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Atlantic States Marine Fisheries Commission Tech. Support Group Guidance and Benchmark Stock Assessment Process 2/2016

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February 2016

Vision: Sustainably Managing Atlantic Coastal Fisheries

Atlantic States Marine Fisheries Commission

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The Commission would like to acknowledge the efforts of the two committees that have overseen the revisions and additions to this document – the Management and Science Committee and the Assessment Science Committee.

This document was first approved in May 2015. February 2016 revisions include clarifying the role of ASMFC staff on species technical committees and stock assessment subcommittees; and modifying guidance on the participation of law enforcement representatives and technical committee chairs at species management board meetings.

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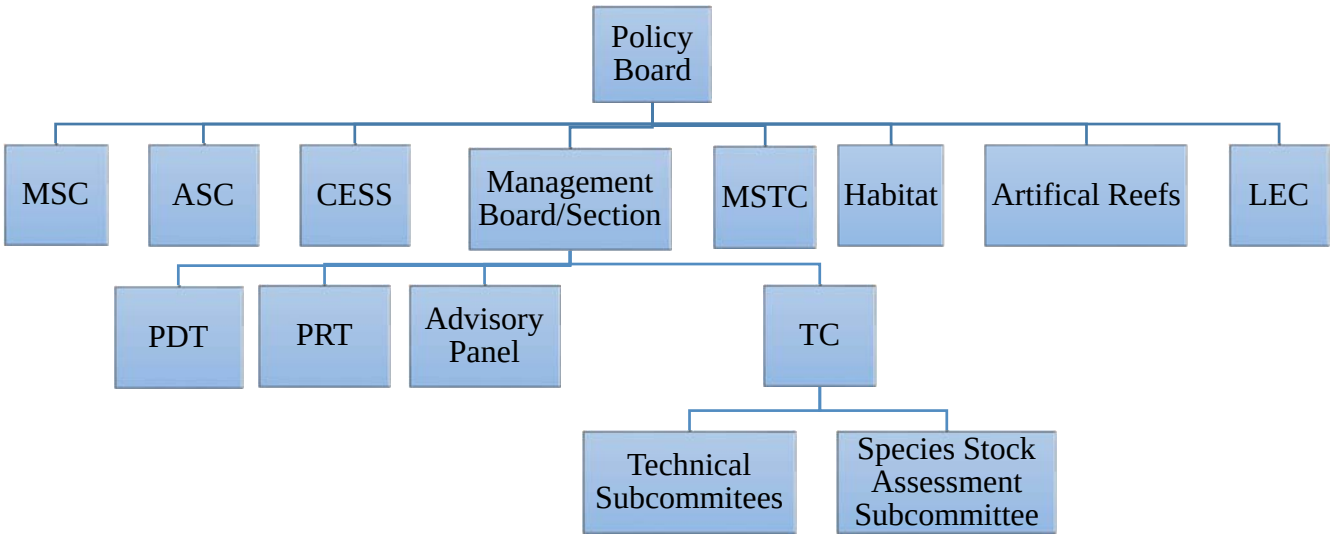
1.0 INTRODUCTION

The purpose of this document is to improve the functioning of the Atlantic States Marine Fisheries Commission (Commission) by providing guidance to all Commission technical support groups on the structure, function, roles, and responsibilities of Commission committees and their members. This document also provides guidance on the Commission stock assessment process.

2.0 BOARDS AND COMMITTEES

This section contains a brief outline of the structure, composition, and function of Commission committees. For additional details, please consult the Interstate Fisheries Management Program Charter.

Committee Organization



2.1 ISFMP Policy Board

The Interstate Fisheries Management Program (ISFMP) Policy Board is comprised of: all member states of the Commission, each state a voting members (The position of a state shall be determined by caucus of its Commissioners in attendance); one representative from NOAA Fisheries and one representative from U.S. Fish and Wildlife Service (USFWS) each a voting member; one representative from the Potomac River Fisheries Commission and one representative from the government of the District of Columbia shall each be a member, eligible to vote, on any matter which may impose a regulatory requirement upon their respective jurisdictions; and one representative of the Commission's Law Enforcement Committee (LEC) is a non-voting member.

The ISFMP Policy Board is responsible for the overall administration and management of the Commission's fishery management programs. The goal of the program is to promote the cooperative management of marine, estuarine, and anadromous fisheries in state waters of the East Coast through interstate fishery management plans (FMPs). The major objectives of the ISFMP are to:

- Determine the priorities for interjurisdictional fisheries management in coastal state waters;
- Develop, monitor, and review FMPs;
- Recommend to states, regional fishery management councils, and the federal government management measures to benefit these fisheries;
- Provide an efficient structure for the timely, cooperative administration of the ISFMP; and
- Monitor compliance with approved FMPs.

2.2 Management Boards and Sections

Management boards are established by and advise the ISFMP Policy Board. Each board/section is comprised of the states/jurisdictions with a declared interest in the fishery covered by that board/section. The boards/sections consider and approve the development and implementation of FMPs, including the integration of scientific information and proposed management measures. In this process, the boards/sections primarily rely on input from two main sources – species technical committees and advisory panels. Boards/sections are responsible for tasking plan development teams (PDTs), plan review teams (PRTs), technical committees (TCs), advisory panels (APs) and stock assessment subcommittees (SAS). Each management board/section shall select its own chair and vice-chair. Chairmanship will rotate among the voting members every two years.

2.3 Plan Development Teams

PDTs are appointed by boards/sections to draft FMPs. They are comprised of personnel from state and federal agencies who have scientific and management ability, knowledge of a species and its habitat, and an interest in the management of species under the jurisdiction of the relevant board. Personnel from regional fishery management councils, academicians, and others as appropriate may be included on a PDT. The size of the PDT shall be based on specific need for expertise but should generally be kept to a maximum of six persons.

2.4 Plan Review Teams

PRTs are appointed by the boards/sections to review regulations and compliance. Members are knowledgeable concerning the scientific data, stock and fishery condition, and fishery management issues. PRTs are responsible for providing advice concerning the implementation, review, monitoring and enforcement of fishery management plans that have been adopted by the Commission, and as needed be charged by the board/sections. The PRT should generally be kept to a maximum of six persons.

2.5 Advisory Panels

AP members include stakeholders from a wide range of interests including the commercial, charter boat, and recreational fishing industries, conservation interests, as well as non-traditional stakeholders. Members are appointed by the three Commissioners from each state with a declared interest in a species because of their particular expertise within a given fishery. APs provide guidance about the fisheries that catch or land a particular species. The AP's role is to provide input throughout the entire fishery management process from plan initiation through development and into implementation.

2.6 Technical Committees

Management boards/sections appoint TCs to address specific technical or scientific needs requested periodically by the respective board/section, PDT, PRT, or the Management and Science Committee (MSC). A TC may be comprised of representatives from the states, federal fisheries agencies, Regional fishery management councils, Commission, academia, or other specialized personnel with scientific and technical expertise and knowledge of the fishery or issues pertaining to the fishery being managed. The TC should consist of only one representative from each state or agency with a declared interest in the fishery, unless otherwise directed by the board/section.

TCs are responsible for addressing specific technical or scientific needs of the board/section, PDT, PRT, or the MSC. TCs can be asked to provide a technical analysis of AP recommendations. Although the TC may respond to requests from multiple committees, the board/section provides oversight of TC tasks and priorities. When tasked by multiple committees, it is the responsibility of the ISFMP staff, in consultation with the TC and board/section chairs, to prioritize these tasks. Although members have been appointed to the TC by their specific agency, each member's responsibility is to use the best science available in an objective manner, not to represent the policies and/or politics of that agency.

2.7 Stock Assessment Subcommittees

Upon the request of a board/section, the TC shall nominate individuals with appropriate expertise in stock assessment and fish population dynamics to a species stock assessment subcommittee (SAS), which will report to the TC. SAS nominations are approved by the board/section and shall continue in existence as long as the board/section requires. Membership of a species SAS will be comprised of TC members with appropriate knowledge and experience in stock assessment and biology of the species being assessed. Individuals from outside the TC with expertise in stock assessment or biology of the species may also be nominated and appointed, if necessary. The TC chair will serve as an ex-officio member of the species SAS. Overall membership should be kept to a maximum of six persons unless additional analytical expertise is requested by the board, TC or SAS.

2.8 Management and Science Committee

The MSC provides advice concerning fisheries management and the science of coastal marine fisheries to the ISFMP Policy Board. MSC's major duties are to provide oversight to the Commission's Stock Assessment Peer Review Process, review and provide advice on species-specific issues upon request of the ISFMP Policy Board, evaluate and provide guidance to fisheries managers on multispecies and ecosystem issues, and evaluate and provide advice on cross-species

issues (e.g., tagging, invasive species and exotics, fish health and protected species issues). The MSC also assists in advising the Policy Board regarding stock assessment priorities and timelines in relation to current workloads. The MSC is comprised of one representative from each member state/ jurisdiction, the NOAA Fisheries Northeast and Southeast Regions, and the USFWS Regions 4 and 5 who possess scientific as well as management and administrative expertise.

2.9 Assessment Science Committee

The Assessment Science Committee (ASC) is a stock assessment advisory committee that reports to the ISFMP Policy Board. ASC is comprised of one representative from each state/jurisdiction, the NOAA Fisheries Northeast and Southeast Regions, the 3 East Coast regional fishery management councils, and the USFWS. All agencies may nominate individuals for appointment to the ASC based on stock assessment and population dynamics expertise. The ISFMP Policy Board should review all nominations and appoint members to the ASC based on expertise, as opposed to agency representation. The ASC membership should be kept to a maximum of 25 members and periodic rotation of membership should be considered. The ASC is responsible for reviewing and recommending changes to the update and benchmark stock assessment schedule, advising the Policy Board regarding priorities and timelines in relation to current workloads, providing stock assessment advice and guidance documents for TCs and boards on technical issues as requested, and providing oversight to the Commission's Stock Assessment Training Program.

2.10 Multispecies Technical Committee

The Multispecies Technical Committee (MSTC) is appointed by and advises the ISFMP Policy Board on multispecies modeling efforts with the goal of moving towards the use of multispecies model results in management decisions. The MSTC is comprised of state, federal, and academic scientists from the TCs with the expertise necessary to complete multispecies tasks on the species of interest and modeling approaches being employed. Individuals from outside the TC with expertise in stock assessment or biology of the species may also be appointed, if necessary.

2.11 Habitat Committee

The Habitat Committee is a standing Commission committee appointed at the discretion of the Commission Chair on an annual basis. The Committee advises the ISFMP Policy Board with the goal of enhancing and cooperatively managing vital fish habitat for conservation, restoration, and protection, and supporting the cooperative management of Commission managed species. The Habitat Committee is primarily responsible for developing habitat sections of FMPs and creating habitat management series publications as needed. Membership includes state representatives, the - USFWS, NOAA Fisheries, National Ocean Service, Environmental Protection Agency, U.S. Geological Survey, and the Army Corps of Engineers. Two seats are available on the Habitat Committee for members from non-governmental organizations (NGOs).

2.12 Law Enforcement Committee

The LEC is a unique body of professionals in marine fisheries enforcement. It is comprised of representatives from each of the Commission's participating states and the District of Columbia. Members also represent NOAA Fisheries, the U. S. Coast Guard and USFWS. The LEC carries out assignments at the specific request of the Commission, the ISFMP Policy Board, the boards/ sections, the PDTs, and the PRTs. In general, the Committee provides information on law enforcement issues, brings resolutions addressing enforcement concerns before the Commission, coordinates enforcement efforts among states, exchanges data, identifies potential enforcement problems, and monitors enforcement of measures incorporated into the various FMPs.

2.13 Committee on Economics and Social Sciences

The purpose of the Committee on Economics and Social Sciences (CESS) is to provide socioeconomic technical oversight for both the ISFMP and the Atlantic Coastal Cooperative Statistics Program (ACCSP). CESS's major duties are to develop and implement mechanisms to make economic and social science analysis a functioning part of the Commission's decision-making process; function as the technical review panel for social and economic analyses conducted by the Commission and the ACCSP; and nominate economists and social scientists to serve on each species TC, Socioeconomic Subcommittee, or PDT, in order to provide technical support and development of socioeconomic sections of FMPs (including amendments and addenda). The CESS is comprised of one representative from each member state, two representatives from NOAA Fisheries Headquarters (one economist and one social scientist), the NOAA Fisheries Northeast and Southeast Regions, and one representative from the USFWS who possess social science expertise and familiarity with fisheries management.

