Southeast Region Framework for Determining that Fishery Conservation and Management Measures are Based on the Best Scientific Information Available

The Magnuson-Stevens Fishery Conservation and Management Act (MSA § 301(a)(2)) mandates that fishery conservation and management decisions in the U.S. be based on the Best Scientific Information Available (BSIA). NOAA Fisheries is responsible for implementing this requirement in consultation with Fishery Management Councils (Councils) and other advisory bodies. This document clarifies the framework used to make BSIA determinations in the Southeast Region, including the jurisdictions of the Caribbean, Gulf of Mexico, and South Atlantic Fishery Management Councils (per NOAA Fisheries Procedural Directive 01-101-10).

General precepts

Section 304 of the MSA requires that the Secretary "review the plan or amendment to determine whether it is consistent with the national standards, the other provisions of this Act, and any other applicable law." In reviewing Council regulations, the statute requires that the Secretary "initiate an evaluation of the proposed regulations to determine whether they are consistent with the fishery management plan, plan amendment, this Act and other applicable law." Because the Secretary has delegated those authorities to NOAA Fisheries, NOAA Fisheries is ultimately responsible for determining if the management measures are based on BSIA, and thereby what constitutes BSIA for any particular management action. However, the agency largely fulfills these legal responsibilities based on the administrative record developed through the Council process and the deliberations of its Scientific and Statistical Committee (SSC).

The National Standard 2 Guidelines require "Each Scientific and Statistical Committee shall provide its Council ongoing scientific advice for fishery management decisions, including recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, achieving rebuilding targets, and reports on stock status and health, bycatch, habitat status, social and economic impacts of management measures, and sustainability of fishing practices." They further stipulate that "SSC scientific advice and recommendations to its Council are based on scientific information that the SSC determines to meet the guidelines for best scientific information available as described in paragraph (a) of this section. SSCs may conduct peer reviews or evaluate peer reviews to provide clear scientific advice to the Council. Such scientific advice should attempt to resolve conflicting scientific information, so that the Council will not need to engage in debate on technical merits. Debate and evaluation of scientific information is the role of the SSC." Thus, the SSC, in making its management recommendations, asserts that the collection of scientific information it has examined meets the guidance for BSIA. It does not assert that each particular component meets the guidance for BSIA.

Peer review is an essential part of determining whether the scientific information used meets the criteria for BSIA. It helps ensure that the quality and credibility of the scientific information and methods meet the technical and scientific standards in the pertinent area.[1] Section 302(g)(1)(E) of the MSA provides that: "The Secretary and each Council may establish a peer review process

[1] *Id.* at 600.315(a)(6)(vii).

for that Council for scientific information used to advise the Council about the conservation and management of the fishery."

Timeliness is also an important tenet of making a determination of best scientific information *available*. The NS2 Guidelines at 50 CFR 600.315(a)(6)(v) states that "Mandatory management actions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis. In some cases, due to time constraints, results of important studies or monitoring programs may be considered for use before they are fully complete. Uncertainties and risks that arise from an incomplete study should be acknowledged, but interim results may be better than no results to help inform a management decision. Sufficient time should be allotted to audit and analyze recently acquired information to ensure its reliability. Data collection methods are expected to be subjected to appropriate review before providing data used to inform management decisions." Further 50 CFR 600.315(e) stipulates that "(1) FMPs must take into account the best scientific information available at the time of preparation. Between the initial drafting of an FMP and its submission for final review, new information often becomes available. This new information should be incorporated into the final FMP where practicable; but it is unnecessary to start the FMP process over again, unless the information indicates that drastic changes have occurred in the fishery that might require revision of the management objectives or measures. (2) The fact that scientific information concerning a fishery is incomplete does not prevent the preparation and implementation of an FMP (see related 600.320(d)(2) and 600.340(b))."

Procedure for BSIA Determinations in the Southeast Region

It is ultimately the responsibility of NOAA Fisheries to make stock status determinations, approve catch limits and other management measures, and certify that these decisions are consistent with BSIA. However, the agency relies on input and advice from the SSCs and peer review processes. The National Standard 2 (NS2) Guidelines explain that the "SSC scientific advice and recommendations to its Council are based on scientific information that the SSC determines to meet the guidelines for [BSIA] as described in [50 CFR 600.315(a)]." NOAA Fisheries supports this process by providing scientific information and guidance, and considers the entire process when it certifies that the management action is consistent with BSIA (including quality, timeliness and other criteria provided by the NS2 Guidelines at 50 CFR 600.315). The text that follows details this process as it is applied in the Southeast Region:

