

COASTAL PELAGIC SPECIES ADVISORY SUBPANEL REPORT ON STOCK ASSESSMENT IMPROVEMENT PLAN COMMENTS

During a webinar on May 31, 2017, the Coastal Pelagic Species Advisory Subpanel (CPSAS) and Coastal Pelagic Species Management Team jointly heard a presentation from Dr. Patrick Lynch on the draft document “Implementing A Next Generation Stock Assessment Enterprise: An Update to NOAA Fisheries’ Stock Assessment Improvement Plan (Agenda Item C.5, Attachment 1). CPSAS members also reviewed Agenda Item C.5.b, SSC Report.

The CPSAS points out that U.S fishery management under the Magnuson-Stevens Act (MSA) is acknowledged worldwide to be among the best, most precautionary systems to achieve sustainable fisheries (Worm et al, *Rebuilding Global Fisheries*, Science 325, 578 (2009). This Stock Assessment Improvement Plan (SAIP) Update acknowledges that NOAA Fisheries is now achieving a fast tempo of high quality assessments across the country, and the new draft SAIP “provides a strategic vision for enhancing the performance of NOAA Fisheries’ stock assessment enterprise to the next generation level...” The CPSAS appreciates the forethought invested in compiling this document, and agrees that while our fishery management is the best in the world, there is room for improvement by expanding incorporation of both ecosystem and socioeconomic dynamics in the development of stock assessments.

CPSAS members appreciate the Council’s consideration of the following comments, with emphasis on CPS:

The Next Generation SAIP summarizes many challenges currently facing stock assessments and recommends innovative research and operations goals to meet those challenges. One new focus aims to make assessments more holistic, i.e. take into account more **ecosystem and socioeconomic factors** that affect the dynamics of fish stocks and fisheries. The CPSAS notes that ecosystem factors are already considered in CPS harvest policies, such as sardine, and harvest policies are conservative, accounting for the importance of CPS as forage. CPSAS members support consideration of **socio-economic factors** in developing stock assessments, as people and fishing communities are part of the ecosystem and the MSA mandates balance in achieving Optimum Yield from fisheries.

The CPSAS provides the following specific comments on the new SAIP’s major themes and recommendations:

Theme: Holistic & Ecosystem-Linked Assessment Paradigm

SAIP recommendations include considering ecosystem, environmental and socioeconomic drivers in research to develop operational assessments, and considering broader ecosystem and fishing community factors in a more holistic evaluation of harvest control rules.

As noted above, ecosystem factors are already considered in CPS harvest policies. The CPSAS believes **fishing community factors should also be considered**. A majority of the CPSAS notes the importance of this consideration especially when determining annual catch limits

(ACLs) in “operational” or update catch-only assessments. One example is the 2017 Pacific mackerel update assessment, where a recent year “2012-14 average” sensitivity run produced an outcome very close to the model projection, but provides about 1,900 mt additional harvest opportunity. Current CPS policies prioritize ecosystem function substantially above the sustainability of fisheries and fishing communities, and many communities are suffering as a result.

Theme: Innovative Science for Data Collection and Analysis

SAIP recommendations include improving fishery-independent data collection capabilities by improving direct calibration of fish abundance from acoustic surveys and adjusting coverage for shifting species distributions. Recommendations for improving fishery-dependent data collection include electronic monitoring and developing low-cost fish and environmental survey methods deployable from fishing vessels. In addition, improving the assessment modeling approach focuses on advanced statistical methods, expanding assessment model scope, and broader use of management strategy evaluation simulations.

CPSAS members appreciate SAIP acknowledgement of the need to improve acoustic surveys, both by calibrating target strength and expanding coverage to encompass broader fish distributions (including the near-shore). We support the recommendation to **utilize fishing vessels in cooperative research programs** to enhance both the scope and accuracy of stock assessments. A majority of the CPSAS also suggest that **more flexibility in modeling approaches is needed** to assess dynamic stocks like CPS. There needs to be a way to incorporate 'outside' information into stock assessments for CPS (for example, Pacific mackerel caught incidentally in the whiting fishery, incidental anchovy/sardine observed in the juvenile rockfish survey, or CPS observed in live bait tanks). Those outside observations provide helpful indices of recruitment and abundance that are not factored into current CPS assessments.

Theme: Timely, Efficient and Effective Processes to Deliver Assessments

SAIP recommendations include prioritizing stock assessment activity through a new data classification system and gap analysis; establishing timely processes by separating research from operational assessments and streamlining the operational process; expanding scope and inclusivity of the research process and establishing an efficient degree of peer review. Recommendations also include improving communication of data needs through stakeholder engagement and improving training of assessment scientists.

Assuming that “research” assessments refer to benchmark assessments with Stock Assessment Review (STAR) Panel review, and “operational” assessments are interim ‘catch-only’ updates, we note that the CPS complex has an established assessment framework for actively managed species. A majority of the CPSAS recommend the **need for more flexibility in the current assessment schedule** in light of the variability of CPS. For example, sardine undergoes full assessment on a three-year schedule, with updates in the intervening two years. Pacific mackerel is assessed on a four-year schedule, with ACLs set for the subsequent two fishing years. Thus, the fishery is penalized if a sharp spike in abundance occurs during intermediate years. The existing assessment model configuration cannot be changed to accommodate new or outside data absent another STAR panel review.

In conclusion, the CPSAS appreciates the effort that NOAA has invested to compile this Update to NOAA's Stock Assessment Improvement Plan, and a majority of the CPSAS support recommendations to implement the next generation, including our comments highlighting the:

- need for more flexibility in modeling approaches to incorporate 'outside' information into stock assessments
- need for more flexibility in current assessment scheduling
- support for considering socio-economic factors
- support for utilizing commercial fishing vessels in cooperative research programs

Conservation Representative Statement

The Conservation Representative supports the SAIP Update's focal areas and related recommendations aimed at achieving the goals of the Next Generation Stock Assessment enterprise. The Conservation representative notes that while the Pacific sardine harvest control rule in particular currently incorporates sea surface temperature as an ecosystem consideration, there remains a need to better collect and integrate information on predator diet, predator-prey dynamics, climate shifts, and other ecosystem factors in stock assessments and resulting harvest policies generally. The Conservation representative agrees that socioeconomic factors should also be explicitly accounted for in stock assessments, although it would be helpful if the final SAIP Update provided additional detail on how these considerations would be incorporated and how their role in stock assessments might differ from (or perhaps add value to) management strategy evaluations and Stock Assessment and Fisheries Evaluation documents. Finally, the Conservation Representative appreciates the SAIP Update's discussion of the need to increase efficiency and timeliness across NOAA Fisheries' stock assessment enterprise, but notes that such objectives should not jeopardize scientific rigor or quality.

Thank you for your consideration of these comments.

PFMC
06/10/17