Standing, Mackerel, Reef Fish, and Socioeconomic SSC
Meeting Summary
Miami, Florida
January 10-11, 2017

The meeting was convened at 1:00 pm on January 10, 2017 with Vice-chair Joe Powers serving as acting Chair. The agenda was approved as written. The summary minutes and the verbatim minutes of the September 20-21, 2016 Standing, Reef Fish, Mackerel, and Shrimp SSC meeting and the November 22, 2016 Standing and Reef Fish SSC webinar were approved as written.

Selection of SSC representative at January 2017 Council meeting

Vice-chair Joe Powers agreed to be the SSC representative at the January 30 – February 2, 2017 Council meeting in New Orleans, Louisiana.

Review of Updated National Standard Guidelines (webinar)

Debra Lambert (NMFS/HQ Office of Sustainable Fisheries) presented an overview of revisions made to the National Standard 1 guidelines in October 2016. The objectives of the revisions are to improve and streamline guidelines, address experience gained during implementation of ACLs and AMs, and to provide flexibility to address management issues within current statutory limits. The revisions do not require Councils to revise their current FMPs.

One revision allows a phasing in of reduced ABCs to prevent overfishing over a 3-year period provided they do not exceed OFL (Figure 1). Any such phase-in would need to be part of the ABC control rule. However, one SSC member stated that increased ABCs during the phase-in period will lead to reduced ABCs from original projections in the future.

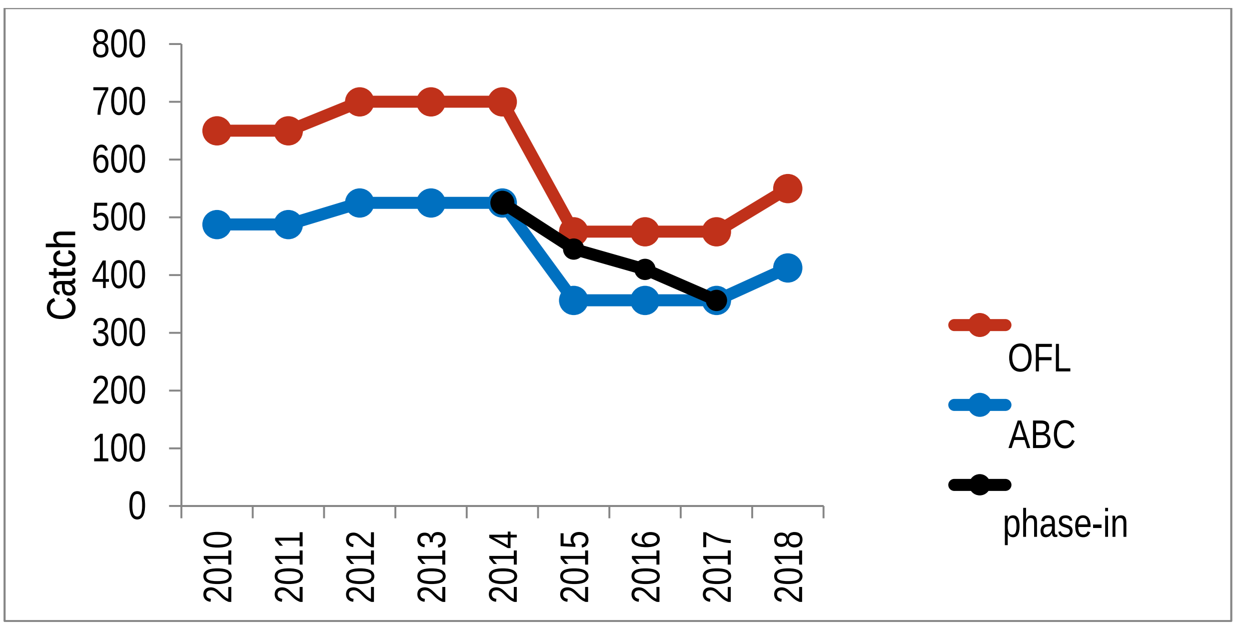

Figure 1. Phasing-in changes to catch levels

Another revision to the guidelines would allow unused quota to be carried forward to the following year. This could be accomplished in two ways (Figure 2). First, if the ACL is set less than ABC, the unused portion of the ACL could be added to the following year's ACL to the extent that it does not exceed the following year's ABC. Second, if the ACL is set equal to the ABC, the ABC control rule could be used to increase the following year's ABC to account for the underharvest in the previous year. The NS1 guidelines explain that the basis for allowing an increase in the ABC is that there has been an increase in stock abundance resulting from the fishery harvesting less than the full ACL. Therefore, when considering the amount of underharvest that can be carried over, it is appropriate to consider natural mortality and other population dynamic effects.

