

The Alaska Fisheries Science Center-Alaska Department of Fish and Game-North Pacific Fishery Management Council Stock Assessment Review Process

GENERAL DESCRIPTION

Objective and Scope of the Peer review

The Alaska Fisheries Science Center (AFSC) is responsible for stock assessments for over 22 species or species groups listed in the groundfish fishery management plan (FMP) for the Gulf of Alaska and approximately 26 species or species groups in the Bering Sea/Aleutian Islands FMP. The State of Alaska Department of Fish and Game (ADFG) is responsible for one stock assessment in the GOA groundfish FMP. The AFSC and ADFG share assessment responsibilities for the 10 species in the FMP for the Bering Sea and Aleutian Islands King and Tanner Crabs.. ADFG has assessment responsibility for Scallops. Scientific recommendations for these living marine resources are provided by the North Pacific Fishery Management Council (NPFMC) with various management authorities delegated to the State of Alaska for Crab and Scallop. A stock assessment and fishery evaluation (SAFE) report is produced by the Plan Teams (which are scientific review bodies specific to each FMP) with contributions that include individual stock assessment chapters from the AFSC and ADFG.

The SAFE report describes the past, present, and possible future status of these resources. It also contains information that summarizes the ecosystem and economic status. The stock assessment sections included recommended acceptable biological catch (ABC) and overfishing levels (OFLs) for each stock and stock complex managed under the FMP. The documents contributed to the SAFE report are subject to AFSC review before dissemination to the Plan Teams and the Council's Scientific and Statistical Committee (SSC) that finalizes the ABC and OFL recommendations. The information is provided to the NPFMC and ADFG to be used as the basis of their harvest management decisions, which are subsequently approved and disseminated by the Secretary of Commerce through NOAA Fisheries Service.

Stock assessment process

The stock assessment process begins with an annual memo from the stock assessment supervisors to AFSC staff listing the lead stock assessment author assignments and the dates for completion of the stock assessment chapters for internal review, and preliminary and final submission to the Plan Teams. A second memo follows with the list of assigned internal reviewers for each assessment. After review and revision, the draft stock assessment chapters are released by the AFSC and ADFG for pre-dissemination review by the Plan Teams. The Plan Teams review stock assessments and associated ecosystem and economic appendices, compile the SAFE reports, and make recommendations to the SSC. The SSC reviews the SAFEs and the Plan Team recommendations and sets the ABCs and OFLs for each stock.

In addition to this annual schedule of assessment updates and reviews within the Council process, there is a separate review process involving the NOAA Fisheries supported Center for Independent Experts (CIE), whose role is to provide outside expert scientific

review. The goal is to obtain a CIE review of all stock assessments once every 5 years. The basic rule of thumb has been that any assessment with a major change in the model or a major re-examination of existing model structure is a benchmark. Typically, a CIE review will result in a benchmark assessment, but benchmark assessments can also arise independently of a CIE review. Routine, annual assessments prepared as part of the annual harvest specification process are listed as full updates, and off-year executive summaries are listed as partial updates. This follows the NOAA Fisheries Species Information System definitions for assessments. The SIS supports the stock assessment program to collect and manage regional and national data across NOAA Fisheries program offices.

Scope of work

The SSC reviews all the main scientific analyses that come before the NPFMC for action. These include economic analysis such as regulatory impact reviews and regulatory flexibility analysis, as well as analysis pertaining to the National Environmental Policy Act and Endangered Species Act and SAFE documents in addition to discussion papers and methodological papers. Typically, the SSC will review EA/RIR/IRFAs when these are at the initial review stage and will recommend to the Council whether the analysis is sufficiently complete to be released for public review. With respect to SAFE analyses, the SSC determines whether a particular stock biomass estimate can be considered a reliable estimate for the purpose of stock assessment, it determines which assessment tier a particular stock should be in, and selects the stock assessment model configuration to be used for its ABC/OFL recommendations. The SSC makes these recommendations based on the input of the Plan Team review and recommendations. There may be scientific workshops held by the NPFMC to advance stock assessment models or other scientific issues. These workshops are generally attended by a variety of Plan Team and SSC members as well as invited participants and, when appropriate, members of the public. . The SSC also has a set of guidelines that it uses specifically when reviewing SAFE documents.

Peer reviewer selection

Expertise and Balance

The Plan Teams serve as the first line of detailed review of SAFE documents in the NPFMC process. These teams are comprised of stock assessment scientists, marine mammal and seabird experts, ecosystem and socioeconomics researchers, and regional fishery management experts from NMFS, state fishery agencies, and universities. The NPFMC SSC review CV's (curriculum vitae) of individuals nominated to serve on the Plan Teams and recommend their appointment to the NPFMC. Similarly, the members of the SSC represent broad areas of scientific expertise to encompass the full range of expertise required to review analyses that come to the Council to aid in decision-making. SSC members are nominated by individuals or agencies and are appointed annually by the NPFMC. There is also an annual call for nominations of SSC members.

