SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON RESEARCH AND DATA NEEDS

The Scientific and Statistical Committee (SSC) discussed the Council's research and data needs to support the management of U.S. West Coast fisheries. Council staff have proposed a revised framework (Attachment 2) for structuring this research and data needs (RDNs) review cycle. This framework involves identifying high-level science and management challenges and organizing specific topics and RDNs under each challenge. The SSC focused its discussion on the high-level challenges but also made recommendations regarding the revised RDN framework.

The SSC appreciates the four draft challenges presented in Attachment 1 but found they were overly broad, imprecise, and/or omitted several important challenges for U.S. West Coast fisheries. In particular:

- Data limited stocks (Draft Challenge 1): This challenge mischaracterizes the level of information available for most stocks managed by the Council. All stocks have data collection needs; the challenge is identifying the appropriate methodology for using the data that we have to perform stock assessments.
- Socioeconomic resilience (Draft Challenge 2): This challenge is too vague to be useful and should be divided to consider economics and social science separately.

The SSC recommends that the four draft challenges be replaced with the following challenges:

1. Data collection: Data collection is required to conduct stock and ecosystem assessments, evaluate policies, and support management. It is necessary to continue and expand existing data collection efforts, develop new data streams (e.g., to support indices of abundance or life history parameter estimation), and improve access to relevant databases. Community-based participatory research programs can aid in this effort.
2. Stock assessment methodologies: Routine methodological development and advancement are required to improve the best scientific information available for stock status determinations. This will include the development and testing of data-limited and data-moderate assessments, dynamic reference points, and methods to account for large spatial closures.
3. Life history and stock structure: Regular collection and evaluation of scientific information is needed to parameterize life history traits, inform the degree of population connectivity and ensure appropriate spatial scales for management actions.
4. Evaluating fishery impacts: Many Council-managed fisheries rely on the evaluation of fishery impacts associated with trip limits, bag limits, season or area closures, incidental mortality, and other factors. These require research and data to inform a number of assumptions utilized in estimation.
5. Ecosystem dynamics: The effects of a changing ecosystem raise challenges for fishery science and management. Continued efforts to account for ecosystem change can involve approaches such as collecting diet data, developing ecosystem models, evaluating the use of ecological indicators in stock assessments, and identifying environmental thresholds.

6. Harvest policy: Improved methods are needed to evaluate harvest policies, including harvest control rules and reference points, which are integral to Council decision-making, especially during periods of nonstationary environmental conditions.
7. Economics: Data and analytical tools are needed to develop and evaluate fishery management policies that aim to ensure the economic viability of recreational, Tribal, and commercial fisheries, including post-harvest sectors and infrastructure.
8. Social science: Data and analytical tools are needed to develop and evaluate fishery management policies intended to address social and cultural objectives of participants in fisheries and fishing communities.
9. Habitat science and spatial management: Ongoing and emerging uses of marine, estuarine, and freshwater resources are diverse, potentially conflicting, and likely to impact fished stocks and their habitats, as well as the surveys used to inform science and management. Continued development of the models used to designate essential fish habitat and otherwise inform spatial management are needed, including for transboundary stocks.

The SSC also has the following recommendations regarding the proposed RDN framework:

- The SSC is unclear about the benefits of identifying topics that would fall below key challenges rather than linking research projects in the database to the key challenges and identifying a small set of research projects that would make the largest contributions to addressing the key challenges.
- The proposed framework should be revised to encourage engagement between the SSC and other advisory bodies when identifying and prioritizing RDNs.
- Active monitoring of the RDN database is required to update the status of RDNs (e.g., underway, complete, no action) and could be undertaken more frequently than the Council review cycle.

PFMC
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