2.14 Other Technical Support Subcommittees

Upon the approval of a board/section, the TC shall appoint individuals with special expertise, as appropriate, to other technical support subcommittees (not including SASs) in order to support TC deliberations on specific issues. These kinds of subcommittees include species tagging and stocking subcommittees, but do not include ISFMP socioeconomic subcommittees. All technical support subcommittees shall report to the TC and shall continue in existence so long as the Management board/section requires. All technical support subcommittees should elect their own chair and vice-chair, who will be responsible for reporting to the TC and the management board/section as necessary. Overall membership should be kept to a maximum of six persons unless additional expertise is requested by the TC or board.

2.15 Special Issue Technical Committees

The ISFMP Policy Board may form new TCs to address special issues (e.g., Interstate Tagging Committee, Fish Ageing Committee, Fishing Gear Technology Work Group, Fish Passage Working Group). Nominations are approved by the Policy Board. Special TCs meet as often as necessary (resources permitting) to address specific Policy Board tasks.

3.0 COMMITTEE RESPONSIBILITIES

3.1 Chairmanship

Unless otherwise specified, all Commission committees and subcommittees will elect their own chair and vice-chair. Chairs serve two-year terms and chairmanship should rotate among members of the committee. The role of the chair is demanding and only those willing and able to commit the time and energy required by the job should agree to serve. The chair must be willing to perform the job and state/federal agencies must be willing to provide the chair time to attend to Commission business. It is the responsibility of all officers to facilitate meetings in an objective manner and represent the viewpoints of all committee members, including opposing opinions and opinions in opposition to their own.

3.2 Plan Development Teams

PDT will be responsible for preparing all documentation necessary for the development of a FMP, amendment, or addendum, using the best scientific information available and the most current stock assessment information. Each FMP, amendment, or addendum will be developed by the PDT in conformance with Section Six of the ISFMP Charter. PDTs will be tasked directly by the board/ section. In carrying out its activities, the PDT shall seek advisement from the appropriate TC, SAS, AP, LEC and the Habitat Committee. Following completion of its charge, the board/section will disband the PDT.

3.3 Plan Review Teams

PRT will be responsible for providing advice concerning the implementation, review, monitoring, and enforcement of FMPs that have been adopted by the Commission, and as needed be charged by the boards/sections to draft plan addenda. PRTs will be tasked directly by the board/section. Each PRT shall at least annually or as provided in a given FMP, conduct a review of the stock status and Commission member states' compliance for which implementation requirements are defined in the FMP. The PRT shall develop an annual plan review in order to evaluate the adequacy of the FMP. This report will address, at a minimum, the following topics: adequacy and achievement of the FMP goals and objectives (including targets and schedules), status of the stocks, status of the fisheries, status of state implementation and enforcement, status of the habitat, research activities, and other information relevant to the FMP. The PRT shall report all findings in writing to the board/section for appropriate action. Compliance review shall be consistent with the requirements of Sections Six and Seven of the ISFMP Charter and the respective FMP requirements. In addition to the scheduled compliance reviews, the PRT may conduct a review of the implementation and compliance of the FMP at any time at the request of the board/section, Policy Board, or the Commission. When a plan amendment process is initiated by the Management board/section, the PRT will continue its annual review function applicable to the existing plan. In carrying out its activities, the PRT shall seek advisement from the appropriate TC, SAS, AP, LEC, MSC and Habitat Committee.

3.4 Technical Committees

TCs are responsible for addressing specific technical or scientific needs requested by the respective board/section, PDT, PRT, or the MSC. At times, the TC may be requested to provide a technical analysis of AP recommendations. Among its duties, the TC shall provide a range of management

options, risk assessments, and justifications, and probable outcomes of various management options. The TC will coordinate the process of developing stock assessments for Commission-managed species. It is not the responsibility of the TC to conduct a review of the Commission member states' compliance for which implementation requirements are defined in the FMP. This is a responsibility of the PRTs.

3.5 Species Stock Assessment Subcommittees

Species SASs are responsible for conducting stock assessments for use by PDTs in formulation of a FMP, amendment, or addendum and for conducting periodic stock assessments as requested for use by the TC in reporting status of the stock to the board/section. The species SAS is responsible for data analysis and preparation of a stock assessment report. Initial input on available data and stock assessment methods should be provided by the TC and ASC. The species SAS shall use the best scientific information available and established stock assessment techniques. Stock assessment techniques should be consistent with the current state of scientific knowledge.

4.0 COMMITTEE TASKING

Boards/sections can task the appropriate Commission committee through board/section action or direction from the board/section chair. Species-specific technical tasks should be directed to the appropriate ISFMP technical support group in writing by ISFMP staff or the board/section chair. Boards/sections may also consider referring broader scientific, law enforcement, habitat and social/economic issues to the MSC, the ASC, the LEC, the Habitat Committee, or the CESS. These committees may provide recommendations to boards/sections based on a more focused area of expertise.

Boards/sections will develop specific and clear guidance whenever tasking committees for advice. ISFMP staff, in consultation with the board/section chair and technical support group chair, will develop the written charge. The charge will contain terms of reference to clearly detail all specific tasks, the deliverables expected, and a timeline for presentation of recommendations to the board/section. It is the responsibility of the ISFMP staff and any technical support group chair present at board/section meetings to ensure the timeline can be met. Any problems or discrepancies encountered by the technical support group in meeting the charge will be discussed with the appropriate ISFMP staff and board/section chair.

Any charge developed by a board/section to a technical subcommittee will be initially forwarded by ISFMP staff to the TC for review and input. It is not the responsibility of the TC to modify or approve a board/section charge, however, input on appropriate mechanisms to meet that charge should be provided. The TC will review products by a technical subcommittee before products are provided to a board/section to ensure the charge has been addressed.

The boards/sections are responsible for making decisions on allocation issues. However, they may task the TC with the development of technical options for addressing allocation. The board/section should develop specific guidelines and initial options for further development by the TC.

5.0 COMMITTEE EXPECTATIONS

Committee members should expect to attend several (1-4) meetings each year, depending on the specific management or assessment activities being pursued. As many of these meetings as possible will be held during one of the three scheduled Technical Meeting Weeks. Committee members should save those dates in their calendars until the agendas for each meeting week are set (typically immediately following each quarterly Commission Meeting so TCs can respond to board tasks).

It is important that all members of a Commission committee fully participate in all meetings and activities of the committee. The appropriate Administrative Commissioner should be informed if a committee member is unable to commit to the level of participation required. Commission staff should be contacted by the committee member prior to the start of the meeting if he or she is unable to attend. The committee member should provide staff with the name of his/her proxy for that committee meeting in writing (email or letter). Proxies must be from the same state or jurisdiction or agency as the individual making the designation. Proxies shall abide by the rules of the committee.

Commission technical support groups are expected to provide scientific and technical advice to the board/section, PDT, and PRT in the development and monitoring of a FMP, amendment, or addendum. It is also important that each committee member provide periodic briefings to his/ her agency's Administrative Commissioner on the discussions and actions taken at all technical support group meetings. Specific activities conducted by TC and SAS members may include:

- Requesting, preparing, and objectively evaluating fishery-dependent and fishery-independent data,
- Conducting periodic stock assessments,
- Providing recommendations on the status of the stock and the fishery,
- Evaluating management options and harvest policies, conducting risk assessments, and assessing probable outcomes of various management options.

New TC members may wish to consult the Commission's Stock Assessment Training Program materials, manuals, and ASC working papers prior to participating in an assessment. Science staff may be contacted for a complete list of available training and guidance documents.

Even though all TC and SAS members have been appointed by a specific agency, it is not appropriate for TC members to represent the policies and/or politics of that agency. It is the responsibility of each committee member to use the best scientific information available and established stock assessment techniques consistent with the current state of scientific knowledge. All participants in the Commission process should act professionally and expect to be treated with respect. See Section 6.6 on meeting etiquette.

5.1 ASMFC Staff Roles and Responsibilities

5.1.1 ISFMP Staff

ISFMP is responsible for organizing all PDT, PRT, AP, and TC and SAS activities. ISFMP staff shall

serve as ex-officio members of all TCs and will chair the PDTs and PRTs. ISFMP staff will provide liaison among the PDTs, PRTs, SAS, TCs, APs, and the boards/sections. ISFMP staff will also provide liaison on species-specific issues to the LEC, MSC, TC subcommittees, and Habitat Committee. ISFMP staff, in consultation with the TC chair and vice-chair, is responsible for scheduling committee meetings, drafting agendas, and distributing meeting materials. Either the Habitat Coordinator or the ISFMP Director will provide primary organizational support for the Habitat Committee. ISFMP staff, in consultation with the TC chair and vice-chair, will determine the relevant oversight committee for presentations of all findings and advice from the technical support group. ISFMP staff, in consultation with the board chair, will refer any relevant AP recommendations to the appropriate technical support group for evaluation.

ISFMP staff, in consultation with the TC and board chairs, will assist in prioritizing tasks assigned to technical support groups. Staff should track committee meeting attendance and provide records upon request. ISFMP staff and the chair of the TC should assist in clarifying the details of any tasks assigned to the TC by the board/section. Assistance should also be provided in the development of the written charge, including all specific tasks, the deliverable expected, and a timeline for presentation of recommendations to the board/section. ISFMP staff is an ex-officio member of the TC, therefore may not vote on issues before the TC.

5.1.2 Science Staff

Science staff are responsible for organizing all MSC, ASC, MSTC, CESS, and special issue committee activities. The Science Director, with the assistance of Science staff, is responsible for coordinating Commission peer reviews. The Scientific Committee Coordinator is responsible for providing support to the MSC, ASC, MSTC, and CESS with assistance on technical matters from other Science staff. Stock Assessment Scientists are responsible for providing support to special issue committees (Fish Passage, Interstate Tagging, Gear Technology, Fish Ageing). The primary responsibility of Stock Assessment Scientists is to provide quantitative technical support to SASs, TCs, and special issue committee activities. Stock Assessment Scientists may serve as members of SASs and other technical support groups (e.g., tagging and stocking subcommittees). Science staff may serve as chair or vice-chair of SASs or other technical support groups. If a consensus cannot be reached, Science staff may vote on an issue before the stock assessment subcommittee, however Science Staff may not vote on issues before the technical committee.

Science staff are not members of TCs but may provide technical support to TCs and also assist FMP Coordinators with organizing TC and SAS activities, as needed. FMP Coordinators are responsible for providing primary support to TCs and SASs. The FMP Coordinator and assigned Science staff will discuss technical needs for each committee as they arise and coordinate roles and responsibilities based on schedules. The ISFMP and Science Directors will resolve workload and responsibility conflicts that may arise.

6.0 MEETING POLICIES AND PROCEDURES

For the purposes of Sections 6 and 7, a meeting can be an in-person, conference call or webinar unless specified.

6.1 Meeting Announcements

A public notice, via the Commission website (www.asmfc.org), will be provided at least two weeks prior to all in-person meetings of the Commission and its various committees, and at least 48 hours notice will be provided for any meetings held by conference call ; provided exceptions to these notice requirements may be granted by the Commission Chair. A non-committee member can request, through Commission staff, to be notified of committee meetings via email (Note: the public notice of the Commission website is the official notification of a scheduled meeting). Non-committee members may attend any in-person or conference call committee meeting, unless confidential data is being discussed.

If a non-committee member would like to attend a webinar he/she should contact Commission staff 24 hours prior to the webinar in order for staff to determine if space is available. If Commission staff is not contacted, priority for available webinar space will be given to committee members.

6.2 Materials Distribution

Meeting materials will be distributed to committee members prior to committee meetings via email or FTP site, if necessary. Agendas and documents for public review will be available via the Commission website. Draft materials with preliminary content and/or with confidential data will not be distributed outside of the committee. The chair will explain at the outset of meetings that all data and analyses are preliminary and not to be shared until they have been finalized and distributed to the appropriate board/section.

6.3 Roles of Chair and Vice-chair at Meetings

It is the responsibility of the chair of the technical support group to conduct and facilitate meetings. Chairs will lead committees through agenda items in consultation with staff, including items requiring specific action. The TC chair should assist in clarifying the details of any tasks assigned to the TC by the board/section. Assistance should also be provided in the development of the written charge, including all specific tasks, the deliverable expected, and a timeline for presentation of results and/or recommendations to the board/section. The chair should attend all board/section meetings and should be in frequent contact with the appropriate ISFMP staff. It is also the responsibility of the chair of the technical support group to provide presentations to the relevant oversight committee on all findings and advice. All formal presentations should be conducted in a manner consistent with the guidance provided in 7.4.5.