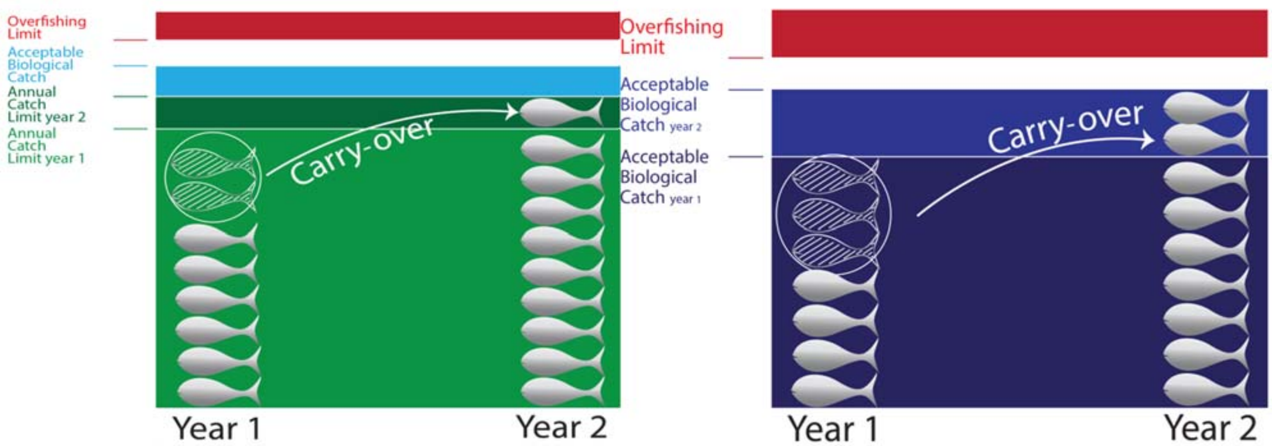

Figure 2. Two possible scenarios for unused ACL carryover.

A third revision allows the use of multi-year overfishing status determinations. When the data is uncertain, rather than rely on a single year to determine if overfishing thresholds have been exceeded, an average of the most recent three years can be compared to the threshold. This increases reporting consistency and reduces the possibility of spurious overfishing determinations.

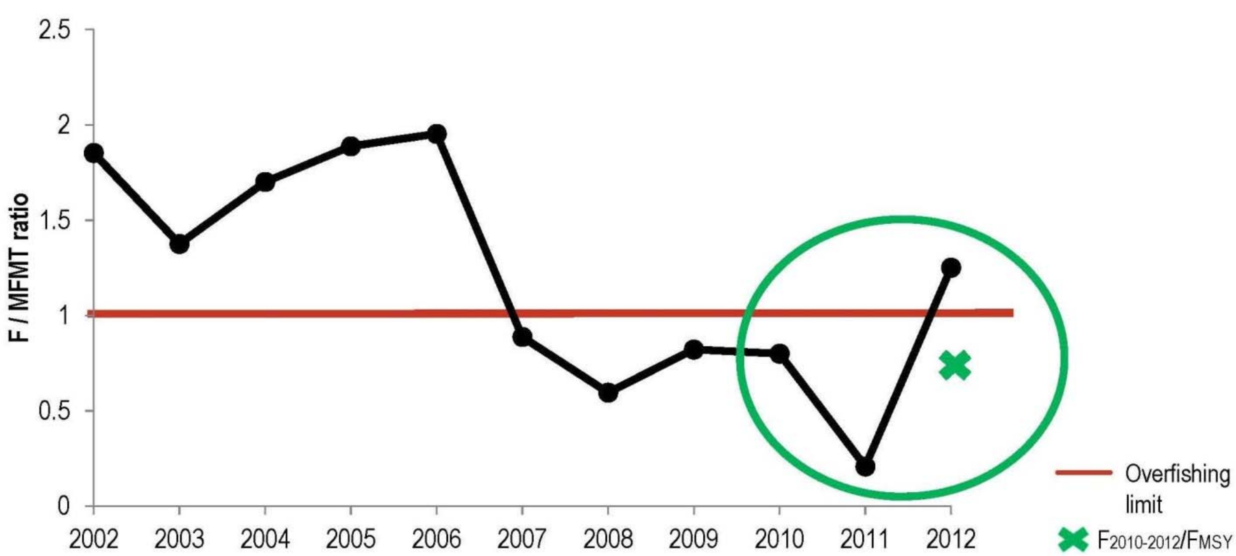

Figure 3. Multi-year overfishing determinations

An SSC member asked if the carryover had to be to the immediate year following, or if it could be carried over to a second year. He noted that delays in getting landings could make it difficult to do annual carryovers. Ms. Lambert responded that the guidelines do not describe all the possible ways that carry-over could occur. But the guidelines do provide guidance on how carry-over ABC control rules can be used to adjust ABCs and said that those types of control rules must be describe in an FMP.

