



**129<sup>th</sup> Meeting of the Scientific and Statistical Committee  
June 6-8, 2018  
Wailea Beach Resort Marriott, Wailea, Maui HI**

**DRAFT REPORT**

**4. Report from the Pacific Islands Fisheries Science Center Director**

Director Seki presented highlights from the Report, including research cruises, protected species work, life history activities, etc. He noted that they were looking more holistically at implementing EBFM through transformational activities involving all units of the center. The collaboration with the University of Florida group on olive ridley turtles has led to exploring all bycatch estimations using similar models. There is an ongoing cross-dimensional look at fleet operations stemming from loss of ship time. He also highlighted recent taxonomic revisions of opah. A number of recent PIFSC publications were highlighted. The SSC thanked Seki for a comprehensive report.

**5. Insular Fisheries**

**A. Main Hawaiian Islands Deep 7 Bottomfish Fishery**

**1. P\* Working Group Report**

Council staff presented the outcome of the P\* working group meeting held at the Council office on April 16, 2018. The group is comprised of bottomfish fishermen, assessment scientists and fishery managers. The working group scored the four scientific uncertainty dimensions in terms of: 1) assessment information; 2) uncertainty characterization; 3) stock status; and 4) productivity-susceptibility. The group reviewed the information provided by the 2018 benchmark stock assessment for the main Hawaiian Islands deep 7 bottomfish complex. In general, there were improvements in the following scientific aspects: 1) information that went into the assessment including fishery independent surveys; 2) better characterization of uncertainties; and 3) standardized productivity attributes for the Productivity and Susceptibility analysis that projected biomass estimates that are higher than BMSY and MSST. The presentation provided a useful comparison of the methodology and results from previous P\* Working Group meetings. The P\* analysis quantified a reduction of 7.59% from 50% risk of overfishing (P\*). This would result in an Acceptable Biological Catch of 42.41% (round off to 42%)

An SSC member noted the adoption of a common value of 0.5 for the recruitment pattern for all Deep 7 species highlighting the lack of recruitment information currently available, highlighting an important information gap that should be addressed. The SSC commended the work of the P\* Working Group with the inclusion of expert bottom fishermen in their efforts to better inform the

process

## **2. Specification of Acceptable Biological Catch for the Main Hawaiian Islands Deep-7 Bottomfish (Action Item)**

Council Staff presented on five alternative management options to specify the multi-year ABC for the main Hawaiian Island Deep 7 bottomfish for fishing years 2018-19, 2019-20 and 2020-21. The 2018 benchmark stock assessment with catch projection to 2022 (Langseth et al. 2018) was noted as best scientific information available to the SSC and Council. Based on this updated information, the Maximum Sustainable Yield was estimated at 509,000 lbs. with an overfishing limit at 566,000 lbs. The P\* working group evaluated the scientific uncertainty and quantified a risk level for the SSC to consider. The five alternatives included: (1) No Action (i.e., no ABC set), (2) Status Quo with ABC based on the 2015 stock assessment, (3) ABC based on 2018 assessment at  $P^* = 42\%$ , (4) ABC based on 2018 assessment reduced to  $P^*=32\%$ , or (5) ABC based on 2018 assessment at  $P^*=22\%$ .

Each SSC member identified a preferred alternative with a brief rationale for the choice with a consensus support for Alternative 3. Some SSC members initially supported Alternative 4 based on the 2018 stock assessment while also providing a phased in approach that could provide an additional management buffer given uncertainties remaining in the assessment, catch reporting, recruitment, impact of higher catch to CPUE and variable oceanographic conditions. The SSC noted that the deep 7 bottomfish fishery is weather dependent and is a highly-skilled fishery. Therefore, the expectation that there will be a sudden increase in fishery participation and fishing effort is unlikely. The SSC also noted that the stock status, expressed in the Kobe Plot from the 2018 assessment, would accommodate increases in catch possible under a larger ABC and that the application of a phase-in approach is not necessary.

