



**Three-Year Plan for the Scientific and Statistical Committee of the  
Western Pacific Regional Fishery Management Council  
2024 – 2026**

**PRELIMINARY DRAFT  
For Review at the 150<sup>th</sup> SSC Meeting  
November 2023**

*This document provides a preliminary draft of the 2024-2026 SSC Plan. The Plan has been updated by staff from the 2021-2023 version based on progress made on activities in the last plan, anticipated management actions, and anticipated focus on developing and implementing climate-ready management strategies. The Council will also be finalizing the IRA project proposals, Council's 5-year Program Plan, and MSRA Research Priorities for the March 2024 meeting, and staff plans to further refine the SSC plan to align with those planning efforts. **The SSC at the 150<sup>th</sup> meeting is asked to provide initial feedback on the updated thematic areas and associated activities, with the anticipated timeline of endorsing the new plan at the March 2024 meeting.***

**Introduction**

The Scientific and Statistical Committee's (SSC's) primary responsibility is to provide ongoing scientific advice for fishery management decisions. The Magnuson-Stevens Fishery Conservation and Management Act<sup>1</sup> (MSA) states that the advice may include but not limited to:

“recommendations for acceptable biological catch, preventing overfishing, maximum sustainable yield, and 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.”

In providing scientific advice to the Council, the SSC forms working groups to discuss the particular issues in detail between the meetings and give a report to the SSC as a body during its regular meetings. SSC members also participate in peer-reviews of stock assessments and other scientific products for domestic and international fisheries management. The SSC members provide scientific support through projects, analyses, report development, and work products submitted to the Council and reported to the SSC for endorsement. The SSC maintains various research priority documents after vetting through different Council Advisory groups. These are the MSA Five-Year Research Priority, Cooperative Research Priority, Management Strategy Evaluation Priorities, and Insular and Pelagic Fisheries Research Plans.

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<sup>1</sup> MSA § 302(g)(1)(B)

## SSC Three-Year Plan

The SSC Three-Year Plan will help the SSC and the Council to project the SSC workload in a three-year horizon. This may include action items that are already ongoing, upcoming actions, scientific products anticipated for review, scientific workshop development, and other projects that would generate scientific products to support fishery management decisions. Additional items may be added to the plan as new management priorities emerge. The plan is structured on a four meeting outlook to map the formation of the different working groups that shall meet before the SSC meeting.

The SSC Three-Year Plan for 2024 to 2026 will focus on the following items under each of the following thematic areas [*restructuring in progress*]:

- 1) **\*UPDATED\*** Scientific Advice for Limit Specifications
- 2) **\*NEW\*** Scientific Advice for Management Actions
- 3) **\*UPDATED\*** Stock Assessment Development and Reviews
- 4) **\*NEW\*** Science to Support Climate-Ready Fisheries and Climate-Informed Fishery Management
- 5) Scientific and Research Priorities to Advance Fishery Management
- 6) Organizational Coordination

[*For reference: Old thematic areas from 2021-2023 plan: 1) Limit specification (ABC or quotas) for pelagic and island fisheries; 2) Stock assessment development; 3) Scientific and research priorities to advance fishery management; 4) Science for fisheries management incorporating climate change; 5) Science workshops to change management paradigm; 6) Protected species; 7) Socio-economics; and 8) Organizational coordination.*]

### 1) **\*UPDATED\* Scientific Advice on Limit Specifications**

- a. Setting Acceptable Biological Catch for Island Fisheries (routine) – the SSC will be deliberating on the new information that was subject to WPSAR review
- b. Bigeye Tuna Specification (routine) – the SSC will review, per any incoming scientific information, the feasibility of catch limits for US and Participating Territories and any transfer of catch from the Territories. At their June meetings, following Pelagic Plan Team meetings, the SSC may provide annual reviews of multi-year specifications, in case new scientific information is available.
- c. Develop catch limits for Pelagic MUS (routine) – the US may need to develop catch limits for billfish stocks that are in an overfished/overfishing situation, yet are under international jurisdiction.
- d. **\*NEW\*** Review and Update of P\* Process – a review and update of the P\* process is expected to occur after the Guam BMUS stock assessment in 2024. The SSC is expected to provide input on this process, including addressing the June 2023 SSC NS1 Working Group recommendation to update the P\* process to be more adaptive to account for near-term directional shifts in productivity, including the use of proportional harvest threshold tables.

