



**124<sup>th</sup> Meeting of the Scientific and Statistical Committee  
1164 Bishop Street, Suite 1400, Honolulu HI 96813  
October 4 to October 6, 2016**

**5. Insular Fisheries**

**A. Updates on the HMRFS data collection improvement project**

Tom Ogawa, Division of Aquatic Resources (DAR) Program Manager for the Hawaii Marine Recreational Fishing Survey (HMRFS), provided an update on possible improvements being evaluated for the program. He provided an update on three recent pilot projects implemented during 2015 to improve the current survey methodologies. The team evaluated a roving survey, a mail survey, and an aerial survey, and Ogawa discussed the relative advantages and disadvantages of each. The National Academies of Sciences review of the national MRIP program will be published soon. The program is moving away from the coastal household telephone surveys and continues to explore new survey methods.

**The SSC looks forward to reviewing further iterations of the HMRFS survey methodology improvements but notes that a recreational/non-commercial fishing license or registry would give a better sampling frame from which to estimate catch and effort from that sector. The SSC recommends the MRIP Implementation Team, in coordination with NMFS PIFSC and DAR, provide educational outreach to fishermen in the various sectors to improve their understanding of the importance of accurate and complete catch reporting.**

**B. Updates on the State of Hawaii research and monitoring efforts**

Alton Miyasaka, DAR provided the SSC with an overview of their ongoing and proposed research and monitoring efforts in state waters. DAR conducts different kinds of surveys (benthic, coral bleaching, GPS-based) and works with various partners to make sure that methods are complementary to federal efforts.

**The SSC thanked Alton Miyasaka and looks forward to hearing further results of the DAR monitoring programs.**

**C. Analysis of Hawaii MUS catch for possible ecosystem component classification**

Peter Nelson, contractor from HT Harvey and Associates, discussed an analysis of catches of Hawaii Management Unit Species (MUS). The intent is to assess the potential for re-classification as ecosystem component species or their removal from the Hawaii FEP. Ecosystem component species do not require ACL specifications. Landings of bottomfish, crustaceans, precious corals and coral reef ecosystem fisheries were reviewed to determine which species or species complexes were taken only in state waters, only in federal waters or in both state and federal waters. The scope of the project is limited to coral reef ecosystem species and based on non-confidential landings.

There are a relatively modest number of fisheries that include a sizeable proportion of catch from federal waters, with many of the MUS that were reviewed residing in both federal and state waters. Questions were raised about how the parsing between federal and state waters catches was done given the state grid systems, and Nelson noted that the data used were already divided.

**The SSC notes that the analyses are preliminary but the results may become important to developing recommendations about the annual ACL specification process. The SSC thanked Peter Nelson and looks forward to the final report noting that this effort may result in a simplification of the ACL process.**

**D. Biomass and spatial distribution of akule *Selar crumenophthalmus* from aerial surveys in Oahu**

John Wiley, Council contractor, presented preliminary results on a project to estimate the biomass and spatial distribution of akule (bigeye scad, *Selar crumenophthalmus*) using aerial surveys around Oahu. Spotter pilot skill and experience is critical to an assessment of life-stage and school biomass.

**The SSC notes that this project is an attempt to obtain a fisheries independent index of abundance to potentially improve stock assessments. The SSC raised the issue of modeling detection and occupancy probabilities. These will be further explored by Council staff. The SSC also noted the importance to validate the methodology for estimation of biomass by aerial surveys. The SSC thanked John Wiley and looks forward to hearing the final results of the project.**

**E. Public Comment**

A commenter raised an issue of using only non-confidential data in the ecosystem component species project.



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**6. Program Planning**

**A. Expansion of NWHI Monument**

**1. Update**

Council staff updated the SSC on the events leading to the expansion of the Papahānaumokuākea Marine National Monument. Actions under the Antiquities Act by President Obama supersede regulatory authorities under the MSA, NEPA, ESA, NMSA, MBTA, and MMPA. Council staff documented the timeline of events that led to Proclamation 9478 under the Antiquities Act that expanded the Monument. Staff described various provisions of the proclamation, including prohibited and regulated activities. NMFS has requested the Council to amend the Pelagic and the Hawaii Fishery Ecosystem Plans to comply with the provisions of Proclamation 9478.

