WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

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Web Conference

FINAL REPORT

4. Pacific Islands Fisheries Science Center Director Report

T. Todd Jones presented the Pacific Islands Fisheries Science Center (PIFSC) Director's report on behalf of Director Charles Littnan. A significant portion of time since the last SSC and Council meetings were lost due to the government shutdown. Major activities since the last meeting include the completion of the 2025 Bottomfish fishery-independent survey Hawaii (BFISH), publication of a peer-reviewed paper on assessing impact of foreign fleets on false killer whales, and completion of the 2025 Marianas small boat cost-earning surveys.

Jones also reported on PIFSC's FY2026 science enterprise priorities, including implementation of an electronic monitoring (EM) program in longline fisheries, regional and international priorities, major surveys, and stock assessments. Regional and international priorities include moving towards census of catch and effort from strictly relying on creel surveys in AS territorial data collection (fishing effort and catch census), false killer whale pelagic species distribution model update, and continued development of tagging devices for leatherback interactions in commercial fisheries. Planned surveys for 2026 include the Winter Hawaiian Islands Cetacean and Ecosystem Assessment Survey (WHICEAS), main Hawaiian Islands and Guam BFISH, American Samoa insular bottomfish and life history survey, and Northwestern Hawaiian Islands (NWHI) monk seal and turtle surveys. Stock assessments will include an update assessment for American Samoa Bottomfish Management Unit Species in April 2026, and participation in several international assessments (Pacific blue marlin, bigeye and yellowfin tuna, and Pacific bluefin tuna).

In response to inquiry from the SSC regarding whether the 2026 surveys were contingent on funding, Jones clarified that the activities included in the report are those that are currently planned. While PIFSC has lost some staff in the territories, they are coordinating with Council and Pacific Islands Regional Office (PIRO) staff in the territories to carry out the planned work. PIFSC is currently operating on level funding under a Continuing Resolution through January 30, 2026, and funding after that date would be determined through either an additional Continuing Resolution or a new budget.

5. Program Planning and Research

A. Multi-species Stock Assessment Strategies Process – Phase I Status Update

Jones and Marc Nadon, PIFSC Fisheries Monitoring and Research Division (FRMD), provided an overview of phases of a framework for bottomfish management unit species (BMUS) stock assessments, which has been endorsed by the Council. Three options were presented as: 1) single species stock assessments using age structured models, 2) relatively small groups of similar species assessed and managed using indicator species, and 3) aggregated species groups assessed as such. These options do not consider the designation of ecosystem component species which would require changes to currently selected BMUS. An update for implementing Phase 1 of this framework was provided, including data assimilation and inputs for stock assessments. SSC members were invited to participate in the four phases of the process.

In response to the SSC, it was clarified that simulation testing could be incorporated into Phase 3 and/or Phase 4 depending on the scope of simulations. An SSC member noted the importance of stakeholder engagement and input to assessment efforts. Jones noted the importance of fishing community involvement throughout the assessment process. The SSC noted the importance of Council allocating resources (e.g., funding for in-person and virtual meetings, analysis hours) to support the collaborative assessment process for the fishing community to ground truth data and data issues prior to Western Pacific Stock Assessment Review (WPSAR). An update assessment will be developed for American Samoa while a benchmark bottomfish stock assessment will be developed for Guam in 2027. The framework will be applied to the Guam BMUS complex leading up to the benchmark assessment.

B. SSC Special Projects Working Group Reports

1. BMUS Multispecies Complex WG next steps

Jones provided an update on integrating the SSC BMUS Working Group (WG) proposed projects from the 157th SSC meeting into the framework process presented under 5.A.

2. Protected Species WG Report

The SSC Protected Species WG (Roberts (presenter), Waples, Jones, Suca, Harley, Hilborn, Helyer, Leon Guerrero) provided a presentation on alternative risk assessment methods for assessing protected species interactions with commercial fishing. The working group focused on priority protected species in federal fisheries management, with an emphasis on false killer whales, oceanic whitetip shark (OWT), and leatherback and loggerhead sea turtles.

The presentation compared risk assessment methods for assessing protected species interactions with commercial fishing and questioned how SSC members can more effectively contribute to and review protected species stock assessments in collaboration with NMFS. In general, it was suggested that the impact on interaction rates as protected species stocks recover needs to be examined.