**2) \*NEW\* Scientific Advice on Management Actions**

- a. BMUS Species Complex and Stock Definition – SSC will review scientific information associated with defining BMUS species complex and stock definitions. Specific actions may include advising on the AS BMUS Revision Amendment and Marianas BMUS complex.
- b. \*NEW\* Implementation of electronic monitoring (EM) in the Western Pacific longline fisheries – The Council, PIRO and PIFSC, in coordination with industry, are developing a pre-implementation program for EM with a priority placed on the Hawaii longline fishery, with a primary monitoring goal for protected species monitoring with secondary objective being for discard accounting. The SSC will provide scientific and technical input on the pre-implementation program development, progress, and associated Council actions.
- c. Council Actions on Improving Protected Species Management Measures – The SSC will provide scientific input on Council actions and associated scientific products to improve protected species management measures in fisheries operating under the FEPs. A pilot study for the Hawaii shallow-set longline fishery seabird measures are expected to be completed in summer 2024, which may lead to follow-up trials and/or a Council action to modify seabird mitigation measures. The Pelagic Plan Team is also undertaking a review of the shallow-set longline fishery sea turtle trip limit measure following three years of implementation data, and the SSC is expected to review the information in June 2024.
- d. Status Determination Criteria under the FEPs – The SSC is also expected to review the SDC for deep-water shrimp during this plan period [2025? – *to be added to schedule*].

**3) \*UPDATED\* Development and Review of Stock Assessment and Other Scientific Products Informing Fishery Management**

- a. Stock Assessment and Research Assessment Development (routine) – SSC members will participate in data workshops and review stock assessment data and modeling decisions and results as needed through SSC meetings and the WPSAR process. The SSC may also advise on development of research assessments, including for incidental Pelagic MUS and alternative assessment approaches for BMUS.
- b. Western Pacific Stock Assessment Review (routine) – The SSC will participate in WPSAR meetings and desktop reviews as dictated by the WPSAR schedule. The SSC will also be tasked with reviewing the Terms of Reference for WPSARs and will nominate a WPSAR chair.
- c. Working Group on the Stock Definitions of Archipelagic and Pelagic Fisheries - National Standards 3 (NS3) of the MSA does not provide clear guidance defining stocks relative to management units in US fisheries. A working group will ultimately

- provide guidance to the MSA NS3 definitions of stock based on management unit species that may be contained within a single jurisdiction, transboundary, or straddling stock. It will develop guidelines for defining specific stocks of both archipelagic and pelagic management unit species in the Western Pacific Region. This will have implications on the jurisdiction of the stock assessment (e.g. state versus federal versus international).
- d. Providing Critical Scientific Information to Address International Overfishing (ad hoc) - After an international RFMO science committee or provider considers a MUS in any Council FEP to be overfished or experiencing overfishing, Council staff or NMFS will present the assessment results, minimum stock-size threshold (MSST) from the appropriate FEP, and US catch histories of Council-managed fisheries to the SSC at its very next meeting. The SSC will either 1) advise Council staff to explore and develop management options before the RA issues a letter to the Council (notifying it of its one-year MSA 304(i) obligations); or 2) request NMFS to work with the RFMO science provider to provide necessary scientific information, such as stock projections before the RA issues its letter to the Council.
  - e. Workshop on bigeye and South Pacific albacore tuna management in WCPO longline fisheries (ad hoc) – comes with two themes: 1) area/zone-based management versus flag-based and 2) management objectives and evaluation. The overarching goal is to develop recommendations to update WCPFC CMMs, specifically management measures for WCPFC longline fisheries targeting tropical tunas, taking into account contemporaneous economic cost-benefit analyses and best available science. The SSC will guide Council staff in framing the workshop and objectives.
  - f. Biological Opinion Reviews – SSC will review and identify scientific issues regarding the impacts assessment and any potential RPMs/RPAs to the Council for ESA consultations for fisheries managed under the Council’s FEPs. ESA reconsultation for the Hawaii shallow-set longline fishery (for loggerhead turtles only) is ongoing and is anticipated to be completed in 2024. The SSC will also continue to review and provide input on the implementation of RPMs in the existing BiOps, including review of the DSLL insular false killer whale observer coverage needs in the overlap area.
  - g. Review of Protected Species Scientific Products – The SSC will provide review of relevant protected species abundance estimates, risk assessments, and other related scientific products relevant to the management of fisheries under the Council’s jurisdiction. These may include false killer whale stock assessments, sea turtle risk assessments, and further application of the Protected Species Ensemble Random Forests (PSERF) model to the Hawaii deep-set longline fishery data with continued exploration of alternative Machine Learning modeling approaches.
  - h. Socioeconomic context of fishery data collection – the effectiveness of fishery data collection improvement efforts will be dependent on support and cooperation from the fishing community. An evaluation of community perceptions and understanding

