

SEDAR Steering Committee  
February 2004  
Attachment 1

**SEDAR – SouthEast Data, Assessment, and Review**

**Steering Committee Minutes  
April 7, 2004  
SEFSC, Miami FL**

1. Introductions

The meeting convened at 10:10 am in the SEFSC Directors Office.

Steering Committee Members in Attendance:

Roy Crabtree, SERO RA  
Nancy Thompson, SEFSC  
Wayne Swingle, GMFMC  
David Cupka, SAFMC  
Bobbi Walker, GMFMC  
Graciella Garcia-Moliner (for Miguel Rolon)

Other Attendees:

John Carmichael, SEDAR

2. Approval of Agenda

The Agenda was approved.

3. Approval of January 2004 minutes.

The minutes of the prior meeting were approved with minor editorial comment.

4. Future Assessment Priorities

The Committee reviewed the current SEDAR Schedule before discussing future priorities. The Committee agreed to increase the planning horizon to 3 years (6 SEDAR cycles), to allow more notice for completing research projects and meeting potential data needs, and to allow each Council to prioritize needs for 2 SEDAR cycles.

After discussing each Council's assessment priorities, the Committee agreed on the following assessment schedule:

SEDAR8: Fall 2004 – February 2005, Caribbean Yellowtail Snapper and Spiny Lobster  
All 3 workshops to be held in the Caribbean.  
Additional Review: Florida Spiny Lobster

SEDAR9. March of 2005 - August 2005.

Gulf of Mexico Vermillion Snapper and Greater Amberjack  
Review Gulf of Mexico Red Drum Escapement Estimates.

SEDAR10. September 2005 - February 2006

South Atlantic and Gulf of Mexico Gag Grouper

SEDAR11. March 2006 – August 2006.

Gulf and South Atlantic Gray Triggerfish

SEDAR12. September 2006 - February 2007.

South Atlantic and Gulf of Mexico Red Grouper

(Include 2005 data)

SEDAR13. March 2007 - August 2007.

Caribbean Yellowfin grouper, mutton and lane snapper.

Discussion of Atlantic/Gulf Spiny Lobster: The spiny lobster fishery is primarily prosecuted in Florida. The SEDAR Steering Committee recommends requesting the state of Florida to serve as the lead assessment agency and develop an assessment following the SEDAR workshop model. The SEFSC will provide additional support and assessment expertise if necessary. The assessment should be completed by February 2005 for review in the SEDAR 8 Review Panel.

General Workshop Information: Specific workshop dates will be selected at least 1 year in advance and so as not to conflict with currently scheduled Council and Commission Meetings, National scientific meetings (e.g. AFS), Holidays, and SEFSC obligations (e.g. ICCAT, NEFSC SARC). The SEDAR coordinator will work with Council Staff to determine workshop dates and locations.

Stock Assessment Update Priorities

South Atlantic Red Porgy for 2005

Shrimp as a possibility – explore assessment options and inclusion in SEDAR.

South Atlantic Vermillion Snapper and Black seabass for 2006

Long Term Priorities:

Councils should consider long-term priorities so that data collection programs can be implemented. The SEFSC will provide a summary of landings and current sampling intensity (total lengths and age structures, and number of trips sampled) by species to aid in planning and prioritization.

5. Funding

The SEFSC provided the Gulf Council with \$30,000 to help defray the travel and administrative expenses of SEDAR workshops.

6. SEDAR relation to Highly Migratory Species, esp. Coastal Sharks.

Tentative shark assessment schedule:

Summer 2005 – large coastal sharks

Summer 2006 – small sharks, sharpnose

These shark assessments will likely follow a SEDAR style assessment approach, including multiple workshops and an independent review.

7. Other Business

- Synchronizing Assessment and Management Planning

The Northeast Region uses a 'Coordinating Council' to plan both assessment and management plan activities. The SEDAR steering committee could serve a similar role. The Committee recommends that this be discussed further at a future meeting when more members are in attendance and supporting materials can be prepared. Nancy Thompson will provide information on the NE coordinating council for distribution and review.

- Red Snapper

The Steering Committee reviewed the tentative agenda for the red snapper data workshop and discussed workshop organization and planning.

8. Adjourn

The meeting was adjourned at 2:15 pm.

# SEDAR

## *SouthEast Data, Assessment, and Review*

South Atlantic Fishery Management Council  
 Gulf of Mexico Fishery Management Council  
 Caribbean Fishery Management Council  
 NOAA Fisheries  
 Atlantic States Marine Fisheries Commission  
 Gulf States Marine Fisheries Commission

1 Southpark Circle #306  
 Charleston SC 29407  
 Phone (843) 571-4366  
 Fax (843) 769-4520

### SEDAR History, Current Work Plan, and Future Priorities

Last Updated: January 12, 2005

#### 1. SEDAR Benchmark Assessment List

SEDAR #	SPECIES	Year	Status July 2004
1	SAFMC Red Porgy	2002	FINAL
2	SAFMC Vermillion Snapper/Black Seabass	2003	FINAL
3	SAFMCYellowtail Snapper ASMFC Atlantic Menhaden / Croaker	2003	FINAL
4	SAFMC Tilefish, Snowy Grouper	2003/04	ONGOING
5	SAFMC & GMFMC King Mackerel	2004	FINAL
6	FL (SAFMC/GMFMC) Goliath Grouper & Hogfish Snapper	2004	FINAL
7	GMFMC Red Snapper	2004	ONGOING
8	CFMC Yellowtail Snapper CFMC Spiny Lobster FL (SAFMC/GMFMC) Spiny Lobster	2004/05	PLANNING
9	GMFMC Vermillion/Greater Amberjack	2005	PLANNING
10	SAFMC & GMFMC Gag Grouper	2006	PENDING
11	SAFMC & GMFMC Gray Triggerfish	2006	PENDING
12	SAFMC & GMFMC Red Grouper	2007	SCHEDULED
13	CFMC Yellowfin Gouper, Mutton & Lane Snapper	2007	SCHEDULED

#### 2. SEDAR Assessment Update Schedule

Species	Benchmark SEDAR#	Scheduled for Update	Status
SA Red Porgy	1	2005	PENDING
SA Vermillion Snapper	2	2006	PENDING
SA Black Seabass	2	2005	PLANNING

#### 3. Future Benchmark Priorities

GMFMC	SAFMC	CFMC
Black Grouper	Red Snapper	
	White Grunt	
	Black Grouper	
	King Mackerel	

SEDAR Benchmark Assessment Schedule Priorities and Justification – 2005 - 2007.

SEDAR #	Expected Completion	Resource	Councils	Comments
SEDAR-8	May 2005	Spiny Lobster and Yellowtail Snapper	CFMC	Yellowtail data considered in SEDAR 3 but not assessed. Spiny lobster an important, primary species for which an assessment should be feasible.
		Spiny Lobster	FMRI has primary responsibility; GMFMC and SAFMC	FMRI has primary responsibility with state, councils, and NMFS jointly participating in the SEDAR review workshop.
SEDAR-9	Dec . 2005	Vermilion Snapper, Greater Amberjack (with Review of Red Drum Escapement Estimates)	GMFMC	Both stocks are under rebuilding plans and full assessments are due
SEDAR-10	May 2006	Gag	GMFMC and SAFMC	Last GMFMC assessment was in 2001; therefore, a full assessment is needed to update the status of the stock
SEDAR-11	Nov . 2006	Gray Triggerfish	GMFMC and SAFMC	Last GMFMC assessment was inconclusive. The Reef Fish Stock Assessment Panel decided not to specify the status determination criteria or a recommendation of the stock status. GMFMC would like to review the landing and CPUE data in 2005 at its July meeting to ascertain whether changes are occurring and whether landings have remained below the one million pound level as suggested by the Reef Fish Stock Assessment Panel.
SEDAR-12	May 2007	Red Grouper	GMFMC and SAFMC	Currently, the Gulf stock is under a program to arrest overfishing and the assessment needs to assess the effectiveness of that program.
SEDAR-13	Nov. 2007	Yellowfin Grouper, Mutton Snapper, Lane Snapper	CFMC	Data believed adequate to conduct assessment
		Black Grouper	GMFMC	GMFMC has requested that FMRI develop assessments for black grouper and scamp some time in the future.
		King Mackerel	SAFMC	SAFMC SSC rejected the assessment from SEDAR 5.