Conflict of Interest

NPFMC SSC members annually complete a financial disclosure form.

Independence

Review assignments are made by the SSC chair to ensure that members are not assigned to review work products of individuals in their chain of command. Particular assignments are given with consideration to the expertise required for a particular document. Generally, one to three SSC members are assigned the review of a particular analysis with the assignments taking into consideration a blend of new and previous experience in reviewing a particular type of analysis.

Transparency

SAFE documents are made available to the Plan Team one to two weeks prior to the Plan Team meeting in which they are to be reviewed. The public is also given access to these documents. Notification of the Plan Team meetings are provided in the *Federal Register* and the meetings are open to the public. Similarly, all documents reviewed by the SSC are made available to the public. This includes SAFE documents and Plan Team reports provided to the SSC in advance of the meeting in which the SSC makes ABC/OFL recommendations. The NPFMC SSC meeting is almost always held in conjunction with the main NPFMC meeting and public notice is provided in advance of these meetings. The SSC conducts all their meetings and discussion in public, with the exception of the election of officers and discussion of Plan Team membership recommendations. The names and affiliations of NPFMC SSC members are published on the NPFMC website. The SSC publicly presents their findings and recommendations to the NPFMC at its meeting and the SSC report is published on the NPFMC website. The final SAFE is also made available on the NPFMC website.

More Details on the Process

The stock assessment process in the North Pacific (i.e., U.S. EEZ off Alaska) involves the North Pacific Fishery Management Council (NPFMC), NOAA's National Marine Fisheries Service (NMFS) Alaska Region (AKR), the State of Alaska (for some crab stocks, Southeast Alaska demersal shelf rockfish, and scallops) and the Alaska Fisheries Science Center (AFSC), in addition to a host of individuals from state, non-governmental, and academic institutions who participate in the process as part of the Plan Teams, Scientific and Statistical Committee (SSC), and other involved bodies. Groundfish TACs are developed by the NPFMC and harvest guidelines for all crab and scallop stocks are developed by the State of Alaska through the shared Federal State management regime for outlined in the FMP for those stocks. This is a process that has evolved over the past 2 decades in response to the fishery management culture in the North Pacific.

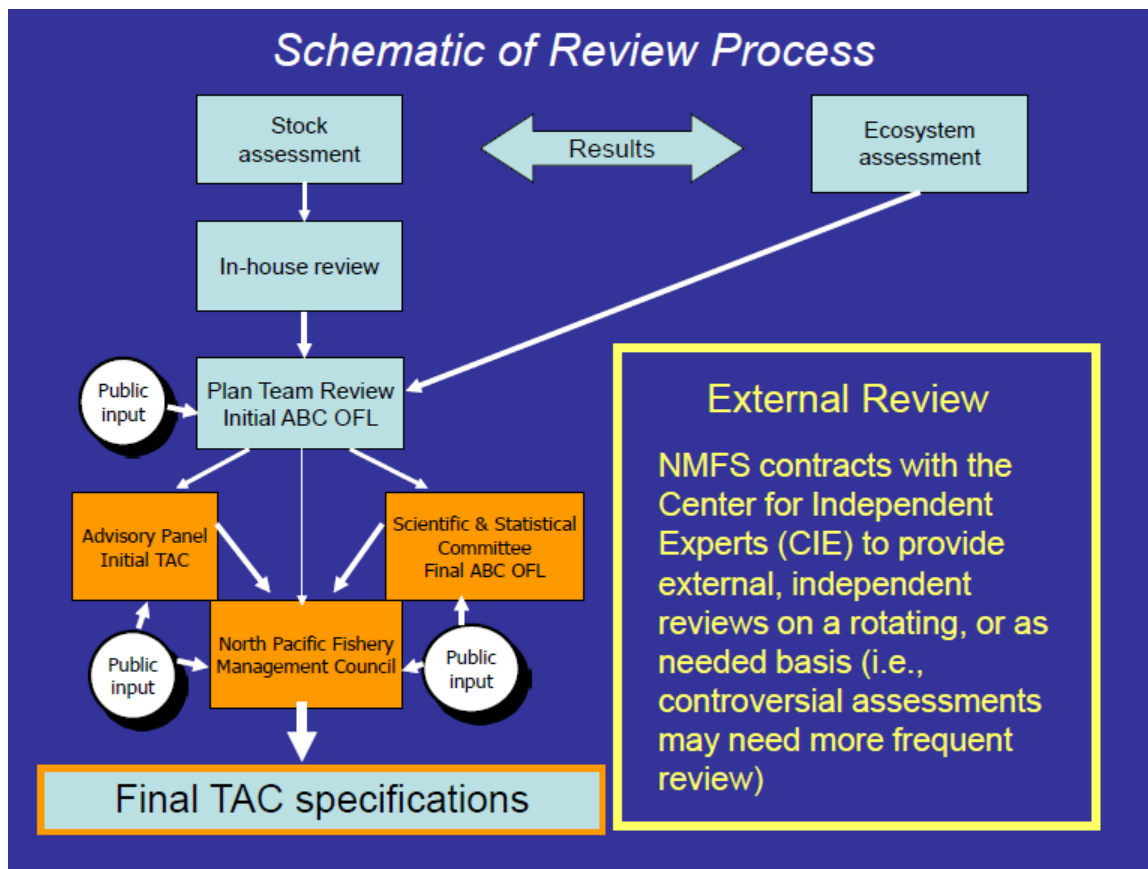


Figure 1. Schematic of review process for North Pacific groundfish SAFEs.