The revised NS1 guidelines provide additional flexibility for determining maximum rebuilding times for stocks that require more than 10 years to rebuild. Previously only one method was provided:

> T_{MIN} + generation time (where Tmin is the time to rebuild in the absence of fishing mortality)

The 2016 guidelines provide 3 methods:

> T_{MIN} + generation time
> T_{MIN}*2
> Time needed to rebuild to B_{MSY} when fished at 75% of MFMT

The revised NS1 guidelines also provide guidance for determining which stocks are in need of federal management, and provide additional guidance on the relationship between OY and ACL, and on the application of an aggregate MSY under an ecosystem based fishery management approach.

In response to a question from an SSC member regarding the application of socioeconomic considerations, Ms. Lambert noted that socioeconomic impacts could be incorporated into the Council's risk policy. Ms. Lambert was asked to provide the exact quotes from the NS1 guidelines on this issue. After the meeting, she e-mailed the following quote:

> 50 CFR 600.310(f)(2)(i): "For stocks and stock complexes required to have an ABC, each Council must establish an ABC control rule that accounts for scientific uncertainty in the OFL and for the Council's risk policy, and that is based on a comprehensive analysis that shows how the control rule prevents overfishing. The Council's risk policy could be based on an acceptable probability (at least 50 percent) that catch equal to the stock's ABC will not result in overfishing, but other appropriate methods can be used. **When determining the risk policy, Councils could consider the economic, social, and ecological trade-offs between being more or less risk averse.** The Council's choice of a risk policy cannot result in an ABC that exceeds the OFL. The process of establishing an ABC control rule may involve science advisors or the peer review process established under Magnuson-Stevens Act section 302(g)(1)(E).

Standing and Mackerel SSC Session

Gulf Migratory Group King Mackerel Updated OFL and ABC Yield Streams for 2017/2018 to 2019/2020 fishing seasons

Michael Schirripa (NMFS/SEFSC) presented a reevaluation of the king mackerel OFL and ABC yield streams that were originally presented at the September 2016 SSC meeting (Table 1). Questions had been raised at that time about the analysis and as to why the updated yields were smaller than the original projections considering that the recreational sector has not landed its ACL in recent years. Dr. Schirripa stated there was an erroneous assumption made that the entire ABC was projected to be caught in the 2013 and 2014 fishing years, which would have overestimated the actual catch. To the contrary, the 2013 original analysis assumed that the catch levels in 2013 and 2014 were equal to the 2012 catches. The updated analysis presented to the SSC at this meeting used the actual 2013 and 2014 landings. These landings, although less than the ABC, were 26% higher than 2012 on average for those years. This was the only change made from the original projections. As a result of the 2013 and 2014 actual landings being 26% higher than originally assumed, the projected yield streams for subsequent years were approximately 17% lower (Table 1).

Table 1. Original king mackerel OFL/BC yield streams from SEDAR 36 and updated yield streams from 2016 projections presented to SSC in September 2016. Yields are in million pounds whole weight.

Fishing Year	Original OFL	Original ABC	Updated OFL	Updated ABC
2017	9.27	8.88	7.56	7.27
2018	9.11	8.71	7.57	7.24
2019	8.95	8.55	7.58	7.24

By fleet, the actual commercial handline and gillnet landings in fishing years 2013 and 2014 were higher than the values assumed for the projections done in 2013. The headboat and charter-private landings were lower than the assumed values in 2013 but higher in 2014.

Dr. Schirripa described an alternative way of calculating the percentiles used to determine ABC were calculated. In the original calculations, a "long hand" method that used manual sorting of results and a "look up" was used to estimate the percentiles. A more precise, but not necessarily more correct, method would be to use an internal function (=percentile.inc) to more precisely calculate the percentiles. This alternative method would have produced ABCs that were 22% lower than the original projections.

One SSC member asked what recruitment was used in the analysis. This was one of the concerns raised by the SSC previously. Dr. Schirripa responded that spawner-recruit function and virgin recruitment inputs were unchanged from the SEDAR 36 assessment. Projected recruitments were deviations around the virgin recruitment.

The SSC noted that this analysis was not a new assessment, but merely a new projection using updated landings. Shannon Calay added that there were no updates to the age and size composition or recruitment. Therefore, Dr. Calay suggested that yield streams from updated projections were more uncertain that the yields from the benchmark projections. Therefore, the SSC affirmed the updated OFL and ABC yields that were previously presented (Table 1 – yellow columns).