related to data reporting is critical to gauging future support and expected participation in new data collection systems. As needs arise, the SSC may review socio-economic and socio-cultural aspects of fisheries that affect support for new data collection approaches or SSC members with social science expertise may participate in Data Workshops to facilitate consideration of perceptions, incentives, and socio-cultural aspects of fisheries and communities.

**4) \*NEW\* Science to Support Climate-Ready Fisheries and Climate-Informed Fishery Management**

- a. \*NEW\* Scenario planning for U.S. Pacific Island fisheries – the Council through the Inflation Reduction Act (IRA) funding will be leading scenario planning efforts to ensure resiliency and responsiveness to changing climate and related impacts. The SSC may provide scientific input on products prepared for the planning effort and/or participate in the process. *[this item will be aligned with the IRA project proposal development]*
- b. \*NEW\* Incorporate climate effects and population trends in predicting protected species interactions in US Pacific pelagic fisheries – the Council through the IRA funding will be carrying out a project to consider strategies for incorporating climate effects and population trends in predicting and managing protected species interactions in U.S. Pacific pelagic fisheries. The SSC will review and provide input on the planning process for this project, and may also participate in associated workshops and consider outcomes for recommending next steps. *[this item will be aligned with the IRA project proposal development]*
- c. Shifting Distributions – Climate change and physical forcing (e.g. ‘regime shifts’) may drive MUS distributions away from their historical distributions and/or away from (or towards) fishery distributions. This may introduce threats to fishery access, food production, and economies. It may also bring about new fishing opportunities. Distributions of MUS and their prey sources may also be affected, which need to be considered under the reauthorization of the MSA. The SSC will review the impacts of distribution and ‘regime shifts’ and provide any guidance to help inform adaptive management.
- d. Island Fisheries Ecosystem Indicators and Thresholds – The Council is working with a contractor to identify the ecosystem and climate change indicators that influence the nearshore fisheries and determine the thresholds in those indicators that would trigger management actions. The SSC will utilize the preliminary product and develop the scientific framework that would adopt the modeling approach and apply it to other species particularly for the management of the ecosystem component species. The SSC may review a Council CRCP project on ecosystem indicators and thresholds for the Marianas in the coming years.
- e. National Workshop of the Scientific Coordinating Subcommittee of the CCC - Western Pacific SSC member representatives will participate in the National Workshop of the SCS in Boston in August 2024. The main theme is “Applying ABC

Control Rules in a Changing Environment”. The SSC will provide input on the workshop preparations, and will discuss outcomes post-workshop to consider recommendations to the Council on next steps.

