

Proposed SEDAR Schedule and Procedural Changes

SEDAR Steering Committee

May 18, 2009

ISSUE: Increasing SEDAR productivity and efficiency

BACKGROUND

SEDAR was designed as an intensive approach to preparing and reviewing stock assessments, and it has served well in this regard over several years in addressing the needs of many controversial stocks. SEDAR was also designed to be flexible and adaptive to the needs of the management programs which it serves, and now that assessments are, or are soon to be, completed for those stocks known as relatively data-rich or as having prior determinations of overfishing or overfished, management needs are shifting toward the multitude of data limited and previously unassessed stocks. Although SEDAR's current configuration and scheduling approach are appropriate for addressing a small number of stocks, consideration must be given to means of increasing production to meet the needs of the Councils and to fulfill the mandates of the reauthorized Magnuson-Stevens Act. This document provides an alternative approach to SEDAR scheduling and recommends methods of increasing the number of stocks assessed in each cycle. It also proposes modifications to the update process to improve production, coordination and support.

The basic proposal is to modify the SEDAR scheduling approach by incorporating a biannual rotation, with 1 year devoted to benchmark assessments and 1 year devoted to updates of prior benchmarks. Overall workshops may be reduced by combining the benchmark data and review workshops for all stocks during each benchmark year, while the number of assessment workshops may vary depending on the particular stocks to be assessed and the perceived level of analysis that is feasible. Workshop timing will be standardized to the extent possible, with the timing of the data workshop determined by data availability.

The two SEFSC assessment groups regularly conducting assessments for the South Atlantic and Gulf of Mexico Councils, including the Gulf group based at SEFSC HQ in Miami and the South Atlantic group based at the SEFSC lab in Beaufort NC, would operate on separate phases of the rotation so that when one team is conducting benchmarks the other team is conducting updates. Other SEFSC assessment teams potentially supporting SEDAR assessments, including the shark team based at the Panama City, FL lab, the shrimp team based at the Galveston, TX lab, and the Caribbean team based in Miami, would be brought in as necessary based on scheduled projects. Due to overlap in personnel among the Caribbean, shark, shrimp, and Miami domestic stocks groups, it will be best if benchmarks involving the shark, Caribbean, or shrimp teams are conducted when the Miami domestic stocks team is in an update segment of the schedule. Multiple data and review workshops may be unavoidable in these years. The FL FWCC has provided lead for some SEDAR stocks, and may continue to do so under this plan by folding such stocks in with either the Gulf or South Atlantic group benchmarks.

APPROACH

SEDAR Scheduling

Scheduling is addressed in 2-year blocks. One year is devoted to benchmark assessments and the other year is devoted to update assessments. Primary SEFSC assessment teams operate out of phase, with one addressing benchmarks while the other addresses updates. Using this approach, no SEFSC assessment team and no Council SSC will be involved in more than one benchmark cycle per year, and intensive benchmark years are followed by slightly less intensive update years, thereby giving both the assessment teams and the SSC participants a more manageable and consistent workload. Scheduling will be fixed within the year to enable participants to better plan their workloads. Besides convenience, this approach may also help to increase available participants as those regularly involved will be able to set aside time for workshops well in advance.

Number of Stocks Assessed

1-4 benchmark assessments will be conducted during each benchmark cycle, representing an increase from the 1-2 that are currently assessed. 3-6 update assessments will be conducted during each update cycle. It is envisioned that careful scheduling, including attention to appropriate combinations of stocks within each cycle as well as grouping of species having similar data availability and analytical expectations will allow further increases in the overall number of stocks assessed. For example, one team may focus on preparing benchmarks for two data-rich stocks with prior SEDAR catch-age model benchmarks, while another team focuses on production model benchmarks for a group of species that may have less data available and therefore support less intensive modeling approaches.

The total number of benchmark or update assessments that can be produced during each cycle is directly dependent upon the staff resources of the assessment agencies, primarily SEFSC and secondarily FL FWCC. SEFSC resources are allocated among a number of groups addressing specific assessment needs. Note that these groupings are not exclusive; key personnel will often interact with multiple groups as needed to meet project responsibilities.