**The SSC recommends Council direct staff to work with PIFSC and State of Hawaii in acquiring data regarding historic fishing activity in the expanded monument area. Further, the SSC recommends the Council consider the use of "customary exchange", as used in other monuments, for providing subsistence/non-commercial fishing options in the expanded monument area.**

**2. Economic impact of lost EEZ fishing grounds**

Justin Hospital, PIFSC, presented on the economic impacts of the lost EEZ fishing grounds due to expansion of the Papahānaumokuākea Marine National Monument. The potential direct revenue lost due to the expansion was estimated to be approximately \$7.8 million dollars (inflation-adjusted) using 2010-2015 average of annual revenues from NWHI catches. In addition, there could be indirect revenue losses to fishery support industries. The direct and indirect revenue losses should be treated as upper bound estimates of impact because the fishery can shift effort elsewhere, but that may incur additional costs to fishing operations. PIFSC Socio-Economics Program will continue to monitor trip costs, net revenues, and other economic performance indicators to help discern continuing impacts of the Monument expansion.

SSC members noted that carbon footprints can be tracked and might indicate measurable differences prior to and post Monument expansion. The SSC further indicated an interest in documenting the number, size, capacity and operational range of vessels that operated in the NWHI.

The SSC thanked Justin Hospital for his informative presentation and looks forward to future reports from the PIFSC Economic Monitoring Program.

**B. Development of an integrated assessment model for data poor stocks**

Merrill Rudd, UW SAFS, reported on recent developments of the Integrated Stock Assessment Model for Data-Poor Stocks (Martell 2015). Rudd provided an overview of the simulation

testing, new data inputs, and the new diagnostics added to the model. These changes were incorporated in an attempt to address the comments and recommendations posed by the Center for Independent Experts review of the model held in October 2015.

The current model now includes mean-length and length-frequency likelihood components. Results suggest that abundance index or biomass are more informative of MSY than catch alone, but that mean length in the catch was less informative. In addition, the model was less reliable in simulations of short-lived species.

**Given the data poor nature of coral reef fisheries, the SSC recommends examination of more than one model for future evaluation of stock status.**

The SSC thanked Merrill Rudd for her informative presentation.

#### **C. Marine Recreational Information Program Strategic Planning**

Council staff presented on the status of the current effort by the MRIP Executive Steering Committee (ESC) to develop an MRIP Strategic Plan. The MRIP program review by the Government Accountability Office required NMFS to develop a strategic plan to provide directions for the program. The Pacific Islands MRIP Regional Implementation Plan is being developed and will direct the changes to the current HMRFS and possibly the territory creel surveys.

#### **D. WPRFMC Coral Reef Conservation Program FY 17-19 project proposals**

Council staff provided an overview of the Coral Reef Conservation Program solicitation for project proposals for Fiscal Year 2017 to 2019 and presented the list of project ideas developed by staff for SSC comments.

**The SSC endorsed the project ideas for full proposal development. The SSC recommended prioritizing projects that would build capacity in the region.**

#### **E. Report on IUCN World Conservation Congress**

Council staff provided a report on the IUCN World Conservation Congress (WCC) held in Honolulu, September 1-10, 2016. The Council was involved in the IUCN WCC through an exhibit booth, staff participation in Forum sessions, and participation in the Member's Assembly, as well as a fish auction tour organized as part of the official excursions. There were 99 motions on conservation issues considered at the assembly and 85 went to electronic voting prior to the Assembly. The remaining were sent to floor vote. The Council followed important issues and submitted written statements on several marine conservation issues, including MPAs.

#### **F. Public Comment**

A member of the public noted that there are several studies from Hawaii on the performance of MPAs. The individual also asked if Justin Hospital included enforcement costs in his analysis of economic impacts of the expanded Monument.



