

**Standing, Socioeconomic, and Reef Fish SSC
Meeting Summary
Tampa, Florida
June 1-2, 2016**

The meeting of the Standing, Socioeconomic, Shrimp, Spiny Lobster, and Reef Fish SSC was convened at 9:00 am on January 1, 2016. This report summarizes the Socioeconomic and Reef Fish sessions. The Shrimp SSC and Spiny Lobster SSC sessions are summarized in separate reports. The agenda was approved as written.

Selection of SSC representative at June, 2016 Council meeting

Chairman Luiz Barbieri agreed to be the SSC representative at the June 20-24, 2016 Council meeting in Clearwater Beach, Florida.

Standing and Socioeconomic SSC Session

Socioeconomic Considerations for Sector Management

Staff reviewed the draft amendments being considered by the Council for the management of red snapper for charter vessels (Amendment 41) and reef fish for headboats (Amendment 42). Concerning Amendment 41, the absence of individual landings histories was identified as a challenge to adopting an IFQ or PFQ program for charter vessels. Also, it was noted that the goals and objectives should be further developed, and these goals and objectives should then inform the Council's decisions pertaining to the design features of any allocation-based program.

Concerning Amendment 42, SESSC/SSC members inquired about selection criteria for vessels to be included in the management plan under consideration. Staff indicated that Amendment 42 would include headboat survey vessels only, i.e., headboats with valid federal reef fish for-hire permits and with catch histories recorded by the Southeast Headboat Survey by the control date established by the Council (December 31, 2015). SESSC/SSC members also inquired about the potential effect of the sunset clause in Amendment 40 (sector separation) in determining the future development of Amendments 41 and 42. Staff indicated that although Amendment 41 is tied to sector separation, the amendment for headboat survey vessels (Amendment 42) is independent from sector separation because it has a multi-species scope. Committee members discussed the enforcement and monitoring provisions necessary for establishing allocation-based programs. Staff noted that the Council has established a technical sub-committee to address electronic reporting for the for-hire fleet. While discussing cost recovery provisions to include in these amendments, Committee members commented that the metric used to determine the cost recovery fees should be carefully selected to mitigate the incentives to underreport the value on which the fees would be based. Committee members also noted that the design of the management plans should be consistent with the stated purpose and need for these actions. Finally, the SESSC and SSC indicated that they were looking forward to the opportunity to discuss future iterations of these amendments.

Market Power Analysis for the Gulf IFQ Programs

Dr. Glenn Mitchell presented an analysis of market power under quota share and quota allocation caps in Gulf of Mexico catch share programs. Dr. Mitchell indicated that his analysis did not find market power in any of the relevant markets related to the Gulf IFQ programs. Therefore, it appears that the existing share and allocation caps have been effective in preventing market power so far. Dr. Mitchell also noted that the lack of market power may also be due to strong competition between industry participants or to products in adjacent markets (e.g., non-IFQ Gulf reef fish and South Atlantic reef fish).

The analysis presented offers the following recommendations. First, Quota Share caps at the Species Groups level may not be necessary to prevent market power, though market power would be prevented with Species Group caps equal to 7% or the highest percentages of landings by entity observed to date. Market power would also be prevented under an aggregate Quota Share cap of 15 percent for all Gulf IFQ Reef Fish. Second, if a cap on Quota Allocation is required, no additional market power will be created and no scale efficiencies will be lost under an allocation cap of 7% for all Gulf IFQ Reef Fish or caps of 10% for each species group.

The Standing and Socioeconomic SSC provided suggestions for the analysis presented. Committee members suggested that the demand models could be improved if reef fish imports were included as an explanatory variable. Committee members also suggested the results might be improved by using an inverse demand model approach (with price as the dependent variable) rather than the quantity dependent approach used in the analysis. Mike Travis noted that the analysis presented would be included in the 5-year review of the Grouper and Tilefish IFQ program.

Standing and Reef Fish SSC Session

The minutes of the January 5-6, 2016 Standing and Reef Fish SSC meeting were approved with a correction that Tables 4 and 5 should indicate the units of measurement.