> **Motion: The Standing & Mackerel SSCs affirms its king mackerel OFL and ABC recommendations for the years 2017-2019. The SSC recommends consideration of the update information provided by the SEFSC in the Council's deliberations for future management actions.**

Motion passed 10-2.

The Chairman clarified that the motion was to affirm the original OFL and ABC projections (Table 1 – yellow columns), but that the updated landings information should be considered when taking future management actions.

Standing and Reef Fish SSC Session

SEDAR 49 Data-limited Species Assessment, Part 1

Skyler Sagarese reviewed the current (status quo) methods used to set OFL and ABC for data-limited species under ABC Control Rule Tier 3a and 3b, and the data-limited approaches used in SEDAR 49. The status quo method was based on using a reference period of landing such as 1999-2008. OFL and ABC were set at the mean of the reference period landings plus or minus some multiple of the standard deviation. However, this method did not identify MSY, just some level of recent catch that may or may not be sustainable. SEDAR 49 evaluated a range of peer-reviewed methods collected into a Data-Limited Methods Toolkit (DLMtool), available at http://www.datalimitedtoolkit.org/. The DLMtool has been used by other agencies including the Mid-Atlantic Fishery Management Council, New England Fishery Management Council, California Department of Fish and Wildlife, and Southeast Fisheries Science Center for Caribbean Data-limited Species (SEDAR 46).

SEDAR 49 evaluated lane snapper, wenchman, yellowmouth grouper, snowy grouper, speckled hind, lesser amberjack, and almaco jack. Red drum was also evaluated, but did not have a reference period of federal landings. Yellowmouth grouper was later removed from consideration due to low catch levels and concerns about misidentification and data confidentiality.

Requirements for the status quo method include that the reference period removals (landings plus discards) have no trend and are relatively small relative to the stock biomass. Based on a trend line analysis, for the status quo method, the assumption of no trend during the reference period may need to be reevaluated for some stocks. In addition, red drum shows an increasing trend, but no reference period has been defined for the stock. Among the limitations of the status quo method, OFL and ABC are fixed values and will not change unless revisited by SSC. In addition, Catch-only methods perform poorly in simulation analyses.

Methods in the DLMtool can use information in addition to catch data, such as indices of relative abundance or indices of mean length. Management strategy evaluation (MSE) is used to determine the most appropriate data-limited approaches. This is not a one size fits all, but needs to be evaluated for each species. MSE consisted of several steps. First, the methods were evaluated to determine which were feasible given the available data. Methods that performed poorly (i.e., resulted in a high probability of overfishing) were then eliminated. MSE allowed the selected methods to be compared to the status quo methods. From this, a subset of methods could be selected to provide management advice. Several methods from the DLMtool were described.

The SSC was asked for guidance on a number of issues. One of the issues to address is whether the results should be considered OFL or ABC, which will depend upon the assumed stock status during the reference period. Another issue is how does catch advice derived from methods in DLMtool fit into the Gulf of Mexico ABC Control Rule? Finally, how should the SEFSC proceed, i.e., should it form a group to evaluate multiple species or focus on a single species for an in-depth evaluation? Several SSC members supported an in-depth evaluation of a single stock.

Results of the SEDAR 49 analysis will be presented at the next SSC meeting.

Gag Update Assessment

Model Configuration

Meaghan Bryan (NMFS/SEFSC) presented an update assessment to the 2013 SEDAR 33 gag benchmark assessment. The update assessment used the same Stock Synthesis 3 model configuration as the benchmark assessment except that the landings and fishery-independent datasets were extended to add the years 2013-2015. However, there were adjustments to some of the datasets. Recreational landings for 1963-1980 were re-estimated following suggested SEDAR best practices, and revisions were made to the recreational landings between 1981 and 2015 due mainly to the recent adjustments to the Access Point Angler Intercept Survey. After 2010, there was an increase in the commercial sector in discards of legal size gag, probably due to implementation of the grouper IFQ program. Recreational discards also increased, probably due to shortened fishing seasons and reduced bag limits. Prior to 2010, it was assumed that all gag above the minimum size limit were kept.

Gag are protogynous hermaphrodite (female to male). The age at 50% female maturity is 3.5 years, and the age at 50% transition to male is 10.7 years. Natural mortality was modeled as a function of age using a Lorenzen curve with a maximum age of 31 years and an average natural mortality rate of M=0.1342.

As with SEDAR 33, the 2005 red tide event was modeled as if the red tide were a fishing fleet with selectivity the same for all age groups. Sensitivity runs were carried out for the red tide events in 2014 and 2015.