- f. Assessing threat abatement using area-based vs. non-area-based management tools, like input/output controls in the WP Region optimize yield under NS1 guidance and make fisheries climate-ready - benefits of the ocean and its resources would include oxygen production, carbon sequestration, food production, employment, tourism, and biodiversity existence values. Threats would include global warming, ocean acidification, and land-based runoff, pollution, illegal fishing, exotic species, etc. Species may shift and opportunities into the future may be gained or lost for WP fisheries. An SSC working group will analyze the efficacy of management tools to most effectively address such threats specific to the WP Region and contrast those tools with management through Marine National Monuments and National Marine Sanctuaries.
- g. Process Error to Inform Extrinsic Ecosystem Drivers - The SSC will develop guidelines to use estimated process error from stock assessment models to inform likely future biomass uncertainties due to short-term ecosystem dynamics or long-term climate change.
- h. Advance the Management Strategy Evaluation efforts (routine) - The SSC will provide guidance on tools used for management strategy evaluation (MSE) and identify key management scenarios for which stated objectives are to be achieved. *[This item may be folded into other relevant activities]*
- i. Fishing community resilience and adaptation to future shocks – narratives of COVID-19 impacts to regional fisheries and fishing communities are a key feature of the Annual SAFE reports in 2021. PIFSC monitored impacts of the pandemic on regional fisheries and communities during 2020<sup>2</sup>. Establishing a framework to monitor and evaluate impacts, assess resilience, and document adaptations to future external shocks such as natural or social disasters that disrupt fishery production, supply chains, and markets will be critical for efficient fishery management decisions. The SSC will provide guidance on developing this framework. *[to be updated with climate-resilience focus and in line with IRA project development]*

## 5) Scientific and Research Priorities to Advance Fishery Management

- a. Review of the Council’s research priorities and informing PIFSC’s Annual Guidance Memorandum and PIFSC Science Plan (routine) – the Council maintains several research priority documents that are used to identify priorities for funding and recommendations for the Annual Guidance Memorandum for PIFSC. These are the MSRA Five Year Research Priorities, Cooperative Research Priorities, Pelagic Fisheries Research Plan, and the Management Strategy Evaluation Priorities. These documents are reviewed in the last quarter of the year in time for the AGM drafting

<sup>2</sup> <https://www.fisheries.noaa.gov/resource/document/updated-impact-assessment-covid-19-crisis-us-commercial-seafood-and-recreational>

by NMFS and the funding RFP development in the subsequent year. The SSC will annually provide input to the Council in September to inform recommendations to PIFSC. The SSC will also provide input on the draft PIFSC Science Plan as appropriate.

- b. Archipelagic and Pelagic Annual SAFE Report Review (routine) – as part of complying with the requirements of the FEP and National Standard 2, the SSC will review and endorse the draft Annual SAFE reports at its regular June meetings. The regulatory deadline for the reports is June 30 of every year.
- c. NMFS Science Policies (ad hoc) – the SSC will be reviewing science policy documents including Electronic Technologies Policy, NS2-related policies, and guidance updates to NS 4 (allocation), 8 (communities) and 9 (bycatch).

## 6) Organizational Coordination

- a. Annual and Quarterly Coordination Between Council and PIFSC Regarding Annual Priorities and Status – Council staff, in coordination with the SSC Chair, shall organize regular meetings with PIFSC Division Directors and leadership to discuss fishery science needs that will lead to Council management actions. Increased coordination with PIFSC staff allows for better monitoring of progress in addressing the science needs of the SSC.