The committee chair is also responsible for clarifying the majority and/or minority opinions, where possible. **The overall goal of all technical support groups is to develop recommendations through consensus.** The chair is responsible for facilitating committee discussion toward reaching a consensus recommendation for board/section consideration. If a consensus cannot be reached the committee shall vote on the issue. The majority opinion shall be presented to the board/section as the recommendation,

defined as a simple majority, including a record number of votes in favor, against, and abstentions. The committee will also present the minority opinion prepared by a committee member(s) that voted in the minority, to the board/section. **Voting should be used only as a last resort when full consensus cannot be reached**. The Commission will periodically conduct meetings management and consensus-building seminars for all chairs and vice-chairs of technical support groups, and others as appropriate. Chairs and vice-chairs should attend these seminars in order to improve your ability to conduct efficient meetings, objectively facilitate discussions and development of consensus recommendations, and objectively represent opposing viewpoints.

The vice-chair will act as chair when the chair is unable to attend a meeting or conference call. It is the role of the vice chair of committees to take meeting minutes that will be used to develop meeting summaries and committee reports. A member of the committee will be appointed by the vice chair to take minutes when the vice-chair is acting as chair.

6.4 Meeting Records

Meeting summaries are provided for all Commission committee meetings (a committee report or meeting minutes can serve as the meeting summary). If the vice-chair is unable to take minutes or there is no vice-chair, another committee member will be appointed to take minutes. Meeting summaries will be distributed by ISFMP staff to all committee members for review and modification. Meeting summaries should be finalized and approved by the committee no later than 60 days following the meeting. Draft meeting summaries will only be distributed to committee members for review. The chair should ensure that all committee member comments are addressed prior to approval and public distribution of meeting summaries and committee reports.

Commission staff should ensure that meeting summaries of all Commission technical support groups are distributed to other appropriate support groups, including APs, TCs, LEC, and MSC. All board/section meeting summaries, and appropriate documentation, should also be provided to technical support groups. Upon approval, these documents will also be posted to the Commission website.

6.5 Public Participation at Meetings

Public comment or questions at committee meetings may be taken at designated periods at the discretion of the committee chair. In order for the committee to complete its agenda, the chair, taking into account the number of speakers and available time, may limit the number of comments or the time allowed for public comment. The chair may choose to allow public comment only at the end of the meeting after the committee has addressed all its agenda items and tasks. Where constrained by the available time, the chair may limit public comment in a reasonable manner by: (1) requesting individuals avoid duplication of prior comments/questions; (2) requiring persons with similar comments to select a spokesperson; and/or (3) setting a time limit on individual comments. The Commission's public participation policy is intended to fairly balance input from various stakeholders and interest groups. Members of the public are expected to respectful of guidelines outlined in section 6.6, meeting etiquette.

Members of the public may be invited to give presentations at committee meetings if the board/section has tasked the committee with reviewing their materials, or if members of the public have been invited in advance by the committee chair to respond to a request from the committee for more information on a topic. Invitations will be offered in advance of the meeting. Public presentations will not be allowed without these invitations. See Section 8 for additional details regarding public participation in stock assessment data, assessment, and peer review workshops.

6.5.1 General Submission of Materials

Public submissions of materials for committee review outside of the benchmark assessment process must be done through the board/section chair (see Section 4.0). The chair will prioritize the review of submitted materials in relation to the existing task list. Materials provided by the public should be submitted to the chair at least one month in advance of the meeting. A committee is not required to review or provide advice to the board/section on materials provided by the public unless it is specifically tasked to do so by the chair in writing or from board/section. Materials will be distributed to committees by Commission staff.

6.5.2 Benchmark Assessment Submissions

The Commission welcomes the submission of data sets, models, and analyses that will improve its stock assessments. For materials to be considered at data or assessment workshops, the materials must be sent in the required format with accompanying methods description to the designated Commission Stock Assessment Scientist at least one month prior to the specific workshop at which the data will be reviewed; see Section 8.6.1. The Commission will issue a press release requesting submissions at the start of the assessment process. The press release will contain specific deadlines and submission requirements for materials to be considered in the benchmark stock assessment process.

6.6 Meeting Etiquette

It is the role of the chair to ensure participants (committee members and members of the public) are respectful of the following meeting guidelines. The chair should stop a meeting if a participant is not following the guidelines. Commission staff should note when these guidelines are not being followed if the chair does not do so. If a participant is being disruptive the chair may ask the individual to leave the meeting.

- **Come prepared.** Read the past meeting summary prior to the meeting. Bring something to write on and with. All presenters should ensure their handouts, presentations, etc., are organized and complete.
- **Be respectful of others.** Hold your comments until the chair asks for comments, unless open discourse throughout the meeting is encouraged. Do not interrupt other attendees. Wait to speak until the chair recognizes you. Hold your side comments to others until a meeting break or after the meeting is adjourned. Side conversations are disruptive to other participants and inconsiderate of the group.
- **Mute electronics.** Turn all cell phones on vibrate or turn off completely. Do not answer your phone while in the meeting.

- **Attend the entire meeting.** Make travel arrangements to allow participation in the entire meeting. Early departure by committee members disrupts the meeting and impacts the development of consensus recommendations and decisions.

If complaints arise they can be brought to the chair of the committee, Commission staff, or the Commission's Executive Director.

7.0 COMMUNICATIONS POLICIES AND GUIDELINES

7.1 Email Policies

For the purposes of distributing draft committee documents, distribution will be limited to committee members. Non-committee members may request to receive notices of committee meetings, agendas, approved meeting summaries and final committee reports.

7.2 Recordings

Committee meetings are open for the public to attend and as such may be recorded (audio or video) by any participant (public or committee member) with notification to the chair and staff prior to the start meeting, and so long as those recordings are not disruptive to the meeting. The chair and/or staff will notify committee members prior to the start of the meeting that they will be recorded. Staff may record meetings for note taking purposes, but the official meeting record is the meeting summary or committee report. Staff recordings will not be distributed.

7.3 Webinars

While committee members are encouraged to attend all technical meetings in person, the Commission acknowledges occasional travel constraints or other impediments to attendance in person. If a committee member cannot attend a technical meeting in person, that member may request that a webinar be arranged to accommodate them. However, the Commission cannot guarantee that the audio or visual quality of the webinar will be sufficient to allow complete participation in the meeting by remote committee members. Committee members should contact Commission staff at least twenty-four hours in advance if they require a webinar, and those requests may be accommodated as feasible.

If a committee meeting is held via webinar (i.e., there is no in-person meeting), it shall be open to the public. As with in-person meetings, public comment or questions at committee webinars may be taken at designated periods at the discretion of the committee chair (see Section 6.5 for more detailed guidance on public participation in committee meetings). Certain agenda items may not be open to the public; these include discussion of confidential data and preliminary model results. Non-committee members will be asked to leave before confidential issues are discussed. To ensure that enough bandwidth is reserved for the meeting, members of the public who wish to attend the webinar must contact staff 24 hours prior to the webinar to ensure there is available space.

Commission policy on meeting etiquette (Section 6.6) applies to webinars as well as in-person meetings. In addition, participants are asked to mute their phone lines when not speaking to reduce background noise that may disrupt the call.

Quarterly Commission Board Meetings are broadcast via webinar and information on listening to those meetings will be available via the Commission's website.

7.4 Reports

All reports developed by an Commission committee should include, at a minimum, the following components (1) the specific charge to the committee, (2) the process used by the committee to develop recommendations and/or advice, (3) a summary of all committee discussions, and (4) committee recommendations and all minority opinions. All committee reports are a consensus product of the committee, not an individual member.

7.4.1 Non-Committee Member Reports

Outside of the benchmark stock assessment process, a non-committee member may submit reports for committee review through the board/section chair (see Section 6.5.1). The board/section chair will determine if the report should be reviewed by the appropriate committee and specify tasks to be completed in the review. Non-committee reports will follow the same formatting guidelines and distribution procedures as Commission committee reports.

7.4.2 Distribution of Committee Reports

Draft committee reports will only be distributed to committee members. All committee member comments should be addressed prior to approval and distribution of committee reports. Stock assessment and peer review reports will not be distributed publicly until the board/section receives and approves the reports for management use. Results of a stock assessment may not be cited or distributed beyond the committee before the assessment has gone through peer review and been provided to the board/section. Commission staff will distribute reports to the appropriate boards/ sections and post committee reports on the website following board approval.

7.4.3 Corrections to Reports

Corrections to published stock assessment reports can be made on rare occasions when mistakes are found after board/section approval. All corrections will be highlighted in yellow within the report. A new publication date will be added below the original publication date on the cover of the report, e.g., *Corrected on March 29, 2012.* An explanation of the correction will be included in the introduction or executive summary and highlighted.

7.4.4 Templates

Appendices 4, 6, 7, and 8 contain outlines for FMPs, addenda, amendments, FMP Reviews, and stock assessment and peer review advisory reports.

7.4.5 Presentations

Chairs and committee members will be responsible for presenting technical reports to boards/sections, APs, and other committees who may have a limited technical background. It is important to effectively present technical information to fishery managers and stakeholders in a straightforward and understandable manner.

All presentations should be developed using a Power Point template provided by Commission staff. Staff can assist in the development of presentations. A copy of the presentation should be provided to staff prior to the meeting. Presentations should be developed consistent with guidelines for other professional presentations, such as the American Fisheries Society. Some general guidelines include:

- Keep visuals simple, limit one idea per slide.
- Prepare figures and tables specifically for your presentation. Copies from manuscripts or papers usually contain too much detail for a presentation.
- When working with words, think brevity. Use a maximum of 6 words per line with 5 or 6 lines per slide. Use key phrases to emphasize important points.
- Tables should be simple with a maximum of 3 columns and 5 rows or vice versa.
- Graph/table values should be in a large enough font to be clearly viewed.
- Visuals appear confusing when too many colors are used; limit to 2 to 4 contrasting colors.

7.5 Board Meetings

Committee Chairs should present the committee report and answer any specific questions relevant to the report at Board/Section meetings. Committee Chairs may ask clarifying questions of the Board. They should not present their own viewpoints during Board/Section deliberations.

8.0 STOCK ASSESSMENTS

8.1 Definitions

8.1.1 Stock Assessment Update

A **stock assessment update** consists of adding the most recent years of data to an existing, peer-reviewed, and board-accepted stock assessment model without changing the model type or structure. Correction of mistakes in existing, peer-reviewed, and board-accepted stock assessment models are permitted during an assessment update.

8.1.2 Benchmark Stock Assessment

The term **benchmark stock assessment** refers to either a new stock assessment or a stock assessment for which existing data inputs and model structure are modified and must therefore be subject to an external peer review. Benchmark changes to data, parameterization, and model type or structure are often made in response to previous peer review recommendations.

8.1.3 Peer Review

Peer review is the critical evaluation by independent (i.e., unbiased) experts of scientific and technical work products. In fisheries science, the periodic review of a stock assessment evaluates the validity of the assessment data, model, and assumptions used, and determines if the science conducted is adequate for informing management. A peer review by independent assessment peers that have had no involvement, stake or input into the assessment provides a judgment on the quality and completeness of the science used in a stock assessment. Peer reviewers are selected who have no

conflict of interest with regard to the technical committee members or the fishery being assessed (see Appendix 5).

8.2 The Assessment Process

The ASC provides oversight for the benchmark data and assessment workshop process (see below), and the MSC provides oversight for the peer review workshop process. All changes to the assessment process are reviewed and approved by the ISFMP Policy Board.

The Commission plans and monitors stock assessments of all managed species via the long-term benchmark stock assessment and peer review schedule. The ASC reviews the schedule biannually to assist the ISFMP Policy Board in setting overall priorities and timelines for conducting all Commission stock assessments in relation to scientist workloads. The Policy Board is responsible for reviewing the schedule, prioritizing stock assessments, and approving the finalized schedule. The schedule is based on a recommendation by the ASC to conduct a benchmark stock assessment and peer review for all species every five years. The ASC and the ISFMP Policy Board should prioritize benchmark stock assessments and associated peer reviews based on the following criteria:

- Assessments for fisheries with unknown stock status
- Assessments for fisheries with new fishery management plans (FMPs)
- Assessments with a major change in the stock assessment data or model
- Assessments for existing FMPs undergoing amendments
- Assessment reviews for species that have not undergone an external review in at least five years

Using the approved schedule, boards/sections task TCs to conduct assessments. Once a stock assessment has been peer reviewed, the chairs of the SAS and peer review panel will draft reports on the results of the stock assessment and peer review panel those reports will be sent to the board/ section. The board/section considers acceptance of the reports for management use. If accepted, the board may task the TC and AP to review the reports, perform follow-up tasks, and report back within a specified timeframe.