SSC Members Serving as Council State Designees

Staff noted that a state agency is considering assigning a staff member who is currently serving on the SSC to be a Council designee. NOAA General Counsel advised Council staff that they cannot find any legal basis for saying that a designee cannot also serve on the SSC, and the Council is seeking input from the SSC on having someone serve simultaneously on the SSC and as a Council designee. Most SSC members who spoke felt that this situation could create a conflict of interest. The SSC member/Council designee might end up voting twice on an issue, and might vote differently on the SSC based on the scientific merits of the issue vs. the Council where the person might vote based on the interests of his/her agency. One SSC member stated that he previously served simultaneously as a member of the Mid-Atlantic Council and the Mid-Atlantic SSC, and did not feel that there was much of an issue regarding conflict of interest.

Discussion of Methods to Address Recreational Red Snapper ACL Underharvest

The recreational sector and sector components have not exceeded their ACLs since the implementation of a 20% ACT buffer, and the Council is seeking ways to allow more of the ACL to be harvested. Two basic approaches are being considered: 1) Opening a supplemental season later in the year when the underharvest occurs, or 2) carryover the unharvested ACL to the following season, which would require that the SSC temporarily increase the ABC to allow that carryover harvest. Opening a supplemental season requires better coordination with state seasons than currently exists, and making short-term projections from a combination of a federal season and multiple state seasons would be difficult. Therefore, SSC members felt that the carryover option was the more viable of the two. A carryover provision could also be applied to the commercial sector, which has been underharvesting its allocation by several hundred pounds each year. Staff asked what information the SSC would need in order to consider an increase in ABC to allow a carryover harvest. SSC members suggested that the history of landings over time from previous years would need to be reviewed. SSC members also suggested that any process adopted include a requirement for a re-evaluation after 3 to 5 years.

Review and Approval of Gag and Greater Amberjack Terms of Reference

Gag

Staff reviewed the terms of reference (TORs) for the 2016 Update Assessment of SEDAR 33: Gulf of Mexico Gag. Noted additions to the standard TORs were: a re-evaluation of the red tide events included in past assessments, and consideration of new red tide events in 2014-15; and projections prescriptions to use the geometric mean for determining $F_{CURRENT}$, to provide OFL and ABC projections for 5 years, and to provide equilibrium values for OFL and ABC if possible. Committee members asked whether red tide data from recent years would be available, and were informed that some data likely would be ready in time for the assessment. When asked why the ACL hadn't changed from the last assessment, staff replied that the Council took a more precautionary approach when setting the gag ACL after SEDAR 33 in response to stakeholder comments about the severity of the red tide events and the general preponderance of the stock in historical areas.

Greater Amberjack

Staff reviewed the TORs for the 2016 Update Assessment of SEDAR 33: Gulf of Mexico Gag & Greater Amberjack. Noted additions to the standard TORs were projections prescriptions to use the geometric mean for determining $F_{CURRENT}$, to provide OFL and ABC projections for 5 years, and to provide equilibrium values for OFL and ABC if possible.

Motion: The Committee accepts the TORs for Gag & Greater Amberjack as written with approved changes.

Motion passed unanimously.

Review of Research and Operational Cycles for SEDAR Stock Assessments

Dr. Clay Porch presented a process being developed by the SEFSC to provide more timely stock assessments. The new process will replace the current benchmark, standard, and update assessments with a research cycle and operational stock assessments. These proposed changes are intended to address data issues and improve throughput more efficiently. The research cycle assessment would evaluate data and models. It would produce an approved/accepted model for use in future operations assessments, and would be reviewed by a CIE panel and by the SSC similar to a benchmark assessment, but it would not by itself produce assessment results useful for management advice. The research track assessment will instead solely focus on resolving any and all issues with the available data. The research cycle will be the foundation upon which future assessments on a given species are conducted. This type of assessment is anticipated to include at least two in-person workshops and take approximately 14-18 months to complete. The research cycle could be conducted on multiple stocks in order to reduce redundant analyses.