#### 4. Detailed Meeting Location Information for upcoming SEDAR workshops

##### **SEDAR 7: Gulf of Mexico Red Snapper**

Workshop	Data	Assessment	Review
Start	- completed -	- completed -	4/4/2005, 8:30 a.m.
End			4/7/2005, 6:00 p.m.
Location			New Orleans LA Country Inn & Suites
Address			315 Magazine Street New Orleans LA 70130
Phone			504-324-5400
cutoff			3/3/2005

##### **SEDAR 8: Caribbean Yellowtail Snapper and Spiny Lobster**

Workshop	Data	Assessment	Review
Start	- completed -	3/14/2005, 1:00 p.m.	5/16/2005, 1:00 p.m.
End		3/18/2005, 12:00 p.m.	5/20/2005, 12:00 p.m.
Location		St Croix USVI Divi Carina Resort	San Juan, PR Best Western San Juan Airport
Address		25 Estate Turner Hole Christiansted,USVI 00820	Luis Munoz Marin Int'l Airport 2nd Floor Carolina Puerto Rico 00981
Phone		877-773-9700 340-773-9700	800-981-1701 787-791-1700
cutoff		2/13/05	5/2/2005

##### **SEDAR STEERING COMMITTEE**

Meeting	February 2005		
Start	2/1/2005, 8:30 a.m.		
End	2/2/2005, 1:00 p.m.		
Location	Hampton Inn and Suites		
Address	678 Citadel Haven Dr. Charleston SC 29414.		
Phone	800-426-7866 843-573-1200		
cutoff	1/2/2005		

## 5. SEDAR WEEKLY PLANNING SCHEDULE

WEEK	Meeting / (Dates)	Location
<b>2004</b>	<b>2004</b>	<b>2004</b>
Nov 1-5	Nov 2 Election day	
Nov 8-12	GMFMC GCFI Nov 11 Holiday	So Padre Is TX St. Petersburg FL
Nov 15-19	ICCAT Commission	New Orleans LA
Nov 22-26	<b>HOLIDAY Block</b>	
Nov 29-Dec 3		
Dec 6-10	SAFMC <b>SEDAR 8 DataWorkshop</b>	Atlantic Beach NC <b>St Thomas, USVI</b>
Dec 13-17	<b>SEDAR 7 AssessWorkshop 2</b>	<b>Miami, FL</b>
Dec 20-24	<b>HOLIDAY Block</b>	
Dec 27-31	<b>HOLIDAY Block</b>	
<b>2005</b>	<b>2005</b>	<b>2005</b>
Jan 3-7	<b>HOLIDAY BLOCK</b>	
Jan 10-14	GMFMC	Baton Rouge LA
Jan 17-21	Jan 17 Martin Luther King Day	
Jan 24-28	ACCSP Bio & Bycatch (24-26) MARMAP Review (26-27) CFMC (26-27) <b>FL Spiny Lobster DW (25-27)</b>	Charleston, SC Charleston SC San Juan PR <b>Marathon, FL</b>
Jan 31-Feb 4	<b>SEDAR STEERING COMMITTEE (1-2)</b>	<b>Charleston, SC</b>
Feb 7-11	ASMFC	
Feb 14-18		
Feb 21-25	Feb 21 Presidents Day	
Feb 28-mar 4	SAFMC	GA
Mar 7-11	GMFMC	Birmingham AL
Mar 14-18	<b>SEDAR8 AW</b> <b>FL Spiny Lobster AW</b> GSMFMC	<b>Divi Carina, St Croix</b> <b>Marathon FL</b> Pt. Clear AL
Mar 21-25	Manag. our Nations Fish. II (24-26)	Washington DC
Mar 28-Apr 1	March 27 Easter ASMFC Tech Mtng Week	
Apr 4-8	<b>SEDAR 7 REVIEW</b>	<b>Country Inn Suites, New Orleans LA</b>
Apr 11-15		
Apr 18-22		
Apr 25-29		
May 2-6		
May 9-12	ASMFC GMFMC	Biloxi MS
May 16-20	<b>SEDAR 8 RW</b>	<b>San Juan Puerto Rico</b>
May 23-27		
May 30 – Jun 3	May 30 Memorial Day	
Jun 6-10		
Jun 13-17	SAFMC	FL
Jun 20-24		
Jun 27-Jul 1	ASMFC Tech Meeting Wk	
Jul 4 - 8	July 4 Independence Day	
Jul 11-15	<b>SEDAR 9 DW TENTATIVE</b> GMFMC	<b>TBD</b> Ft Meyers FL
Jul 18-22		

Jul 25-29		
Aug 1 – 5		
Aug 8 – 12	<i>ASMFC</i>	
Aug 15 – 19		
Aug 22 – 26		
Aug 29-Sep 2		
Sep 5-9	Sept 5 Labor Day	
Sep 12-16	<i>AFS 135<sup>th</sup> Annual Meeting</i> <i>GMFMC</i>	<i>Anchorage AK</i> <i>TBD</i>
Sep 19-23	<i>SAFMC</i>	<i>SC</i>
Sep 26-30	<b>SEDAR 9 AW TENTATIVE</b> <i>ASMFC Tech Mtng Week</i>	<b>MIAMI SEFSC</b>
Oct 3-7		
Oct 10-14	Oct 10 Columbus Day	
Oct 17-21		
Oct 24-28		
Oct 31-Nov 4		
Nov 7-11	Nov 11 Veterans Day	
Nov 14-18	<i>GMFMC</i>	<i>TBD</i>
Nov 21-25	<b>HOLIDAY Block</b>	
Nov 28-Dec 2		
Dec 5-9	<i>SAFMC</i>	<i>NC</i>
Dec 12-16	<b>SEDAR 9 RW TENTATIVE</b>	<b>TBD</b>
Dec 19-23	<b>HOLIDAY Block</b>	
Dec 26-30	<b>HOLIDAY Block</b>	
<b>2006</b>	<b>2006</b>	<b>2006</b>
Jan 2-6	<b>HOLIDAY Block</b>	
Jan 9-13		
Jan 16 - 21		
Jan 23 - 27		
Jan 30 – Feb 3		



SEDAR Operations Committee

Fall 2004

Discussion Paper and Recommendations

Attendance: John Carmichael, Mike Prager, Doug Vaughan, Jim Berkson, Mike Murphy, Jerry Scott

1. Nature and scope of the committee

Charge from the SEDAR Steering Committee:

*Convene an informal Operations Committee to help resolve procedural issues and assist in establishing realistic timelines. The Committee will be composed of representatives from offices with lead responsibility for assessment production: John Carmichael, SEDAR Coordinator; Jerry Scott, SEFSC Miami; Mike Prager, SEFSC Beaufort; a representative from FL FMRI, with Bob Muller suggested.*

Procedure: The Operations Committee will meet as needed to address procedural issues. Issues will be brought to the Committee by the SEDAR Coordinator. Issues may arise from the Councils, Council SSC's, assessment teams, or SEDAR workshop participants. The Operations Committee will review issues and make recommendations to the SEDAR Steering Committee. All decisions are the ultimate responsibility of the Steering Committee.