1) Procedure for Stock Status Determinations: NOAA Fisheries is responsible for determining the status of each stock in an FMP. This should be done through a formal stock assessment process guided by terms of reference that define the scope of work NOAA Fisheries, the Councils, and their partners consider most important to address. In the Southeast Region, this is often accomplished through the Southeast Data Assessment and Review (SEDAR) process. The standard operating procedure (SOP) for the SEDAR process, along with definitions of stock assessment terms, can be found at http://sedarweb.org. A draft stock assessment, whether conducted through SEDAR or another process, should be peer-reviewed as described in the MSA NS2 Guidelines (50 C.F.R. 600.315). The peer review should be limited to the data and analyses available at the time the stock assessment process was completed. NOAA Fisheries officially certifies that scientific information (including a stock assessment) meets the guidance for

BSIA based on the record developed through the Council process (including SSC review of analytical products). The SSC is not required to make BSIA recommendations for any particular piece of information (including a stock assessment), but it is helpful for the SSC or other cooperators in the process to advise in that regard.

a. Peer review of an assessment should evaluate, to the extent possible, the scientific basis for the following:
    i. Stock status relative to the overfishing status determination criteria (SDC) specified in the FMP;
    ii. Stock status relative to the overfished SDC specified in the FMP, including whether the stock is approaching an overfished condition.
    iii. Technical merits of potential revisions to SDCs (including the choice of proxies for MSY-based SDCs), harvest control rules, or other management actions that are analyzed within the stock assessment, per the terms of reference of the assessment process (e.g., SEDAR).
b. A peer review may be conducted by the SSC, or through another clearly specified process that is more or less independent of the SSC, and may involve other Council entities such as Plan Teams. Different review processes may be used for different types of scientific information. For example, the SEDAR stock assessment process often involves peer review by the Center for Independent Experts (CIE).
c. It is unnecessary for the SSC to repeat a previously conducted, detailed technical review (e.g., one conducted by CIE). Rather, the SSC should focus on reviewing information that has not already been peer-reviewed. For example, operational type assessments that have been previously reviewed should only be reviewed to the extent they address specific areas detailed in the terms of reference for that update (or otherwise depart from the previous analysis).
d. If an SSC disagrees with the findings or conclusions of a previous peer review, in whole or in part, the SSC must prepare a report outlining the areas of disagreement, and the rationale and information used by the SSC for making its determination. This report must be made publicly available (50 C.F.R. § 600.315(c)(5)) and should be stored by the Council and SEDAR (where applicable).
e. The NOAA Fisheries Southeast Fisheries Science Center (SEFSC) should establish a point of contact (POC) to the SSC to support discussions regarding the assessment and other analyses, determine the extent to which additional work might be warranted to address any concerns identified by the SSC, and communicate final decisions regarding stock status and BSIA determinations. NOAA Fisheries representatives who are members of an SSC will not fulfill this role.
f. If a peer review, whether conducted by the SSC, CIE or other body, identifies substantive deficiencies that cannot be addressed immediately, then the required remedial measures will be provided in writing to the lead assessment agency and cooperating bodies. The lead assessment agency and SSC should coordinate to determine the extent to which those concerns need to be addressed before the product can be used for scientific advice. Adjustments that are limited in scope, and which can be addressed and reviewed by the SSC (or other designated peer

review body) in a timely manner, should be attempted when feasible. Otherwise, the SSC should decide whether the collection of scientific information available to it at the time is sufficient to use for management advice (and thereby meets the guidance for best scientific information *available*).

g. Mandatory management actions should not be delayed due to limitations in the scientific information or the promise of future data collection or analysis. If the SSC advises that the scientific information before it is not consistent with the guidelines for BSIA, and therefore not a sufficient basis for management recommendations, the SEFSC will review the SSC's advice and make a formal determination. If the SEFSC determines the scientific information does not represent BSIA, the SSC (in coordination with the SEFSC) should establish and document an alternative basis for management recommendations until new information (e.g., a new assessment) can be obtained. If the SEFSC determines that it is BSIA, the SSC should reconsider using it as the basis for catch limits or other management recommendations to avoid the potential need for additional management action by NOAA Fisheries.

h. NOAA Fisheries (SEFSC) reviews the stock assessment, peer review recommendations, and SSC recommendations and make a determination about stock status determination. After the assessment review and any necessary subsequent revisions, NOAA Fisheries (SEFSC) records the assessment results into a centralized repository (currently the NOAA Fisheries Species Information System; SIS). By locking the record in SIS, NOAA Fisheries indicates the assessment provides information that is consistent with the BSIA process. A BSIA determination memo from the SEFSC may be provided at this point and shared with the Council and SSC. SERO works with the Office of Sustainable Fisheries in Headquarters to document the rationale for the change in stock status determinations in a decision memo cleared through the Regional Administrator and signed by the agency's Assistant Administrator. After the decision memo is signed, SERO immediately sends a letter to the Council regarding the change in stock status (Procedural Directive 01-101-0917). NOAA Fisheries Stock SMART website provides summary information on stock assessment results, as reported to the NOAA Fisheries Office of Science and Technology through SIS, which is based on BSIA. NOAA Fisheries reports on the status of U.S. fisheries on an annual basis within a report to Congress, and on a quarterly basis on the Fishery Stock Status Updates website.