Table 1. Assessment Staff Resources

Group	Normal Responsibilities	Number of Assessment Scientists, May 2009
Beaufort	South Atlantic Stocks	3
Miami Domestic	Gulf of Mexico Stocks	2
Miami Caribbean	Caribbean Stocks	2
Miami International	ICCAT Stocks	4
Panama City	HMS Sharks	2
Galveston	Shrimp	2
FL FWCC	FL Stocks	

Benchmark Process

The stocks to be assessed will be assigned to one or more assessment teams, with the number of teams convened determined by the number of stocks to be assessed and the analytical complexity required for each stock. Team participation will be similar to the composition of current Assessment workshops. The number of available teams is limited by SEFSC personnel availability.

Data Workshop

A single data workshop will be held each year, addressing all stocks to be benchmark assessed and involving all assessment teams. The workshop will be held between late March and early May, using terms of reference similar to those currently in place, with the exception that the DW would not be expected to provide the final, most up-to-date input dataset. The DW will focus on solutions to overall data issues and recommend tabulation approaches, with final data, including those for the terminal years, vetted through conference calls and required by July 1. Incorporating this deadline and workshop timing will reduce the lag between the date of the assessment and the terminal year of data included in the assessment

Assessment Workshop

There are two options to consider for the assessment workshop.

Option 1. Multiple assessment workshops.

Assessment teams will meet in separate assessment workshops to refine assessment models between July and September. A representative of the CIE will be added for each Assessment Workshop to broaden the perspective of the group and increase the level of expertise brought to bear at this stage of the process. Standing and ‘as-needed’ conference calls will be used prior to the assessment workshops. Standing calls will include one in mid-April convened to discuss available data and determine modeling approaches to be considered, and a second held prior to the AW to develop the suite of alternatives to be presented at the

AW. Addressing these issues in advance will allow AW teams to focus on refining and evaluating preferred configurations and uncertainties during the AW. Functioning base model configurations for all model approaches proposed for consideration will be available for review by all participants at least 2 weeks prior to the assessment workshop. Additional conference calls will be used if needed to finalize models, outputs, and documentation, but the intent is that results reflecting AW recommendations will be available for consideration during the AW.

Option 2. Single assessment workshop

There will be a single assessment workshop devoted to selecting a base model configuration, checking models and inputs for errors, interpreting results, identifying sources and discussing implications of uncertainties, and ensuring an appropriate range of sensitivities is brought forward to the review for all stocks assessed. An analytical team, composed of lead agency representatives and SSC appointees will be convened for each stock assessed. Each team will communicate amongst members via informal conference calls and emails to develop the base models and prepare reports that document model approaches and results. At least one formal conference call will be held with each team prior to the AW to finalize the base model and sensitivities for presentation at the AW. All analytical teams will come together in a single AW. Additional participants to be brought in for the AW include council members, AP members, and other constituent representatives. A representative of the CIE will be added for the Assessment Workshop to broaden the perspective of the group and increase the level of expertise brought to bear at this stage of the process. Team reports documenting their modeling efforts and results will be available for review by all AW participants at least 2 weeks prior to the assessment workshop. The AW report will focus on base model selection, evaluation of uncertainties, and interpretation of results. Additional conference calls will be used if needed to finalize the AW report, but the intent is that results reflecting AW recommendations will be available for consideration during the AW and the report will be completed at the end of the workshop.

Review Workshop

All benchmarks conducted during the period will be peer reviewed during a Review Workshop held in early January. No changes are proposed for the Review Workshop process, although the number of stocks reviewed will increase. It should be noted that it is not unusual for other similar review approaches, such as the SARC in the Northeast and the STAR in the Northwest to review 3-6 stocks during their review workshops.

Final dissemination of the assessment report will in early March, approximately 6 weeks following conclusion of the Review Workshop.

Update Process

Stocks scheduled for updates will be assigned to assessment teams, similar to the method proposed for benchmarks. The number of teams convened during the benchmark phase and the number of updates per team will vary based on the number of benchmarks required and the analytical requirements of the scheduled stocks. Analytical agency staff resources will limit the total number of teams available.