Action: The committee may more clearly define issues it wishes to address.

*Discussion and Recommendations:*

The SOC **recommended that the Operations Committee assume broad latitude in reviewing issues and making recommendations to the Steering Committee.**

2. Define the Scope of SEDAR

SEDAR was conceived as a process of developing and rigorously reviewing assessment information. It is more or less becoming the source of all assessment information. However, the guidelines do not make any statements that directly restrict all assessment information to SEDAR. Some believe that SEDAR is the process for providing all assessment information, while others believe it should be dedicated to benchmark assessments and highly controversial issues. As this committee knows only too well, a full SEDAR cycle is a time-consuming process. The work plan specifies that 2 SEDAR cycles will be conducted per year, with each cycle devoted to only 1 or 2 stocks (further limited to stocks that have some relation, e.g. 2 king mackerel migratory units, 2 deepwater S-G species). The only guidance provided is separation of 2 assessment categories, benchmarks and updates (next issue).

A process similar to SEDAR is the SARC of the NEFSC. SARC was originally intended to provide benchmark assessments, with every species addressed over a 5 year period. The goal was 8 assessments a year to address the approximately 40 species. Updates were to be done through regular channels to meet management needs. In practices, some get a SARC review nearly

annually and others go more than 5 years. Over the years SARC has also addressed assessment methods and data sources.

Action: Develop a purpose statement for SEDAR. Clearly state whether SEDAR will provide all assessment information for the Councils or focus more on controversial issues and major revisions. Should also consider whether SEDAR reviews should be applied to methodological issues such as new models or even survey reviews, i.e., oversight of procedures as well as products.

*Discussion and Recommendations:*

The SOP **recommends that using the SEDAR process to review methods could be useful, but should be considered a long-term priority**. Such activities could be considered in the future but should not in any way detract from the primary objective of producing assessments. The Council SSC and ad hoc review bodies should be considered for reviewing methods and data programs.

In discussing whether SEDAR should be the source of all assessment information or whether SEDAR should focus on benchmark assessments and controversial issues, the SOP **reiterated the value of SEDAR in producing benchmark assessments**. An abbreviated process should be developed for generating updated assessments. The SOP did not reach a consensus as to whether or not all assessment information, including updates and benchmark analyses should fall within the SEDAR process. The SOP **recommended that this is a policy issue that should be established by the Steering Committee**.

3. Guidelines for Assessment Updates.

The SEDAR guidelines identify 2 assessment categories: Benchmark Assessments and Update Assessments. Benchmark assessments are complete reviews of all data and methods developed through the full three-workshop SEDAR process (called a cycle). Update Assessments are an update of a benchmark assessment with the most recent information. Update assessments will be reviewed by Council SSC's. The goal is to increase productivity. The Steering Committee endorsed the concept of classifying assessments and is expecting guidance on procedures and definitions of each classification.

Action: - define "Assessment Update"  
- recommend guidelines for assessment updates  
- recommend target timelines for benchmarks and updates

Options:

- Updates done by same person/team as benchmark when feasible vs. anyone
- Updates strictly add new data vs. new data and model advancements
- Updates done totally outside SEDAR vs. including some SEDAR workshops
  - combination data-assessment workshop?
- Review by SSC (as now) or in a SEDAR review workshop?
- responsibilities for providing the data, getting it to the analysts – analytical team or other?
- Timing solely set by Council vs. recommendations at RW, in benchmark. Criteria?

*Discussion and Recommendations:*

There was considerable discussion on this issue. The first goal was to define an assessment update. The SOP agreed **that in the strict sense an update would only involve adding new data points to the data sets used in the benchmark assessment.** No changes in data sources, model method, or assumptions is allowed. The committee also **recommends that such a strictly defined update be prepared for any assessment update.**

The committee discussed the possibility of allowing some changes when an assessment is updated. Concern was expressed over possible repercussions from allowing even minor changes in input data and modeling method, essentially to account for improvements in ‘model technology’ or calculation of indices. There was strong concern that allowing any such changes would open the floor for more changes, and at some point a judgment will have to be made as to what changes are acceptable or minor and what degree of change moves the assessment from an update to a benchmark.

The committee discussed various ways of further defining an update and clarifying items which could change and still maintain the ‘update’ classification, such as allowing changes in model technology, input data assumptions, or index calculations that were endorsed by previous SEDAR review workshops. Also discussed was the possibility of a less intensive data-assessment workshop where only the changes were reviewed in-depth.

The committee discussed the possibility of a three-tiered assessment system, including benchmarks generated through the 3 workshop process, strict updates generated through less formal data-assessment workshop format and reviewed by the SSC, and an in-between category that would allow some changes in model, assumptions, and input data through an assessment generated by a less formal data-assessment workshop format and reviewed by a SEDAR Review Workshop. This option does not resolve the issue of determining how much change could be allowed in an update and determining who would have responsibility for making such decisions.

Despite discussing many alternatives for establishing boundaries on update modifications, the committee could not reach consensus on the degree of change allowable in a benchmark assessment without triggering a complete SEDAR review. Therefore, the committee **recommends that assessment updates be defined strictly, and only allow for adding new data points to the benchmark framework.**

The committee **recommends that an update assessment need not necessarily be conducted by the same analyst or agency that conducted the preceding benchmark assessment.** SEDAR is intended to provide adequate documentation of the methods and input data sources so that any qualified analyst could conduct the update, not just those who prepared the benchmark.

The committee **recommends that update assessments be prepared through a SEDAR workshop format, and that shortened workshops or combined data-assessment workshops are preferable to the previous system where one analyst did the work alone.**

The committee believes that efficiency and productivity in SEDAR workshops will continue to improve.

#### 4. Workshop Responsibilities

The goal of SEDAR workshops has always been to complete rough drafts of the data and assessment reports by the end of each workshop. At the first several workshops much of the report writing was left until after the assessment workshop. As a result, many decisions were inadequately documented and much of the writing fell to a few individuals. Documentation of SEDAR workshop decisions and analyses has improved considerably with the implementation of

the working paper series and the separation of the report into segments completed through each workshop. However, there is still room for improvement in the documentation process.

Based on participant responses, the most complete and efficient report yet provided was that from the SEDAR 7 Data Workshop. The approach used there reflects the current evolution of workshop responsibilities and could serve as a model for clarifying workshop tasks and assignments.

*SEDAR 7 Data Workshop Assignments*

Workshop Chair: Responsible for conducting the plenary sessions and ensuring workgroups meet task deadlines.

Workshop Rapporteur: Responsible for editing and compiling the report.

Workgroup Leaders: Responsible for leading workgroups, reporting to the plenary, and drafting their workgroup's report segment.

A number of improvements were implemented during the SEDAR 4 Assessment Workshop to improve QA/QC that could be considered for inclusion in the guidelines.

*SEDAR 4 Assessment Workshop Assignments*

Data Review: Responsible for checking and verifying accuracy of input files

Code Review: Responsible for checking and verifying model code

Species Leader: Responsible to tracking plenary suggestions and decisions, drafting text during the workshop. Co-editor of report following workshop.

Lead Biologist(analyst): Lead for the assessment team, responsible for making model runs and presenting results to the group. Assumes lead writing duties following the workshop.

Clarifying tasks to be completed and identifying jobs to be filled for each workshop will improve efficiency at the workshops and assist the councils in making appointments. Assigning responsibilities well in advance of the workshop will reduce confusion.

**Actions:**

Recommend specific job assignments for each workshop.