Waples presented an overview of Vortex, an example of a software program used for wildlife population modeling that incorporates genetic considerations and inbreeding depression. Roberts discussed integrated population model-based assessments, highlighting examples from Hawaii, and mentioned tools like PCMS for assessing cumulative effects and also ecosystem approaches to evaluate fishing impacts. Both speakers emphasized the data-intensive nature of these models and their utility for identifying knowledge gaps and planning strategies.

SSC members noted there is a large body of published necropsy data on sea turtles that is available to support further studies of the assessment of fisheries and non-fisheries threats. This also applies to information on sea turtle hooking location, entanglement and mortality. An SSC member noted that interaction rates also vary latitudinally such as the warm sea surface temperature preference for oceanic whitetip shark. SSC members supported identifying leatherback turtles as a high priority species of concern and suggested contacting Inter-American Tropical Tuna Commission (IATTC) scientists with relevant expertise. Other SSC members supported developing PVA analyses for both leatherback and loggerhead turtles while also consulting already published studies such as those by PIFSC examining take in 2018-2020. These studies should be updated with the most recent nesting and vital rate data.

An SSC member suggested the recent Western and Central Pacific Ocean (WCPO) oceanic whitetip stock assessment should be examined for information useful to the SSC and Council. SSC and Council staff noted that the SSC previously recommended that the US delegation should push for greater spatial discrimination in OWT stock assessments to examine sub-regional variability in distribution.

An *ad hoc* meeting of the project working group (during day 2 of the 158th SSC) discussed potential options for alternative risk assessment methods, and relevant data limitations, for addressing key management issues for the focal protected species. A list of recommendations will be included in the project report, which will be presented at the 159th SSC.

3. Electronic Monitoring WG Update

This item was taken up in conjunction with 7.A (EM Updates); see section 7.A for associated discussion.

The SSC Electronic Monitoring (EM) WG (Harley, Dichmont, Hunt, Itano, Lynch, Cabrera, Carothers) previously developed a list of questions pertaining to data usage and responsibilities of fishery operators using EM systems. Specifically, these questions focus on the impacts to human dimensions at sea and possible intrusions to privacy of operators. The need to mitigate the negative impacts of video monitoring and actively manage the privacy risks involved are an essential component of successfully delivering on-board cameras. Council staff provided responses to date on these previously posed questions to be considered in EM implementation. These questions are to continue to be updated in consultation with NOAA General Counsel, PIFSC, and PIRO staff. Recent Federal furlough has delayed the implementation of EM in Hawaii and American Samoa longline fisheries, including addressing issues posed by the EM WG.

4. Review of Special Projects List for 2026

The SSC reviewed the special project list and discussed updates for 2026 working groups and associated projects.

Special Projects 1 (SSC process), 2 (Human dimensions and social science) and 3 (Integration of biological, economic, social, and cultural considerations) were completed as of March and June 2025. Special Project 4 (Integration of climate information into decision making) is slated for completion by March 2026. Special Project 5 (BMUS multispecies complex) was presented and discussed at the December 2025 SSC meeting in collaboration with NMFS. The scope of the Special Projects 7 (Efficacy of MPA/closed areas for HMS conservation has yet to be defined,

and Special Project 6 (Protected species) and Special Project 8 (EM) were discussed at the December 2025 meeting and are ongoing.

The Chair called for suggestions on new special projects for 2027. An SSC member supported greater attention to the impacts of fisheries to humans and suggested human dimensions should be addressed in SSC work. Council staff noted that the SSC developed and adopted guidelines at the 157th SSC meeting for conduct that codify the need to address human dimensions in all aspects of its work. The SSC will revisit discussion on additional Special Projects for 2026 at the March 2026 meeting.

C. Monument Actions

1. Options for removing federal fishing prohibitions in the Marianas Trench, Rose Atoll, and Papahānaumokuākea Marine National Monument (Action Item)

Joshua DeMello, Council staff, presented options for restoring commercial fishing to the marine national monuments in the Pacific following from Executive Order 14276. He noted that while there is no directive in place, a potential directive (e.g., presidential proclamation) that removes the commercial fishing prohibitions would require the Council to consider the current fisheries management framework for the Marianas Trench (MTMNM), Papahānaumokuākea (PMNM), and Rose Atoll Marine National Monuments (RAMNM) under the authorities of the Magnuson–Stevens Fishery Conservation and Management Act (MSA). At its 205th meeting, the Council will consider both No Action and Removing Commercial Fishing Prohibitions, and may look at enhanced management for fisheries that may operate in those areas.

