Department of Commerce · National Oceanic & Atmospheric Administration · National Marine Fisheries Service

NATIONAL MARINE FISHERIES SERVICE PROCEDURE 01-101-11
Effective on: November 30, 2020

To be reviewed on: November 30, 2025

Fisheries Management

Fisheries Management Actions 01-101

Procedural Guidance for Changing Assessed Stock Status from Known to Unknown

NOTICE: This publication is available at: https://www.fisheries.noaa.gov/national/laws-and-policies/policy-directive-system

Author name: Regina Spallone
Office: Sustainable Fisheries

Certified by: Kelly Denit
Office: Sustainable Fisheries

Type of Issuance: Initial

Signed DENIT.KELLY.L.1365842074 Digitally signed by DENIT.KELLY.L.1365842074 Date: 2020.12.01 15:25:10 -05'00' Kelly Denit
11/30/2020

Director, Sustainable Fisheries

1. INTRODUCTION

This document provides guidance for considering a change in stock status from a known status to an unknown status for the Secretary's required status determination decisions under section 304(e) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Review and approval of such a change is done as described within the agency procedural directive, *Procedures to Determine Stock Status and Rebuilding Progress*, National Marine Fisheries Service Procedure 01-101-09[1], October 11, 2017. Changing the status of a stock from known to unknown may have implications for fishery management, but this document does not provide guidance on management responses to such changes. Such management responses will be addressed on a case-specific basis, will depend on the status of the stock and other factors, and must comply with requirements in the MSA.

[1] This document provides the administrative procedures for stock status and rebuilding progress decisions under section 304(e) of the MSA.

2. OBJECTIVE

This guidance promotes consistent and transparent agency decisions[2] when changing stock status from known to unknown and facilitates prompt status decisions, which allow for timelier fishery management decisions.

3. GUIDANCE

In general, the status of stock is based on recent estimates of abundance and fishing mortality relative to targets and limits specified for that stock. These estimates are often determined through a stock assessment, which represent a range of scientific analyses, from data limited to comprehensive approaches[3]. Once the status of a stock is determined, or "known," NOAA Fisheries continues to report that stock status until new information warrants a change to a different status. The agency encourages retaining a known stock status, whenever possible. However, each stock status decision is unique, with distinctive challenges and considerations. Therefore, all decisions regarding status changes under this guidance will be specific to the facts and situation of that stock. This guidance applies to both overfishing and overfished status determinations, although it may conclude a different result for each. Any change to the status of a stock should be justified in the record.

This document identifies scenarios in which a change in stock status from a known to unknown status is warranted, and includes recommended approaches for addressing each scenario. The status of a stock is a key factor in the process for setting target assessment frequency and annual priorities as described in the agency's Prioritizing Fish Stock Assessments document. In many cases, stocks with unknown status would provide a higher priority rank for stock assessments, considered with other factors such as fishery importance and assessment information. Any stock status changes, including changes from known to unknown, must be documented consistent with NOAA Fisheries Procedures 01-101-09 and 01-101-10.

4. SCENARIOS FOR KNOWN TO UNKNOWN STOCK STATUS CHANGES

A. CHANGES TO MANAGEMENT UNITS

DESCRIPTION

National standard (NS) guidelines at § 600.305(c)(7) state that Fishery Management Councils (Councils) "should periodically review their FMPs and the best scientific information available (BSIA) and determine if the stocks are appropriately identified. As appropriate, stocks should be reclassified within an FMP, added to or removed from an existing stock complex or FMP, or

[2] While it is ultimately the responsibility of NOAA Fisheries to make stock status determinations, the agency relies on input and advice from Councils' Scientific and Statistical Committees and the peer review processes or from scientific bodies of Regional Fishery Management Organizations such as the International Commission for the Conservation of Atlantic Tunas.

[3] Assessments are guided by terms of reference, described in NS2 guidance, 78 FR 43066, July 19, 2013, are determined to be the best scientific information available, consistent with NOAA Fisheries Procedure 01-101-10, and are prioritized by the agency's Prioritizing Fish Stock Assessments (see https://www.st.nmfs.noaa.gov/Assets/stock/documents/PrioritizingFishStockAssessments_FinalWeb.pdf).

added to a new FMP, through an FMP amendment that documents the rationale for the decision." Stocks in management units also may change due to a new stock assessment where stock structure is explored, including when substantial fractions of a stock move out of the old spatial range of the stock. These revisions may result in changes to the management units through the consolidation or splitting of stocks, or modifications to stock complexes by way of an FMP amendment.

Revised management units may impact stock status determinations. For example, removal of an indicator stock that comprises a significant portion of the complex, may result in a status change for the remaining complex. Where a stock is an insignificant part of the stock complex and is removed, a status change may not be necessary. Furthermore, revised management units may not yet have an assessment or consideration of status relative to revised status determination criteria (SDC). These factors should be considered when evaluating a stock status change.