The operational stock assessments would be similar to existing standard or update assessments, and would build upon the approved/accepted model to produce assessment results useful for management. The SEFSC will no longer be constrained by the strict TORs of an update assessment if a change in the data, a method, etc. is expected to improve the quality and accuracy of the assessment. This new process is expected to produce 1 to 2 research cycles per year and 4 to 6 operational assessment per year assuming 5 lead analysts. Operational assessment results would be reviewed by the SSC. The new process will be presented to the SEDAR Steering Committee at their next meeting.

SSC members had concerns on whether a transition to the new process would disrupt the timeliness of current assessments. Dr. Porch responded that most currently assessed stock have had recent benchmark assessments, which should make the transition seamless. However, SSC members had other concerns:

- The role of the SSC in both conducting and reviewing the research cycles and operational assessments should be better articulated
- A statement of organization practices and procedures (SOPPs) should be produced
- How will stakeholders respond to this new process?
- The new process should initially be implemented as a pilot project to evaluate its effectiveness

SSC members thought that, because they had just received the presentation, they could not fully evaluate the proposal. However, based on the information presented, and assuming that the concerns expressed would be addressed, the SSC passed the following motion.

Motion: The Committee recommends that the Council approve the proposed Research/Operational Assessment structure concept for SEDAR Stock Assessments.

Motion passed 13-2.

Review of SEDAR Assessment Schedule

Staff reviewed the current SEDAR stock assessment schedule with the Committee, focusing on years 2018 and 2019. One Committee member asked whether shark assessments were included on the schedule. Staff replied that they were; however, sharks are managed by the NMFS Highly Migratory Species branch, rather than the Gulf Council. Clarification on the nature of the MRIP updates was provided, noting that the recreational indices affected by the MRIP survey updates were all that would be addressed in the MRIP calibration updates scheduled for 2017 and 2018. A Committee member noted that the Council had expressed an interest in a gray triggerfish benchmark assessment as soon as possible. Staff plan to address this request with the Council, and to draft a letter requesting that the SEFSC process gray triggerfish larval samples since 2007 in time for the scheduled 2019 stock assessment, to ensure that the recruitment indices are using the most current information. A Committee member added that a stock assessment on hogfish was likely from the FWC in 2018, and that the FWC would review doing said assessment with the SEDAR Steering Committee in September 2016.

Decision Tool for Gray Triggerfish Bag Limits, Size Limits, and Season Analyses

Dr. Michael Larkin gave a presentation describing the decision tool spreadsheet he constructed for evaluating the impact of various gray triggerfish size limits, bag limits, and closed seasons on season length to achieve the recreational ACT under various alternatives in draft Amendment 46. Projected landings for waves 1 and 2 were determined from the average landings during 2012-2014. Waves 3 through 6 were predicted using earlier landings where there were no closures (2008, 2009, and 2011). To establish 95% confidence intervals, a bootstrap method was applied by wave and mode to the distributions of individual years of landings to randomly sample the 1,000 times. Size limits of 14 to 20 inches FL and bag limits of 1 and 2 fish were evaluated in the spreadsheet. The decision model does not account for effort shifting due to closed seasons, changes in averages size during stock rebuilding, or changes in fishing effort. The model has been tested retrospectively but assumes that state waters will close when federal waters are closed. Some SSC members expressed concern that the model included catches of undersized fish, and one SSC member stated that he would like to see trips broken down by weight. The SSC made no motions regarding the Decision tool.

SEDAR 45 Vermilion Snapper Standard Assessment

Dr. Matt Smith reviewed the SEDAR 45 vermilion snapper stock assessment. Major changes from the previous assessments include converting from total length to fork length, restricting the growth curve to account for minimum size regulations, and use of a Lorenzen natural mortality function rather than a constant natural mortality rate over age groups. The Lorenzen function was scaled to a target of 0.25, which matches the constant natural mortality rate used in the SEDAR 9 update. Commercial landings were split by regions (east Gulf vs. west Gulf), and was split pre-and post-2007 in order to account for red snapper IFQ. Recreational landings were combined due to low sample sizes. Recreational landings showed some discrepancies for prior years with the 2011 update due to historic and Access Point Angler Intercept Survey (APAIS) recalibrations. Discards were not included due to low relative levels in comparison to landings and low assumed discard mortality. For shrimp trawl bycatch, a 'super-year' approach was implemented where the median was fit directly instead of assuming it was a constant catch in every year. Shrimp trawl bycatch estimates were based