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**7. Pelagic Fisheries**

**A. Report on the Pelagic SAFE report development**

Kevin Kelly, NOAA contractor, presented on the development of a comprehensive stock assessment and fisheries evaluation (SAFE) report format for Western Pacific Pelagic Fisheries. SAFE reports are required under the Magnuson Stevens Act (MSA) National Standard 2 Guidelines and by the Pelagic Fisheries Ecosystem Plan. In the past the Council has drafted an annual report comprised of introductory text, fishery modules for Hawaii, American Samoa, Guam and CNMI, an international module and a recreational module. The new SAFE report will have a broader range of topics including protected species, socioeconomics, climate and oceanic indicators, and essential fish habitat.

**The SSC advises that the SAFE reports should be more concise and pertinent to the fishery, should not use regression lines in the figures, and should include in the appendix tables of all available years of data. The SSC further noted that the SAFE report should contain a section providing a concise evaluation of the performance of the fishery with respect to the reference points and management measures.**

The SSC thanked Kevin Kelly for an informative presentation.

**B. Hawaii & American Samoa Longline Fisheries Reports**

Russell Ito and Keith Bigelow, both from PIFSC, presented the semiannual reports on performance of the Hawaii and American Samoa longline fisheries.

**The SSC requests that PIFSC, in future presentations, include both annual and quarterly data points, maps (of effort, catch, and CPUE), as well as clear indication where there are no data (i.e., real zeros or no fishery activity) versus time periods with no non-confidential data in the numerous data visualizations presented. The SSC requests PIFSC develop methods that both ensure data confidentiality while also presenting the bulk of data that is non-confidential.**

The SSC thanked Russell Ito and Keith Bigelow for their informative presentations.

**C. Report on American Samoa LVPA and fisheries statistics**

Keith Bigelow presented an update on the American Samoa large vessel prohibited area (LVPA),

which extends seaward approximately 30–50 nm around the various islands of American Samoa. Prior to early 2016, federal regulations restricted vessels 50 ft and longer from fishing for pelagic management unit species within the LVPA. The Council and NMFS established the LVPA in 2002 to prevent potential gear conflicts and catch competition between large and small vessels. Since 2002, the American Samoa pelagic fisheries have changed such that the conditions that led the Council and NMFS to establish the LVPA are no longer present.

To address the fishery conditions experienced in the American Samoa longline fleet, the Council recommended, and NMFS approved, that federally permitted U.S. longline vessels 50 ft and longer be exempt from LVPA regulations and be allowed to fish in portions of the LVPA beyond 12 nm. In recommending the exemption, the Council requested PIFSC monitor the performance of the longline fishery as well as catch and CPUE of small-scale troll vessels operating out of American Samoa. Bigelow presented logbook information from American Samoa longline vessels which indicated that, in general, the LVPA exemption did not provide for significantly improved catch rates as compared to outside the LVPA.

The SSC thanked Keith Bigelow for the informative presentation and requests that PIFSC provide information on catch and CPUE of troll vessels and continue analysis of economics in the longline fishery.

#### **D. WCPO Spatial Longline Bigeye Analysis**

Keith Bigelow and SSC member Graham Pilling presented on a WCPO longline bigeye spatial analysis that is currently being conducted. The analysis was endorsed by the WCPFC Science Committee, held in Bali in August 2016, and added to the work program of the SPC. Specifically, the SPC will identify alternative levels of regional longline bigeye catch (relative to those in 2012) that achieve fishing mortality at the Maximum Sustainable Yield (Fmsy) level within a certain time frame, such as initially 10 years, or additionally in 20 years if computationally feasible.

The spatial structure of the WCPFC BET stock assessment model, which currently bisects the Hawaiian Islands (between regions 2 and 4) was discussed. The SSC reiterated its long-standing recommendation for the BET stock assessment regions to be realigned, with particular focus on the latitudinal boundary between regions 2 and 4. There is strong scientific support derived from tagging studies that support the latitudinal delineation of the stock assessment region boundary between regions 2 and 4 being shifted south to 10 degrees N. It was noted that a stock assessment region realignment with regards to regions 2 and 4 is supported scientifically for yellowfin tuna. The importance of tagging studies was also recognized, including the need to determine the origin of bigeye caught by the Hawaii longline fishery on fishing grounds to the NE of the Hawaiian Archipelago.