An SSC member asked about the original objectives underlying the establishment of marine monuments, including whether conservation or fisheries management goals were explicitly articulated. Discussion noted that monuments were created through presidential proclamations rather than legislative acts, meaning they generally emphasized broad protections without detailed management intent, and that clarifying language is available in Federal Register documentation. Members emphasized that monuments differ substantially in context and purpose and should not be treated uniformly, it is also noted that Monuments such as the Papahānaumokuākea are both a monument and sanctuary (Sanctuaries Act).

2. State of Knowledge of Open Ocean MPAs and Impacts in Western Pacific Region

Ray Hilborn and Council staff delivered a summary of published studies to date on the efficacy of large marine protected areas (MPAs) in the Western Pacific Region. This summary weighs findings and caveats from these studies to discern benefits, limitations, and drawbacks of large closed areas to fishing to inform Council action.

The study by Medoff et al. (2022)[1] is distinguished by its claim that the 2016 expansion of the PMNM, the world's largest fully protected marine protected area at the time, generated positive spillover benefits for two highly migratory species, yellowfin tuna and bigeye tuna, evidenced by a statistically significant increase in Catch Per Unit Effort (CPUE) for vessels near the boundary relative to those far away. However, Hilborn et al. (2025)[2] found no net benefit to fisheries

[1] Medoff, S., Lynham, J., & Raynor, J. (2022). Spillover benefits from the world's largest fully protected MPA. Science, 378(6617), 313–316. https://doi.org/10.1126/science.abn0098.

[2] Hilborn, R., Fitchett, M., Hampton, J., & Ovando, D. (2025). When does spillover from marine protected areas indicate benefits to fish abundance and catch? Theoretical Ecology, 18(1). https://doi.org/10.1007/s12080-024-

targeting these species. Chan (2020)[3] also determined there was significant economic loss and reduction in CPUE in the Hawaii longline fishery following the PMNM expansion. Likewise, Gilman et al. (2020)[4] found no significant benefits based on conservation metrics following closed areas in the Pacific Islands Heritage Marine National Monument. In this same region, Blanluet (2025)[5] found no measurable increase in tuna biomass density inside protected areas using acoustic data from drifting fish aggregating devices.

SSC members discussed whether closures associated with monuments are likely to produce measurable biological benefits, noting that for pelagic species, recruitment is largely environmentally driven and unlikely to respond strongly to area closures even with a degree of spawning-site protection, unlike the response we might expect from some demersal species. SSC members explained that the evidence for spillover benefits from Papahānaumokuākea expansion is weak, in part because fishing intensity in this area was already low before the closures and because highly migratory species move across vast ocean regions that make localized protections less influential. It was also noted that displaced fishing effort may simply relocate, limiting ecological effects. Although some early studies suggested increasing catch rates near Papahānaumokuākea boundaries, later analyses showed that pre-existing abundance patterns and broader ocean conditions could explain those changes far better than protected area spillover. Most SSC members agreed that closures alone are unlikely to appreciably increase total stock abundance for such species, though some cautioned against certainty in framing the effects as nonexistent since weak or diffuse ecological effects are possible.

Multiple SSC members highlighted the opportunity—particularly if access is modified in the future—to design phased or pre-/post-opening experimental studies to evaluate ecological, fisheries, and socioeconomic outcomes. Reference was made to existing experimental design frameworks in the literature as a basis for such evaluations, with emphasis on tailoring approaches by region and fishery. SSC members noted that if monuments are opened, failure to incorporate an experimental design for monitoring would be a significant shortcoming. Clarification was sought on whether a formal action item or recommendation would be appropriate, with recognition that next steps and regulatory pathways remain somewhat unclear.

Discussion addressed the regulatory framework necessary to implement experimental fishing or monitoring, noting that while previous regulations remain on the books, any reopening would depend on the specific wording of future proclamations. It was emphasized that existing fishery regulations would generally reapply if waters were reopened, including long-standing area closures such as the 0–50 nautical mile longline restriction in the NWHI. Any research or fishing activity within monument areas would still require permits through appropriate sanctuary and federal processes, which have historically posed challenges—particularly for extractive research—though it was noted that attitudes toward such research may be evolving amid increasing climate-related uncertainty.

00596-2.

[3] Chan, H. L. (2020). Economic impacts of Papahānaumokuākea Marine National Monument expansion on the Hawaii longline fishery. Marine Policy, 115, 103869. https://doi.org/10.1016/j.marpol.2020.103869.

[4] Gilman, E., Chaloupka, M., Fitchett, M., Cantrell, D. L., & Merrifield, M. (2020). Ecological responses to blue water MPAs. PLoS ONE, 15(7), e0235129. https://doi.org/10.1371/journal.pone.0235129.