on all observer data and showed a sharp decline after 2004. The SEAMAP larval survey in numbers-per-area was an index of spawning stock biomass (SSB). The assessment was conducted using Stock Synthesis 3 (SS3), using data from 1950 through 2014. A bias adjusted Beverton-Holt stock-recruit function was used with estimated deviations for data rich period 1994-2012, but there was low confidence in the curve because most of the data points were concentrated in a narrow range of SSB (Figure 1). Therefore, a proxy for MSY was used to determine stock status.

Motion: The Committees accept the SEDAR 45 Vermilion Snapper Standard Assessment as the best scientific information available.

Motion passed unanimously.

Stock status results were calculated for F_{MSY} proxies of both $F_{30\% SPR}$ (used in SEDAR 9), and F_{MAX} (used in the SEDAR 9 update assessment). Results were also calculated for achieving maximum yield-per-recruit under existing selectivities (F_{CMAX}). The resulting F values were as follows:

$$F_{MAX} = 0.081$$

$$F_{30\% SPR} = 0.103$$

$$F_{CMAX} = 0.246 \text{ (equivalent to 12\% SPR)}$$

After discussion, the SSC felt that $F_{30\% SPR}$ was the most appropriate proxy for F_{MSY} .

Motion: The Committees recommend that the MSY proxy be the yield at the fishing mortality rate of 30% SPR and the biomass at 30% SPR.

Motion passed unanimously.

Using 30% SPR as a proxy for MSY, the stock biomass status was below $SSB_{30\% SPR}$ prior to 2014, but it has never been below its overfished threshold (MSST). The stock fishing mortality rate was above the overfishing threshold (MFMT) in the mid-1990s and early 2000s, but as of 2014, the SSB was above $SSB_{30\% SPR}$ (not overfished) and fishing mortality rate was below $F_{30\% SPR}$ (not overfishing) (Figure 2).

Motion: The Committee accepts that the SEDAR 45 Stock Assessment of Vermilion Snapper determination that the stock is not overfished and not undergoing overfishing.

Motion passed unanimously.

In order to project yield streams, since the assessment only included landings through 2014, provision landings for 2015 (2.31 mp) were included and an average of landings during 2012-2014 was used for 2016 (2.73 mp). Yield stream projections therefore began with 2017.