Stock assessments or executive summary updates are prepared and reviewed annually, culminating in the annual publication of the SAFE report and setting of total allowable catches (TACs) by the NPFMC for groundfish and guideline harvest levels (GHLs) by

the State of Alaska for crab and scallops and some of the State's GHs are set using the NPFMC groundfish stock assessments. The AFSC, in conjunction with the NPFMC Plan Teams and SSC, has developed SAFE guidelines that list the required information to provide sufficient scientific review of the assessment, and reporting of the stock assessment results. In addition to the normal schedule of assessment updates and reviews, a separate review schedule involving the Center for Independent Experts (CIE) is maintained, with the goal of obtaining a CIE review of all stock assessments once every 5 years. The basic rule of thumb has been that any assessment with a major change in the model configuration or a major re-examination of input data and model parameters is a benchmark. Typically, a CIE review will result in a benchmark assessment, but benchmark assessments can also arise independently of a CIE review. Routine, annual assessments prepared as part of the annual harvest specification process are listed as full updates, and off-year executive summaries are listed as partial updates (this follows the NMFS Species Information System definitions for assessments).

The stock assessment process begins with an annual memo from the stock assessment supervisors to staff outlining the dates for completion of the stock assessment chapters for internal review and the list of internal reviewers for each assessment. After review and revision, the draft stock assessment chapters and associated ecosystem and economic appendices are released by the AFSC and ADFG for pre-dissemination review by the NPFMC Plan Teams. The Plan Teams review all the information, compile the SAFEs, and make recommendations to the SSC. The SSC reviews the SAFEs and the Plan Team recommendations and sets the ABCs and OFLs for each stock.

For groundfish, proposed harvest specifications for the next 2 years are reviewed in October by the NPFMC SSC. These proposed harvest specifications are derived from projections from previous year's model or rollover of previous year's Acceptable Biological Catch (ABC)/Overfishing Level (OFL) for a stock with no model. These are replaced with ABCs/OFLs derived from November assessment update that is presented to the SSC in December for the final harvest specifications.

As part of the annual stock assessment review process by the Plan Teams and SSC, the Plan Teams review proposed model changes and suites of model configurations that should be considered for ABC/OFL setting later in the year. This typically occurs in May for crab and September for groundfish. At present, scallops do not have a stock assessment model. These are then reviewed and approved by the SSC before the final SAFE preparation begins. A second Plan Team and SSC meeting is then set to review the draft SAFEs with the new inputs, recommended model configurations, and resulting ABC/OFLs. The NPFMC then receives the Plan Team and SSC reports along with the recommendations of the Advisory Panel to set groundfish TACs. The State of Alaska sets GHs for crab and scallop species in accordance with ABC/OFL limitations set by the NPFMC.

The Plan Team and SSC reports based on the SAFE reviews and ABC/OFL setting contain recommendations for improvements in the data collection and modeling that should be considered in the next year's assessment cycle and beyond. Sometimes special

Plan Team meetings are organized to deal with specific stock assessment, especially modeling, issues during the year in advance of regular SAFE development and review meetings.

The Plan Teams have established Terms of Reference (e.g., <http://www.npfmc.org/wp-content/PDFdocuments/membership/PlanTeam/Groundfish/PTterms.pdf>). The NPFMC SSC has guidelines for the review of SAFE documents (http://www.npfmc.org/wp-content/PDFdocuments/membership/SSC/SSC_SAFEguidelines.pdf). The NPFMC has also prepared documents that outline the process for external review of stock assessments (e.g., http://www.npfmc.org/wp-content/PDFdocuments/membership/crab_extrev.pdf) to ensure that those can be accommodated without compromising the stock assessment cycle and standard review process. The NPFMC provides public notice of the meetings of its Plan Teams and SSC when SAFE reviews are being conducted. The NPMFC Plan Team and SSC have procedures that allow for public comment at these meetings.

Ultimately, the AFSC, AKR, NPFMC, and State of Alaska (for FMP crab and scallop species, and Southeast demersal shelf rockfish) work together to coordinate a highly successful and open public process for the development, review, and acceptance of SAFE documents that are used to manage the productive federal fisheries in the EEZ off Alaska.