## FOR REFERENCE: Recent SSC/Council Recommendations to be Incorporated into Future Planning

- From SSC NS1 WG recs (June 2023)
  - The SSC working group recommends that the SSC, NMFS, and Council staff explore and develop guidelines on the use of SPR and provide the Councils options to incorporate SPR into Fishery Ecosystem Plans (e.g. prioritizing American Samoa BMUS revisions). [*Staff to incorporate into 5-year program plan, determine schedule, and incorporate into SSC plan*]
  - The SSC working group suggests that Council staff and the SSC explore modifications to the P\* process in order to be more adaptive to account for near-term directional shifts in productivity, including the use of proportional harvest threshold tables. This process may also need to be applicable to the use of SPR. [*Incorporated into strawman SSC plan for 2024-206 above*]
- 195CM (from AS REAC rec): Directed staff to work with the Plan Teams to document information on tuna and preferences for oceanographic conditions and how they might shift with El Niño Southern Oscillation (ENSO) and climate change. This information should be provided to fishermen to assist them in knowing where the fish will shift from, or to, in the region. [*Staff to work into Pelagic Plan Team works schedule, and fold back into the SSC Plan; may also create a specific item for climate-related science product review within the plan*]
- From Sept 2022 SSC (National SSC lessons learned): Identify scenarios where quantitative decision making tools could help improve understanding of ecosystem considerations for fisheries in the WP region. Priorities include interactions between

protected species taken in the region's longline (LL) fisheries and current management approaches, and considering ways to incorporate ecosystem considerations into bottomfish (BF) assessments and reference points. [*Consideration for scenario planning*]

- 194CM: EBFM modeling - Requested NMFS PIFSC explore further application of the Protected Species Ensemble Random Forests (PSERF) model to the Hawaii deep-set longline fishery data and continue to explore alternative Machine Learning modeling approaches. [*Incorporated into strawman SSC plan for 2024-2026 above*]

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**Schedule of Meetings and Working Group Sessions**

2024							
<i>Inter-session</i>	<b>March</b>	<i>Inter-session</i>	<b>June</b>	<i>Inter-session</i>	<b>September</b>	<i>Inter-session</i>	<b>December</b>
MHI D7 BF Stock Assessment Benchmark WPSAR (Dec)	MHI D7 BF Stock Assessment Report	MHI BF P* and SEEM Guam BF Stock Assessment Benchmark WPSAR (Mar)	Annual SAFE report review ABC setting for MHI D7 BF Guam BF Stock Assessment Report DSLL-IFKW overlap area obs coverage evaluation SSLL tori line project report Annual Review bigeye tuna and/or other MUS multi-year specifications EM Pre-implementation program plan review	WCPFC SC20 Guam BF P* and SEEM	ABC setting for Guam BF ABC Review Precious Coral and Deep-water Shrimp Research Priority review WCPFC Advice Review of silky shark int'l stock assessment	MHI Uku Stock Assessment Update WPSAR (Nov)	CNMI BF & Kona Crab Stock Assessment WPSAR TORs  MHI Uku Stock Assessment Report
2025							
<i>Inter-session</i>	<b>March</b>	<i>Inter-session</i>	<b>June</b>	<i>Inter-session</i>	<b>September</b>	<i>Inter-session</i>	<b>December</b>
Kona Crab Stock Assessment Update WPSAR (Feb)	ABC setting for MHI Uku Kona Crab Stock Assessment Report	CNMI BF Stock Assessment WPSAR (Mar)	Annual SAFE report review Annual review bigeye tuna and/or other MUS multi-year specifications CNMI BF Stock Assessment Report ABC Setting for Kona Crab	WCPFC SC21  CNMI BF P* and SEEM	Research Priority review WCPFC advice ABC Setting for CNMI BF Review of oceanic whitetip shark int'l stock assessment		AS BF Stock Assessment WPSAR TOR
2026							
<i>Inter-session</i>	<b>March</b>	<i>Inter-session</i>	<b>June</b>	<i>Inter-session</i>	<b>September</b>	<i>Inter-session</i>	<b>December</b>
AS BF Stock Assessment Update WPSAR (Feb)			Annual SAFE report review Possible new multi-year specifications for territorial bigeye tuna for 2027-2030	WCPFC SC22	Research Priority review WCPFC advice MHI D7 BF Stock Assessment TOR Review of striped marlin int'l stock assessment	MHI D7 BF Stock Assessment Update WPSAR (Nov)	MHI D7 BF Stock Assessment Report  MHI Uku Stock Assessment Benchmark WPSAR TOR