Model Outputs

The model outputs for the update assessment (continuity model) indicated that, while spawning stock biomass has been increasing in recent years, the increase is not as rapid as indicated by SEDAR 33 (Figure 4). The number of recruits in 2006-2007 was also estimated to be less in the update assessment compared to SEDAR 33. A retrospective analysis showed similar trends, i.e., as data for each year 2015-2012 was subsequently removed from the model and the model re-run, the spawning stock biomass and recruitment estimates increased.

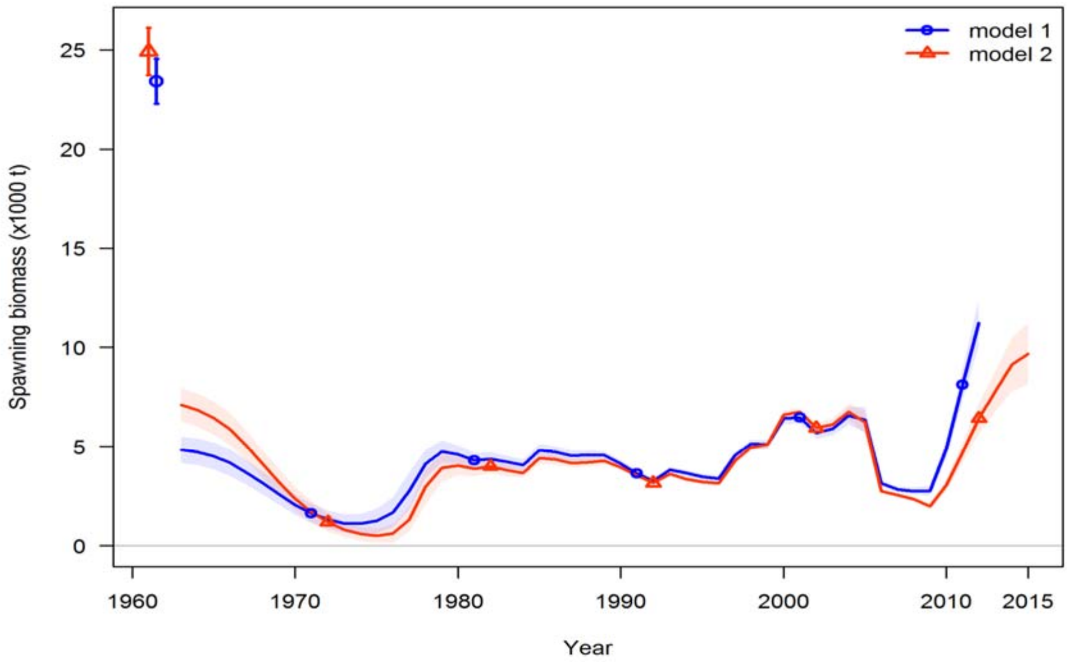

Figure 4. Spawning stock biomass estimates from SEDAR 33 (model 1) and the update assessment (model 2)

The red tide event in 2005 was reevaluated, and sensitivity runs conducted on the 2014, and 2015 red tide events. For the 2005 red tide event, the update assessment (continuity model) showed similar results to the SEDAR 33 analysis. However, when the effects of the 2005 red tide was combined 2014 or 2015, this number of dead discards was much higher (Table 2). This differs from the analysis conducted by FWRI following the SEDAR 33 assessment which concluded the 2014 red tide mortality was not substantial.

Table 2. Red tide sensitivity analysis

Model	Exploitation rate	Dead discards (1000s)
SEDAR 33	0.397	3405.69
Continuity	0.39	3216.48
Red tide 2005 and 2014	0.493, 0.564	5075.75, 4232.08
Red tide 2005 and 2015	0.425, 0.492	6718.35, 10366.1

The update assessment model outputs used to determine gag overfishing and overfished status are shown in Table 3. The fishing mortality rate that produces maximum yield-per-recruit (F_{MAX}) was used as a proxy for F_{MSY}. The current fishing mortality rate ($F_{CURRENT}$) was defined as the geometric mean of the fishing mortality rate for the most recent 3 years (2012-2015). As shown in Table 3, $F_{CURRENT}$ is well below the maximum fishing mortality threshold (MFMT) at just 41.6% of MFMT. **Therefore, the stock is not experiencing overfishing in the most recent 3 years**

(2013-2015). The current spawning stock biomass ($SSB_{CURRENT}$) was defined as the female biomass (in metric tons) in 2015. Table 3 shows that $SSB_{CURRENT}$ is above the minimum stock size threshold (MSST) at 156% of MSST. **Therefore, the stock is not overfished as of 2015**. In addition, $SSB_{CURRENT}$ is also above SSB_{MSY} (at 135% of SSB_{MSY}). Therefore, the stock is above the biomass level needed to obtain maximum sustainable yield on a continuing basis (assuming F_{MAX} is an appropriate proxy for F_{MSY})