No significant changes are proposed for the update process. The SSC will play a key role in establishing the Terms of Reference, providing participants, and providing the final review. One proposed change is that a SEDAR Coordinator will be assigned to provide staff support to the update workshop, a responsibility currently assigned to an SSC member. Data will be scoped via conference call, likely held between March and May depending on the data availability for the particular stocks addressed. Final data will be expected by July 1.

Core analytical teams will prepare the base models and associated sensitivity runs, making use of additional conference calls if necessary to determine starting parameters and resolve modeling issues that arise. The analytical teams will come together in an update workshop, held between late August and mid-September, to select final model configurations and discuss results and uncertainties. This suggestion, that all update teams will come together in a single update workshop, is primarily intended to increase the level and breadth of expertise available to evaluate the model and findings, but holding one workshop will also reduce overall travel demands and hence cost (especially for key individuals who may be involved in multiple teams). Final documentation of the update will be made available to the SSC for review approximately 6 weeks following the update workshop. The SSC will review and evaluate the update and prepare a written report of their findings and recommendations.

BENEFITS

1. Improved planning and scheduling. Establishing fixed weeks for all workshops and dedicating a phase of the process to updates will enable typical participants to plan accordingly and in advance of individual project scheduling.
2. Reduction in overall workshops. SEDAR typically holds 2 data workshops, 2 assessment workshops and 2 review workshops per year for a total of 6 benchmark cycle workshops. The proposed approach would reduce this by 2-3 in most years, through holding 1 data, 1 review, and 1-2 assessment workshops. This will provide considerable economy in both participant's time and SEDAR budget obligations. Greater use will be made of conference calls and webinars to ensure that each assessment receives the attention and level of deliberation required.
3. Increased assessment productivity: This proposal slightly increases the overall number of both benchmark and update assessments conducted most years. Slightly increased productivity can be supported through reducing the number of workshops and therefore the time devoted to travelling, efficient grouping of stocks during each cycle, and building on the basic methods developed through previous SEDARS to efficiently deal with common data and analytical challenges. Integral to this component is the assumption that critical deadlines will be met, with two of the most important being the requirement for final input data available by July 1 and baseline model configurations available within 2 weeks of the assessment workshops.
4. Improved coordination and oversight of the update process. Scheduling updates so that they do not overlap benchmarks for each assessment group (ie, Beaufort and Miami groups of SEFSC) will reduce competing demands on analysts and critical support staff. It will allow SEDAR coordinator staff to play a greater role in the update process and increase the level of staff support

at update workshops. It will also ensure that updates receive due consideration and attention, and remove the potential perception that updates are not as integral to SEDAR as benchmarks.

PROPOSED SCHEDULES

General Annual Timing

Group 1: Benchmark Phase

- Mid-January: Data scoping conference call
- 3rd week of March: Data Workshop
- Mid-April: Assessment scoping call
- Mid-June: Data finalization DW conference call
- July 1: Final input dataset available to analytical team and DW report completed
- Mid-July/August: AW conference call to determine models and sensitivities to present at AW
- August-September: AWs held
- December 1: Final AW report completed
- Second week of January: Review Workshop
- March 1: SEDAR dissemination, full report available for SSC

Group 2: Update Phase

- March-April: Data scoping conference calls
- July 1: Final datasets available
- July-August: Analytical teams meet via conference calls to develop initial models
- Late August-mid-September: Update Workshop
- Late October: Update reports available to SSC

Potential Application to Scheduled Activities

In 2009, the Beaufort group is conducting several SA benchmarks and the Miami group is conducting several GOM updates. Initiating the phased approach proposed may therefore be accomplished most easily by starting the Beaufort team with an update phase and the Miami team with a benchmark phase in 2010. Gulf benchmarks would thereafter be conducted in even years and South Atlantic benchmarks in odd years. Ideally, Caribbean benchmarks would be conducted in odd years along with South Atlantic benchmarks to enable greater participation from the Miami group. HMS benchmarks should also be scheduled to optimize participation of Miami group staff.

Two alternative scheduling approaches are offered. The first, in Table 2, maintains consistency with the current assessment schedule. The second, in Table 4, deviates further from the current schedule to allot resources to unassessed stocks in 2010.