Recommend appropriate group to fill the roles (i.e., council SSC vs. SEFSC)

Recommend deadlines for assigning roles to participants

*Discussion and Recommendations:*

**Data Workshop:**

The committee **recommends standardizing file formats and software**, to avoid the difficulties created by multiple platforms and file conversions.

The committee **recommends establishing a chief editor for the data workshop**, and using this term rather than rapporteur. This job should be assigned in advance of the workshop, and needs to be someone with the time and resources to properly complete the task. The SEDAR Coordinator should work with the Steering Committee and others making appointments to the workshop to find a suitable editor.

Assessment Workshop:

The committee **recommends assigning data and code review responsibilities at every assessment workshop**. The SEDAR Coordinator should work with the steering committee to ensure appropriate personnel are appointed to handle these tasks.

The committee **recommends assigning a species leader** as listed above. This is an important task with two primary responsibilities of keeping notes and drafting text. The Leader should be provided additional help as needed. As with the other jobs, these responsibilities should be assigned early in the planning process.

The Committee **recommends identifying a lead analyst**. Having this person assume editing and report drafting responsibilities after the workshop creates some challenges due to the shifting of responsibilities. Other possibilities should be explored in the future.

The Committee **recommends assigning a report editor as at the Data Workshop**.

Review panel:

The committee discussed selecting a strong presenter to present information at the review workshop, rather than a default reliance on the lead analyst. **No consensus recommendation was reached at this time.**

General:

The committee discussed the challenges of filling all the necessary workshop jobs, ensuring the appropriate expertise is appointed, and providing participants adequate time both before and after the workshop to complete all necessary tasks. The committee **recommends that appointments be made well in advance (6 months) of the data workshop, and that all workshop appointments be made at this time to ensure the appropriate expertise is available at the appropriate workshop.** (*NOTE: The Councils made great strides in this area over the last 9 months*)

The committee discussed the conflicting workshop tasks of chairing and coordinating and noted that simply running the meeting can often require one's full attention. The committee **recommends that for especially controversial issues the Steering Committee consider appointing a facilitator or independent chair** to help move the data and assessment workshops along and strongly prod the participants to complete the tasks. This is similar to the process in place for the Review Workshop, and would free the SEDAR Coordinator to focus attention on monitoring progress and housekeeping chores.

## 5. Improving Workshop productivity

SEDAR workshop productivity has improved greatly. Positive examples include the SEDAR 4 Assessment Workshop and the SEDAR 7 Data Workshop. In some instances, however, the workshops are failing to complete the assigned tasks. The SEDAR 4 Data Workshop report was not completed until right before the Assessment workshop, by some accounts the SEDAR 5 Assessment Workshop failed to produce a true benchmark assessment, the SEDAR 7 Assessment workshop failed to complete an assessment, and the SEDAR 4 Review Workshop noted that data sources were not evaluated as required in the Data Workshop Terms of Reference. Many difficulties over the past year are simply a result of an overly optimistic schedule that failed to allow adequate time between workshops. This has been addressed by limiting SEDAR to 2 cycles per year. Although this leaves a seemingly adequate 6 months to complete each cycle, it should be noted that SEDAR 4 spanned 8 months and, with the delay in SEDAR 7, that cycle will ultimately take as long as 10 months.

A number of productivity improvements have been derived during the last several SEDAR's that could be incorporated into the standard procedures. Conversely, some things have been tried that may or may not be working as hoped. Some of these items are common to SEDAR workshops while others have only been used once or twice.

#### 5.1 Current Productivity Enhancements:

1. Working Papers: The working paper approach facilitates discussion during the workshops and accomplishes much of the data cleaning-formatting work prior to the workshop.
2. Working Groups: The workgroups used at the data workshops increase productivity and improve documentation.
3. Assessment Team Meetings: During the weeks leading up to the SEDAR 4 Assessment Workshop the analytical team held weekly conferences to address ongoing data and analytical issues. This helped resolve many of the issues that would otherwise have bogged down the assessment workshop. Early identification of data problems also ensured that solutions were found before the workshop and prevented critical failures.
4. Assessment Summary document (Advisory Report): Drafting responsibility for this report was transferred from the Review Workshop for SEDAR 4 to the Assessment Workshop team. This allowed the reviewers to focus solely on their consensus report, and as a result they largely completed a thorough report by the conclusion of the workshop.
5. Separating Data and Assessment Reports: Requiring each workshop to provide a complete report improves documentation and eliminates the many loose ends that resulted from allowing the Data Workshop to complete only a segment of the report.
6. Standardized Report Outline: The standard report outline has helped the many new or less experienced participants better understand what is expected of each workshop. Over time it should also make the reports more user-friendly to the Councils. It also facilitates drafting introductory sections prior to the workshops.

#### 5.2 Procedures that still need some work:

1. Report formatting assistance/technical editing: The task of editing and formatting SEDAR reports is a formidable task that some feel would be better left to administrative personnel rather than analysts. The primary time killing tasks are embedding figures and graphics, generating cross references, and creating the TOC and table and figure lists. Outsourcing formatting was tried for the SEDAR 4 Assessment Report with mixed results. It ultimately took 4 rounds of inserting figures, creating tables, and adding references before the report was done. The formatting tended to get messed up with each subsequent version of the report. The concept is good, there just needs to be better planning for the implementation.

#### *Suggestions:*

Abandon this approach?

Continue with changes?

Formatting duties left to one person, writers/editors provide simple text and placeholders

Clarify figure and table formats in advance, and provide them in desired format to the technical editor.  
Provide ample time for the editor to complete formatting tasks.

*Discussion and Recommendations:*

The committee discussed the need for highly detailed assessment reports, and questioned whether the labor involved was worth the effort. The Committee **recommends that the level of detail required in the outline be maintained**, acknowledging that it is necessary and should reduce the effort in conducting assessment updates. The Committee discussed the need for additional assistance in the technical aspects of report preparation, and **inquired as to the possibility of requesting a technical writer be provided**, similar to the support that is provided at international meetings such as ICCAT or ICES.

2. Working Papers distribution: The working papers are most helpful when they are provided to workshop participants 2-3 weeks in advance of the workshop.

*Discussion and Recommendations:*

The committee **recommends that planning for workshops be started well in advance and appointments be made sufficiently in advance of the data workshop so that work can get started early and papers can be completed.**

The committee discussed the possibility of establishing deadlines for working paper submission, perhaps 2 weeks prior to the workshop. There was an impression that instituting deadlines would do little to improve the overall problem of workload and productivity, and **recommended that strict deadlines not be established.**

3. Initial Working Papers presentations: Most workshops have started with a day or so of presentations. This helps to bring everyone up to speed, and may be unavoidable when materials are provided at the workshop, but it is a significant time drain. In some instances, it sets an expectation that the workshop participants are more reviewers and less hands-on participants.

*Suggestions:*

For DW, have group leaders make brief presentations – 30 mins max

For AW, have lead assessment bio make brief presentation

Provide Working papers well in advance.

Try to focus discussions early on: presenters provide a decision matrix

*Discussion and Recommendations:*

The committee preferred to leave procedures flexible. It was suggested that the bigger problem is getting adequate advance preparation for the workshops and ensuring a plan is established for addressing issues early enough in the workshop. The committee **recommended conference calls between the SEDAR Coordinator, workgroup leaders, and lead analysts to identify issues prior to the workshop and develop a strategy** for addressing them. There should be a strategy conference call one

week before the workshop between the SEDAR Coordinator, Workgroup Leaders, and the lead editor.

The committee supported **limiting the presentations to a short treatment by each workgroup leader that primarily focuses on issues for the workshop to resolve.** However, the committee did not support making this a strict requirement since such an action could be too rigid and every situation will present unique challenges.