[5] Blanluet, A., Game, E. T., Pollock, K., Wolff, N. H., Everett, J. D., Neubert, S., Dunn, D. C., & Richardson, A. J. (2025). Drifting fish aggregation devices as a tool to study oceanic marine protected areas. Fisheries Research, 289, 107474. https://doi.org/10.1016/j.fishres.2025.107474.

Economic considerations were raised, particularly regarding fisheries facing hardship. SSC members noted that reopening monument areas—especially in American Samoa—could help address economic pressures on local longline fisheries while maintaining sustainability, given the relatively small scale of U.S. fleets compared to foreign competitors. It was emphasized that the effectiveness and impacts of reopening would be region- and fishery-specific and should be evaluated accordingly. Discussion of fishery impacts highlighted differences across sectors, with pelagic fisheries generally viewed as lowest impact, followed by bottomfish, and then lobster fisheries, which may have greater benthic impacts and uncertainty regarding current stock status. Previous bottomfish fisheries in NWHI were noted to have been highly productive with relatively low removal relative to total biomass.

SSC members also discussed monitoring needs, emphasizing the value of tagging, telemetry, and low-impact research approaches, and noting that some fisheries previously operated with full observer or electronic monitoring coverage. Market considerations were raised, including questions about demand for fish sourced from monument areas, potential substitution with existing imports, and the likelihood that increased supply could affect prices. Members observed that imports have fluctuated over time and that reintroduction of monument-sourced fish would effectively constitute a market experiment.

SSC members further raised questions about whether Indigenous knowledge systems, cultural values and norms, and community benefits have been formally considered in evaluating monument effectiveness. An SSC member commented that monument research often overlooks Indigenous knowledge systems—such as traditional ecological practices, resource-management norms, and governance frameworks—so current measures of "success" may ignore cultural values, spiritual connections, and subsistence needs. Some members of Indigenous communities raise concerns about who benefits from area closures, whether these protections are more symbolic than ecologically effective, and whether Indigenous harvesting rights are being limited in the name of conservation without real gains for ecosystems or the people who depend on them. Other members of Indigenous communities also raise concerns about removing protections for closed areas. The SSC recognizes the importance of consulting with Indigenous communities in advance of regulatory changes.

It was noted that Indigenous advisory groups have not yet formally addressed these issues but may do so in the future as policy direction becomes clearer.

Finally, SSC members noted that if commercial fishing is permitted, subsequent decisions would likely return to established MSA processes, including fishery-by-fishery evaluation and recommendation.

The SSC recommends if fishing resumes in parts of the Marine National Monuments, the following research and monitoring tasks would be needed with immediacy:

a. **Collecting data on catch and bycatch by vessels fishing in the newly opened area, appropriate for then using a statistical model-based evaluation approach as outlined in Hilborn et al (2022)[6] for drawing causal inference about the efficacy of a policy**

[6] Hilborn, R. et al. (2022) Area-based management of blue water fisheries: Current knowledge and research needs. Fish. Fish. 23, 492–518 https://doi.org/10.1111/faf.12629

intervention

b. **Assessing the impacts of foreign fishing versus domestic U.S. fishing in areas around U.S. waters**
c. **Tagging/telemetry and low-impact research approaches to evaluate movement of species caught within Monument waters**
d. **Assessing the impacts of fishery resources from Monuments on markets**
e. **Co-designing research with fishing and indigenous communities, as appropriate**

The SSC thanked Hilborn for the informative presentation.

D. Council IRA Project Updates

1. Scenario Planning for the American Samoa Longline Fishery

Kimberly Gordon, Resource Logic, provided a summary report of their meetings in American Samoa for Scenario Planning for the local longline fishery. Meetings were held with the Starkist cannery, Tautai Samoa Longline Association, fish buyers, suppliers, and local government officials. Prevailing issues include low pricing for albacore, the target species for the fleet, from the Starkist cannery. Uncertainty in pricing structure is an issue for the fleet, which has seen increasing costs and decreasing revenues, despite recent improvements in catch rates. Labor shortage has stymied the ability for longline fisheries to plan for fishing trips and get operations going. Dockside and shoreside infrastructure to maintain fishing vessels has also been a limiting factor for both longline fisheries and purse seine fisheries that offload in American Samoa.

Some possible improvements to the viability of the fishery could be made through special labeling of American Samoa-caught albacore, discerning from foreign sources which could add a premium value to the product. Cooperative research to improve fishery performance could be conducted to improve fishing operations for the fleet when fishing outside of a moon phase where albacore may be deeper and out of reach of fishing gear. International measures, tariff schedules, and trade agreements could be modified to improve the viability of U.S.-caught albacore in the U.S. seafood market.