As currently scheduled, 2010 is a challenging year with significant demands placed upon the SEFSC due to scheduled benchmarks for the GMFMC, CFMC, and HMS sharks. It may be impossible to

meet these demands and fully implement the workshop and travel reductions contained in this proposal for 2010. Nonetheless, Table 2 illustrates how the currently scheduled projects could be adapted to this proposal. Table 4 provides an alternative schedule approach proposed to accommodate SEDAR involvement in developing MSY estimates for the remaining unassessed stocks in the Gulf and South Atlantic.

2010 Priorities

- Beaufort Group Projects, 2010: Updates of South Atlantic black sea bass, snowy grouper, and tilefish
- Miami Group Projects, 2010: Benchmark of Gulf of Mexico yellowedge grouper and tilefish (SEDAR 21 in current schedule); Caribbean benchmark of species to be determined.
- Shark Group Projects, 2010: Benchmark, species TBD.

Table 2. Modified application of the proposed approach for 2010-2012

Group	Beaufort		Miami			Others
Team	SAFMC		GMFMC	CFMC	Shark	
2009	B: black grouper, red grouper		U: gag, red grouper U: red snapper	Data Review, Monitoring Plan		B: ASMFC red drum
2010	U: sea bass (S24, 2011) ** snowy grouper, tilefish (2010)		B: GOM yellowedge, tilefish (S22, 2010) Goliath (S29, 2013)	B: TBD (S23, 2010)	B: TBD (S21, 2010)	ASMFC, Menhaden Review (S20, 2010) U: FL Spiny Lobster
2011	B: speckled hind, Warsaw grouper (S27, 2012) <i>Yellowtail</i> (FL FWC)		U: Gulf Amberjack (2010), vermilion & gray trigger, (2012)	B: TBD (S25, 2011)		B: FL FWC, <i>Yellowtail</i>
2012	U: red porgy (2012) <i>vermilion</i> gag (2011)		B: GOM Red Snapper (S26, 2012)		B: TBD (S28, 2012)	
2013	B: <i>White Grunt</i> (2 stocks expected), <i>Scamp</i> ?		U: 2-3 stocks TBD	B: (S30, 2013)		
2014	<i>U: amberjack</i> <i>red snapper</i>	B: <i>CMP stocks</i> <i>Cobia, Little Tunny, cero</i>	<i>U: King mackerel</i>			
2015						

New additions are italicized

Currently scheduled benchmarks and Update timing noted in parentheses.

Outlook 2010 - 2013

2010 will require 3 benchmark projects as currently scheduled because it will be impractical to combine sharks, Caribbean stocks, and Gulf of Mexico stocks into a single project. Both Caribbean and shark projects require dedicated projects due to their unique datasets and geographical distributions. It is unlikely that 3 benchmark projects can be accommodated without increased funding.

Once the hurdle of 2010 is cleared, the process proposed in this documents provides increased productivity such that all benchmark and update assessments now scheduled through SEDAR 30 in 2013 are accomplished by 2012, with the exception of SEDAR 30, which remains devoted to the CFMC in 2013. Caribbean and shark benchmarks are scheduled in alternate years to ease the workload.

Overall, several scheduled benchmarks are advanced (SEDAR 27 by one year to 2011, SEDAR 29, Goliath, by three years to 2010) and 6 benchmarks are added (3 CMP stocks in 2014, SAFMC white grunt (2 stocks expected) in 2013, FL yellowtail in 2011). Update of greater amberjack is delayed by a year to 2011, while updates of vermilion and gray triggerfish occur sooner, in 2011 rather than 2012. The South Atlantic gag update is delayed from 2011 to 2012, but additional updates of amberjack and vermilion snapper are added.

These additions and advancements in scheduling in future years are made possible through some minor adjustments. First, it is proposed that South Atlantic and Gulf of Mexico Cobia are addressed through teams from the Miami and Beaufort labs in 2014, along with the remaining stocks from the CMP plan (cero mackerel and little tunny). (NOTE: Both the Gulf and South Atlantic Councils have expressed interest in cobia assessments, though none are scheduled at this time. It is not known whether age structures evaluations are up-to-date for cobia, so scheduling cobia for 2010 may not be feasible)

Next, an update of South Atlantic black sea bass is proposed for 2010, thereby freeing up a full benchmark slot. Sea bass is currently scheduled for a benchmark in SEDAR 24, in 2011, but the primary underlying need is more up to date information that can be provided via another update. The SAFMC SSC advises conducting a sea bass updated because no new datasets are available and no alternative preferred modeling approaches have been identified.