An alternative stock assessment for a Commission-managed species developed by external groups must be brought to the attention of the board/section chair during a benchmark stock assessment process if the group would like their assessment to be considered for management use. Alternative assessments are subject to the same standards, documentation, and process as assessments developed by the Commission, including SAS, TC, and independent peer review. External groups must notify the Commission one month in advance of an assessment workshop regarding their interest in presenting an alternative assessment at the workshop. Any analyses submitted outside the benchmark process may not be considered for management until the next Commission benchmark assessment. For more details, see Section 8.6.2 below.

8.3 Assessment Frequency and Benchmark Triggers

Assessment frequency for a given species is recommended by the TC, keeping in mind FMP requirements and the biology of the species (especially the number of years necessary to begin to detect the anticipated effects of new management actions). Update assessments are conducted for a select group of Commission species and are performed on a regular schedule, typically every 1-3 years between benchmark assessments. Annual updates are generally not needed for species that are not overfished and overfishing is not occurring. Requests for additional update assessments may be made by the board/section to the Policy Board and are granted based on prioritization of the existing stock assessment schedule, relative workloads of assessment scientists, and available funding. Changes in stock indicators may trigger an update or benchmark assessment to be completed as outlined in the FMP, with TC consultation.

Before requesting an additional assessment, the board/section should task the SAS with determining if an update or benchmark assessment is warranted. If the SAS is unsure, the ASC may be consulted. In the case of multispecies models (MSVPA), MSTC, recommends the timing of a benchmark assessment for approval by the Policy Board, and updates of the model are performed before each menhaden assessment.

An assessment update will need to be converted to a benchmark assessment if a benchmark trigger occurs (see trigger examples below). The policy board must approve the scheduling of new benchmark assessments, including when new methods or data streams are presented. If scheduling a benchmark is not approved, the update will continue and will only use the previous methods and data streams. The Commission has employed a default five-year benchmark frequency to prevent excessive time from elapsing between peer reviews of each species assessment used by management. More or less time may be scheduled between benchmarks depending on the biology and management needs of the species. The following are examples actions that would trigger a benchmark (not inclusive):

- Change in stock unit definitions or boundaries.
- Change in model type
- Change in input data sources used (additions, deletions, major modifications)
- Change in input parameters (e.g., natural mortality, selectivity, steepness, etc.)
- Change in model configuration (e.g., estimation vs. specification of parameters, changes in stock-recruitment or selectivity parameterization, etc.)
- Appearance in update assessment of severe retrospective pattern or other diagnostics indicating a significant problem with the model that was not identified during the last peer review.
- Changes to reference point model or type

Requests for additional benchmark assessments and associated peer reviews may be made by the board/section to the Policy Board and are granted based on prioritization of the existing stock assessment and peer review schedule, relative workloads of assessment scientists, and available funding.

Assessments rejected at a peer-review should not undergo projections, updates, or benchmark assessment and peer review until the deficiencies identified by the review are addressed or a different model is used that is appropriate for the existing data. This is intended to: 1) match the assessment technique to the available data, rather than management requirements that exceed the available data, and 2) ensure that the necessary research/work is done to improve data for a species before conducting an assessment using a method that is appropriate with the available data. Species TCS should review and evaluate whether or not the assessment deficiencies identified in previously rejected assessments have been addressed. When making recommendations for the benchmark assessment and peer review schedule, the ASC will consider whether or not those deficiencies have been addressed.

On rare occasions an analytical error in a stock assessment is discovered after either peer review or management board acceptance. Corrections to the assessment will be added to the previous versions of the accepted assessment report and highlighted in order to document the development of assessment results, including stock status (see Section 7.3.3 above). Simple errors in calculations that do not change the peer-reviewed structure of the data or model will not require additional review. Errors in model structure and primary inputs (e.g., survey indices, catch-at-age tables) will require review in the form of written correspondence from the original reviewers. The SAS and TC chairs, management board chair, and Commission Science Director will determine the need for and means of subsequent peer review.

Commission-managed species display numerous life history strategies and have data sets that vary greatly in quantity and quality. To reflect this variability, specific time lines should be set by each TC and board/section to account for the specific requirements of each species assessment. Planning should begin at least 24 months in advance of the expected peer review date. For species with no accepted benchmark stock assessment, the assessment process might need to begin as early as 36 months in advance of a scheduled peer review.

Should a SAS determine that an assessment is unable to meet its stock assessment timeline; the SAS chair will present a revised time line and an explanation for the revised time line to the TC for review and possible approval. If the new time line is accepted by the TC then the TC chair will go before the board and explain the need for a new time line. The TC chair, in consultation with the SAS chair, will explain to the board the TC's reasons for requesting a new time line. The board will then vote to approve the new time line or continue with the established time line.

8.4 Data Confidentiality

State and federal laws requires all those who view or receive copies of confidential data have up- to-date clearance with the agency that provided the data. Data confidentiality access for each state can be applied to through the ACCSP, for more information please visit http://www.accsp.org/how-we-protect-confidentiality. All TC and SAS members and other workshop participants who wish to view confidential data should be prepared to prove their confidential data clearance status and explain the nature of the agreement before viewing or receiving confidential data. Data providers are responsible for identifying confidential data submitted to the Commission and fellow committee members or

workshop participants. Confidential data should only be handled and viewed by those with the required clearance. Data presented to those who do not have appropriate clearance must be compiled so that confidentiality is maintained; if sharing or display of non-confidential data is not adequate for the TC or SAS to complete their tasks, portions of data and assessment workshops will be closed to the public.

8.5 Assessment Updates

Assessments updates typically consist of one or two SAS workshops to review updated data and modeling results, troubleshoot any problems that arise, and organize the report and presentation to the board/section. Once the update is complete, the TC holds a meeting or conference call to review the update report results, conclusions, and recommendations. All update SAS workshops are facilitated by the SAS chair and all TC meetings are facilitated by TC chair. The SAS will prepare the update assessment which is to be approved by the species TC prior to distribution to the board/section. For species managed cooperatively by the Commission and the regional councils, a stock assessment report may be developed by NOAA Fisheries Northeast or Southeast Fisheries Science Centers (NEFSC and SEFSC).

8.6 Benchmark Assessments

The SAS will prepare the benchmark assessment, which is to be approved by the species TC prior to peer review. For species managed cooperatively by the Commission and the regional councils, a stock assessment report will be developed by the NEFSC or SEFSC.

Prior to the start of the benchmark assessment process, a meeting or conference call with the TC chair, SAS chair, and Commission staff will initiate assessment planning, review the stock assessment checklist (Appendix 1), and develop a draft time line for subsequent assessment-related meetings and milestones. The TC, in consultation with the SAS, will draft the terms of reference for the assessment. Both the draft time line and draft terms of reference will be presented to board/section for additional modifications and approval. Generic terms of reference for Commission peer reviews are provided in Appendix 2.

At the start of a benchmark assessment, before the data workshop, the MSC, in consultation with the species TC, will determine the need for an integrated peer review. Integrated reviews will be considered for species assessments that did not pass previous review, or passed with major recommendations for improvement. If it is deemed necessary, the integrated reviewer will provide analytical guidance during the construction of the assessment, enhancing the quality of assessment results. An integrated review report will be written to convey guidance from the reviewer to the SAS, and also later be provided to the peer review panel. Guidance will not override the expertise and results generated by the SAS. The integrated reviewer's recommendations will serve as supplementary expert guidance for the SAS to consider, and decide on whether alternative approaches should be pursued, or not. Further guidelines for the use of integrated reviewers can be found in the Commission's *Protocol for Integrated Peer Review*.

The benchmark assessment process involves a minimum of three workshops, namely the data workshop, assessment workshop, and peer review workshop. Additional intermediate workshops may be conducted if necessary to complete the assessment.

8.6.1 Data Workshop

The objectives of data workshops are to coordinate the collection, preparation, and review of available data and to conduct preliminary analyses to help determine the best approach(es) for assessing each stock. Data workshop participants will include the TC, SAS, Commission and ACCSP staff, and other interested or invited parties. For species with significant recreational harvest, staff from the Marine Recreational Information Program (MRIP) will be invited to attend the data workshop to present and review recreational fishing estimates and their PSEs. MRIP staff will also be asked to compare historical and current data collection and estimation procedures and to describe data caveats that may affect the assessment.

Stakeholders will be encouraged to attend Commission data workshops and share any information or data sets that might improve the stock assessment. A public announcement will be made prior to the data workshop to call for data of which the TC may not already be aware.

Commission staff will send notifications to known interested parties soliciting data and inviting participation from a wide range of stakeholders, agencies, and academics to attend at their own expense. For data sets to be considered at the data workshop, the data must be sent in the required format, with accompanying methods description, to the designated Commission Stock Assessment Scientist at least one month prior to the data workshop.

Prior to the data workshop, data availability spreadsheets (Appendix 3) will be distributed by Commission staff to all new data holders to obtain detailed descriptions of available data. For each data set identified, staff will distribute data submission instructions to data holders. All data holders should follow the requested formatting and metadata requirements and meet the data submission deadline for their data to be considered.

Data workshop products include a comprehensive database of acquired data sets, a table of data sets and reasons for inclusion or exclusion, and a draft report that contains the first five sections of the stock assessment report (see Appendix 4). All decisions and recommendations will be documented by the dedicated note-taker and/or Commission staff. At the conclusion of the workshop, participants will discuss the possible approaches for conducting the assessment based on available data, assign tasks and due dates to prepare for the assessment workshop.

Commission staff will maintain all stock assessment data files, final reports, working papers and additional materials on a secure server at the Commission.

8.6.2 Assessment Workshop

The objectives of the assessment workshop are to rigorously evaluate the methods and stock assessment models developed, to ensure appropriate use of the data in models, and to determine the

status of the fishery examined. Assessment workshop participants shall include the SAS, TC chair, and Commission ASMFC staff. All Commission meetings are open to the public.

However, all participants will be responsible for abiding by confidentiality agreements for data used at the assessment workshop and those without confidential access to data being presented may be asked to temporarily leave the room.

All benchmark data and assessment workshops are facilitated by the SAS chair. Preliminary model runs should be performed before the workshop to ensure proper model function to minimize the time spent at workshops correcting computer issues. Conducting and reviewing model runs are the focal points of the meeting.

If relevant data are identified during or within two weeks after the data workshop, then the new data should be reviewed and approved at the start of the assessment workshop by the SAS. As a rule, data identified more than two weeks after the data workshop may not be considered, unless the SAS ascertains the addition of such data may have a significant impact on the assessment outcome. These data must meet the same quality standards as those provided on a timely basis through the data workshop. Late, missing or unavailable data that are identified should be discussed to determine the impact on the ability of the SAS to conduct a comprehensive stock assessment.

SAS members will present on the stock assessment methods and models that have been developed. Data use, model formulation, results, diagnostics, and conclusions should be presented. Each analysis will be critically evaluated, a table of strengths and weaknesses of each approach will be constructed, and the SAS will select the best approach or approaches for assessing the stock. It is recommended that other peer-reviewed models be explored in addition to the model(s) currently used in an assessment. The Commission encourages development of new models (ones that have not been peer-reviewed). These exploratory models should be compared with existing peer-reviewed models and submitted as part of the peer reviewed benchmark assessment. If the new model passes peer review, it can be used as the primary model.

Stakeholders will be encouraged to attend Commission assessment workshops and share any analyses that might improve the stock assessment. A public announcement will be made prior to the assessment workshop to call for analyses of which the SAS may not already be aware.

Commission staff will send notification to known interested parties inviting participation from a wide range of stakeholders, agencies, and academics to attend at their own expense. For analyses to be considered for the assessment, the analyses must be sent in the required format, with accompanying methods description, to the Commission at least one month prior to the first assessment workshop, to allow for consideration at the workshop and any subsequent workshops. Anyone participating in the assessment workshop and presenting results from an analysis or assessment model is expected to supply all source code, executables, and input files used in the generation of those analyses or models along with a detailed methods description to Commission staff at least one month in advance of the assessment workshop. These measures allow transparency and a fair evaluation of differences between models being considered.