An SSC member noted that the presenter conveyed there was concern about fish pricing differences across markets and that their expertise could be utilized to assist in evaluating the existence, nature and extent of market irregularities.

The SSC thanked Gordon for their important work and informative presentation.

2. Updates on the Protected Species, Regulatory Review, and Community Engagement Projects

Thomas Remington, Lynker, and Alex Min, Pacific Islands Fisheries Group, provided updates on three of the other Inflation Reduction Act (IRA) projects initiated in 2025. These updates included the following:

- **Protected Species (presented by Remington):** The first of the two workshops planned under this project was originally scheduled for October 29-30, 2025, but was postponed due to the government shutdown. The workshop will be rescheduled to February 2026.
- **Regulatory Review (presented by Remington):** Fishery Ecosystem Plan (FEP) reviews began in July 2025 and initial draft finding expected to become available around the end of November 2025. Once the desktop reviews are completed, public meetings will be scheduled to share draft findings and gather community input on regulatory needs, gaps,

latency and redundancy. The initial report will be presented to Council next week focused on five possible scenarios that may interact with regulation misalignment across jurisdictions, focused on climate and monitoring driven shake-ups. These misalignments include: non-complementary management mechanisms, variability in monitoring and reporting across jurisdictions, poor adaptive management structure, and complexity in structure of FEPs.

- **Community Engagement (Presented by Min):** The second round of community engagement meetings were held between August and December 2025 to follow up on priority topics identified through the first round of meetings, including shark depredation, access to marine protected areas, and cultural take of sea turtles. In the meetings to date, fishers described changing ocean conditions, fish aggregating device (FAD) losses and long downtimes, increased shark depredation preventing bottomfishing in American Samoa, and opposition to MPAs in Guam, while communities in American Samoa expressed a desire for Rose Atoll to remain unchanged. A pilot commercial vocational training program was also conducted in September 2025. Feedback from the CNMI participant to the vocational training program highlighted exposure to fish auctions and the challenges of securing buyers despite abundant fish in CNMI, alongside practical adaptations such as increased ice use to maintain fish quality.

An SSC member noted that National Standard 6 already addresses contingencies and adaptive management, asking whether edits will explicitly incorporate that into the FEPs. Remington noted that adding specificity or calling it out in the plans is a "low-hanging fruit." An SSC member also asked about enforcement of FEPs at state, local, and federal levels and suggested checking current enforcement status. Remington acknowledged enforcement has only been touched on and agrees it needs deeper examination, noting that management effectiveness depends on enforcement.

An SSC member highlighted challenges to intergenerational knowledge transfer among fishers, with elders noting that rapid ocean changes have altered traditional knowledge and made it difficult to pass on to younger fishers. SSC also discussed shark depredation as a major concern, and although most solutions mentioned were not new, many fishers suggested culling sharks or moving locations; commercial fishers especially favored killing sharks and hanging them over the boat to deter others. Some associations have stopped targeting certain species because sharks take the catch before fishers can retrieve it. SSC emphasized the need for continued training and involvement of young fishers, recognizing their passion and the importance of sustaining future participation. A forthcoming workshop will bring together territorial and Hawai‘i fishers and experts to explore shark depredation mitigation and possible policy responses.

E. Public Comment

Eric Kingma, Executive Director of Hawai‘i Longline Association, commented on agenda items related to Pacific monument fishing closures and emphasized that current protected areas limit access for the Hawai‘i longline fleet, forcing U.S. vessels away from U.S. waters and reducing flexibility in locating fish. He argued that opening monument/sanctuary areas—such as Johnston or the NWHI —would create more fishing opportunities and space to operate, especially seasonally, although it may not necessarily increase total catch. Instead, greater fishing area would allow vessels to spread out, avoid crowding, and reduce direct competition with both U.S. and foreign fleets. Kingma also challenged claims that these closed areas create spillover benefits for tuna stocks, stating that he and others believe the science does not support this, and

encouraged the SSC to address scientific gaps and respond to what he characterized as "propaganda." He also raised concern about the emerging Biodiversity Beyond National Jurisdiction (BBNJ) convention, arguing that future high-seas closures could further limit U.S. fishing and push foreign fleets closer to Hawai‘i's fishing grounds.