4. Advisory Report: This is a summary of the assessment and is intended for managers and fishermen. The Advisory Report was initially drafted by the review workshop. However, the report is intended to be light on text and heavy on figures and tables, the data for which are not always easily accessible or readily available to the reviewers. Formatting figures and tables is also time consuming. On the other hand, having this drafted by the AW could result in significant changes following the review. Council members appreciate the summary nature of the report and wish to see it remain a product.

Suggestions:

- Make it an AW product

- Allow assessment team latitude in modifying after the review

- Don't draft until after the review

- Make it a RW product, require analysts to provide spreadsheet of figs and tables

*Discussion and Recommendations:*

The committee **recommends changing the name of the advisory report to "Assessment Summary"**, assigning the assessment team to prepare the summary, encouraging that it be drafted prior to the review workshop, and allowing editorial license to address post-review changes. The committee recommends that the summary be presented at the front of the assessment report and serve as an executive summary.

5.3 General Areas for further improvement

1. Workshops, not reviews. Some SEDAR workshops are functioning in the true sense of the word, but at others the participants are largely reviewers, offering little in the way of hands-on participation. This is especially true of the assessment workshops where the participants still lean heavily on SEFSC staff to do all the work.

Suggestions:

- Develop a work group strategy for the assessment workshops

- Assigning tasks as noted above – and help to clarify the skills that should be appointed

- Improve dissemination of data and models before and during the workshops, so others can do exploratory, sensitivity analyses, produce tables and figures

- Training so there are more capable analysts

*Discussion and Recommendations:*



The committee **recommends that broad expertise is needed at the assessment workshop**, especially to include those with first-hand knowledge of key datasets. One possibility is to include the workgroup leaders from the Data Workshop on the Assessment Workshop Panel. The committee **recommends that, similar to the Data Workshop recommendation, a strategy conference call be held between the SEDAR Coordinator, species leader, report editor, and analytical team one week prior to the workshop to identify the controversial issues and items to resolve, and develop an appropriate agenda and plan for the workshop.**

2. Getting data evaluated: SEDAR was developed with the idea that participants would bring raw data to the data workshops and the assessment datasets would be compiled within the week. The reality is that this is not practicable. Working papers are the first step. Now we need to focus on evaluation of data sets – much of this type work is being held until the assessment workshop, thus interfering with completing the assessment work (essentially the problem with SEDAR 7). Some of this will be unavoidable, as the reliability of data are often not questioned until they are put into the context of the assessment model.

Suggestions:

Modify the DW statement of purpose to require that basic data manipulation and error checking be conducted in advance. Participants come with functional datasets in hand, prepared to debate their merits and develop methods of evaluation.

Require that datasets be submitted in advance (1 month) so all participants have an opportunity to familiarize themselves with the information, perhaps come up with ideas for evaluation.

Some method of putting data into an assessment context well in advance of the actual assessment workshop, perhaps last day of the data workshop? – Such as having an analytical team working to develop a simple model while the DW participants are drafting their reports, and make a presentation on the last day. This would require the bulk of the basic data to be completed early in the week

#### *Discussion and Recommendations:*

Modifying Purpose Statement:

The committee **recommends that the purpose statement and guidelines for the DW be modified to indicate that basic data preparation be completed prior to the workshop.**

Establishing data submission deadline:

The committee was hesitant to establish a strict deadline due to perceptions that deadlines are not effective. Further, in many instances data are still being finalized up to the week of the assessment workshop. The committee **recommends requesting data be submitted 1 month in advance, providing guidance on formatting requirements, and examples of basic exploratory work that should be completed prior to the workshop.**

Model work or analyses during DW:

The committee considers this unfeasible and unrealistic. The problems may be solved by better data representation at the Assessment Workshop. One possibility is to **include the data workshop workgroup leaders as participants at the AW.**

3. Getting data distributed: SEDAR was developed with the idea that those leaving the data workshop could have the complete assessment dataset in hand. Further, all datasets would be warehoused in a consistent format with clear supporting documentation and metadata. In many cases the datasets are not finalized until right before the assessment workshop. Very few participants outside the analytical team are getting easy access to the basic datasets. Initial raw datasets are not making their way through the process, such that they are available to the reviewers as originally intended. The intent is good and still viable, however manpower, coordination, and time are lacking.

*SUGGESTIONS:*

Add a TOR to provide all basic datasets on cd to all DW and AW participants.

Set a reasonable deadline for compiling and providing all datasets.

Assign a dataset coordinator, tracker, something for the DW. SEDAR Admin??

Require supporting details for data submission

Develop a data format and submission form

*Discussion and Recommendations:*

The committee does not believe another deadline will help, and reiterates that everyone is trying to complete the necessary tasks but the workload is burdensome and manpower is stretched thin. Workshop participants need to be more proactive in obtaining data during the workshop. The committee **recommends that an initial call for data be made well in advance of the workshop and that appropriate reminders of data formats and data needs be included.**

4. Getting assessments completed: SEDAR was originally developed with the idea that raw data from the AW would be modeled at the assessment workshop. This is not practicable. In reality, the models need to be well developed prior to the assessment workshop. The challenge is finding a way to develop the models that adheres to the SEDAR concepts of increased participation and transparency

*Suggestions:*

- 1) Change the AW statement of purpose to focus on refining models that are developed in advance, identifying and developing sensitivity analyses, and drafting a truly interpretative report. Essentially require that the bulk of the modeling work be done in advance.

*Discussion and Recommendations:*

The committee acknowledges that much of the assessment modeling must be and is done in advance, but **recommends that the statement of purpose not be changed to make this an explicit requirement or expectation.** There is concern that such a change would detract from the workshop's purpose and cast participants into the role of reviewers.

- 2) Implement regular meetings of the assessment team in the weeks leading up to the AW (i.e., the SEDAR 4 AW model). Expand this to include the entire AW (which may require restrictions on the size of the AW – although some may forgo this opportunity).

*Discussion and Recommendations:*

The Committee acknowledged that the team meetings of SEDAR 4 helped resolve many issues in advance, but was opposed to formalizing the process. There is also concern that participants could be overwhelmed if asked to contribute through regular meetings prior to the workshop. There is concern that SEDAR should not attempt to control participants work loads to such a degree.

- 3) Create analytical teams – subgroups of those assigned to the AW, limited to those with actual assessment expertise who have the ability to run models and conduct analyses. Charge the teams with developing a base model configuration, drafting a working paper describing their model for the AW.

*Discussion and Recommendations:*

The Committee's comments on this issue were similar to those for other previous suggestions geared toward completing more work in advance, with concerns expressed over participant workloads, willingness and ability of appointees to contribute, a reluctance to overly formalize the process, and concern that this option would make assessment workshops function more as reviews.

The committee **recommends that collaboration be conducted with the entire AW through email, name AW participants at the same time as DW participants and have them attend the DW, and generally coordinate the model preparation informally.**

- 4) Hold 2 assessment workshops: (as happened for SEDAR 7). The first will be a first look and opportunity to evaluate the data more thoroughly, then the analytical teams will go and do the work, then come back for a second workshop to refine, develop sensitivities, and draft the report.

*Discussion and Recommendation*

The committee acknowledges that in some cases 2 assessment workshops would be useful, but is not realistic given timelines and workloads, that there will always be a desire for additional time to understand and comprehend the analyses. The committee **recommends maintaining that the current single AW approach.**

5. Consideration of alternative models: SEDAR TOR's state that several models should be developed, and such a practice should be standard for benchmark assessments. In many cases only a single model receives most of the work, with alternatives being put together at the last minute.