2) Procedure for Catch specifications: Council SSCs are responsible for recommending an overfishing limit (OFL) and acceptable biological catch (ABC) based on information derived from peer-reviewed stock assessments, other sources of information, and the relevant ABC control rule. The NS2 guidelines clarify that the SSC, provides catch level recommendations to a Council for developing annual catch limits (ACL). Therefore, when the SSC is the body that conducts the technical review of an assessment or other sources of information, the peer review process should clearly conclude before the catch recommendation process begins.

   a. OFL recommendations from the Council's SSC should be based on peer-reviewed information. The OFL should be risk neutral and represent the best estimate from the assessment.

b. ABC recommendations from the Council's SSC should be reduced from the OFL commensurate with the degree of scientific uncertainty and consistent with the ABC control rule established by the Council (in consultation with the SSC). The SSC may depart from the established ABC control rule as a basis for its recommendations, but must document the rationale for doing so.
c. In cases where proxies for MSY-based SDC are needed (e.g., where the long-term production potential of the stock is unclear), the SSC should advise the Council on the proxies most likely to produce optimum yield.
d. Additional projections may be requested after the peer review to compute OFL and ABC contingent on proposed management changes. The SSC should work with the lead assessment agency to document the projection specifications and discuss their implications for stock rebuilding and catch levels. The resulting report should be archived on the Council website.
e. Each step from developing the scientific information to the final catch specifications and agency BSIA determination must be documented and traceable.

3) Chronological Summary:
   a. Scientific information, including the findings of relevant peer reviews and any related revisions, is delivered to the Council's SSC.
   b. The SSC considers the scientific information available, and seeks clarifications where necessary.
   c. The SSC advises on whether that scientific information is consistent with the guidance for BSIA and sufficient for developing management recommendations. The SSC may also advise on whether particular parts of the scientific information are consistent with BSIA, such as the estimates of stock status from a stock assessment, but is not required to do so.
      i. If the SSC finds that the scientific information before it is consistent with BSIA, it should make management recommendations commensurate with the level of information available to it. If necessary, the SSC may request projections or other analyses during an initial meeting and then make recommendations at a subsequent meeting.
      ii. If the SSC finds that the scientific information does not provide sufficient basis for one or more of the topics described in section (1)(a)(i)-(iii) above, or for supporting catch level recommendations, it may, in consultation with NOAA Fisheries and with sufficient justification, consider other sources of information to support its recommendations. Alternative approaches considered by the SSC should, to the extent feasible, be based on peer-reviewed information and ABC control rules.
      iii. The SEFSC will review the scientific information, peer reviews, and SSC recommendations to ensure the guidance for BSIA is satisfied. The SEFSC POC will communicate the findings in writing to the Council and SSC.
   d. BSIA determination for the assessment and stock status determination:
      i. NOAA Fisheries (SEFSC) reviews assessment, peer review, SSC recommendations and determines if BSIA.

ii. NOAA Fisheries records stock status results it deems consistent with the BSIA in the NOAA Fisheries SIS, following Procedural Directive 01-101-0917 (Procedures to Determine Stock Status and Adequate Progress). This will normally be done as soon as possible after the SSC completes its deliberation on the assessment.

iii. SERO works with the Office of Sustainable Fisheries in Headquarters to document the rationale for the change in stock status determinations in a decision memo cleared through the Regional Administrator and signed by the agency's Assistant Administrator. After the decision memo is signed, SERO immediately sends a letter to the Council regarding the change in stock status (Procedural Directive 01-101-0917). The decision memo will be provided to the Council with the letter.

iv. NOAA Fisheries reports to Congress on the status of U.S. Fisheries on a quarterly and annual basis. SERO will forward the reports for stocks under the Council's jurisdiction upon their distribution to Congress.

e. Final NOAA Fisheries approval: NOAA Fisheries reviews all Council developed conservation and management actions, including catch specifications, and through approval of those actions, certifies that such specifications are consistent with the MSA National Standards (including NS2's BSIA requirement), other provisions of the MSA, and other applicable laws. NOAA Fisheries' final approval provides the certification that the actions are based on the BSIA. Certification is documented via a letter from the SEFSC Director to the SERO Regional Administrator.

i. If the Council makes a decision that is inconsistent with the advice of its SSC, such as the choice of the MSY-proxy, NOAA Fisheries will determine if the decision is consistent with BSIA when reviewing the Council's recommended action.

ii. If the agency determines that the Council's recommended action is not consistent with BSIA, the Council may revise the action and submit it for review. If the Council fails to submit a revised action, the agency may prepare a Secretarial plan.