In response to follow-up questions by SSC members, Kingma noted that opening certain areas might marginally improve fuel efficiency depending on distance, but said the primary benefit remains operational flexibility, not increased supply or major economic gains.

6. Protected Species

A. False Killer Whales Abundance Estimates Update

1. MHI Insular Population Abundance Estimates

In response to information provided during the PIFSC Director's Report at the 157th meeting, the SSC requested PIFSC to provide a full presentation on the MHI insular false killer whale (IFKW) abundance estimate publication, including information on the evidence of fishery interactions, at the December meeting. Following the government shutdown, PIFSC notified the Council that they are unable to fulfill the requested presentations for the December SSC and Council meetings, as PIFSC is operating under highly compressed timelines following the government shutdown to complete critical analyses and survey planning for several of the region's most urgent protected species priorities. In its response, PIFSC also noted that two recent publications on the MHI insular false killer whale abundance estimates (Badger et al., 2025)[7] and fisheries interactions (Harnish et al., 2024)[8] represent the most current and available science on these issues. PIFSC will continue to track progress on these topics and can revisit this request as new information becomes available for future SSC and Council meetings.

In lieu of a presentation from PIFSC staff, SSC was asked to review the publications as well as previous SSC reports associated with this topic. The SSC previously reviewed a preliminary analysis and results on the insular false killer whale abundance estimates at the 148th meeting in June 2023, and made the following recommendations to PIFSC on the analysis as well as the underlying data.

- *Considering the uncertainty of what is driving the changes seen in the newer modeling results, the SSC recommends that the PIFSC prepare a clear set of IFKW model runs that start with the same approach used in the Bradford 2018 assessment with incremental additions of: 1) adding more recent Cascadia Research Collective data, 2) adding the other sightings data, 3) adding the pseudo-spatial correction, and 4) adding distinctive individuals; with the goal being to better understand the relative impacts of the methodological changes. The SSC further recommends that PIFSC provide the trends in the key demographic parameters necessary to diagnose the abundance, including survival rates, detection rates and recruitment rates.*

Discussion on the interaction paper (Harnish et al. 2024) focused on the lack of independent verification of interactions, but the SSC did note that the State of Hawai'i was undertaking work to summarize knowledge on depredation (including depredation attributed to FKW). There was also discussion as to whether information on interactions could help inform estimates of mortality.

The SSC noted that the scientific paper on abundance trends (Badger et al. 2025) did not address the recommendations from the 148th SSC meeting for sensitivity analyses and the need for demographic parameters to diagnose underlying drivers of the estimated population trends (i.e., the increase over the first half of the time series and decrease over the second half). Therefore,

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[7] Badger JJ, Baird RW, Johnson DS, Bradford AL, Mahaffy SD, Kratofil MA, Cullins T, Currie JJ, Stack SH, Oleson EM (2025) Accounting for sampling bias reveals a decline in abundance of endangered false killer whales in the main Hawaiian Islands. Endangered Species Research 57:325-340 https://doi.org/10.3354/esr01423

[8] Harnish AE, Baird RW, Mahaffy SD, Douglas AB, Kratofil MA, Shaff JF, Cullins T, Stack SH, Currie JJ, Bradford AL (2024) False killer whales and fisheries in Hawaiian waters: evidence from mouthline and dorsal fin injuries reveal ongoing and repeated interactions. Endangered Species Research 55:273-293 https://doi.org/10.3354/esr01374

these concerns remain.

The SSC also noted an observation from an SSC member of a declining trend in nominal CPUE of mahimahi in the Hawaii longline fishery. Mahimahi are a key FKW prey species and may affect detectability for visual surveys of FKW, and such information could be included in any subsequent FKW mark-recapture study.

The SSC reiterated its advice to the Council from the 148th SSC meeting (provided above) and the request for a presentation of this additional information as it will be critical to assessing the validity of the estimated abundance trends.

2. Pelagic Abundance Estimates based on the 2023 HICEAS Survey [Cancelled]

This agenda item was postponed due to the federal government shutdown, and will be rescheduled for a future SSC meeting.

The primary dataset for estimating abundance of the pelagic false killer whale stock comes from the Hawaiian Islands Cetacean and Ecosystem Assessment Survey (HICEAS) survey conducted inside the EEZ around Hawai‘i. The latest survey was conducted from July through December 2023, with previous surveys conducted in 2002, 2010, and 2017. As of early 2025, PIFSC was anticipating having preliminary design-based estimates from the 2023 HICEAS survey available by summer. The timeline for the analysis has shifted due to delays associated with the shutdown as well as preparations for the Winter Hawaiian Islands Cetacean and Ecosystem Assessment Survey scheduled for January 24 - March 31, 2026.