Table 3. Stock status results from gag update assessment

		Model
		Continuity
Criteria	Definition	
Base M		0.134
Steepness		0.855
Virgin Recruitment	1000s	5030.8
SSB unfished	Metric tons	24908
F_{MSY} or proxy	F_{MAX}	0.1964
MFMT	F_{MAX}	0.1964
$F_{CURRENT}$	F (nyr-3)-nyr (geometric mean)	0.0817
$F_{CURRENT}$/MFMT		0.416
	Biomass criteria	
SSB_{MSY}	SSB at F_{MAX}	7171
MSST	(1-M)*SSB_{MSY}	6210.1
$SSB_{CURRENT}$	SSB2015	9688.07
$SSB_{CURRENT}$/MSST	SSB2015	1.56

OFL and ABC Projections

Following the presentation and discussion of the model results, the SSC passed the following motion to accept the assessment and the OFL yields shown below in Table 4.

> **Motion: That the SSC accept the continuity model as the best available science, and that the OFL yield streams resulting from the continuity model be accepted as shown in the table (Table 4), using the years 2017-2019.**

Motion passed 13-1 with 1 abstention.

The SSC felt that there was considerable uncertainty with the results of the gag update assessment for several reasons. Although the update assessment concurred with the SEDAR 33 results that the stock biomass was increasing, the strong retrospective pattern indicated previous management advice may have been optimistic. In addition, there is uncertainty about the level of discards in the private recreational fleet. In the continuity model, retention curves were used to account for private recreational discards. An alternative sensitivity model was run that assumed retention of gag in the recreational private fleet mirrored the retention of the headboat fleet. This simple change resulted in large changes in the model outputs, and would have indicated that the stock was overfished and experiencing overfishing. This indicated that the model is highly sensitive to its inputs.

Because of these uncertainties, the SSC felt that a conservative approach should be taken to setting ABC. Rather than use the ABC control rule's tier 1 spreadsheet to determine P*, the SSC asked the SEFSC for two alternative ABC yield stream for 2017-2019: 1) ABC at the lowest risk level authorized by the Council, P* = 0.30, and 2) ABC at the yield equal to 75% of F_{MAX}, which is consistent with the method previously used to set ABC following the SEDAR 33 assessment. The results for OFL and the two ABC yield streams are shown in Table 4:

Table 4. Projected Gag OFL and two alternative ABC yield streams, 2017-2019

Year	OFL at F_{MAX}	ABC at P* = 0.30	ABC at $0.75{*}F_{MAX}$
2017	4.68 mp gw	4.28 mp gw	3.59 mp gw
2018	4.34 mp gw	3.99 mp gw	3.50 mp gw
2019	4.18 mp gw	3.86 mp gw	3.52 mp gw
Equilibrium	4.05 mp gw	3.81 mp gw	4.10 mp gw

For consistency with the previous method of setting ABC, the SSC selected the ABC yield stream based on 75% of F_{MAX}.

Motion: The SSC recommends to retain the alternative method to the ABC Control Rule, setting ABC at the yield stream at 75% of F_{MAX}, using the years 2017-2019.

Motion passed 14-0 with 3 abstentions.

For comparison, the previously recommend OFL for 2017 was 5.13 mp gw, and the previously ABC for 2017 was 4.46 mp gw. Because of concerns about the condition of the stock, the Council has maintained an ACL of 3.12 mp gw.

Mechanism for Allowing Carryover or Quota Underharvest

Staff briefed the SSC on the premise behind the Council's desire to consider carrying over unused quota from the previous fishing year to the following fishing year.

SEFSC staff developed a simulation to demonstrate the hypothetical effect of carrying unused quota over to the following year, and the resultant effect on the rebuilding plan. Ultimately, the simulation showed that 100% of the unused quota could be carried over.

The simulation assumed a 20% underage for each of the directed fishing fleets, and this was assumed to be the hypothetical maximum underage based on historical landings. The final Stock Synthesis 3 projection model from the SEDAR 31 update assessment was used to determine the effect of the act of carrying over unused quota. The current allocation between the commercial (48.5%) and recreational (51.5%) sectors was used, and the landings were modified to simulate the 20% underage. The carryover was simulated to be added 2 years following the year from which the underage occurred to account for data processing time to ensure the use of finalized landings. For example, an underage from 2015 would not be carried over until the 2017 fishing year.