*SUGGESTIONS:*

Create several analytical teams, each assigned to a different model type (i.e. basic VPA, SCA, ASPIC), and allow the teams to develop base configurations prior to the workshop.

*Discussion and recommendations:*

The committee notes that alternative models can mean simply a change in how a model is configured, and should not always be taken to imply a completely separate model implementation or approach. Many of the same people would be involved in developing alternative models, so individual teams may not be practical. The committee reiterated earlier concerns about the difficulties and drawbacks of attempting too much work in advance. The committee **recommends against this change at this time.**

6. Post-Workshop edits and corrections: There are always numerous changes to reports and model results following the workshops. In some instances workshop participants have complained of being 'out of the loop' after the workshop. The Team approach may help alleviate some of this with the data workshop, especially if the teams need to continue their collaboration following the workshop to complete their report segment. Establishing assessment workshop work groups may do the same for the AW.

*Suggestions:*

Ensure that all workshop participants have an opportunity to review the final documents.

Encourage email collaboration with participants following the workshop if errors arise or edits are required.

Allow ample time between the AW and RW so deadlines can be reasonable.

*Discussion and Recommendations:*

**The committee supported the suggestions.**

6. Review of Timeline

Current target timeline:

Cycle length: 6 months/24 weeks.

1-2 years in advance: species identified

6 months in advance: Times and Places selected, participants named

4 months in advance: Workgroups assigned, leaders selected, rapporteur selected

**SUGGESTION: add scoping sessions of some sort – calls with the workgroup leaders to identify issues.**

Week 1: DW working papers distributed, basic data sets distributed

Week 4: Data Workshop

Week 7: Final Data Workshop report completed, analytical teams identified

Week 10: Deadline for AW working papers

Week 12: Assessment Workshop

move a week from between AW and RW to put more between the DW and AW – little more between data and assessment... minimum between AW and RW?? 6,8 weeks.

Week 18: Final Assessment Report completed.

Week 22: Review Workshop

Week 24: Advisory Report completed; RW reports completed

*Discussion and Recommendations*

The committee **recommended minimum times between workshops of 8-10 weeks between data and assessment workshop and 10-12 weeks between assessment and review workshops.**

SEDAR Steering Committee  
February 2004.  
Attachment 4.

SAFMC SSC motion regarding updates of SEDAR stock assessments for the SAFMC:

MOTION: There are two types of Stock Assessments being considered:

- a. A major benchmark assessment where all data, methods, model structures, assumptions, etc. are on the table and under review.
- b. An updated assessment which starts with a recent, major benchmark assessment, incorporating updated data with possible minor changes to data sources, model structure, assumptions, etc.

Assessment updates are to use the same modeling methods and include new annual data on catch, size/age and catch-per-unit effort indices previously utilized in the assessment.

Type 1 Assessments should be completed within the SEDAR process with full participation throughout and a formal peer review.

Type 2 Assessments should be completed through the update process which should incorporate representatives from relevant agencies and should be peer reviewed by the SSC. All potential assessment updates should be approved by the SSC in principle before the major work begins, to ensure that the magnitude of the changes is appropriate for the update process. The SSC will determine if the magnitude of the changes is large enough to require assignment to the SEDAR Process.

APPROVED BY SSC

## **Proposal for SEDAR Update Assessments**

M. H. Prager, D. S. Vaughan

29 October 2004

### **Introduction**

There are two points of view on how a SEDAR update assessment should be conducted. On the one hand, the wish for continual improvement in methods suggests that updates should use better data treatments and model structures if available. On the other hand, the wish for a less labor-intensive assessment cycle and the need for accountability suggest that updates should be based strictly on the preceding benchmark assessments. This proposal attempts to bridge that gap by presenting a middle-of-the-road definition for a SEDAR update assessment cycle.

### **Objectives and Definitions**

The objective of a SEDAR update cycle is to provide a defensible assessment with less resource demand than that of a full SEDAR cycle. It does that by being derived from the immediately preceding benchmark assessment.

A SEDAR update assessment differs from a SEDAR benchmark assessment in the following ways:

1. An update assessment (if conducted) follows a SEDAR benchmark assessment of the same species at a biologically meaningful interval.
2. An update assessment is developed through an abbreviated SEDAR workshop cycle that omits the Review Workshop. The update assessment is reviewed by the Council's SSC.
3. An update assessment uses the same data sources and same basic model structure as the preceding benchmark assessment. By default, data treatments and model details are kept constant. However, refinements may be introduced into data treatments and model structure, but only if those refinements have been applied to a similar species in a SEDAR benchmark assessment that has successfully undergone a full SEDAR Review Workshop.
4. The report documenting an update assessment is abbreviated, consisting of reference to the preceding benchmark assessment, a description of any refinements, and description of results, focusing on stock status and management benchmarks. It is anticipated that the report will be no more than 15 pages in length.

## **Workshop Structure and Procedures**

A SEDAR update cycle includes the following workshops:

- Scoping Workshop (SW)
- Assessment Workshop (AW)
- SSC Workshop (SSCW)

Participants in the SW and AW are selected as for a full SEDAR cycle. Both workshops require participation of all major data holders and those likely to lead the modeling efforts. It is desirable that biologists from all states potentially affected by the assessment should attend. Also welcome, as always, are participants representing NGOs and the Council's relevant Advisory Panel.

The Scoping Workshop occupies 1.5 to 2 days. Data sources, data treatment, and modeling methods are discussed. Proposals are made and discussed for refinements, and consensus is achieved on the form of the upcoming update assessment. Then, assignments are made for data preparation and model development work. A development period of approximately 60 days follows the workshop.

The subsequent Assessment Workshop occupies about 4 days. Procedure and activities are similar to those for a benchmark assessment. If model or data refinements have been made, the previous model/data configuration is exercised along with the new configuration, for comparative purposes. The assessment report should be drafted during the workshop. A finalization period of approximately 60 days follows, to allow for any additional modeling or writing that may be required. Following the finalization period, the AW report is submitted to the SSC.

The SSC Workshop is independent of SEDAR, so it is not described here in detail. It is anticipated that participants in the AW will attend the SSC Workshop to present the work. It is also anticipated that the review will take no longer than one business day.

## **Resource Needs**

Resource needs for an update cycle are less than those of a full SEDAR cycle, but demands on staff and budget are still significant. SEDAR staff or others will be required to schedule meetings, make arrangements, lead meetings, and meet legal requirements (e.g., tape recording, Federal Register notices). Scientific staff will be required to prepare data sets, revise and improve models, run old and new models and projections, make analytical graphics, prepare the report, and present the work to the SSC. The preceding list includes most of the elements of a full SEDAR cycle, so time savings to scientific staff are relatively minor. Nonetheless, significant fiscal and time savings are expected from omission of the Review Workshop.