**The SSC recommends that the boundary between Regions 2 and 4 used in the current tuna assessment models be realigned southward to better reflect stock structure, movements, and fisheries. Further, the SSC recommends that Council staff prepare a supporting document on this recommendation to the Regional Administrator of PIRO and PIFSC representative to the SPC pre-assessment workshop.**

The SSC thanked Keith Bigelow and Graham Pilling for their informative presentations.

## **E. Report on WCPO and EPO Bigeye Tuna Limits**

Council staff and Chris Boggs, PIFSC, presented on the bigeye tuna catch limits for the Hawaii longline fishery, which operates in both the Western and Central Pacific Ocean (WCPO) and the Eastern Pacific Ocean (EPO), is subject to catch limits for bigeye in both. The EPO bigeye limit of 500 mt annually applies to vessels  $\geq 24$  m. The bigeye limit in the WCPO is based on a reduction of a 2004 catch of 4121 mt, which was reduced by 10% (3,763 mt) for the years 2009 to 2011. In 2013, a further 5% reduction was scheduled for each of the years 2015 (3,554 mt) and 2017 (3,345 mt).

Both catch limits were reached in August 2015 and July 2016 respectively, forcing some large vessels  $\geq 24$  m to tie up until the transfer of bigeye quota from the US Participating Territories could be approved by NMFS under the provisions of Amendment 7 to the Pelagics Fishery Ecosystem Plan. Evaluation of the data from the Eastern Pacific suggests that this closure was premature and the cumulative catch was only 250 mt. Boggs presented that reaching the respective catch limits earlier in the calendar year, as compared to previous years, was due to higher bigeye CPUE, both in number of fish and in larger fish for the first half of 2015 and 2016.

The SSC thanked Chris Boggs for an informative presentation.

## **F. Factors resulting in recent increased HLL bigeye CPUE**

Jeffrey Polovina, NMFS PIFSC, gave a presentation on a recent analysis of bigeye CPUE trends in the Hawaii longline fishery. He and his colleagues found that a recent increase in bigeye tuna CPUE is due primarily to a strong recruitment pulse entering the fishery in quarter 3, 2013, and propagating through the fishery over the 3 subsequent years. A trend of higher fishing effort to the north and northeast, where CPUE was higher than the core region, also increased CPUE. Lastly, interannual variation in the depth of bigeye foraging habitat can be significant and may have increased catchability in 2015 due to shoaling of isotherms caused by reduced trade winds during the recent El Niño event. The CPUE by weight class from the dealer data provides a source for developing a valuable recruitment index to forecast future CPUE. An 8% increase in effort during the first 6 months of 2016 compared with 2015 was an important contributor to reaching the quota earlier as well.

The SSC thanked Jeff Polovina for the informative presentation and encouraged him to apply the approach to other species.

## **G. 2017 US Participating Territory Bigeye Tuna Limits (Action Item)**

Council staff presented options for the specification of the 2017 Territory bigeye limits pursuant to Amendment 7 of the Pelagics FEP. The Council will consider the following limits:

Option A) Specify 2,000 mt longline bigeye catch limits for each Territory, of which 1,000 mt per Territory could be transferred to US vessels permitted under the Pelagics FEP (status quo).

Option B) Specify 2,000 mt longline bigeye limits for each Territory, of which up to 2,000 mt

per Territory could be transferred to US vessels permitted under the Pelagics FEP.

Option C) Specify greater than 2,000 mt longline bigeye limits for Territory, of which greater than 2,000 mt per Territory could be transferred to US vessels permitted under the Pelagics FEP.

Information on bigeye stock status, trends in catch, and WCPFC conservation and management measures were also presented. According to the stock status determination reference points in the Pelagic FEP, the most recent stock assessments indicate that bigeye overfishing is occurring in the WCPO, but that the stock is not overfished in the WCPO or EPO. However, the estimated spawning biomass in the WCPO is assessed to be below the WCPFC limit reference point of 20% of unfished spawning biomass.