The act of carrying unused quota over to a fishing season 2 years later was demonstrated to have no negative long-term impact on spawning potential ratio, and therefore would not negatively impact the red snapper rebuilding plan. A key caveat to this simulation is that unused quota could only be given back to the fleet which had the underage in a previous fishing season. For example, an underage originating with the private recreational fleet could only be reassigned to that fleet, and not to the for-hire or commercial fleet. Adding an underage to a different fleet would result in different effects related to gear selectivity, size at age, and other metrics, and could therefore be detrimental to the rebuilding plan.

SEFSC staff stressed that this exercise should not form the basis of management advice; however they did indicate that the results of this simulation would likely prove similar for many of the species managed by the Gulf Council. The SSC was not requested to formally accept or reject the simulation, since it was created to be informative and address the SSC's previous concerns about the potential effect that carrying over unused quota could have on the rebuilding plan.

Analysis of Time for Stocks to Recover From MSST Under Different Life History Characteristics

At the January 2017 SSC meeting, the SEFSC presented an analysis of how long it would take stocks with various life history characteristics to recover to B_{MSY} (or proxy) from MSST levels of 90%, 85%, 75%, and 50% of B_{MSY} (or proxy). The species selected for analyses were based on having had recent stock assessments and a diversity of life histories, and were as follows (natural mortality rates are from NMFS stock assessments except where noted):

- Yellowfin tuna (M = 0.70)[1]
- Vermilion snapper (M = 0.25)
- Gray triggerfish (M = 0.27)
- Red Snapper (M = 0.09)
- King mackerel (M = 0.17)

[1] Yellowfin tuna natural mortality rate taken from Sculley, Michelle L., "Estimating Movement Rates of Atlantic Ocean Tropical Tunas, Katsuwonus Pelamis, Thunnus Albacares, and T. Obesus, from Tagging Data" (2016). Open Access Dissertations. Paper 1755. http://scholarlyrepository.miami.edu/cgi/viewcontent.cgi?article=2777&context=oa_dissertations

- western Atlantic Bluefin tuna (M = 0.14)[2]
- Gag (M = 0.13)
- Yellowedge grouper (M = 0.07)

The analyses projected that, for all species, recovery would occur in 10 years or less under all MSST levels (Table 5).

Table 5. Time to recovery from four definitions of MSST in the absence of fishing mortality

MSST Definition (% B_{MFMT})	Species							
	Yellowfin tuna	Gray Trigger-fish	King Mackerel	Vermilion Snapper	Gag Grouper	Red Snapper	Yellowedge Grouper	Bluefin Tuna
90	1	1	1	1	1	1	1	2
85	1	1	1	1	2	1	2	3
75	1	2	2	2	2	2	3	5
50	3	3	3	3	3	4	6	10

There is a large amount of uncertainty in the stock-recruit relationship, and in most cases it is impractical to eliminate all sources of fishing mortality. Furthermore, stocks are rarely found to be exactly at the MSST level, and may be substantially below MSST before overfished determinations are made. Consequently, actual recovery rates are likely to take longer than indicated in the analysis. Finally, analysis by Porch (2016)[3] suggests that there is very little chance that spawning potential levels would fall below 75% B_{MSY} unless overfishing had been occurring. Thus, it would seem inconsistent to wait until the stock had decreased to well below 75% of B_{MSY} to declare it overfished.

Following the presentation, the SSC voted to accept the analysis as the best scientific information available.

Motion: The SSC accepts the analysis of time for stocks to recover from MSST as the best available science.

Motion passed unanimously.

[2] Atlantic bluefin tuna natural mortality taken from Fonteneau, A. and J. Maguire. 2014. On the natural mortality of eastern and western Atlantic bluefin tuna. SCRS/2013/077. Collect. Vol. Sci. Pap. ICCAT, 70(1): 289-298. https://www.iccat.int/Documents/CVSP/CV070_2014/n_1/CV070010289.pdf

[3] Porch, C. E. 2016. On the probability that the spawning stock will fall below the minimum stock size threshold in the absence of overfishing. Sustainable Fisheries Contribution No. SFD-2016-001. https://grunt.sefsc.noaa.gov/P_QryLDS/download/SFD970_SFD-2016-001.pdf?id=LDS

Standing and Socioeconomic SSC Session

Discussion on Economic and Social Implications of Catch Limits

SSC members, led by Lee Anderson, Ben Blount, and David Griffith discussed how economic and social factors could be integrated into the setting of catch limits with respect to National Standards 5 and 8. Dr. Anderson felt that the SSC's setting of ABCs may be arbitrary. He demonstrated his point using an analogy for the probability of rain, such that the critical probability of something happening (rain), and the risk one is willing to accept in the event it happens depends on a ratio of cost/loss. He argued that P* cannot be set unless you know what the costs are of protecting (the stock), and the losses from not protecting. Essentially, what are the consequences in costs and losses from risk uncertainty? From a socioeconomic perspective, the SSC should think about what the loss is from managing toward a buffer (i.e., ABC) to prevent overfishing. Given the biological uncertainties in setting OFL, Dr. Anderson questioned whether exceeding OFL and thus triggering overfishing status necessarily means that the future of the stock is in jeopardy. He feels the SSC should consider what is being given up, as it is not clear that they are gaining protections that are really needed. In fact, the models may be overly conservative. Dr. Anderson noted that maximizing net benefits to the nation is the goal that should be addressed, as mandated by the Magnuson-Stevens Act.