## **SEDAR Stock Assessment Report Outline**

### **I. Introduction**

Cover Page  
Table of Contents

1. SEDAR Process Description
2. Management Overview
  - 2.1 Management Unit Definition
  - 2.2 Regulatory History
3. Assessment History
4. Stock Assessment Summary

SEDAR STAFF  
COUNCIL/SERO STAFF

LEAD ASSESSMENT AGENCY  
ASSESSMENT WORKSHOP

### **II. Data Workshop Report**

*(Developed by Data Workshop Panel)*

Cover Page  
Table of Contents  
List of Tables  
List of Figures

1. Introduction
  - 1.1. Workshop Time and Place
  - 1.2. Terms of Reference
  - 1.3. List of Participants
  - 1.4. List of Data Workshop Working Papers
2. Life History
  - 2.1. Natural Mortality
  - 2.2. Age
  - 2.3. Growth
  - 2.4. Reproduction
  - 2.5. Stock Definition and Description
3. Fishery Descriptions and Data Sources
  - 3.1. Commercial (May be further divided by gears)
    - 3.1.1. Overview
    - 3.1.2. Commercial Landings
    - 3.1.3. Commercial Discards
    - 3.1.4. Commercial Sampling Intensity
    - 3.1.5. Commercial Catch-at-Age/Length
  - 3.2. Recreational (May be further divided by Sectors, e.g., headboat, private, charter)
    - 3.2.1. Overview
    - 3.2.2. Recreational Landings
    - 3.2.3. Recreational Discards
    - 3.2.4. Recreational Sampling Intensity
    - 3.2.5. Recreational Catch-at-Age/Length
4. Fishery-Dependent Survey Data
  - 4.1. Description of Survey (to 4.x where x= # of Surveys)
    - 4.1.1. Methods, Gears, and Coverage
    - 4.1.2. Sampling Intensity – Time Series
    - 4.1.3. Size/Age data
    - 4.1.4. Catch Rates – Number and Biomass
    - 4.1.5. Uncertainty and Measures of Precision

5. Fishery-Independent Survey Data
  - 5.1. Description of Survey (to 4.x where x= # of Surveys)
    - 5.1.1. Methods, Gears, and Coverage
    - 5.1.2. Sampling Intensity – Time Series
    - 5.1.3. Size/Age data
    - 5.1.4. Catch Rates – Number and Biomass
    - 5.1.5. Uncertainty and Measures of Precision
6. Research Recommendations
7. Literature Cited
8. Tables
9. Figures

### **III. Stock Assessment Workshop Report**

*(Developed by Assessment Workshop Panel)*

*(If multiple assessments are produced from a single data workshop report, each should have a dedicated Assessment Report (section III) denoted by letter, e.g. III.A, III.B)*

- i. Cover Page
  - ii. Table of Contents
  - iii. List of Tables
  - iv. List of Figures
1. Introduction
    - 1.1. Workshop Time and Place
    - 1.2. Terms of Reference
    - 1.3. List of Participants
    - 1.4. List of Assessment Workshop Working Papers
  2. Data Issues and Deviations from Data Workshop Recommendations
  3. Stock Assessment Models and Results
    - 3.1. Model 1 (Up to 3.X, where X = # models considered)
      - 3.1.1. Model 1 Methods
        - 3.1.1.1. Overview
        - 3.1.1.2. Data Sources
        - 3.1.1.3. Model Configuration and Equations
        - 3.1.1.4. Parameters Estimated
        - 3.1.1.5. Uncertainty and Measures of Precision
      - 3.1.2. Model 1 Results
        - 3.1.2.1. Measures of Overall Model Fit
        - 3.1.2.2. Parameter estimates
        - 3.1.2.3. Stock Abundance and Recruitment
        - 3.1.2.4. Stock Biomass (total and spawning stock)
        - 3.1.2.5. Fishery Selectivity
        - 3.1.2.6. Fishing Mortality
        - 3.1.2.7. Stock-Recruitment Parameters
        - 3.1.2.8. Measures of Parameter Uncertainty
        - 3.1.2.9. Retrospective and Sensitivity Analyses
  4. Models Comparison
    - 4.1. Compare and Contrast Models Considered
    - 4.2. Preferred Model Recommendation
  5. Population Modeling
    - 5.1. Yield per Recruit Models
      - 5.1.1. Methods
      - 5.1.2. Results
    - 5.2. Stock-Recruitment Models

- 5.2.1. Methods
- 5.2.2. Results
- 5.3. Other Methods Considered
  - 5.3.1. Methods
  - 5.3.2. Results
- 6. Biological Reference Points (SFA Parameters)
  - 6.1. Existing Definitions and Standards
  - 6.2. Estimation Methods
  - 6.3. Results
    - 6.3.1. Overfishing Definitions and Recommendations
    - 6.3.2. Overfished Definitions and Recommendations
    - 6.3.3. Control Rule and Recommendations
  - 6.4. Status of Stock Declarations
- 7. Projections and Management Impacts
  - 7.1. Projection Methods and Assumptions
  - 7.2. Results
    - Abundance, Biomass, Exploitation, Stock Status, Yield,*
    - 7.2.1. Projection at  $F=0$
    - 7.2.2. Projection at  $F$  current
    - 7.2.3. Projection at  $F$  target
    - 7.2.4. Projection at  $F_{msy}$
    - 7.2.5. Projection at  $0.5 * F_{msy}$
- 8. Research Recommendations
- 9. Literature Cited
- 10. Tables
- 11. Figures

#### **IV. Review Workshop Report**

*(Developed by Review Workshop Panel)*

- i. Cover Page
- ii. Table of Contents
- 1. Introduction
  - 1.1. Workshop Time and Place
  - 1.2. Terms of Reference
  - 1.3. List of Participants
  - 1.4. List of Review Workshop Working Papers
- 2. Consensus Reports
  - 2.1. Species 1
  - 2.2. Species 2
  - 2.n Species N

## DESIRED TABLES

All input data and model configuration information should be included in the assessment report in tabular form. Figures should be used to support the assessment and describe the input data, but no input data shall be presented solely in figure format. Large datasets such as length distributions or age-length keys may be included as appendices. Preliminary work and accessory tables in working papers may also be cited. However, all information required as input data for the assessment model shall be listed in the report tables in the level of detail required for the assessment. The basic rule of thumb to follow is that the assessment report should contain all data necessary to duplicate the stock assessment.

The following list indicates the general information to be included in the tables of the assessment report. In some instances the list may include information (such as fecundity) or suggest a level of detail (such as 'by age') that is not feasible given the available data. Several listed items may be included in a single table. It is recognized that the specifics of each table can and will vary by assessment. The required reporting detail will be dictated by both data availability and modeling approach. For example, if the assessment model is based on annual landings at length by gear, then the report must include a table of landings by gear, year, and length class. Further, a model based on length may require that life history characteristics such as mean weight be reported by length class as well as age. Fisheries that have 'fishing years' that do not correspond to calendar years will require reporting of some data in both calendar and fishing year.

### INPUT DATA TABLES (Data report section)

#### Life History

- Mean weight & length
- Maturation schedule
- Fecundity
- Age-Length keys
- Growth models

#### Catch

- Total annual landings
- Landings by sector (i.e., comm and rec)
- Landings by gear/sector
- Landings by state/jurisdiction/sector
- Discards, discard losses, release mortality, by sector/gear
- Catch mean weights, by sector/gear
- Length distributions, by sector/gear/year, season
- Total catch time series as input to model

#### Sampling

- Length, age, weight sampling intensity
- Number of samples taken
- Number of trips sampled

#### Dependent Surveys and Effort

- Total effort
- Effort by gear/sector
- Effort by state/jurisdiction
- Survey CPUE time series as input to model

#### Independent Surveys

- Survey Effort
- Survey Coverage
- Survey length/age distribution
- Survey CPUE, Catch
- Survey CPUE time series as input to model

## **ASSESSMENT RESULTS TABLES (Assessment Report)**

### Input specifications

Complete list of input specifications required for the model  
e.g., fitting methods, min/max limits, ages for averaging, assumptions  
List of all parameters estimated

### Measures of precision and fit

Error components, contribution to total error  
Sums of squares, variances, CV's, and other statistical measures for est. values  
Error weighting values  
Residuals (plotted)  
Time series of observed and predicted values for fitting/tuning criteria (plotted)

### Population Estimates

Total annual abundance  
Abundance at age  
Recruitment  
Biomass, annual and by age  
Spawner abundance and biomass, annual and by age  
Fecundity, total annual and by age