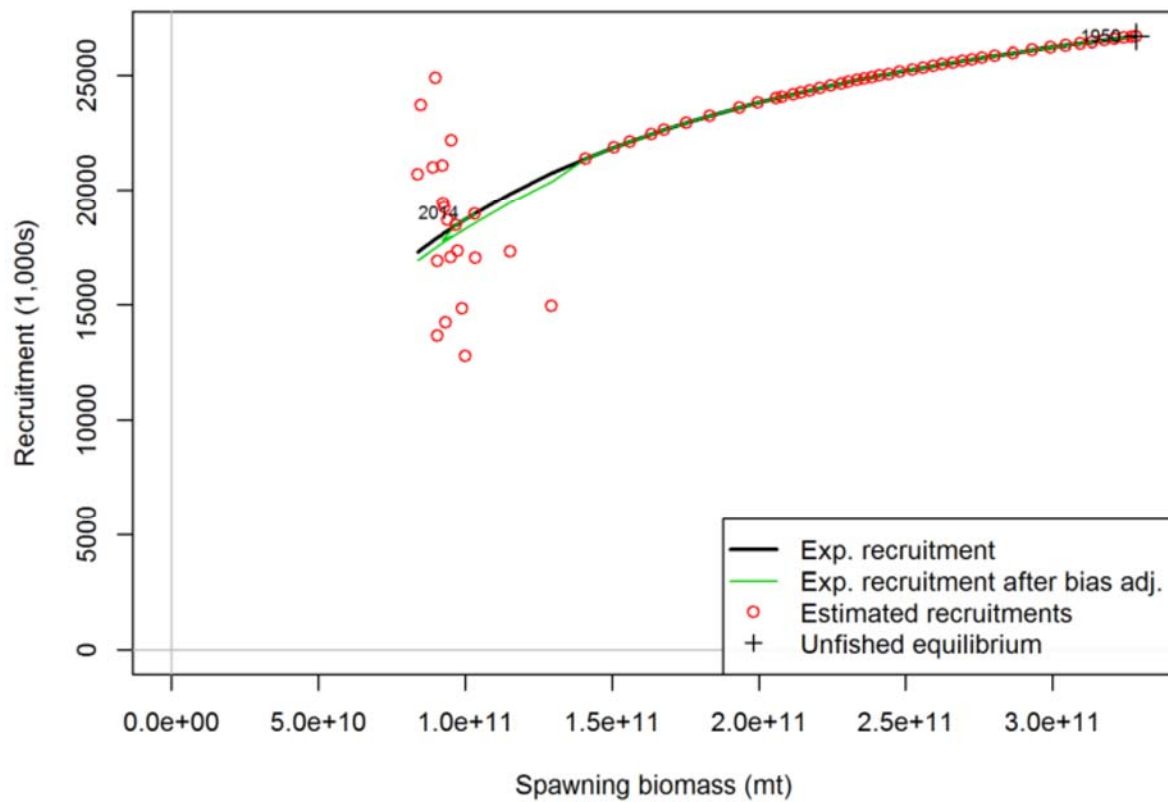


Figure 1. Beverton-Holt stock-recruit curve for vermilion snapper from SEDAR 45

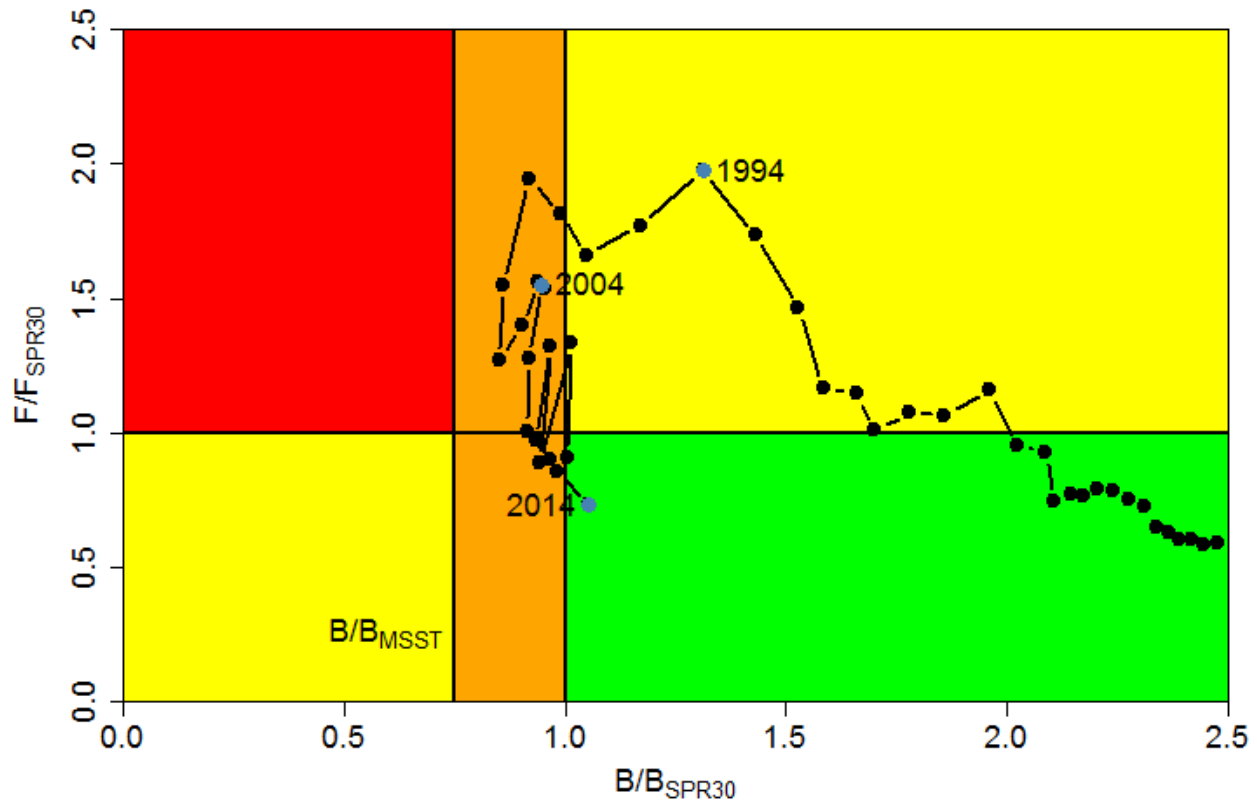


Figure 2. Vermilion snapper fishing mortality rate relative to MFMT and spawning stock biomass relative to MSST and B_{MSY} using a 30% SPR proxy, 1971-2014.

OFL was projected as the yield at $F_{30\% SPR}$. For ABC, the SSC felt that the P^* method used in tier 1 of the ABC control rule and used in recent SEDAR assessments has indicated unexpectedly small uncertainty estimates in the OFL, which also occurred in SEDAR 45. The SSC felt that a more conservative ABC should be used, and after discussion, agreed to use the yield when fishing at 75% of $F_{30\% SPR}$ as the ABC yield.

Motion: The Committee recommends that the yield stream at 75% of $F_{30\% SPR}$ be used to determine the ABC and the yield at $F_{30\% SPR}$ be used to determine the OFL of Vermilion Snapper.

Motion passed unanimously.

The resulting yield streams are declining, so a 5-year constant catch ABC was also provided as the average of the annual ABCs for 2017-2021. A constant catch OFL was not needed because the annual OFL remained above the constant catch ABC for the 5-year period. However, under a constant catch ABC, the risk of exceeded OFL would become greater each year as the buffer between OFL and ABC becomes smaller. The following yield streams for both constant F and constant catch ABC were provided by the assessment team.

Table 1. Vermilion snapper OFL and ABC projections under constant F and constant catch scenarios. Units are millions of pounds whole weight.

Year	Constant F		Constant Catch
	OFL (yield at F _{30%} SPR)	ABC (yield at 75% of F _{30%} SPR)	ABC (ave. of 2017-201 ABCs)
2017	4.17 mp	3.21 mp	3.11 mp