Shannon Cass-Calay suggested that social scientists and economists could be integrated into the SEDAR process, which would enable them to contribute early to the work of the SSC. Other SSC members supported this suggestion.

Ben Blount provided background on how National Standard 8, with its emphasis on considering impacts on human communities, is integrated into federal fishery management. Other SSC members provided summaries of current work on integrating social science in fishery management. Steve Jacob described the development of social indicators at the community level to examine a community's engagement and reliance with a particular fishery, and the community's social vulnerability to regulatory change. Dr. Jacob noted that the next step is to predict quantitatively how community change may happen as a result of regulatory change, which includes processes of gentrification. David Griffith discussed the findings of his work for the Grouper-Tilefish IFQ program 5-year review. He noted changes relative to the discussion that have occurred include occupational shifting among fishermen, such that regulations may push fishermen to shift to other work, either full or part-time. He also noted the seasonal relationship between charter and commercial fishing in parts of the Gulf. Bob Gill raised the issue of the changing definition of "community".

In terms of socioeconomic factors that may be integrated in the control rule, Dr. Blount noted that changes in fleets, effort, and catch levels are some preliminary examples. Jim Tolan noted the importance of examining effort shift among species, such as when red snapper regulations result in effort shift to vermilion snapper and greater amberjack. SSC members noted that these shifts were foreseeable and that those substitutes may or may not have been satisfactory to participants and their fishing activity. Finally, Steven Atran will provide a white paper to the SSC describing ABC control rule alternatives that the SSC has discussed previously. He suggested that these could possibly be used as a basis for incorporating socioeconomic considerations into the ABC control rule.

Dates for Future SSC Meetings

Staff presented the tentative schedule of SSC meetings for the remainder of 2017. Meetings are normally scheduled 3 weeks before each Council meeting, but in March that would be the week of March 13, which is in conflict with the Gulf States Marine Fisheries Commission meeting, and with the black grouper SEDAR Data Workshop. The meeting cannot be rescheduled to an earlier week because the SEFSC will not have time to complete analysis needed for the meeting. Therefore, staff is proposing to reschedule the meeting for the week of March 21. One SSC member who is also on the Mid-Atlantic SSC stated that the Mid-Atlantic SSC is scheduled to meet on each of the dates that the Gulf SSC is scheduled for, so he has a conflict on all of the remaining meetings. Another SSC member stated that he has a conflict with the proposed March date. Another SSC member said he could be available on Wednesday and Thursday of the proposed March week. Staff suggested that the following week (week of March 27) was a possibility. That would eliminate a conflict for at least one of the SSC members.

SSC Members Present

Standing SSC

Joe Powers, V. Chair
Lee Anderson
Harry Blannchet[1]
Benjamin Blount
Mary Christman
Bob Gill
David Griffith
Jack Isaacs
Jeff Isely
Walter Keithly
Kai Lorenzen
Paul Mickle
James Tolan

1 – Attended via webinar both days
2 – Attended via webinar, day 2 only

Reef Fish SSC

Jason Adriance[2]
Robert Ellis[1]
Jennifer Herbig
John Mareska

Mackerel SSC

Jason Adriance[2]
Melissa Recks

Socioeconomic SSC

Steve Jacob
Sherry Larkin

Council Staff

Steven Atran
Doug Gregory
Ava Lasseter
Ryan Rindone
Charlotte Schiaffo

Others

Craig Brown, NMFS/SEFSC
Meaghan Bryan, NMFS/SEFSC
Shannon Calay, NMFS/SEFSC
Daniel Goethel, NMFS/SEFSC
Debra Lambert, NMFS/HQ[1]
Kevin McCarthy, NMFS/SEFSC
Adyan Rios, NMFS/SEFSC
Skyler Sagarese, NMFS/SEFSC
Michael Schirripa, NMFS/SEFSC
Matthew Smith, NMFS/SEFSC
Michael Drexler, Ocean Conservancy
Todd Gedamke, MER Consultants

1 – Attended via webinar

Council Representative

Martha Guyas