Anyone who provides alternative analyses or models and follows the above requirements will be required to present and undergo SAS review of their methods and findings at the assessment workshop; however, only members of the SAS will be allowed to participate in final deliberations on the use of each analysis or model in the Commission assessment. If the alternative assessment meets the standards of documentation but cannot be reconciled by the SAS with the Commission assessment, the Board chair may, at his or her discretion, add a review workshop terms of reference directing the peer review panel to address the alternative assessment as it would a minority report from a TC member. If the alternative assessment receives a favorable review, the review panel chair will present the panel's recommendations regarding the use of both the Commission and alternative assessments to the board/section.

The SAS will then conduct final model runs, sensitivity analyses, uncertainty estimation, and any other tasks as needed to finalize modeling efforts. The SAS will develop its consensus recommendation on stock status in terms of the appropriate reference points and compose the final sections of the draft stock assessment report. The SAS will also review and prioritize research recommendations according to the terms of reference. The SAS will assign tasks with due dates needed to finalize the stock assessment report.

For the final assessment report, journal articles and grey literature (e.g., annual and technical reports published by agencies) may be cited if they contain detailed descriptions of the data and methods and are accessible to public (e.g., available in public libraries, from agencies on request, or on an agency's website). Grey literature cited in the assessment but not already accessible to the public will be stored in the Commission Science Department stock assessment archive and made available to interested parties upon request.

Commission FMP Coordinators will track the delivery of SAS final tasks. Upon completion of all tasks, the SAS chair and FMP Coordinator will make final edits to the full stock assessment report. The FMP Coordinator will schedule a final meeting or conference call of the subcommittee to review and approve the stock assessment report before it is submitted to the TC. The FMP Coordinator will schedule a TC meeting to review and approve the stock assessment report to send for peer review. When assistance is needed, Commission Stock Assessment Scientists will help FMP Coordinators with tracking progress and finalizing the stock assessment report.

The TC review of the stock assessment report final draft serves as the last opportunity to evaluate the assessment work before peer review. The TC review will take place in person or via webinar at the discretion of staff. Staff will send the final draft of the stock assessment report to the TC two to four weeks before the TC meeting. If the stock assessment report is approved by the TC, it will be distributed to the appropriate peer review venue. If the stock assessment report is not approved by the TC, then the TC will return the report with comments to the SAS. The SAS will address the comments and re-submit the report to the TC for its approval. The Commission's Science Director will forward the stock assessment report and supporting materials to the peer review panel one month before the review workshop. The SAS chair will prepare a final presentation of the stock assessment for the review panel.

8.6.3 Peer Review Workshop

The purpose of an external peer review is to obtain judgment of the value and appropriateness of the stock assessment for use in management and to provide recommendations for future research and assessment improvements. The peer review will not provide specific management recommendations.

The Commission may choose among 6 venues for conducting a peer review:

1. Commission Review Process
2. NEFSC's SAW/SARC or "research and operational assessment" process
3. SAFMC's SEDAR process
4. TRAC process
5. CIE desk review
6. Other formal review process using the structure of existing organizations (i.e., American Fisheries Society, International Council for Exploration of the Seas, National Academy of Sciences).

The SAW/SARC (Northeast) and the SEDAR (Southeast) processes will be utilized as fully as possible. The Commission staff will serve on the Northeast Coordinating Council (formerly the SAW Steering Committee) and the SEDAR Steering Committee.

The procedures and logistics for planning a stock assessment peer review are dependent on the type of review to be conducted. For information on options 2-6 above, consult the coordinating agency. For the Commission Review Process, the Science Director will initiate selection of the peer review panel. The ASC and SAS should provide suggestions on peer reviewers as soon as the final assessment workshop is complete. A small group of rotating MSC members (2-3 people) is to assist the Science Director in making the final decision on review panel membership. When possible, the MSC group should consist of representation by states outside the management range of the species. Criteria for selection of peer review panel members include:

- Knowledge of the life history and population biology of the species under review;
- Proficiency in utilizing quantitative population dynamics and stock assessment models;
- Knowledge of broader scientific issues as outlined in the terms of reference, and;
- Professional objectivity and credibility.

All peer reviewers participating on a Commission review panel must sign a conflict of interest statement in addition to the peer review panelist contract (Appendix 5). Panel members involved with the Commission's peer review must not have been involved with the Commission stock assessment and management process for the species under review. In addition, at least one panel member should be from outside the range of the species. Once reviewers are under contract to serve on the peer review panel, their names can be released upon request, but will not be posted on the website. Commission Science staff will advise that no contact be made between the panelists and SAS before the peer review workshop.

Terms of reference for the peer review will be developed by the TC and SAS at the initiation of the assessment. The terms of reference will be approved by the board/section. The approved stock assessment report for peer review and supporting documentation will be distributed by the Commission's Science Director to the peer review panel approximately four weeks prior to the review workshop. The Commission's Science staff will coordinate all review workshop logistics in consultation with panel members. Workshop information will be distributed by the Commission's Science Director.

The Commission peer review involves a multi-day meeting of the panel to review the stock assessment for a single species. Commission peer reviews will be coordinated by the Commission's Science Director. For Commission review workshops, the full SAS, board/section chair, and AP chair will be invited to attend the review. At review workshops, stakeholders may attend as observers and provide comment at the discretion of the Review Panel chair. Only members of the TC, SAS, the review panel, and Commission staff will be invited to engage in discussions regarding the assessment.

The panel should select one member to serve as chair of the review. Duties of the panel chair include focusing discussion on the issues of the review, developing consensus within the review panel, taking the lead role in writing the advisory report, and presenting the finalized advisory report to Commission boards/sections.

Panel members may request specific presentations of other issues, including minority opinions. Requests for presentations should be made to the Science Director prior to the review Workshop to allow the presenter ample preparation time.

The review workshop will include a period for the presentation of the stock assessment report and any additional presentations, a period of open discussion among the review panel and SAS, a period for the review panel to ask specific questions of the assessment and supplemental reports, and a closed session for the development of the advisory report. During a review workshop, minor edits to the stock assessment report can be made with the concurrence of the SAS chair, review panel chair, and Science Director, if edits do not change the intent of the report. If major edits are made, notification of the modified report will be sent to the TC for their approval. The final assessment report, made publicly available on the Commission website, will include highlighted changes and a description of how and why the document was changed from the version presented at the review workshop.

The review panel will develop an advisory report during the review workshop, or shortly thereafter. The report will address each term of reference individually as well as the advisory report requirements outlined in Appendix 6. The advice included in the report should be a consensus opinion of all review panel members. It is the review panel chair's responsibility to ensure the contents of the advisory report provide an accurate and complete summary of all views on issues covered by the review. In the event consensus cannot be reached on an issue, the chair will incorporate all reviewers' opinions in the report. Development of the advisory report will be coordinated by the Science Director or a designated Commission Stock Assessment Scientist.

If the review panel has questions or needs clarification on the stock assessment report, the questions should be directed to the Science Director, who will work with the SAS chair to provide the panel with an answer. In certain situations, the panel may wish to communicate with the SAS before completing the advisory report, or before the board/section meeting. Post-review communication will be limited to chair-to-chair interaction, and the Science Director will be involved in those conversations.

The advisory report will be distributed to all relevant species committees (board/section, TC, SAS, AP) upon completion and approximately two weeks prior to presentation of the results. Advisory reports will not be distributed publicly, except for the meeting week briefing materials, until accepted by the board/section. Following distribution of the advisory report, the TC will review the advisory report findings and to evaluate the feasibility for each research recommendation made in the stock assessment and advisory reports. The TC shall provide the board/section with a timeline outlining the expected delivery of each item, ranging from 'ASAP to 'pending funding,' where applicable. The TC shall also indicate whether each item, once addressed, can be used in a future assessment update, or whether incorporating that item would trigger a benchmark assessment (see section 8.3).

If the TC/SAS and the review panel cannot reach agreement, the following process for reconciling the differences between the review panel and the TC will be followed:

- Results of the peer review will be presented by the review panel chair to the board/section.
- The board/section will refer the peer review results to the TC and SAS for review and action.
- The TC and SAS will revise the stock assessment report based upon the peer review advice. If the SAS and TC do not agree with the peer review advice, they will provide justification for not incorporating the advice, and provide alternate analyses.
- The final assessment, including the peer review and post-review actions, will be presented to the board/section by the TC.
- The board/section will make the final determination on status of stock and reference points.

For all reviews, after the board/section has received the presentation of the peer review results, the board should indicate that it 'accepts' or 'does not accept' the stock assessment report and peer review advisory report for management use.

APPENDIX 1. GENERAL CHECKLIST FOR TRACKING PROGRESS OF COMMISSION BENCHMARK STOCK ASSESSMENTS

Pre-Assessment Webinar
Who: TC chair and SAS chair, and Commission FMP Coordinator and Stock Assessment Scientist
When: A minimum of one to two years before scheduled peer review

- Review and discuss stock assessment process and policies. All should have read this document before meeting.
- Review and discuss the roles and responsibilities for participants of the data and assessment workshops.
- Develop draft timeline with milestones (data and assessment workshops, related TC meetings, the peer review and report to boards/sections). The timeline will be presented to the TC and to the board/section for approval.
- Stock Assessment Scientist develops draft terms of reference. After the webinar, the FMP Coordinator will distribute draft terms of reference, draft timeline, and other relevant stock assessment materials to the TC and SAS.

Pre-Assessment Technical Committee Meeting
Who: TC and SAS, and Commission FMP Coordinator and Stock Assessment Scientist When: Timing is determined during pre-assessment webinar and will be several months in advance of data workshop
Checklist:

- Commission staff review goals and objectives of the benchmark stock assessment and peer review process.
- Review draft terms of reference, edit, and forward to board/section for approval.
- Review draft timeline, edit, and forward to board/section.
- Review data availability spreadsheets and distribute to the TC and SAS members. Set deadline for TC and SAS members to return data availability spreadsheets.
- Determine additional data sources to contact, as needed, including other state and federal agencies, universities, consulting agencies, utility companies, etc.
- Develop assignments and due dates for TC and SAS members and Commission staff for the data workshop. Each task should be assigned to a specific person with the date initially assigned and due date noted. Some specific tasks include:
    - For each data set, prepare data set for submission in proper format, provide a written description of the methods, preliminary analyses, and metadata, and prepare a short presentation
    - SAS chair should prepare a short presentation reviewing of previous stock assessments as a working paper, conduct or update the literature review (life history/habitat and other relevant work), and prepare a short presentation
- Stock Assessment Scientist identifies members of TC and SAS who may need to obtain confidential data clearance, remind all members of confidentiality rules, and provide instructions on how to obtain confidential access, if needed.
- Finalize date and location for data workshop.

Data Workshop Preparation
When: Between pre-assessment TC meeting and data workshop

- Stock Assessment Scientist sends data availability spreadsheets and data workshop announcement to newly identified data holders. Staff also requests that these data holders submit data, working paper and presentations prior to data workshop. Commission staff will provide data submission instructions to additional data holders that respond to initial inquiry.
- Stock Assessment Scientist compiles data availability spreadsheets submitted by TC and SAS members, as well as other identified data holders.
- Stock Assessment Scientist makes data submissions available to all data holders (with proper confidential access, as appropriate).
- FMP Coordinator forwards draft assessment time line and terms of reference to board/section.
- Stock Assessment Scientist and SAS chair track data submission and assignment progress.
- Stock Assessment Scientist and SAS chair compile data sets from TC, SAS, and additional date holders that will be stored on the Commission's secure server and distributed via the data workshop CD.
- Commission staff develop and distribute data workshop agenda
- Stock Assessment Scientist send preliminary data workshop ftp instructions to TC and SAS
- Stock Assessment Scientist monitor progress of data confidential access requests

Data Workshop
Who: TC and SAS, Commission FMP Coordinator and Stock Assessment Scientist, invited data holders and interested stakeholders.

When: Timing determined at pre-assessment meeting, at least 3-6 months after TC meeting. Check-list:

- Presentation on the goals and objectives of data workshop and terms or reference.
- Review summary of previous stock assessments.
- Review summary of literature review (life history/habitat and other relevant work).
- Review all data sets
- Develop list of data analysis and report-writing assignments and due dates
- Determine additional data analyses to conduct and possible approaches for assessing stock(s)
- Determine SAS assignments and due dates for assessment workshop (additional data analyses, modeling approaches).
- Finalize date and location of assessment workshop.