The provisional 2015 total catch of bigeye by all fishing gears in the WCPO is estimated to be the lowest since 1996. Reduced FAD effort in the purse seine fishery and lower reported longline bigeye catches are attributed to reduced WCPO bigeye catch. It was further noted that the WCPFC conservation and management measure is having positive effects in restricting catch such that in absence of the measure, catches of bigeye would likely be higher. Information shown at the WCPFC Science Committee by the SPC indicates that the projection of recent catches of bigeye, in combination with recent average recruitment estimates, results in a more optimistic outlook of bigeye stock status as compared to the 2014 stock assessment. It was further noted that the next bigeye stock assessment is scheduled for 2017.

The SSC found that the methodology used to assess the relative impacts of the specification limits is appropriate and utilizes a similar approach to the analyses conducted by the SPC to evaluate the effectiveness of the WCPFC tropical tuna measure. It was noted that Option A does add to bigeye fishing mortality, but that the impact is relatively small and not believed to impede international measures to eliminate bigeye overfishing.

**If the Council chooses Option C, which allows for limits in excess of 2,000 mt for each Territory, the SSC recommends that Council staff work with PIFSC to conduct a new analysis that evaluates the potential relative impact on fishing mortality and stock biomass reference points.**

## **H. Impact of ELAPS on America Samoa Economy**

Valerie Chan, PIRO, presented a study she coauthored with Dale Squires on the estimated economic impacts of the 2015 Effort Limit Area for Purse Seine (ELAPS, which applies to US purse seine vessels fishing on the high seas and US EEZ areas within 20°N-20°S of the WCPFC Convention Area). The analyses investigated economic impacts to US purse seine vessels, canneries and vessel support facilities in American Samoa. Using data from a variety of sources, the cumulative losses in 2015 as compared to two average recent time periods (2012-2014, 2013-2014) were estimated. These losses were largely attributed to a steep rise in access fees and declines in ex-vessel fish prices. Fees and prices of the two counterfactual periods were adjusted with the 2015 values, and the results suggested the ELAPS closure had an incremental (yet smaller) adverse impact on profitability. The estimated economic losses due to the ELAPS closure ranged from \$11 million to \$110 million, depending on the counterfactual period considered. The model was most sensitive to changes affecting vessels, as that portion of the model was most well-informed, but overall model results were fairly consistent, even though the



cannery and vessel support portions lacked good profit and cost information, respectively.

The SSC noted that the detailed results of the study were not available for review because of confidentiality issues. However, it was felt that an additional counterfactual study of the American Samoan economy could provide a useful perspective on the impact of the ELAPS closure.

**The SSC recommends that a counterfactual study of the American Samoa economy, using non-confidential macroeconomic metrics such as Gross Domestic Product (GDP) or available proxies, be undertaken, with specific regard to impacts of the ELAPS closure.**

The SSC thanked Valerie Chan for the informative presentation.

## **I. International Fisheries**

### **1. WCPFC Science Committee**

Keith Bigelow presented a summary report of the WCPFC 12th Science Committee which met in Bali from the 3rd to the 11th of August 2016. The report included the most recent catch statistics for the WCPFC and outcomes of stock assessments for WCPO skipjack, Southwest Pacific blue shark and Pacific blue marlin.

The SSC thanked Keith Bigelow for a concise and informative presentation.

### **2. WCPFC Northern Committee**

Ray Clarke, NMFS PIRO, presented a summary report on the WCPFC Northern Committee, which focuses on sub-tropical and temperate stocks such as Pacific bluefin, North Pacific swordfish and North Pacific albacore. Regarding the bluefin tuna assessment (see Fig 4 in the Northern Committee report), the SSC noted that this highly valued resource has been overfished for nearly 50 years, and yet the fishery still continues today. Bluefin tuna in the Atlantic has been shown to have high fecundity, and if this is true for the Pacific species, this could be one explanation for the persistence of the fishery. The SSC also notes that the Pacific fishery targets sub-adults with low take of older, larger fish.

The SSC thanked Ray Clarke for an informative presentation.

### **3. WCPFC Technical and Compliance Committee**

Council staff presented material from the draft outcomes document from the recent meeting of the WCPFC Technical and Compliance Committee, held September 22-28 in Pohnpei, FSM.