APPROACH

When NOAA Fisheries approves changes to management units, the agency would report stock status consistent with the new management units, consistent with BSIA. Where the new management units have not yet been assessed relative to new SDC, or where no new SDC are yet in place, these changes may result in an unknown status determination for the new management unit. However, in some cases it is reasonable to retain the status of the original stock until a new stock assessment, especially for new management units descended from stocks that were overfished or subject to overfishing.

B. AGING STOCK ASSESSMENT

DESCRIPTION

Stock status determinations are typically based on the results of a stock assessment. Stock status determinations based on relatively old assessments may be problematic where those determinations no longer reflect the current status of a stock.

There is currently no standard for when the age of such an assessment is no longer suitable to support stock status determinations, however several agency documents provide information relevant to this issue. For example, the agency's Prioritizing Fish Stock Assessments[4] document, describes a process for setting target assessment frequency. The Marine Fisheries Stock Assessment Improvement Plan (SAIP) builds upon the stock assessment prioritization process and describes seven attributes (including years since assessment conducted) to classify the levels of stock assessments.[5] Further, NOAA Fisheries maintains the National Stock Assessment Performance Measure, which tracks the number of adequate[6] stock assessments.

[4] See: https://www.st.nmfs.noaa.gov/Assets/stock/documents/PrioritizingFishStockAssessments_FinalWeb.pdf
[5] See: https://spo.nmfs.noaa.gov/content/tech-memo/SAIP2018. See Table 10.1, pg. 93.
[6] Within the context of performance tracking, the term "adequate" does not necessarily mean adequate for fishery management purposes and is used only for budget formulation and prioritization.

While there is no clear standard for determining when an assessment is too old to support stock status determinations, there may be cases where a stock status may change to unknown due to the age of assessment.

APPROACH

When a stock is not assessed with sufficient frequency, its true status can drift from the last assessed status. Consequently, NOAA Fisheries may recommend a change to unknown. However, this decision would be case-specific and should be informed by the SAIP and the agency's stock assessment prioritization process, and the stock's catch history relative to ACLs since the last assessment. The actual age of an assessment that serves as the basis for a recommended change will differ among stocks. For example, analysts should consider the stock's life history and assessment characteristics prior to recommending a change to unknown, as those factors – and others – may preclude more frequent assessments or make them unnecessary. Target assessment frequencies, as identified through the agency's prioritization process, would provide relevant information for deciding whether to change a stock status to unknown.

C. STOCK ASSESSMENT DOES NOT PROVIDE SUFFICIENT INFORMATION TO SUPPORT A STOCK STATUS RECOMMENDATION.

DESCRIPTION

This scenario broadly encompasses situations of substantial scientific uncertainty which creates challenges for making stock status determinations. Where NOAA Fisheries determines that a new peer-reviewed stock assessment represents BSIA, the agency recommends stock status, consistent with the SDC in the FMP, based on the new assessment. However, in some cases the stock assessment review process[7] may conclude that an assessment is not suitable for supporting stock status determinations. For simplicity, this document refers to this as a rejected assessment.[8]

Generally, data rich, data moderate, and data limited assessments are referenced in terms of tiers or levels (this document uses the term tiers)[9]. The SAIP recommends when an assessment gets rejected, there be an assessment at the next tier that would provide a stock status recommendation if aligned with the SDC defined in the FMP. However, in cases where the assessment does not provide that stock status advice, this section describes approaches for addressing resultant stock status determinations.

[7] The regional peer review processes developed by NMFS and the Councils are described in the 2016 Federal Register Notice entitled Regional Peer Review Processes (81 FR 54561; August 16, 2016).

[8] NOAA Fisheries Procedure 01-101-10 on BSIA, recommends that peer review panels explicitly and separately consider whether assessments provide the scientific basis for several management topics. Therefore an assessment could be rejected for stock status decisions but accepted for Annual Catch Limit recommendations and/or accepted for overfished status but rejected for overfishing status. In either case, peer review should provide sufficient justification for its recommendations consistent with agency guidance documents such as the SAIP.

[9] In general, the use of tiers corresponds to the level of information available. Data rich tiers are more likely to have information sufficient to support both an overfishing and overfished status determination. Data limited or data poor tiers are more likely to lack that information and/or have a higher degree of uncertainty associated with them. Some lower tier approaches do not support status determinations (or support only one of the two: overfishing or overfished).

C1. Reject new assessment, accept previous assessment model with new data

When a proposed model is being considered during an assessment, scientists often re-run the previous assessment model with new data as a fall back. The fall back model run is often called a continuity run. The proposed model remains in a research mode until approved. If reviewers reject the proposed stock assessment model, they may recommend that the continuity run outputs from the previously accepted model serve as the basis for stock status decisions. These outputs, if consistent with BSIA and the SDC in the FMP, would serve as the basis for stock status determination until superseded.