Assessment Workshop Preparation

- TC chair, SAS chair, and Commission FMP Coordinator and Stock Assessment Scientist edit data report. FMP Coordinator sends data workshop report (including all data and additional materials) to SAS.
- FMP Coordinator sends assignments and due date reminders to SAS.

Assessment Workshop

Who: SAS, Commission FMP Coordinator and Stock Assessment Scientist When: Timing determined during pre-assessment workshop meeting Check-list:

- Presentation on the goals and objectives of assessment workshop and terms of reference.
- Review report sections, any additional data analyses, and conduct final evaluation of each data set for use in assessment and list reasons data sets were included or not (if modifications are necessary)
- Determine best approach or approaches for assessing stock.
- Conduct model runs, sensitivity analyses, model diagnostics, uncertainty estimates, as appropriate.
- Develop consensus recommendation of stock status.
- Develop prioritized research recommendations.
- Assign tasks for writing up final sections of draft stock assessment report.

Post-Assessment Workshop Follow-up

- SAS members complete final assignments for stock assessment report.
- SAS chair and FMP Coordinator make final edits to full report; SAS submit outstanding tasks.
- FMP Coordinator plans full TC meeting to review and approve stock assessment report.
- FMP Coordinator sends stock assessment report to TC two to four weeks prior to meeting.
- Stock Assessment Scientist files final draft of stock assessment report, all working papers, all data sets and other stock assessment materials on secure server
- FMP Coordinator files material on Commission Meeting CD
- Fisheries Science Director and Stock Assessment Scientist begin identifying review panel members if Commission peer review is the selected venue.

Technical Committee Review of Stock Assessment Report

- SAS chair presents terms of reference and final stock assessment report.
- TC reviews assessment and either approves the stock assessment report for peer review or returns it to the SAS to address TC concerns.
- If the stock assessment report is approved by the TC, it will be distributed to the appropriate peer review venue.
- If the stock assessment report is not approved by the TC, then the TC will return the report with comments to the SAS. The SAS will address the comments and re-submit the report to the TC for its approval.

Preparation for Peer Review

- Stock assessment report and supporting materials submitted to review panel one month before review meeting.
- SAS chair and other SAS members prepare presentations for the review workshop

Review Workshop

- SAS chair and other SAS members present assessment to peer review panel and conduct additional analyses from panel's prioritized list as time allows

Post Review Workshop

- SAS and panel chairs prepare presentations for board
- FMP Coordinator finalizes stock assessment report and Science staff finalizes advisory report for Commission Meeting CD
- Follow up TC meeting/webinar held if issues arise that need to be addressed before board/section meeting
- Stock Assessment Scientist drafts layman's stock assessment overview to accompany board/section meeting press releases

Board/Section Meeting

- SAS and panel chairs present to board/section
- Board accepts or does not accept assessment and review for management; additional tasking of SAS or TC may occur in response to assessment and review

Post-Board/Section Meeting

- Final edits to assessment and advisory reports and stock assessment overviews conducted and all relevant documents placed on website
- TC evaluates the feasibility and timeline for each research recommendation made in the stock assessment report and peer review advisory report; determines whether each item, once addressed, can be used in a future assessment update, or whether it will require a benchmark assessment

APPENDIX 2. GENERIC TERMS OF REFERENCE

Generic ASMFC Terms of Reference for Stock Assessment Process

1. Characterize precision and accuracy of fishery-dependent and fishery-independent data used in the assessment, including the following but not limited to:
    a. Provide descriptions of each data source (e.g., geographic location, sampling methodology, potential explanation for outlying or anomalous data)
    b. Describe calculation and potential standardization of abundance indices.
    c. Discuss trends and associated estimates of uncertainty (e.g., standard errors)
    d. Justify inclusion or elimination of available data sources.

2. Discuss the effects of data strengths and weaknesses (e.g., temporal and spatial scale, gear selectivities, aging accuracy, sample size) on model inputs and outputs.

3. Review estimates and PSEs of MRIP recreational fishing estimates. Request participation of MRIP staff in the data workshop process to compare historical and current data collection and estimation procedures and to describe data caveats that may affect the assessment.

4. Develop models used to estimate population parameters (e.g., F, biomass, abundance) and biological reference points, and analyze model performance.
    a. Describe stability of model (e.g., ability to find a stable solution, invert Hessian)
    b. Justify choice of CVs, effective sample sizes, or likelihood weighting schemes.
    c. Perform sensitivity analyses for starting parameter values, priors, etc. and conduct other model diagnostics as necessary.
    d. Clearly and thoroughly explain model strengths and limitations.
    e. Briefly describe history of model usage, its theory and framework, and document associated peer-reviewed literature. If using a new model, test using simulated data.
    f. If multiple models were considered, justify the choice of preferred model and the explanation of any differences in results among models.

5. State assumptions made for all models and explain the likely effects of assumption violations on synthesis of input data and model outputs. Examples of assumptions may include (but are not limited to):
    a. Choice of stock-recruitment function.
    b. No error in the catch-at-age or catch-at-length matrix.
    c. Calculation of M. Choice to use (or estimate) constant or time-varying M and catchability.
    d. Choice of equilibrium reference points or proxies for MSY-based reference points.
    e. Choice of a plus group for age-structured species.
    f. Constant ecosystem (abiotic and trophic) conditions.

6. Characterize uncertainty of model estimates and biological or empirical reference points.

7. Perform retrospective analyses, assess magnitude and direction of retrospective patterns detected, and discuss implications of any observed retrospective pattern for uncertainty in population parameters (e.g., F, SSB), reference points, and/or management measures.

8. Recommend stock status as related to reference points (if available). For example:
    a. Is the stock below the biomass threshold?
    b. Is F above the threshold?

9. Other potential scientific issues:
    a. Compare trends in population parameters and reference points with current and proposed modeling approaches. If outcomes differ, discuss potential causes of observed discrepancies.
    b. Compare reference points derived in this assessment with what is known about the general life history of the exploited stock. Explain any inconsistencies.

10. If a minority report has been filed, explain majority reasoning against adopting approach suggested in that report. The minority report should explain reasoning against adopting approach suggested by the majority.

11. Develop detailed short and long-term prioritized lists of recommendations for future research, data collection, and assessment methodology. Highlight improvements to be made by next benchmark review.

12. Recommend timing of next benchmark assessment and intermediate updates, if necessary relative to biology and current management of the species.

Generic ASMFC Terms of Reference for External Peer Review

1. Evaluate the thoroughness of data collection and the presentation and treatment of fishery-dependent and fishery-independent data in the assessment, including the following but not limited to:
    a. Presentation of data source variance (e.g., standard errors).
    b. Justification for inclusion or elimination of available data sources,
    c. Consideration of data strengths and weaknesses (e.g., temporal and spatial scale, gear selectivities, aging accuracy, sample size),
    d. Calculation and/or standardization of abundance indices.

2. Evaluate the methods and models used to estimate population parameters (e.g., F, biomass, abundance) and biological reference points, including but not limited to:
    a. Evaluate the choice and justification of the preferred model(s). Was the most appropriate model (or model averaging approach) chosen given available data and life history of the species?
    b. If multiple models were considered, evaluate the analysts' explanation of any differences in results.

    c. Evaluate model parameterization and specification (e.g., choice of CVs, effective sample sizes, likelihood weighting schemes, calculation/specification of M, stock-recruitment relationship, choice of time-varying parameters, plus group treatment).

3. Evaluate the diagnostic analyses performed, including but not limited to:
    a. Sensitivity analyses to determine model stability and potential consequences of major model assumptions
    b. Retrospective analysis

4. Evaluate the methods used to characterize uncertainty in estimated parameters. Ensure that the implications of uncertainty in technical conclusions are clearly stated.

5. If a minority report has been filed, review minority opinion and any associated analyses. If possible, make recommendation on current or future use of alternative assessment approach presented in minority report.

6. Recommend best estimates of stock biomass, abundance, and exploitation from the assessment for use in management, if possible, or specify alternative estimation methods.

7. Evaluate the choice of reference points and the methods used to estimate them. Recommend stock status determination from the assessment, or, if appropriate, specify alternative methods/measures.

8. Review the research, data collection, and assessment methodology recommendations provided by the TC and make any additional recommendations warranted. Clearly prioritize the activities needed to inform and maintain the current assessment, and provide recommendations to improve the reliability of future assessments.

9. Recommend timing of the next benchmark assessment and updates, if necessary, relative to the life history and current management of the species.

10. Prepare a peer review panel terms of reference and advisory report summarizing the panel's evaluation of the stock assessment and addressing each peer review term of reference. Develop a list of tasks to be completed following the workshop. Complete and submit the report within 4 weeks of workshop conclusion.

APPENDIX 3. EXAMPLE DATA AVAILABILITY SPREADSHEETS

Introduction

Overview

* The purpose of this request is to develop a catalog of the types of fisheries-dependent and fisheries-independent data available on SPECIES X. An evaluation of the available data will serve as a starting point for the selection of stock assessment methods. Prior to the Data Workshop, the Stock Assessment Subcommittee will put forth a request for the necessary data, including the preferred format for data submission.

Directions

* For ***each*** source of data available from your state/jurisdiction (including historical data sets), please fill-in the appropriate sheet as described below.
* The forms on the following sheets are intended to assist with the stock assessment process. The data sources described in the 'Key' sheet represent the types of information typically collected by the states/jurisdictions.

Additional Information

* Please review the 'Additional Info' sheet and provide responses where appropriate. For each item, provide contact information for individuals who manage each data set.

Please submit a completed data availability file for your state to Pat Campfield at pcampfield@asmfc.org

Key

Species X Data Availability by State

Years Available - include the range of years in which data are available; if there are breaks in a time series, please describe missing years in N**otes**

if Gear Type, Units Effort, or other data became available after the time series started, identify the first year this information is available (e.g., counts, lengths taken throughout the time series; started collecting ages later)

Temporal Resolution - check a box describing level of detail (select one only)

date - check if full date known

season - check if only season (Spring, Summer, Fall, Winter) and year are known

year - check if only the year landed, caught in survey, etc. is known

Spatial Resolution - check a box describing level of detail (select one only)

latitude and longitude - check if detailed coordinates known

NMFS statistical area - check if area known, but greater detail (lat/long) unknown

state waters - check if only the state in which fish were landed, caught, etc. is known

Gear Type - check if fishery or survey gear (trawl, pound net, etc.) is known

Units Effort - check if some measure of effort (tow duration, hours net set, catch per day, etc.) is known and can be used to calculate CPUE

Counts - check if number of individuals in each sample

known **Weight** - check if individual or aggregate

sample weights known **CPUE** - check if pre-calculated

CPUE is available

Sex - check if sex was determined for some or all of sampled fish (i.e., mature individuals)

Subsample - check if sub-sample size used to estimate landings, discards, survey tow total catch, etc. is known

Variance - check if pre-calculated measure of variance is available

File Type - are the data in SAS, xls, Access, ascii, field sheets, etc?

