

**Standing and Special Reef Fish SSC  
Meeting Summary  
Tampa, Florida  
March 11-12, 2015**

The meeting of the Standing and Special Reef Fish SSC was held March 11-12, 2015. The Standing, Special Shrimp, and Special Spiny Lobster SSC also met on March 10, 2015. That portion of the meeting is in a separate summary. The Standing and Special Reef Fish SSC did not have a quorum present. Therefore, the SSC did not vote to make OFL and ABC recommendations for mutton snapper and hogfish. OFL and ABC for those stocks will be reviewed at a future meeting.

The agenda was accepted with changes to the order of presentations and the removal of OFL and ABC recommendations for mutton snapper and hogfish. The following minutes were accepted by acclamation as written.

- January 2014 Standing and Special Reef Fish SSC summary minutes
- Reef Fish portion of January 2011 Standing, Special Spiny Lobster, and Special Reef Fish SSC summary minutes

Dr. Will Patterson announced that he would be the SSC representative at the March 30-April 2, 2015 Council meeting in Biloxi, Mississippi.

**Reorganization of SSCs as Approved by Council**

Mr. Doug Gregory reported that the Council had approved combining the Standing, Ecosystem, and Socio-economic SSCs into a single SSC, with the creation of a new Special Socio-economic SSC. A new online application form will be available on the Council website soon, at which time applications will be accepted to the SSCs until 45 days before the June 2015 Council meeting. Appointments to the reorganized SSCs will be made at the June Council meeting.

**FWC SEDAR 15A Mutton Snapper Update Assessment**

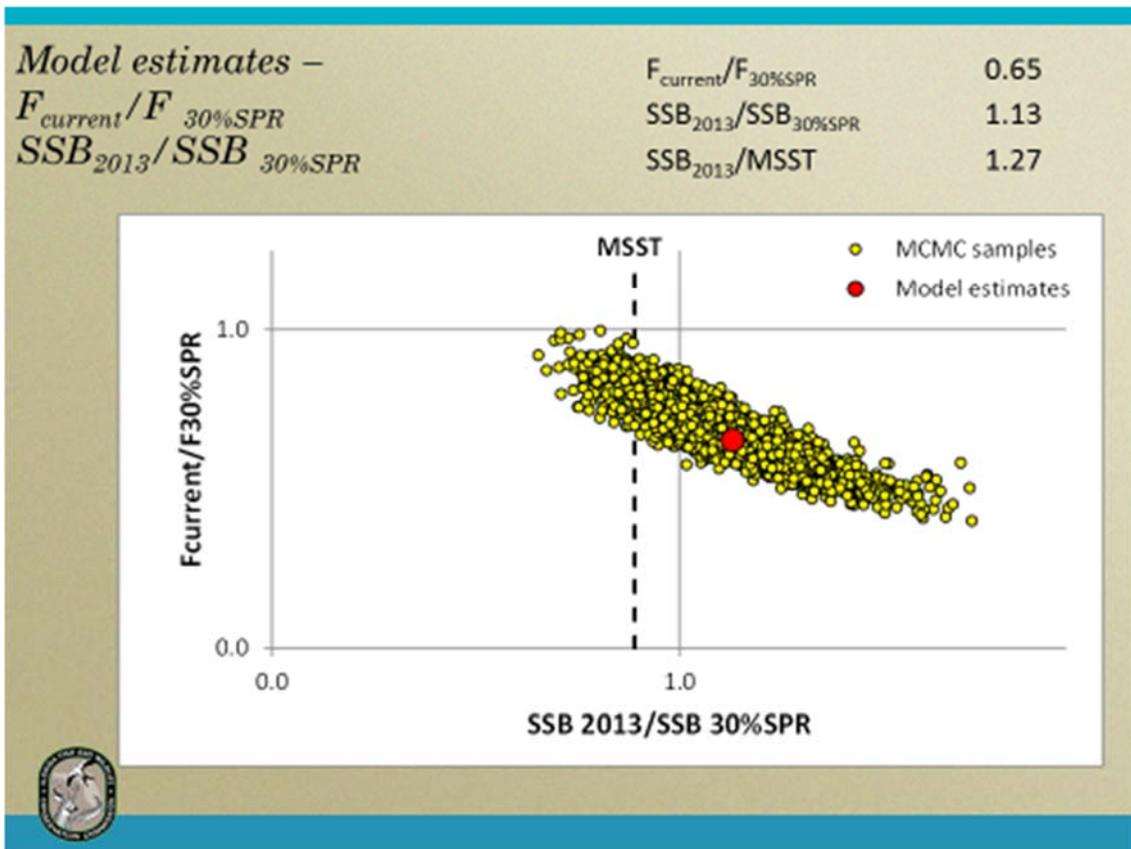
The SSC did not have a quorum present, and therefore did not vote to recommend mutton snapper OFL and ABC. However, the SSC did review the update assessment and voted on whether to accept it. Mr. Joe O'Hop from Florida FWRI presented the assessment. The South Atlantic and Gulf of Mexico regions were treated as one for the SEDAR 15A assessment and for this update. A statistical catch-at-age model (ASAP) was used as the assessment model. Several suggestions for improvements made by the SEDAR 15A Review Panel were incorporated into this assessment. Changes in the update assessment included:

- Update incorporates
  - New discard data (rates, lengths, dispositions)
  - Revised maturity schedule, new sex ratio data (~1:1)
  - Re-calculated growth curves, M (but similar to SEDAR 15A)
  - New genetics data (still one stock)

- Stochastic Age-Length-Key (but still external to model)
- Fishery ALK and Direct aging as sensitivities
- Newer methods for constructing indices of abundance
- ALK- age comps for discards, indices of abundance
- Selectivity modeled with logistic and double logistic curves
  - And linkage of fishery dependent indices to fleets
- Adjusted 1981-1991 Head Boat Survey landings and discards
  - [SEDAR41-DW40, August 2014]
- Adjusted MRFSS/MRIP time series, by coast, year, and mode
- Base run, eighty-one sensitivity runs, 10-year retrospective, likelihood profiling, and MCMC (multiple chains)

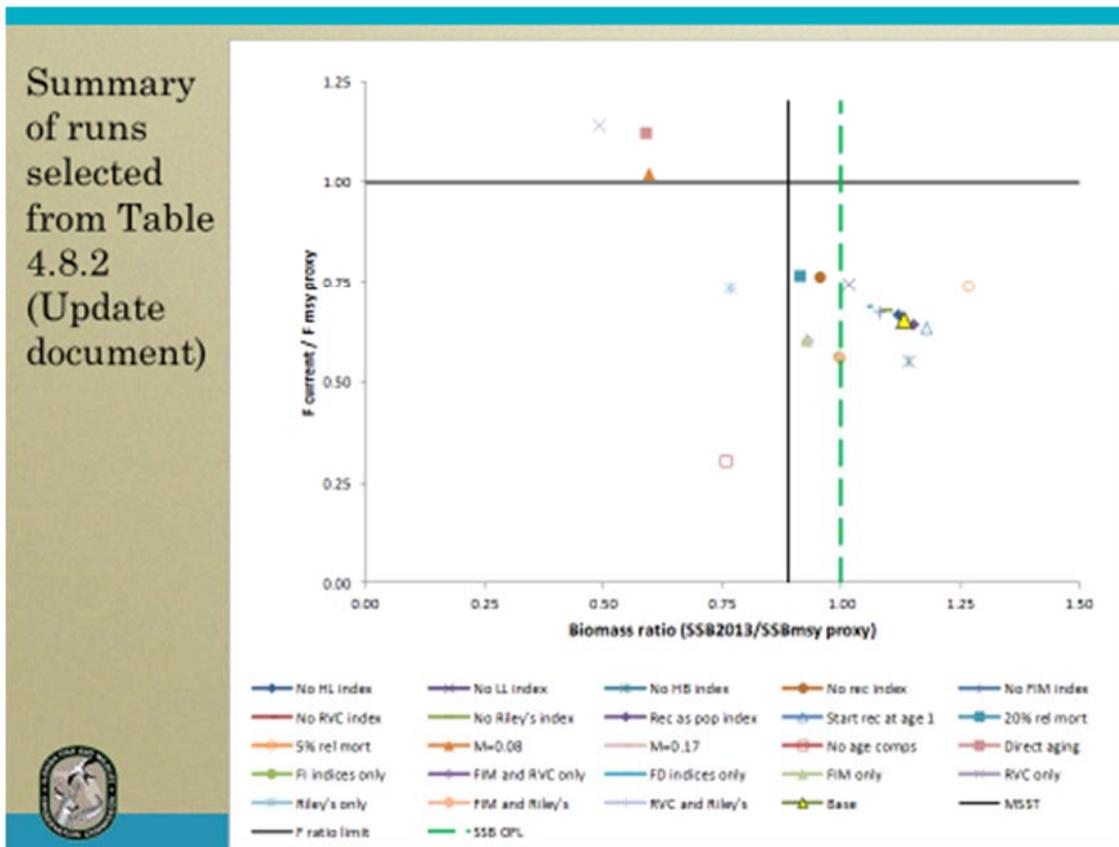
Indices generally followed the same trends as in the previous assessment. One difference in the results of the update assessment compared to the SEDAR 15A benchmark assessment was a change in the maturity curves. The average length at 50% maturity was reduced from 402 mm (15.8 inches) TL to 388 mm (15.3 inches) total length. The age at 50% maturity was also reduced from 3.71 years to 2.72 years.