B. DSLL ESA Reconsultation for Oceanic Whitetip Shark and Leatherback Turtles

Council staff provided a brief update on the status of ESA reconsultation for the Hawai‘i deep-set longline fishery. On September 19, 2025, PIRO Protected Resources Division (PRD) reinitiated consultation on the authorization of the Hawai‘i deep-set longline fishery at the request of PIRO Sustainable Fisheries Division (SFD). The reinitiation triggers were exceedances of the incidental take statement in the 2023 biological opinion for oceanic whitetip sharks and leatherback sea turtles during the first and second quarter of 2025, respectively. The consultation is anticipated to be completed in March 2026.

Council staff indicated that they may call upon SSC members to review any consultation documents and encouraged interested members to contact the Council Protected Species lead.

The SSC thanked Council staff for the informative presentation.

C. Kaneohe Green Sea Turtle Nesting Genetics [Cancelled]

In response to information provided during the PIFSC Director’s Report at the 157th meeting, the SSC requested PIFSC to provide an update on the genetic sampling of the green sea turtle nesting population at Marine Corp Base Hawai‘i Kaneohe when the information becomes available. Following the government shutdown, PIFSC notified the Council that they are unable to fulfill the requested presentations for the December SSC and Council meetings. This agenda item will be rescheduled for a future SSC meeting.

D. Public Comment

There was no public comment.

7. Pelagic and International Fisheries

A. Electronic Monitoring Updates

Council staff reported on progress of implementation of EM in Hawaii and American Samoa longline fisheries and engagement with industry, including the first EM forum to go over vessel monitoring plans (VMPs) and timelines for implementation held in November 2025. NMFS has developed agreements with around 20 existing HLA vessels with EM systems on a voluntary basis to transition those EM systems for the purpose of fishery monitoring to augment observer data for the estimation of protected species interactions and bycatch in the Hawaii longline fishery.

The Federal government shutdown has led to significant delays in a request for proposal (RFP) for EM vendors and for various EM-associated projects. Delays are expected in the EM phase-in for the Hawaii-based pelagic longline fleet, probably delayed until the middle of 2026 through 2027. An EM/VMP forum was held to engage the pelagic fishing industry and discuss the development of vessel-specific VMPs on November 25, 2025. Council staff expanded on what would be in those VMPs, including specific details on agency and industry responsibilities, provision and maintenance of EM infrastructure, and protocols in the event of EM equipment malfunction. Council staff, PIFSC, PIRO, and Pacific States Marine Fisheries Commission (PSMFC) are anticipating holding more EM/VMP forums throughout January and February 2026.

The SSC asked about the type and duration of the arrangement with the PSMFC equipment vendors. PIFSC staff responded that RFPs would be released every 3 years given the expected cycle of EM systems, following Federal procedures.

The SSC noted the calibration approaches to enable automatic fish length measurements through EM, highlighting the need to ensure the approach had a minimal impact on operations. Council staff indicated the intent so far has been to use known fixtures on vessels to calibrate length measurements without any extra onus to fishermen, but providing grids could be considered.

The SSC noted the balance needed in ensuring privacy during the use of EM footage while ensuring necessary stakeholders can get access to the information.

The SSC noted the benefits in obtaining footage of the setting process, acknowledging that it would require an additional camera that is not currently planned. That additional footage could be used for verification of the use of seabird bycatch mitigation measures such as tori lines. The SSC also noted species identification issues for billfishes with EM that could present an issue as species-level regulatory discards roll out in coming years.

The SSC thanked Council staff for the informative presentation.

B. Outcomes of the Western and Central Pacific Fisheries Commission 22nd Regular Session

Felipe Carvalho, PIFSC, and Valerie Post, PIRO, presented outcomes of the 22nd Regular Session of the Western and Central Pacific Fisheries Commission (WCPFC22), held December 1-5, 2025 in Manila. WCPFC22 progress on the adoption of a management procedure (MP) on South Pacific albacore (SPA) which affects the American Samoa longline fishery, was the highlight of the meeting. A bigeye tuna (BET) MP framework was introduced, including

limitations and benefits to the U.S. Hawaii longline fishery. A target reference point and MP framework for BET is expected to be developed for adoption at the December 2026 meeting. Progress on a proposal to combine EM with human observer requirements was also provided.