Notes - provide more details to clarify available data

(e.g., length measurements in FL; scale or otolith age samples)

Commercial Data

Source: Commercial Fishery		YEARS AVAILABLE		TEMPORAL RESOLUTION			SPATIAL RESOLUTION			GEAR TYPE	UNITS EFFORT	DATA								File Type	NOTES
TYPE	INFO	From	To	date	season, yr	year only	lat / long	NMFS stat area	state waters			Counts	Lengths	Weights	Ages	Sex	CPUE	Subsample	Variance		
Landings	ME																				
	NH																				
	MA																				
	RI																				
	CT																				
	NY																				
	NJ																				
	DE																				
	PA																				
	MD																				
	VA																				
	NC																				
	SC																				
	GA																				
	FL																				
	NMFS																				
Discards	ME																				
	NH																				
	MA																				
	RI																				
	CT																				
	NY																				
	NJ																				
	DE																				
	PA																				
	MD																				
	VA																				
	NC																				
	SC																				
	GA																				
	FL																				
	NMFS																				

Recreational Data

Source: Recreational Fishery		YEARS AVAILABLE		TEMPORAL RESOLUTION			SPATIAL RESOLUTION				GEAR TYPE	UNITS EFFORT	DATA								File Type	NOTES
TYPE	INFO	From	To	date	season, yr	year only	lat / long	NMFS stat area	state waters				Counts	Lengths	Weights	Ages	Sex	CPUE	Subsample	Variance		
Landings	ME																					
	NH																					
	MA																					
	RI																					
	CT																					
	NY																					
	NJ																					
	DE																					
	PA																					
	MD																					
	VA																					
	NC																					
	SC																					
	GA																					
	FL																					
	NMFS																					
Discards	ME																					
	NH																					
	MA																					
	RI																					
	CT																					
	NY																					
	NJ																					
	DE																					
	PA																					
	MD																					
	VA																					
	NC																					
	SC																					
	GA																					
	FL																					
	NMFS																					
eleased Alive	ME																					
	NH																					
	MA																					
	RI																					
	CT																					
	NY																					
	NJ																					
	DE																					
	PA																					
	MD																					
	VA																					
	NC																					
	SC																					
	GA																					
	FL																					
	NMFS																					
Total Catch	ME																					
	NH																					
	MA																					
	RI																					
	CT																					
	NY																					
	NJ																					
	DE																					
	PA																					
	MD																					
	VA																					
	NC																					
	SC																					
	GA																					
	FL																					

Fisheries-Independent Survey Data

Source: Fishery-Independent Surveys		YEARS AVAILABLE		TEMPORAL RESOLUTION			SPATIAL RESOLUTION			GEAR TYPE	UNITS EFFORT	DATA								File Type	NOTES
TYPE	INFO	From	To	date	season, yr	year only	lat / long	NMFS stat area	state waters			Counts	Lengths	Weights	Ages	Sex	CPUE	Subsample	Variance		
Catch	ME																				
	NH																				
	MA																				
	RI																				
	CT																				
	NY																				
	NJ																				
	DE																				
	PA																				
	MD																				
	VA																				
	NC																				
	SC																				
	GA																				
	FL																				
	NMFS																				

Example

Source: EXAMPLE Fishery-Independent Surveys		YEARS AVAILABLE		TEMPORAL RESOLUTION			SPATIAL RESOLUTION			GEAR TYPE	UNITS EFFORT	DATA								File Type	NOTES
TYPE	INFO	From	To	date	season, yr	year only	lat / long	NMFS stat area	state waters			Counts	Lengths	Weights	Ages	Sex	CPUE	Subsample	Variance		
Catch	ME	1985	present																	Excel	lengths in TL
	NH	1990	present	X					X	X		X	X	X	99	X				Excel	
	MA	1985	present	X					X	X		X								SAS	relative inde
	RI	2000	present	X				X		X	X	X	X	X	X	X	X	X	X	Excel	
	CT	1990	2002	X			X			X		X								SAS	
	NY	1990	2002		X			X		X		X	X	X	01					Excel	
	NJ	1995	present		X			X		X	X	X								Excel	Age-0 index
	DE	2002	2005			X		X		X		X	X	X	X					ascii	
	PA	1990	present			X			X	X		X								Access	
	MD	1980	present	X			X			X	X	X	X	X	X	X				Access, SAS	
	VA	1980	present	X			X			X	X	X								Access	late summe
	NC	1980	present	X			X			X	X	X	X	X	X	X	X	X	X	SAS	lengths in FL
	SC	1995	present	X			X			X	X	X	X	X	95	X	X	X	X	Excel	
	GA	1995	present			X		X		X	X	X								Excel	
	FL	1980	present			X		X		X	X	X								Access, SAS	movement,
	NMFS	1980	present	X			X			X	X	X	X	X	X	X	X	X	X	Excel	
				X				X		X	X	X	X	X	X	X	X	X	X		

Additional Information

ADDITIONAL INFORMATION

1. Is your state's **SPECIES X** regulatory history available? Please provide contact information for the best source of this information.

Contact Info

AGENCY _____

CONTACT _____

ADDRESS _____

_____

_____

PHONE _____

FAX _____

E-MAIL _____

NOTES _____

_____

_____

_____

_____

2. Are there additional sources of information or data sets from your state that would be useful for stock assessment? This could include discard mortality studies, natural mortality studies, stock identification studies, tagging studies, citation program data.

Data

SOURCE: _____

TYPE: _____

INFO: _____

Contact Info

3. Does your state engage in **SPECIES X** stock enhancement? If yes, please provide the types of data collected in enhancement efforts and/or information for the appropriate contact.

Data

SOURCE: _____

TYPE: _____

INFO: _____

_____

_____

_____

4. Are individual fish lengths-weights available for any data sources from your state?

Data

SOURCE: _____

TYPE: _____

INFO: _____

Contact Info

AGENCY _____

CONTACT _____

ADDRESS _____

_____

_____

PHONE _____

FAX _____

E-MAIL _____

NOTES _____

_____

_____

_____

_____

5. If age data are available for one or more of your state's data sources, are the age-length keys used to generate those data available?

Data

SOURCE: _____

TYPE: _____

INFO: _____

_____

_____

6. Are you aware of any SPECIES X socio-economic publications or data that would be useful for stock assessment or projections?

Data

SOURCE: _____

TYPE:

INFO:

Contact Info

AGENCY

CONTACT

ADDRESS

PHONE

FAX

E-MAIL

NOTES

Appendix 4. Components of the Assessment Report

Acknowledgements

Executive Summary

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List of Tables

List of Figures

Terms of Reference
(written by SAS and approved by species technical committee and management board)

1.0 Introduction
- 1.1 Brief Overview and History of Fisheries
- 1.2 Management Unit Definition
- 1.3 Regulatory History
- 1.4 Assessment History
  - 1.4.1 History of stock assessments
  - 1.4.2 Historical retrospective patterns

2.0 Life History
- 2.1 Stock Definitions (include tagging, genetic information, if available)
- 2.2 Migration Patterns
- 2.3 Age
- 2.4 Growth
- 2.5 Reproduction
- 2.6 Natural Mortality

3.0 Habitat Description
- 3.1 Overview – brief review of habitat requirements relevant to assessment results (e.g., temperature, depth, salinity, DO, pH, flow, substrate, vegetation)
  - 3.1.1 Spawning, egg, and larval habitat
  - 3.1.2 Juvenile and adult habitats

4.0 Fishery-Dependent Data Sources
- 4.1 Commercial (include all appropriate subsections - subsections may be removed or added as necessary)
  - 4.1.1 Data Collection and Treatment
    - 4.1.1.1 Survey Methods (including coverage, intensity)
    - 4.1.1.2 Biological Sampling Methods (including coverage, intensity)
    - 4.1.1.3 Ageing Methods
    - 4.1.1.4 Catch Estimation Methods (e.g., catch-at-age)
  - 4.1.2 Trends

4.1.2.1 Commercial Catch Rates (CPUE)
4.1.2.2 Commercial Landings
4.1.2.3 Commercial Length/Weight/Catch-at-Age
4.1.2.4 Commercial Discards/Bycatch
4.1.3 Potential Biases, Uncertainty, and Measures of Precision

4.2 Recreational (include all appropriate subsections - subsections may be removed or added as necessary)
4.2.1 Data Collection and Treatment
4.2.1.1 Survey Methods (including coverage, intensity)
4.2.1.2 Biological Sampling Methods (including coverage, intensity)
4.2.1.3 Ageing Methods
4.2.1.4 Catch Estimation Methods (e.g., catch-at-age or -length)
4.2.2 Trends
4.2.2.1 Recreational Catch Rates (CPUE)
4.2.2.2 Recreational Landings
4.2.2.3 Recreational Length/Weight/Catch-at-Age
4.2.2.4 Recreational Discards/Bycatch
4.2.3 Potential Biases, Uncertainty, and Measures of Precision

5.0 Fishery-Independent Data
5.1 Surveys (include all appropriate subsections - subsections may be removed or added as necessary)
5.1.1 Data Collection and Treatment
5.1.1.1 Survey Methods (including coverage, intensity)
5.1.1.2 Biological Sampling Methods (including coverage, intensity)
5.1.1.3 Ageing Methods
5.1.1.4 Catch Estimation Methods (e.g., catch-at-age or -length)
5.1.2 Trends
5.1.2.1 Catch Rates (Numbers)
5.1.2.2 Length/Weight/Catch-at-Age
5.1.2.3 Abundance and Biomass Indices (-per-unit effort)
5.1.3 Potential Biases, Uncertainty, and Measures of Precision

6.0 Methods
6.1 Background (on models and software used)
6.1.1 Assessment Model Description (discuss assumptions and any differences from previously published applications)
6.1.2 Reference Point Model Description (discuss assumptions any differences from previously published applications)
6.2 Configuration (include all appropriate subsections - subsections may be removed or added as necessary)
6.2.1 Assessment Model(s)
6.2.1.1 Spatial and Temporal Coverage
6.2.1.2 Selection and Treatment of Indices
6.2.1.3 Parameterization

6.2.1.4 Weighting of Likelihoods
6.2.1.5 Estimating Precision (e.g., ASEs, Likelihood profiling, MCMC)
6.2.1.6 Sensitivity Analyses
6.2.1.6.1 Sensitivity to Input Data
6.2.1.6.1 Sensitivity to Model Configuration
6.2.1.7 Retrospective Analyses
6.2.1.8 Projections
6.2.2 Reference Point Model(s)
6.2.2.1 Parameterization
6.2.2.2 Estimating Uncertainty
6.2.2.3 Sensitivity Analyses

7.0 Results (include all appropriate subsections - subsections may be removed or added as necessary)
7.1 Assessment Model(s)
7.1.1 Goodness of Fit
7.1.2 Parameter Estimates (include precision of estimates)
7.1.2.1 Selectivities and Catchability
7.1.2.2 Exploitation Rates
7.1.2.2 Abundance or Biomass Estimates
7.1.3 Sensitivity Analyses
7.1.3.1 Sensitivity to Input Data
7.1.3.2 Sensitivity to Model Configuration
7.1.4 Retrospective Analyses
7.1.5 Projection Estimates
7.2 Reference Point Model(s)
7.2.1 Parameter Estimates
7.2.2 Sensitivity Analyses (e.g., to M, selectivities)
7.3 Results Uncertainty (e.g., interpretation of alternate model results)

8.0 Stock Status (discuss current BRPs & any new proposed BRPs separately, if applicable)
8.1 Current Overfishing, Overfished/Depleted Definitions (define targets, thresholds, and control rules)
8.3 Stock Status Determination
8.3.1 Overfishing Status
8.3.2 Overfished Status
8.3.3 Control Rules
8.3.4 Uncertainty

9.0 Research Recommendations

10.0 Minority Opinion (if applicable)
10.1 Description of Minority Opinion
10.2 Justification from Majority (on why not adopted)

11.0 Literature Cited

12.0 Tables - suggested tables include the following:
Landings (numbers and weights)
Catch-at-Age
Lengths/Weights-at-Age
Fecundity/Maturation Schedule
Natural Mortality Schedule
Age-Length Keys
Survey or Index Values
Model Configuration and Inputs
Model Outputs, Parameter Estimates and Precision
Results (e.g., Abundance, Biomass, SSB, and Fishing Mortality)

13.0 Figures - suggested figures include the following:
Landings by Year, all states
Landings by Year, by state
Length/Weight-at-Age
Observed Survey Values by year
Observed and Predicted Survey Values by year
Residuals
Results (Abundance, Biomass, SSB) by year
Stock Abundance and Catch by year
Sensitivity Plots
Retrospective Plots

Appendices 1-X (if applicable)

APPENDIX 5. INSTRUCTIONS FOR PEER REVIEWERS AND CONFLICT OF INTEREST STATEMENT

Overview

The Atlantic States Marine Fisheries Commission (Commission) Benchmark Peer Review Process provides a framework for the critical evaluation by independent experts of fish population models upon which fishery management decisions are based. For full details, see the Commission document "Technical Support Groups Guidance and Benchmark Stock Assessment Process". The term benchmark stock assessment refers to an assessment that goes through an independent peer review. Benchmark assessments are prompted by new fishery management actions, a major change in stock assessment model or data, or a Commission or regional fishery management council time-trigger. Stock assessment reviews evaluate the validity of the models used, the input data, parameters, and model results, alternative assessment methods, and additional research needs. A review by independent assessment scientists that have no involvement, stake, or input into the assessment provides a judgment on the quality and completeness of the science used in a stock assessment. Peer review panel decisions are based on science; discussions and deliberations shall not consider possible future management actions, agency financial concerns, or social and economic consequences.