A plot of Markov Chain Monte Carlo results for SSB-ratio and F-ratio was made using  $F_{30\% SPR}$  as the proxy for  $F_{MSY}$ . None of the F-ratios were above 1 (overfishing not occurring). Only 6.2% of the SSB-ratios were less than MSST ( $1-M*B_{MSY}$ ) and only 24.3% were less than 1, indicating that the stock is not overfished (Figure 1).



**Figure 1. Plot of Markov Chain Monte Carlo results for SSB-ratio and F-ratio**

Results of most of the sensitivity runs also indicated the stock was below the overfishing threshold and above MSST (Figure 2). Exceptions were runs using low natural mortality, direct ageing, no age-composition indices (age-structured surplus production model), or with only a single fishery independent index (RVC or Riley's Hump) for model tuning.



**Figure 2. Summary of sensitivity runs.**

Upon reviewing the update assessment, the SSC passed the following motion.

**The Committee accepts that the 2015 SEDAR 15a update assessment of mutton snapper represents the best available science and is suitable for the development of management advice.**

**Motion passed 9-0**

Since a quorum is needed to vote on ABC projections, the SSC did not review projections or recommend OFL and ABC. Furthermore, some SSC members expressed concern about fitting the model with age composition estimates derived from age-length keys when direct aging of the catch was available. The SSC requested additional information to examine that fit versus model runs in which age composition was estimated via direct aging of the catch.

Approximately 85% of the mutton snapper stock occurs in the South Atlantic Council's jurisdiction. The South Atlantic SSC is scheduled to review the mutton snapper update assessment and vote on OFL and ABC when it meets in April. When the Gulf SSC meets again in May, it will review the South Atlantic SSC's recommendations and the results of the additional information requested. At that time, the SSC will decide whether it concurs with the South Atlantic SSC's recommendations.

## Minimum Stock Size Threshold Options Paper

Dr. Shannon Cass-Calay reviewed an analysis prepared by the SEFSC of the probability that spawning stock will fall below the MSST in the absence of overfishing when  $MSST = (1-M) * B_{MFMT}$  versus other MSST reference points. This analysis was requested by the interdisciplinary planning team that is developing a proposed amendment to adjust MSST for certain stocks managed by the Gulf Council. The analysis modeled three stocks using different proxies for MFMT ( $F_{MSY}$  for bluefin tuna,  $F_{MAX}$  for vermilion snapper and  $F_{30\% SPR}$  for gray triggerfish). For these stocks, estimated natural mortality ( $M$ ) ranged from 0.14 to 0.27. In the model, abundance was varied randomly while the stock was fished at MFMT. Results showed that fewer than 5% of the model runs resulted in spawning stock levels below MSST at either  $(1-M) * B_{MFMT}$  or  $0.75 * B_{MSY}$ . None of the model runs resulted in spawning stock levels below MSST at  $0.50 * B_{MSY}$ . These results indicate that for the stocks examined,  $(1-M) * B_{MFMT}$  appears to be a sufficient buffer against stocks dropping below MSST due to natural fluctuations. However, lower values of  $M$  did result in higher probabilities of the stock dropping below MSST despite not experiencing overfishing. As a result, the relationship may breakdown for very small levels of  $M < 0.1$ , in which case one might wish to adopt a definition for MSST that does not exceed  $0.9 * B_{MFMT}$ .

SSC members suggested that the analysis be conducted for stocks that have a very low  $M$ . One SSC member noted that the simulations did not account for all sources of uncertainty, and in his experience  $0.75 * B_{MFMT}$  seemed to produce better results than  $(1-M) * B_{MFMT}$ . It was pointed out that in setting MSST, the Council needs to consider the costs associated with different levels of MSST. If MSST is only slightly below  $B_{MFMT}$ , there is a risk of unnecessarily having to implement a rebuilding plan if the stock fluctuates below MSST but may recover on its own. On the other hand, if MSST is far below  $B_{MFMT}$ , the likelihood of unnecessarily implementing a rebuilding plan is reduced, but the cost of rebuilding from a lower MSST will be greater.