### **4. Permanent Advisory Committee to US Delegation to WCPFC**

Council staff informed the SSC that the PAC was meeting on October 6 and 7 in Honolulu and referred them to the PAC meeting agenda. It was mentioned that the US government has developed a draft WCPFC tropical tuna conservation and management measure for consideration by the PAC, which includes FAD set limits, vessel capacity limits, and spatially delineated longline bigeye tuna quotas [missing text]

## **5. Continuation of 90<sup>th</sup> IATTC Plenary**

Council staff and Kurt Schaefer, IATTC, provided an overview of the 90th IATTC meeting, which was unable to achieve a consensus in June 2016 on a new resolution to replace Resolution C-13-01. The 90<sup>th</sup> meeting is scheduled to resume October 12-14 in La Jolla, with the objective of agreeing on a new tropical tuna measure. It was noted that recent increases in purse seine vessel capacity may require the seasonal total purse seine fishing closure to be extended from 62 days to up to over 90 days.

### **J. Meta-regression analyses for shark catch rates**

Eric Gilman (The Nature Conservancy and Pelagic Fisheries Research Services) presented on a meta-analysis of the impact of fishing gear and bycatch behavior on catch rates and condition of sharks and rays taken in longline fisheries. The study, co-authored with SSC member Milani Chaloupka, and published recently in *Fish and Fisheries* comprises 2 components; (1) a multilevel mixed effect meta-analysis synthesizing various studies on shark and ray capture rates on circle versus J-hooks conditioned on various informative covariates and (2) a literature review of all studies of hook-type dependent shark and ray catch rates.

The study noted that use of circle instead of J-shaped hooks and fish instead of squid for bait, shows benefits to interactions with sea turtles, odontocetes and possibly seabirds while circle hooks increase elasmobranch catch, therefore warranting fishery-specific assessments to determine relative risks among taxa. It was noted that circle hooks can increase catch rates of sharks but their condition may be better compared to J hook caught sharks due to a higher degree of jaw hooking.

The SSC thanked Eric Gilman for an informative presentation.

### **K. Summary of Cooperative Electronic Monitoring Project, TNC Indo-Pacific Tuna Program**

Craig Heberer (TNC) provided an overview of an electronic data monitoring (EM) project that he is leading which is one aspect of TNC's Indo-Pacific Tuna Program. The EM project is building on progress made by other agencies to take the EM of longline fisheries beyond the pilot stage. The one-year program will equip 24 tuna longline vessels from Palau, FSM, Republic of the Marshall Islands, Solomon Islands and Okinawa with a satellite-linked digital monitoring system from Satlink. The priorities of the project are to integrate the Satlink EM data with existing data collection and database systems of the SPC and WCPFC and streamline data review and in-country support for the development of data review centers.

It was clarified that the project does not intend to place observers on every vessel equipped with an EM system but will take advantage of some observed trips on an ad hoc basis. It was noted that a pilot project in the Solomon Islands using the same EM system showed high agreement between the data collected by onboard observers and the EM data acquisition. The project is also working closely with the SPC Observer Coordinator to select experienced observers for review of EM data.

The SSC thanked Craig Heberer for an informative presentation.

**C. Public Comment**

No public comment was provided



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**8. Protected Species**

**A. Hawaii Longline False Killer Whale Project Updates**

**1. Depredation mitigation device project**

Dan Curran, PIFSC, provided a preliminary report on a project led by the Hawaii Longline Association and funded through the S-K grant program to test devices that may deter depredation of catch by false killer whales. The project tests a device previously developed and trialed by the Australian Government in the Fiji longline fishery and alternative devices designed in collaboration with Hawaii longline fishery participants. All devices are designed to attach to the branchline and release a deterrence mechanism when triggered by the tension of a hooked fish. The primary objective of the project is to test the commercial viability and practicality of the deterrent devices. Field trials have recently been completed, and data analysis will follow.

He discussed experimental tests on four devices under various set and haul characteristics for bigeye tuna catches. Based on preliminary results from the first four trips, all four devices performed adequately and triggered when a tuna of at least 10lbs was on the hook. However, all devices had a higher tangle rate than the control in poor weather conditions. Nonetheless, it was apparent that a cost-effective and practical device is feasible for this deep-set longline fishery that may have the potential to mitigate marine mammal depredation.