### Exploitation

Fishing mortality, annual and by age  
Selectivity or partial recruitment

## **POPULATION MODELING**

### Yield per Recruit

Complete input values table  
Complete results table  
Figure of yield and ssb per recruit

### Stock-Recruitment modeling

Table of input values  
S-R parameter estimates and precision measures  
residual plots

## **PROJECTIONS AND BENCHMARKS TABLES**

### Inputs

Catch or exploitation assumptions  
Starting population values  
Fishery characteristics – selectivity, limits, weights  
Stock-recruit model or assumption

### Projection Results

Population abundance  
Recruitment  
Biomass  
Catch  
Exploitation

### Benchmark Results

SFA criteria values, confidence intervals  
*Fmsy, MSST, MFMT, Bmsy, Generation time estimate*

Generic SEDAR Data Workshop Terms of Reference

1. Determine the quality and appropriateness of life-history information.  
Address the following items:
  - Stock structure and unit stock identification
  - Natural mortality
  - Ageing methods, age structure sampling, and age determinations
  - Growth models, by length and weight
  - Reproductive characteristics: sex ratio including transitions, maturity, and fecundity
  - Generation time
2. Determine the quality and appropriateness of stock abundance indices (MARMAP, SEAMAP, headboat CPUE, commercial logbook CPUE, etc.).  
Provide the following:
  - Summary of survey methods, especially noting any changes
  - Details of sampling intensity and coverage
  - Maps of area and depths sampled
  - Survey values
3. Determine the quality and appropriateness of fishery data.  
Provide the following:
  - Annual landings by appropriate strata
  - Biological sampling details (intensity, coverage)
  - Length and age distributions
  - Discard rates, release mortality, and estimated discard removals
4. Provide a review of past assessment methods.
5. Determine the quality and appropriateness of available data for estimating impacts from proposed or existing management measures.
6. Recommend possible assessment methods and appropriate models given the quality and scope of the data sets reviewed.
7. Provide recommendations for future research (field and assessment).
8. Prepare a Data Workshop Report based on the SEDAR Assessment Report Outline and addressing the Terms of Reference and providing DW endorsed datasets. Submit the report to SEDAR within 4 weeks of the conclusion of the workshop.

Generic SEDAR Assessment Workshop Terms of Reference

1. Identify appropriate modeling approaches based on available data sources, parameters and values required to manage the stock, and recommendations of the Data Workshop.
2. Document any deviations from Data Workshop recommendations or modifications to data provided by the Data Workshop.
3. Estimate stock parameters, including but not necessarily limited to the following:
  - Population abundance at age
  - Population biomass
  - Spawning stock biomass
  - Fishery selectivity at age and size
  - Fishing mortality
  - Yield
  - Stock-recruitment relationship
4. Evaluate uncertainty related to input data, modeling approach, and model configuration. Provide representative measures of precision for stock parameter estimates.
5. Provide complete SFA benchmarks. Evaluate any existing SFA benchmarks, estimate alternative SFA benchmarks if appropriate, estimate SFA benchmarks (MSY,  $F_{msy}$ ,  $B_{msy}$ , MSST, and MFMT) if not previously estimated, and develop stock control rules.
6. Evaluate stock status relative to SFA criteria. Provide clear statements of stock status relative to 'overfishing' and 'overfished'.
7. Estimate ABC and TAC levels if appropriate.
8. Provide predictions of future population conditions and stock status for the following future fishing mortality levels:
  - 1) current  $F$  (based on recent average),
  - 2)  $F=0$ ,
  - 3)  $F = F_{target}$
  - 3)  $F = F_{msy}$ ,
  - 4)  $F = 0.5 * F_{msy}$
9. Evaluate the impacts of current management actions, with emphasis on determining progress toward stated management goals.
10. Provide recommendations for future research and data collection (field and assessment); be as specific as possible in describing sampling design and sampling intensity.
11. Provide an Assessment Workshop Report based on the SEDAR Assessment Report Outline and addressing the Terms of Reference. Submit a Final report to SEDAR within 3 weeks of the conclusion of the workshop.
12. Prepare a Stock Assessment Summary Report summarizing the stock assessment. Submit a final report within 3 weeks of the conclusion of the review workshop.

Generic SEDAR Review Workshop Terms of Reference

1. Evaluate the adequacy and appropriateness of all data used in the assessment and state whether or not the data are scientifically sound;
2. Evaluate the adequacy, appropriateness, and application of the methods used to estimate population parameters such as abundance, biomass, and exploitation and state whether or not the methods are scientifically sound;
3. Evaluate the adequacy, appropriateness, and application of the methods used to estimate population benchmarks (*e.g., MSY, Fmsy, Bmsy, MSST, MFMT, or their proxies*) and state whether or not the methods are scientifically sound;
4. Evaluate the adequacy, appropriateness, and application of the methods used to project future population status and, if appropriate, evaluate predictions of stock rebuilding; state whether or not the methods are scientifically sound;
5. Ensure that all available required assessment results (*as listed in the SEDAR Stock Assessment Report Outline*) are clearly and accurately presented in the Stock Assessment Report and that such results are consistent with the Panel's decisions regarding adequacy, appropriateness, and application of the data and methods;
6. Evaluate the performance of the Data and Assessment Workshops with regard to their respective Terms of Reference, and state whether or not the Terms of Reference for those previous workshops are adequately addressed in the Stock Assessment Report;
7. Review research recommendations from the Data and Assessment Workshops; make additional recommendations.
8. Prepare a Peer Review Consensus Summary summarizing the Panel's evaluation of the stock assessment and addressing each Term of Reference. (Drafted by the Panel during the Review Workshop with a final report due three weeks after the workshop ends.).



SEDAR Steering Committee  
February 2004  
Attachment 8.

Suggested Attendance List for Spiny Lobster SEDAR Assessment

**Assessment Workshop Marathon FL**

March 15-17, 2005

Starts 8:30 am on 15<sup>th</sup>

Ends 5 PM on 17th

FWC

**Bill Teehan**  
**John Hunt**  
**Bill Sharp**  
**Bob Muller**  
**Tom Matthews**  
**Rod Bertelsen**  
**Carrollyn Cox**  
**Rick Beaver**  
**Luiz Barbieri**  
Ann Jackson

Marine Fisheries Management  
FWRI Marathon  
Marine Fisheries Management  
FWRI St. Pete  
FWRI Marathon  
FWRI Marathon  
FWRI Marathon  
FWRI Marathon  
FWRI St. Pete  
FWRI St. Pete

Council Member

**Tony Iarocci**  
**Roy Williams**

SA Council  
Gulf Council

NMFS/Council Staff

**Joe Idoine**  
**Larry Jacobsen**  
**Ed Little**  
**John Carmichael**  
**Greg Waugh**  
**Roy Crabtree or designee**  
**Stu Kennedy**  
**Joe Powers**  
Jeff Polovina  
Dawn Aring

NE Fishery Center  
NE Fishery Center  
NMFS Key West  
SEDAR Coordinator  
SA Council staff  
NMFS St. Pete  
Gulf Council staff  
**NMFS Miami**  
NMFS Hawaii  
Gulf Council staff

Commercial Industry

**Jerry Sansom** Executive Director OFF

Gulf Council AP

**Ralph Boragine** Executive Director  
**Bruce Irwin** middle Keys  
**Simon Stafford** lower keys  
**Jeff Cramer** upper Keys

Council AP

Recreational Sector

No one

Other People

**Nelson Ehrhardt**  
Eric Johnson  
**Todd Kellison**  
**Mark Butler**  
**Douglas Gregory**  
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