Mr. Steven Atran reviewed the actions and alternatives in the MSST options paper. In Action 1, sub-options would define low  $M$  as either 0.15, 0.20, or 0.25. Based on the SEFSC analysis,  $M=0.1$  might be worth considering as a low  $M$  options, and  $0.90 * B_{MFMT}$  might be worth considering as an alternative MSST. At the other end of the low  $M$  range, SSC members questioned whether 0.25 should be considered low  $M$ . Only two stocks in the Gulf for which  $M$  has been estimated are above that level; greater amberjack ( $M = 0.28$ ) and gray triggerfish ( $M = 0.27$ ).

## SEDAR 45 Vermilion Snapper Terms of Reference and Project Schedule

Dr. Julie Neer reviewed the terms of reference for the SEDAR 45 vermilion snapper standard assessment. Under TOR #2, it was noted that there are no new indices of abundance at this time, just additional data for existing indices.

Dr. Cass-Calay noted some changes from the previous update assessment that the Science Center intended to incorporate into the standard assessment. One change is that the model will be fitted to the shrimp effort data series rather than assume a mean shrimp bycatch throughout the series. The Science Center is also reevaluating how it produces discard estimates relative to the previous SEDAR 9 benchmark assessment. Dr. Cass-Calay stated that the Science center was not aware of any new information for vermilion snapper at this time, but it would like to incorporate any new fisheries-independent indices that become available. She asked that anyone who has new information about vermilion snapper that they would like to have considered in the assessment let her know.

An SSC member asked if inputs from the Deepwater Horizon spill could be incorporated into the assessment if feasible. Dr. Neer suggested that this could possibly be included as an episodic event under TOR #2. However, it was noted that the indices would have to show a decline in abundance in order to estimate an episodic M.

A suggestion was made to include the word “standard” in the title of the terms of reference. Dr. Neer responded that they had moved away from identifying assessments in the title as benchmark, standard, or update because of the public perception that standard and update assessments were a lower quality. However, she agreed to include somewhere in the TOR a notation that this is a standard assessment.

A request was made from staff to include in the TOR #5 a constant catch ABC projection that is equivalent to the annual ABC projection during the years for which the SSC makes a projection. A suggestion was made that the mean of the ABCs might serve as a constant catch alternative, but it would need to be analyzed further.

An SSC member suggested that, rather than include all tables and figures in the assessment document, that they be kept in an online digital archive with links from the assessment document. This would allow the document to be smaller in size while allowing more tables and figures to be made accessible than in the current format. Several SSC members expressed support for this approach. Dr. Neer noted that this would be a major change in how assessment documentation is provided.

Following the above discussion and suggestions, the SSC passed the following motion.

**The Committee accepts the SEDAR 45 Vermilion Snapper TOR as modified.**

**Motion passed unanimously.**

### **Review of Draft National Standard 1 Guideline Revisions**

Mr. Steven Atran reviewed a NMFS presentation on proposed revisions to the Magnuson-Stevens Act National Standard 1, 3, and 7 Guidelines. This was presented at the recent National SSC workshop and Council Coordinating Committee meeting, and will be presented at Council

meetings over the next couple of months. Mr. Atran also review the marked up document containing the proposed changes.

Under Rebuilding: Adequate Progress, the marked-up text contains a sentence on page 21 that states, “The Secretary shall review rebuilding plans at routine intervals that may not exceed two years...” It was pointed out that the Generic ACL/AM Amendment requires that Council staff examine inclusion/exclusion of species and species groupings in fishery management plans for suitability every five years. However, the Generic ACL/AM amendment provision may be more applicable to the National Standards guidelines section on stocks that require conservation and management than to the section on adequate progress for rebuilding plans.

The presentation included a slide that stated that the annualized expression of  $OY = ACL$ . The marked-up text included on page 16, under “Relationship between OY and the ACL framework”, the statement, “An annual OY cannot exceed the ACL.” SSC members felt that this was reversed and should read, “An ACL cannot exceed annual OY.” This led to a discussion concerning the relationship between OY, ACL and ACT. Several SSC members felt that management should move from being driven by buffers to stay away from limits (MSY) to being target (OY) based. One SSC member suggested that this could be accomplished by setting  $ACT = OY$ , and then setting ACL at some level between ACT and OFL depending on how large a buffer is needed. This would make ACT the main reference point for management. It was pointed out that not all Councils use ACT, and the Gulf Council considers ACT unnecessary for IFQ managed sectors.

Under Phased-in ABC Control Rule, SSC members felt that clarification was needed as to what was meant by a “comprehensive analysis”. It was suggested that a phase-in could result in overfishing continuing during the phase-in, which would violate the Magnuson-Stevens Act requirement to end overfishing immediately unless the catch was kept below OFL. However, if the phase-in catch is kept below OFL, the buffer between OFL and ABC for many Gulf stocks is so small that there would be little benefit to a phase-in. In addition, a phase-in would need to be incorporated into ABC projections.