Approach

Where the results of the previous model with new data are accepted, determined to be BSIA and consistent with the SDCs in the FMP, NOAA Fisheries would recommend a known stock status based on this assessment.

C2. Reject new assessment, use previous assessment results with no new data

In some cases, reviewers reject both the proposed assessment model and the continuity run. Thus, this scenario is similar to scenario C1, but without any updated data, so no new information on stock status is available. This scenario may also occur when an assessment is not proposing a new model but the current model with new data does not pass peer review, and thus provides no new stock status advice.

Approach

In this scenario, where a stock assessment provides no new numerical estimates to measure against the SDC, yet there is evidence in the assessment or noted during peer review to support the current known stock status, the agency would maintain that known stock status. However, if there is no evidence to support retaining the current known status, the agency would change the status to unknown.

For example, a stock assessment or peer review may note that biomass indices are down relative to previous indices, or that the stock biomass remains near historic lows. This information may support the previous known overfished stock status determination which had been based on an analytical stock assessment using approved SDC. Thus, the agency would retain the known overfished stock status. In another example, if the overfishing determination is old, catch rates have been greatly reduced, or there is significant uncertainty around the previous overfishing determination, it may be appropriate to change the status to unknown.

The qualitative evidence used to support continued known status would not provide data against which to evaluate the approved SDC, therefore in these situations, analysts should not recommend a change to a different known status (for example, from “overfishing” to “not subject to overfishing” or from “overfished” to “not overfished”; see scenario D).

In these situations, when known status is maintained, NMFS asserts that the previous assessment, along with other sources of information from the new stock assessment, provides information that is consistent with the BSIA process. Within quarterly and annual stock status reporting, the agency would provide a footnote in the stock status table explaining the rationale for the continued known status.

This scenario does not constitute a new stock assessment or reset the age of the assessment as it pertains to the stock assessment age in scenario B. Per scenario B, if the last known status was based on an old assessment that no longer reflects BSIA, it may be appropriate to change the stock status to unknown, based on a case-specific determination.

C3. Reject new assessment, flawed previous model

This scenario includes situations in which an assessment review panel concludes that a flaw leading to the rejection of the new assessment existed in the previous assessment as well. This flaw may have been missed by the previous review panel or was not discovered until after the previous assessment had been determined to be BSIA. Here, the flaw is so essential to the assessment that the use of the previous assessment results is now suspect and that assessment could no longer be considered BSIA and should likely not have been used for status determinations. For this document, we refer to this as an "invalidated" assessment, though that term may or may not be used during the assessment process.

Approach

In this scenario, where the results of the previous assessment have been invalidated, and no new assessment is available, the agency would move the stock status to unknown unless there is evidence to support maintaining the current known stock status (see C2).

In these situations, when known status is maintained, within quarterly and annual stock status reporting, the agency would provide a footnote in the stock status table explaining the rationale for the continued known status.

D. STOCK ASSESSMENT DEVIATES FROM SDC SPECIFIED IN THE FMP

Description

The MSA requires that conservation and management measures be based on BSIA (MSA sec. 301(a)(2)). The MSA also requires that stock status be determined using the criteria specified in the FMP (MSA sec. 304(e)(1))[10]. Assessments typically provide the basis to make stock status determinations.

While the MSA requires that stock status determinations be based on criteria specified in the FMP, in some instances, the most recent science in a peer reviewed stock assessment may

[10] In the case of internationally-managed stocks, the Council may decide to use the SDCs defined by the relevant international body. In this instance, the SDCs should allow the Council to monitor the status of a stock or stock complex, recognizing that the SDCs may not be defined in such a way that a Council could monitor the MFMT, OFL, or MSST as would be done with a domestically managed stock or stock complex.

recommend the use of SDC other than that specified in the FMP to determine stock status. In fact, the terms of reference for research assessments typically specify that SDC be re-evaluated.

These cases raise questions about what information should be used to make stock status determinations. Many FMPs establish an SDC framework where each assessment updates the SDC calculations and recommends status relative to the SDC. However, new assessment-generated SDCs that have not been specified in an FMP should not be used for status determinations, even where they represent BSIA.

APPROACH

Where NOAA Fisheries determines the new assessment, including new overfishing and overfished SDC, to be based on BSIA,[11] the agency will maintain the last known stock status based on SDC contained in the FMP until the Council adopts the new SDC into the FMP.

In these situations, within quarterly and annual stock status reporting, the agency would provide a footnote in the stock status table explaining the rationale for the reported status, noting the more recent assessment results will be reported if/when the Council adopts the new SDC into the FMP. Letters to the relevant Council regarding stock status would suggest timely adoption of the new SDC so stock status can be reported based on BSIA. NS1 guidelines at § 600.310(e)(2)(ii) encourages Councils to develop a process that allows SDCs to be quickly updated to reflect the BSIA.

[11] Consistent with the framework for determining BSIA (NOAA Fisheries Procedure 01-101-10), section 305(e)(1) of the MSA, and NS2 guidelines.