The SSC is encouraged by this productive collaboration between the PIFSC and the local longline fishing industry.

The SSC thanked Dan Curran for his informative presentation and looks forward to the final report on this experiment.

**2. Acoustic monitoring of false killer whale depredation**

Erin Oleson, PIFSC, provided a presentation on a project to monitor false killer whale (FKW) depredation in the longline fishery through acoustic monitoring. The project deploys passive acoustic devices to improve understanding of FKW behavior around longline gear.

Minimizing FKW interactions with longline gear is highly desirable due to financial loss to fishermen and potential impacts to the whales. A new acoustic recording device and housing was designed to provide a cost-effective and practical instrument for a field trial experiment to identify FKWs in the vicinity of the gear deployed. FKW detection rates around the gear were found to be higher than suggested by depredation rates and were substantially higher during haul-back than during setting of the gear. A manuscript has been submitted for publication, documenting the results of the charter vessel based component of this ongoing experiment. The

study has expanded to include volunteer vessel participation to deploy recorders in their gear in consultation with the observer program.

The SSC thanked Erin Oleson for her informative presentation and looks forward to a final report on this experiment. The SSC is encouraged by this productive collaboration between the PIFSC and the local longline fishing industry.

### **B. Reconsultation of the Hawaii Deep-set longline fishery**

Dawn Golden, PIRO, provided an update on the reconsultation of the Hawaii deep-set longline fishery under the Endangered Species Act (ESA). The incidental take statements for three sea turtle species from the 2014 biological opinion (BiOp) were exceeded, triggering the reconsultation. She advised that the deep-set BiOp is nearing completion.

The SSC thanked Dawn Golden for her brief presentation.

### **C. Rare Events Bycatch Workshop Update**

Council staff provided an update on the Rare Events Bycatch Workshop to address methodologies to determine the level of protected species interactions expected from fishery management actions. This workshop addresses a Council recommendation from the 163<sup>rd</sup> meeting that directed staff to work with advisory group representatives and NMFS to review approaches used to estimate anticipated sea turtle take in recent biological opinions for the Hawaii deep-set longline fishery. The workshop consists of a webinar and an in-person meeting. The webinar was held on September 14, 2016 and provided background material to participants to set up the in-depth discussions that will take place during the in-person component scheduled for October 18-20, 2016.

The SSC thanked Council staff for the workshop update and looks forward to the workshop outcomes being presented at the next SSC meeting in March 2017.

### **D. Updates on Endangered Species Act and Marine Mammal Protection Act Actions**

Dawn Golden, PIRO, provided an update on ESA and MMPA actions of relevance to fishery management actions, including the humpback whale listing final rule, false killer whale take reduction team, insular false killer whale recovery planning, and spinner dolphin approach rule. A brief overview of the ESA listing process was also provided for the benefit of the new SSC members.

Fifteen Indo-Pacific coral species were listed in 2014 and a coral critical habitat rule is under consideration. NMFS is also working on a green sea turtle critical habitat rule following the recent listing revision. Status reviews are underway for oceanic white-tip shark and giant and reef manta rays. A petition to list the chambered nautilus is also under consideration.

A final rule for humpback whale listing was published, separating the species into 14 distinct

population segments (DPSs). The western North Pacific DPS, which includes Guam and CNMI, was proposed as threatened but listed as endangered under the final rule. The Hawaii and Oceania DPSs are no longer listed under the ESA, and a new interim approach regulation for the Hawaii DPS was issued under the MMPA.

FKW take reduction team has not met this year. There have been three FKW interactions so far in 2016, all occurring on the high seas and thus not counting toward the Southern Exclusion Zone trigger. NMFS is developing a critical habitat rule for the ESA-listed insular FKWs and recovery planning efforts are underway for this DPS. Insular FKW recovery planning workshop is scheduled for October 2016 and will focus on threats related to nutrition, fisheries and ocean noise.

A proposed rule for spinner dolphin approach regulations to prevent disturbance to local spinner dolphin populations was published. The rule proposes prohibition of swimming with and approach within 50 yards. The 60-day public comment period closes on October 23.

The SSC thanked Dawn Golden for her informative presentation.

#### **E. Public Comment**

No public comment.