2018	3.91 mp	3.15 mp	3.11 mp
2019	3.71 mp	3.10 mp	3.11 mp
2020	3.58 mp	3.05 mp	3.11 mp
2021	3.49 mp	3.03 mp	3.11 mp
2022	3.44 mp	3.01 mp	
2023	3.41 mp	3.00 mp	
2024	3.39 mp	2.99 mp	
2025	3.37 mp	2.98 mp	
2026	3.37 mp	2.98 mp	

The SSC needed to decide how many years to include in their OFL/ABC recommendation. Given that the stock is currently neither overfished nor undergoing overfishing, but there are concerns about long-term recruitment and low confidence in the stock-recruit curve, the SSC chose to recommend a 5-year yield stream.

Motion: The Committee recommends that the time frame be 5 years (2017-2021) for the yield stream of OFL and ABC for Vermilion Snapper.

Motion passed unanimously.

The SSC did not make a recommendation between either the 5-year constant F ABC or the 5-year constant catch ABC. Both yield streams are presented, and the Council may decide which it chooses to use for management.

Table 2. Vermilion snapper OFL and ABC projections under constant F and constant catch scenarios. Units are millions of pounds whole weight.

Year	Constant F		Constant Catch
	OFL (yield at F _{30%} SPR)	ABC (yield at 75% of F _{30%} SPR)	ABC (ave. of 2017-201 ABCs)
2017	4.17 mp	3.21 mp	3.11 mp
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2020	3.58 mp	3.05 mp	3.11 mp
2021	3.49 mp	3.03 mp	3.11 mp

Staff reminded the SSC that it had previously passed a motion stating that “if at the end of the projection period no new assessment is available, and the equilibrium ABC is below the ABC of the constant catch yield stream, ABC should revert to the equilibrium ABC”. This motion would apply to the vermilion snapper ABC unless the SSC moved otherwise. The SSC Chairman stated that it was his intent that the SSC was making no statement about what the ABC should be after 2021.