Preparation for the Review Workshop

In general, peer reviews are conducted within 6 to 8 weeks of the completion of the stock assessment report. A Commission stock assessment review panel is composed of 3-5 scientists (state, federal, university, or private). Review panel members should possess:

- Knowledge of the life history and population biology of the species under review
- Proficiency in utilizing quantitative population dynamics and stock assessment models
- Knowledge of broader scientific issues as outlined in the terms of reference, and
- Professional objectivity and credibility.

Panel members involved with a Commission peer review ***must not*** have involvement with the Commission stock assessment and management process for the species under review. In addition, at least one panel member should be from outside the range of the species.

The stock assessment report, all supporting materials, and instructions for peer reviewers will be distributed to the review panel by the Commission's Science Director one month before the review meeting. Reviewers shall read the documents to gain an in-depth understanding of the stock assessment, the resources and information considered in the assessment, and their responsibilities as reviewers. The Science Director will organize the review workshop in coordination with panel members and the SAS.

The Review Workshop

A Commission peer review involves a multi-day meeting of the review panel to evaluate the stock assessment for a single species. The full SAS, TC chair and vice-chair, board/section chair and vice-chair, and chair and vice-chair of the advisory committee should be invited to attend the review. Stakeholders shall be invited to attend Commission peer reviews, but not as panel members, and the review panel chair will encourage public comment.

The workshop will begin with introductions and a short overview of the review workshop objectives presented by the Science Director. Panelists should then select one member to serve as panel chair. Duties of the panel chair include focusing discussion on the issues of the peer review, developing consensus within the review panel, taking the leading role in development of the advisory report, and presenting the finalized advisory report to appropriate Commission boards/sections.

The review workshop will include a period for the presentation of the stock assessment report and any additional presentations, a period of open discussion for all attendees, a period for the review panel to ask specific questions of the SAS, a closed door session for the review panel to reach consensus on the review, a period for the panel to review the major points of their consensus opinion on each term of reference with the SAS, and a closed door session for development of the advisory report. Presentation of the stock assessment report and any minority reports will occur on the first day(s) of the meeting. Panel members may request specific presentations on other issues. Requests for presentations should be made to the Science Director prior to the workshop to allow the presenter ample preparation time. During a review workshop, minor changes to the stock assessment report can be made with the concurrence of the Science Director, SAS chair, and review panel chair. Minor changes/results will appear as an appendix to the stock assessment report, and an explanation for the change will be referenced in the advisory report. Only clarifications will be allowed during the review workshop.

The review panel will develop and author an advisory report during the review workshop, or shortly thereafter. The findings and advice included in the advisory report will be a consensus opinion of all peer review panel members. Panels are expected to reach conclusions that all participants can accept, which may include agreeing to acknowledge multiple possibilities. It is the review panel chair's responsibility to ensure the contents of the advisory report provide an accurate and complete summary of all views on issues covered by the review. In the event consensus cannot be reached on an issue, the chair will incorporate all reviewers' opinions in the report.

Development of the advisory report will be coordinated by the Science Director or designated Fisheries Science staff. The report will include all content outlined in Appendix 1. Each term of reference will be addressed individually by number in Section II, including discussion of majority versus minority reports when present. A clear statement will be made indicating whether or not the task(s) outlined in each term of reference was satisfactorily completed by the SAS using the best available data and stock assessment methodology; specifically, is the assessment suitable for use by managers in exploring management options? The advisory report also includes advice on the issues listed in Appendix 1, Section III. Comments on topics not listed in Appendix 1 are encouraged and will be included in the Other Comments section.

If the review panel finds a term of reference deficient to the extent that SAS members present cannot correct the deficiencies during the course of the review workshop, or the SAS chair deems that desired modifications would result in an alternative assessment, then the review panel shall reject that term of reference. If a term of reference is rejected, the panel should include in the advisory report 1) a justification for rejection (i.e., a complete description of the deficiency)

and 2) specific, constructive suggestions for remedial measures or alternate approaches to correct the assessment.

Presentation of Peer Review Results

Results of the peer review will be presented within 4 weeks of the completion of the peer review. The advisory report will be distributed to all relevant committees (board/section, TC, SAS, AP) upon completion and approximately two weeks prior to presentation of the results. The results of the peer review will be presented by the chair of the review panel to a meeting of the board/section.

The advisory report and presentation will not include specific management advice. The stock assessment report and the advisory report will be posted on the Commission website (www.asmfc.org) after acceptance by the board/section.

Commission Peer Review Code of Conduct

- Review panel decisions shall be based on science. Discussions and deliberations shall not consider possible future management actions, agency financial concerns, or social and economic consequences.
- Personal attacks will not be tolerated. Advancement in science is based on disagreement and healthy, spirited discourse is encouraged. However, professionalism must be upheld and those who descend into personal attacks will be asked to leave by Commission staff.
- Review panelists are expected to support their discussions with appropriate text and analytical contributions. Each panelist is individually responsible for ensuring their points and recommendations are addressed in workshop reports; they should not rely on others to address their concerns.
- Panelists are expected to provide constructive suggestions and alternative solutions; criticisms should be followed with recommendations and solutions.

Expectations of the Peer Review Process

The peer review WILL:

- Provide a judgment of the value and appropriateness of the science and scientific methods which produced the assessment
- Provide recommendations for future research and improvements of future assessments
- Evaluate all input parameters and biological characteristics incorporated into the model
- Evaluate the stock assessment methods
- Evaluate status of stocks relative to current FMP goals

The peer review WILL NOT:

- Resolve all issues
- Answer all questions
- Provide specific management recommendations
- Provide options to reach management targets

ATLANTIC STATES MARINE FISHERIES COMMISSION PEER REVIEWER CONFLICT OF INTEREST STATEMENT

The Commission stock assessment peer review process involves establishing a peer review panel composed of 3-5 scientists (state, federal, university, or private) who will provide judgment on the quality and completeness of the science used in the stock assessment. It is of the utmost importance that input provided by peer reviewers be unbiased.

Potential reviewers should declare themselves not eligible to serve on the review panel for the species under review if they have a relationship with persons involved in the assessment under review that might be construed as creating a conflict of interest.

Conflict of interest may include (but is not limited to):

- Involvement, stake, or input to the Commission stock assessment or with the management process for the species under review.
- Involvement with state, federal, or international management, the fishing industry, or any other interest group regarding the species under review.
- A well-formed position or history of advocacy for a specific viewpoint on a subject relevant to the stock assessment under review.
- Current association as a thesis or postdoctoral advisor or student of scientists involved in the stock assessment.
- Collaboration (within the last 3 years, currently, or planned) on a project, book, or paper with scientists involved in the stock assessment under review.
- Financial partnerships (consulting, business, or other financial connection) with the persons involved in the stock assessment under review.
- Spouse, child, or general partner relationship with scientists involved in the stock assessment under review.

I_____ hereby certify, to the best of my knowledge, I do not have a conflict of interest and am not likely to give appearance of a conflict of interest, impropriety, or impairment of objectivity with respect to the stock assessment I am asked to review.

_____

Signature Date

APPENDIX 6. ADVISORY REPORT OUTLINE

The advisory report will be developed by the review panel, with assistance from the Commission's Science staff. The report will provide an evaluation of each term of reference and be followed by an advisory section providing general scientific advice on the topics outlined. The advice included in the report should be a consensus opinion of all review panel members.

Standard Contents

I. Introduction

II. Terms of Reference (addressed individually by number)

III. Advisory Section

- Status of Stocks: Current and projected
- Stock Identification and Distribution
- Management Unit
- Landings
- Data and Assessment
- Biological Reference Points
- Fishing Mortality
- Recruitment
- Spawning Stock Biomass
- Bycatch
- Other Comments

IV. Sources of Information

V. Tables

VI. Figures

* for all sections, "information not available" should be indicated where appropriate

APPENDIX 7. FISHERY MANAGEMENT PLAN OUTLINE

DRAFT FMP OUTLINE

(approved by ISFMP Policy Board - May 1999)

This document outlines the contents of Commission FMPs developed by the ISFMP. It contains FMP elements required by the ISFMP Charter as well as suggestions on other sections, should information on these elements be available.

It is intended that this outline be a working document for use by PDTs, PRTs, and others in drafting, compiling, and reviewing FMPs as guidance in FMP development and implementation. The ISFMP Charter, Section Six, lists the required elements of a FMP.

This outline was adopted by the ISFMP Policy Board during the Spring Meeting in Atlantic Beach, North Carolina on May 20, 1999. Suggestions for additional changes to the FMP outline are welcomed and should be forwarded to ISFMP Staff.

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1.7.5 Law Enforcement Assessment Document ***(if available)***
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APPENDIX 8. FMP ADDENDUM OUTLINE

1.1 Introduction

- Management authority (state/federal waters)
- Management unit
- Amendment the document is working under
- Purpose/goal of the document (list out issues if there is more than one being considered in the document)

2.1 Overview

2.2 Statement of the problem

- Why the board is considering a change in management
- This paragraph should be short, simple, and to the point

2.3 Background

- Events leading to the consideration for a change in management

3.1 Management Options

- If the management options are replacing a previous management action be sure to state upfront that this section will replace section X of Amendment/Addendum Y
- Almost always include status quo as first option
- Committee Recommendations/Comments (if necessary)

If there is more than one issue being considered you would repeat the three sections above **(3.1-3.2)**

4.1 Compliance

- Due dates for proposals, plan reviews, implementation dates

4.2 Recommendation for Federal Waters

- Not all plans will have this section

APPENDIX 9. FISHERY-INDEPENDENT DATA USE POLICY

(approved by ISFMP Policy Board - May 2015)

Introduction

Data collected by fishery-independent sampling programs are commonly used in Commission stock assessments and provided to Stock Assessment Subcommittee and/or Technical Committee members. Providing raw data for Commission stock assessments is one purpose for which sampling information is used for the benefit of the public and Atlantic coast fisheries. Fishery-independent data also often support analyses outside of stock assessments, including analyses described in journal manuscripts with the intent of enhancing the scientific understanding of a species or ecosystem. Data used for both purposes may be collected by state agencies, federal agencies, or academic institutions. Because the Commission does not own fishery-independent datasets, the Data Use Policy defines how fishery-independent data are to be treated within and outside of Commission stock assessments. The objective of the Commission's Data Use Policy is to achieve the fullest potential for application of data to stock assessments in order to inform fisheries management decisions, while protecting the rights of data providers.

In Stock Assessments

In many cases, public dollars in the form of federal or state agency funding are used to support fishery-independent data collection. Therefore, raw data are to be made available to the Commission staff and SAS committee members for stock assessment purposes by any agency or institution whose sampling programs are publicly funded. For stock assessments and other technical analyses used to provide scientific advice to fisheries managers, Principal Investigators (PIs) are asked to provide raw catch, biological, tagging and other data to the lead assessment analyst for a given species, along with metadata detailing current and past sampling methodology. Expert assessment scientists on committees will consider methods and account for changes when developing new indices or other inputs to assessment models, a procedure required and regularly conducted in all stock assessments. Analysts will also communicate with the sampling program leads to ensure data are being applied, or excluded, appropriately. Fishery-independent summary data, metadata, and resulting analyses will be included in Commission Stock Assessment Reports. Principal Investigators and their institutions will be acknowledged in Reports and other presentations of assessment results for Commission purposes. The Reports are considered grey literature and do not violate duplicative publishing rules of scientific journals.

Outside of Stock Assessments

Committee members who have received copies of fishery-independent data as part of a Commission assessment may also be interested in using the data for non-assessment purposes. In such cases, authors of journal manuscripts or other analyses must communicate directly with all Principal Investigators/data collectors to obtain permission to use their data in journal publications or other non-assessment uses. Data requests from non-committee members to the Commission will be handled in the same manner; the requestor will be directed to the PIs to obtain raw data. The Commission is obligated to and will provide summary level data that are already included in assessment reports (e.g., index values, but not raw data). The Commission Stock Assessment Scientist or Fishery Management Plan Coordinator involved in the stock assessment at hand should be contacted to obtain lists of data collectors and their contact

information, or if there are questions about the Data Use Policy in general. Responsibility for contacting PIs will be with the authors of manuscripts or non-assessment analyses.

Policy Relevance

Failure to adhere to the Commission's Data Use Policy jeopardizes the quality of stock assessments, in the event that PIs discontinue data sharing when their permission or rights in publishing have been violated. The Commission encourages open communication among committee members and scientists collecting fishery-independent data in order to both use data for fisheries assessment and management applications, and to promote the quality of research being conducted at fisheries science institutions.