The Commission tasked the Pacific Community (SPC) with the evaluation of candidate BET MPs that included potential controls on both the longline and purse seine fishery, with the aim of adopting an MP for bigeye at the end of 2026 for implementation in 2027. To assist, regional BET management workshops are planned for May 2026 and October 2026.

The Pacific Island Region anticipated significant engagement during 2026, with a focus on development of a BET MP and negotiations on a SPA conservation and management measure (CMM). Workshops on a SPA CMM, including allocation frameworks, are planned for May 2026 and September 2026.

The SSC noted that the mixed fishery approach to harvest strategies adopted by the WCPFC would require a consideration of the balance between purse seine and longline impacts to achieve BET management objectives.

The SSC also noted that in the IATTC, the approach was to control only the purse seine fishing level. SSC enquired whether there was consideration of including pelagic longline impacts within the control of any management procedure. Post noted that discussions were ongoing and there is an intent to examine partitioning total purse seine effort output from an existing MP between free school purse seine sets and FAD sets to account for BET mortality.

The SSC thanked Carvalho and Post for the informative presentation.

C. Public Comment

There was no public comment.

8. Island Fisheries

A. Territorial Coral Reef Life History

Cassie Pardee, Poseidon Fisheries Research, presented the results of a three-year project with the Council to process and analyze coral reef life history samples from the PIFSC archives. These samples were obtained from fishermen in Guam, CNMI, and American Samoa through the PIFSC life history program. Pardee and partners utilized the length and weight measurements from the samples and combined that with otolith and gonad samples to develop age, growth, and reproduction estimates for 12 coral reef species.

Highlights were provided from the analysis of 2,200 samples of 12 key species for American Samoa, CNMI, and Guam. The species were determined based on the samples available, local importance, and lack of other research on the species. Recommendations were made: to expand life history research to target additional species, to provide training to improve species and macro-sex identification, to develop quality control standards for data entry, and to more fully capture size, age, and temporal dimensions of future samples. New papers are out on this research in *Fishes*[9] and forthcoming in *Coral Reefs*.

In American Samoa, the research focused on five Holocentridae species, which showed slow growth, delayed maturity, low total mortality, and long lifespans. The oldest individual observed was a 40-year-old *S. spiniferum*. The program noted difficulty obtaining small, immature individuals needed to refine maturity estimates due to reliance on fishery-dependent sampling.

In the CNMI, analyses centered on four fast-growing, short-lived species that mature early and may be more resilient to fishing pressure. L50 could not be estimated for *C. spilurus* because of insufficient sample sizes of small, immature specimens.

Guam had limited sample sizes, though additional collections were made from February to July 2024. Three focal species—a grouper, an emperor, and a rabbitfish—reached maximum ages of 10–13 years and matured at roughly 20 cm.

The program emphasized that market-based sampling limits the size distribution of collected fish. Future work will prioritize expanding species coverage, improving representation of the full size and age range, and increasing temporal coverage across all months to better resolve spawning periods.

An SSC member asked whether fecundity had been assessed, but analyses were limited by the small sample sizes in two of the three regions, as well as by lack of complete gonads for analysis. Members also inquired about potential misidentification of Holocentridae in American Samoa samples. Pardee noted that several otoliths of one species could be distinguished from others based on shape and that fish identification workshops could improve accuracy during collection in the future. An SSC member noted that SPC is working on life history characteristics of coastal species and encouraged collaboration. Questions were raised about continuing life history studies of coral reef fishes in the region, and it was noted that future efforts would depend on available funding and needed to avoid duplication with other research efforts.

[9] Pardee, C., Wiley, J., & Taylor, B. M. (2025). Age-Based Demography of Two Parrotfish and a Goatfish from Saipan, Northern Mariana Islands. Fishes, 10(7), 303.
Pardee, C., Ochavillo, D., & Taylor, B. M. (2025). Comparative Demography of Five Holocentridae Species from American Samoa. Fishes, 10(11), 596.

An SSC member noted the lack of small, immature *C. spilurus* in the CNMI samples and added that the local agency has since collected those specimens and will process and share the results of their findings to the analysis.

The SSC thanked Pardee for her informative presentation and encourages the analysis of bio samples to obtain area specific life history information noting that additional sampling and analysis may be necessary to obtain robust reproductive parameters.

The SSC recommends the Council continue to work with PIFSC and territorial agencies to support life history studies for ecosystem component species to facilitate and support territorial fisheries agencies in the primary management of the near-shore resources.

B. Marine Recreational Information Program [Cancelled]

This agenda item was cancelled and will be rescheduled to a future SSC meeting.

C. Public Comment

There was no public comment.