Finally, the two phase approach begins to pay off with regard to updates in 2011 and 2012, with scheduled GOM updates occurring in 2011 and South Atlantic updates occurring in 2012. The cycles are filled out by adding in a few additional stocks.

Table 3. Net benchmark and update assessment productivity, 2010-2013, and changes achieved through Table 1. Note that species are not listed at this time for some scheduled benchmarks, in particular those for sharks and the CFMC. Those benchmark slots are counted as 2 ‘units’ for purposes of this table. The benchmark of Gulf red snapper is also counted as 2 units.

	TYPE	2010	2011	2012	2013	Total	Change
Current	Benchmark	6	4	6	3	19	
	Update	5	1	3	0	9	
	Total	10	5	9	3	27	
Proposed	Benchmark	7	5	4	4	20	+1
	Update	3	3	4	3	13	+4
	Total	10	8	8	7	33	

The Steering Committee must carefully consider whether the work load scheduled for 2010 is reasonable and whether funds will be available to support the number of workshops this workload will require. As Tables 1 and 2 show, it is not necessarily impractical to achieve the level of production planned for 2010 given appropriate consideration to scheduling and compatibility among projects. In fact, the proposed overall workload for 2011-2013 is similar to that now scheduled for 2010. Concern is raised for 2010 primarily because the wide range of projects scheduled offer little opportunity for combining efforts. Moreover, it will be very difficult to accommodate 3 benchmarks involving 3 jurisdictions and an unknown number of stocks under level funding scenarios.

The second alternative proposes allotting time in 2010 to address unassessed stocks to help the Councils meet the MSRA mandate of developing ABC and ACL values for all managed stocks by fishing year 2011.

Table 4. Alternative Scheduling with Benchmark-Update blocking

1) Projects added to evaluate all the unassessed stocks in 2010 for ABC determinations, re MSRA

2) Open benchmark slots allotted to stocks in the FSSI

Group	Beaufort		Miami			Others
Team	SAFMC		GMFMC		CFMC	Shark
2009	B: black grouper, red grouper U: sea bass (S24, 2011)		U: gag, red grouper	U: red snapper	Data Review, Monitoring Plan	B: ASMFC red drum
2010	B: Unassessed stocks project (Data evaluation, rapid assessment techniques)		B: unassessed stocks		B(S23, 2010)	B: TBD (S21, 2010) Menhaden Review (S20, 2010) U: FL spiny lobster
2011	B: speckled hind, Warsaw grouper (S27, 2012) Yellowtail (FL FWC)		U: Gulf Amberjack (2010), vermilion & gray trigger, (2012)		B: TBD (S25, 2011)	B: FL FWC, Yellowtail
2012	U: red porgy (2012) vermilion gag (2011)		B: GOM Red Snapper (S26, 2012)			B: TBD (S28, 2012)
2013	B: White Grunt (2 stocks expected), Scamp		U: 2-3 stocks TBD		B: (S30, 2013)	
2014	U: red snapper	B: CMP stocks Cobia, Little Tunny, cero	U: King Mackerel			B: Shrimp
2015	B: Dolphin, Wreckfish		U:	U:		B/U TBD
2016	U: amberjack U:		B: Goliath, Yellowedge Grouper, Tilefish			
2017	B B		U		B	
2018	U U		B: Hogfish			B
2019	B B		U			B FL?

A primary scheduling change applied in Table 4 is the shift of the Gulf yellowedge grouper and tilefish benchmarks to 2016. If the biannual scheduling approach is employed, the benchmark slot in 2010 is allotted to unassessed stocks, and the benchmark of red snapper is retained for 2012, the next available Gulf benchmark slots will be 2014 and 2016. Table 4 proposes addressing the CMP stocks jointly for both Councils, involving personnel from both assessment teams, in 2014. The Committee should determine whether cobia is a higher priority than yellowedge and tilefish. It should be noted that assessments of yellowedge and tilefish may be accommodated during the unassessed stocks block in 2010.