Reevaluation of SSC Recommendation for Hogfish Equilibrium ABC

Staff noted that the SSC had, in September 2015, passed a motion that stated, “if at the end of the projection period no new assessment is available, and the equilibrium ABC is below the ABC of the constant catch yield stream, ABC should revert to the equilibrium ABC”. Given that this motion affects the Council’s preferred alternative for ACL in hogfish Amendment 43, and the SSC had expressed low confidence in equilibrium yields for other stocks, the SSC was being asked for clarification on its position. The Chairman stated that it was his position that the SSC should not be bound by previous motions. There was no further discussion on this topic.

OY Exceeding MSY in Some Scenarios

Staff noted that under the Magnuson-Stevens Act definition of optimum yield, OY is a reduction from MSY, but in some circumstances the SEFSC calculation of OY can exceed MSY, most recently with the red grouper assessment in January 2016. Staff suggested that OY be redefined to some other method where OY can never exceed MSY, such as $OY=ACL$ or $OY=75\%$ of MSY rather than the yield at 75% of F_{MSY} . Dr. Clay Porch noted that one of the biggest issues when calculating OY is the assumption that near-term recruitment levels exist forever. The SSC made no recommendations on this topic.

Review of Draft Amendment 44 (MSST and MSY Proxies for Reef Fish Stocks)

Staff reviewed Draft Amendment 44, which addresses MSST and MSY proxies for low natural mortality stocks, and proposes a consistent definition for all reef fish stocks that do not have those criteria already defined. Dr. Porch noted that the issue of proxies had been discussed at the National Stock Assessment Workshop, and none of the Councils have been consistent in their use of proxies. Staff noted that the Council had convened two ad hoc finfish assessment panels to help recommend status determination criteria during the preparation of the 1999 Generic Sustainable Fisheries Act Amendment. The Chairman suggested putting the 1999 materials on the agenda for a subsequent SSC meeting to aid in the discussion of possibly forming a new ad hoc panel, noting that some of the SSC members were in high school when this issue was last addressed.

Other Business

There was no other business.

SSC Members Present

Standing SSC

Luiz Barbieri, Chair
Joe Powers, V. Chair
Lee Anderson
Benjamin Blount
Mary Christman
Bob Gill
David Griffith
Jack Isaacs

Jeff Isely
Walter Keithly
Kai Lorenzen
Paul Mickle
Ken Roberts
Steven Scyphers
Robert Shipp
James Tolan

Reef Fish SSC

Marcus (James) Drymon
Robert Ellis
John Mareska

Socioeconomic SSC

Matthew Freeman
Sherry Larkin*
Gabriela Stocks

Shrimp SSC

Richard Burris
Ryan Gandy*
Jeffrey Marx
James Nance

Spiny Lobster SSC

Ryan Gandy*
Sherry Larkin*

* On more than one SSC

Council Staff

Steven Atran
Assane Diagne
John Froeschke
Doug Gregory
Morgan Kilgour
Ava Lasseter
Ryan Rindone
Charlotte Schiaffo
Carrie Simmons

Others

Roy Crabtree, NMFS/SERO
Susan Gerhart, NMFS/SERO
Stephen Holiman, NMFS/SERO
Mike Larkin, NMFS/SERO
Christina Package-Ward, NMFS/SERO
Jessica Stephen, NMFS/SERO
Mike Travis, NMFS/SERO
Clay Porch, NMFS/SEFSC
Matt Smith, NMFS/SEFSC

Shanae Allen, FWRI
Michelle Masi, FWRI
Miles Archabal, Ocean Conserv.
J.P. Brooker, Ocean Conserv.
Todd Phillips, Ocean Conserv.
Glenn Mitchell, Gnarus Advisors
Shelley Krueger, FL Sea Grant
Sal Versaggi

Council Representative

Leann Bosarge