Under the Carryover ABC Control Rule, this provision does not include any mention of uncertainty in the estimation of catches.

## **Review of NMFS Climate Strategy**

Dr. Roger Griffis, NOAA Office of Habitat Conservation, made a presentation via webinar of the NMFS Draft Climate Science Strategy. An SSC member noted that the Southeast Fisheries Science Center has an integrated ecosystem assessment group that is developing processes for ecosystem assessments, but is running into funding and staffing problems. Dr. Griffis responded that ongoing examples such as this would be useful in his attempts to gain funding for climate science. He noted that NOAA has ranked climate science as one of its top 3 priorities for FY 2016, and one of its top two priorities for FY2017. It was noted that increasing capacity to conduct climate-informed management strategy evaluations would likely require that each Science Center hire an MSE specialist. The Centers might consider diverting existing staff from

stock assessments, but NMFS already has a shortage of assessment scientists and this would reduce NMFS's ability to do stock assessments.

It was noted that the Draft Climate Science Strategy does not contain any mention of mitigation efforts or technology to reduce human impacts such as increased use of hybrid engines. Dr. Griffis responded that NMFS might be able to partner with other agencies to address this issue.

An SSC member asked if the Draft Climate Science Strategy incorporated actions related to state responsibilities and needs. Climate change actions taken by the states could have impacts on species that inhabit state waters during early periods of their life cycle. Dr. Griffis responded that some of the state information needs are the same as the federal needs, but that he would reach out to the state agencies for input.

An SSC member asked how closely NMFS will work with Landscape Conservation Cooperatives (LCCs) that are working on similar issues. Dr. Griffis responded that he recognizes the importance of LCCs and efforts are being made to work with them.

A question was asked as to how often ecosystem status reports would be updated. Every two to three years was suggested, but this was felt to be too infrequent. Some Science Centers produce quarterly status reports which allow them to more quickly identify any changes.

### **National SSC Workshop V Summary**

SSC members and staff who attended the National SSC V Workshop in Honolulu gave their impressions of the meeting. In general, the meeting was felt to be well organized and productive, but it attempted to address too many issues in too short a time. Of note was the introduction of the term, "model resistant stocks", a term which has been applied in some regions to stocks for which fits of assessment models always seem to be poor. SSC attendees felt that this term was a misnomer. Stocks are not model resistant. Rather, in these cases the selected and parameterized models are mis-specified, or other sources of error exist, such that stock dynamics are not fully accounted for by the models.

One SSC attendee expressed concern about the need to incorporate stakeholder needs into the process. A staff member noted an almost complete lack of discussion of recreational fishery concerns. It was noted that, in Hawaii, anyone can buy a commercial license for \$20 and become a commercial fisherman.

Western Pacific Council staff is in the process of consolidating comments made by the workshop participants, and will circulate a draft in the near future. Their immediate objective is to formulate recommendation from the workshop to bring to the June CCC meeting. The next National SSC workshop will be hosted by the Pacific Fishery Management Council.

### **Ecosystem Working Group Summary**

Dr. Morgan Kilgour reported the results of a meeting of the Ecosystem Working Group held September 19, 2014. The working group developed an initial set of suggested goals and

objectives incorporating ecosystem based fisheries management into current assessments, and developed approaches for identifying and prioritizing ecosystem and socioeconomic information needs for fisheries managed by the Council. Their recommendations were reviewed by the Ecosystem SSC on February 25, 2015, which recommended that the working group continue working on developing a set of suggested goals and objectives.

**Other Business**

*Starting times for SSC meetings*

Council staff asked if SSC members would prefer that meetings start at 8:30 am on the first day or at 1:00 pm which is currently done for most meetings. Several SSC members responded that they would prefer the earlier start if it meant the meeting could last two days instead of three days.

**SSC Members Present**

**Standing SSC**

William Patterson, Chair  
\*Luiz Barbieri, V. Chair  
Shannon Cass-Calay  
Bob Gill  
\*Walter Keithly  
\*Kai Lorenzen  
Jim Tolan

**Special Reef Fish SSC**

Robert Ellis  
John Mareska

**Council Staff**

Steven Atran  
Charlotte Schiaffo  
Morgan Kilgour  
Doug Gregory  
John Froeschke  
Ryan Rindone

**Council Member**

Camp Matens

**Others Present**

Michael Drexler-OC  
Bill Kelly- FKCF  
Chad Hanson-PEW  
Julie Neer-SEDAR  
Joe O'Hop-FWC  
Jim Nance-NMFS

\* Not present on last day