Potential changes in the fishery such as a reopening of the BRFA were discussed. It was noted that opening of the BRFA is still uncertain and would require a long regulatory process. The importance of BRFA area-specific catch and effort data was noted if these areas were to be opened to fishing.

**The SSC recommended that the State of Hawaii should review and consider previous SSC recommendations and advice on research priorities prior to the opening of BRFAs in order to be able to scientifically monitor and measure the impact of this action on the fishery and assessment.**

An SSC member noted that one of the objectives of the Magnuson-Stevens Act is to achieve full utilization of marine resources. The current exploitation rate is roughly half the level that would maximize long term yield, supporting scientific advice to take measures that would encourage more efficient utilization of the resource. Thus, setting ACLs that include a "phase in" stage would discourage expansion of the fishery and be unnecessary given current effort levels.

**The SSC recommends Alternative 3 which utilizes BSIA through a documented and transparent process incorporating the benchmark 2018 stock assessment and an improved  $P^*$  process resulting in  $P^*=42$  percent equivalent to an ABC of 508,000 lbs with no interim**

**phase-in approach.**

### **3. SEEM Working Group Report**

SSC member Justin Hospital presented on the outcome of the SEEM working group meeting held at the Council office on April 16, 2018, specifically thanking the bottomfish fishermen who participated in the meeting. The working group is comprised of an economist/social scientist, fishery managers, and bottomfish fishermen. The working group discussed the need to update the SEEM process since the positive scoring does not allow for the ACLs to exceed the ABC. The group quantified management uncertainties that include: 1) unreported bottomfish sales through online sales; 2) potential loss of registered CML holders due to increase in annual CML fees; 3) emergence of new recreational fishing techniques with negative impacts on non-commercial catch estimates; and 4) vessels without Bottomfish registration taking bottomfish and not reporting. The working group quantified the management uncertainty with a reduction of 2.41% (i.e., rounded to 2%) from the ABC.

The group also explored the potential use of the National Standard 1 carry over provision where the amount or a portion of the unused catch in the current fishing year can be added to the ACL in the following fishing year. The working group developed specific criteria for applying this provision and requested that this be analyzed and explored further by staff.

SSC members commend the efforts of the SEEM Working Group, noting the need to inform bottomfish fishermen on the importance of reporting full and accurate catch and effort data including observations of depredation events and the importance of supporting the State in outreach and education to improve data quality.

**SSC recommends that the Council direct staff to develop the regulatory framework to implement a carry-over provision for setting the main Hawaiian Islands Deep 7 bottomfish fishery ACL.**

**SSC recommends that the Council direct the Social Science Planning Committee to review the SEEM framework and findings, both past and present, to make recommendations on dimensions and scoring processes relevant to future SEEM analysis.**

#### **B. Report on State of Hawaii Kahekili Herbivore Fisheries Management Area**

Russell Sparks (DAR) presented background and results from ongoing studies evaluating the effect of the Kahekili Herbivore Fishery Management Area (KHFMA). Declines in live coral diversity and complexity and an increase in invasive benthic algae spurred management action to establish the KHFMA in 2009. Fishing for surgeonfish, parrotfish, chub, and urchins are prohibited but other legal fishing is allowed. Biomass of small parrotfish and surgeonfish species have increased since establishment of the area while biomass levels of large parrotfish species and the *Naso* spp. surgeonfish initially increased in earlier years and declined in recent years. The coral and macroalgal cover had decreased over time while crustose coralline algae increased. The live coral cover decrease was attributed to the bleaching events. The decline in large parrotfish and surgeonfish was attributed to illegal fishing based on anecdotal information.

SSC members questioned the assumption that illegal fishing was the cause of dramatic reductions in some reef fish species when unexplored causes could be at play, including land-based nutrient loads, sediment, pollutant inputs, sampling design and methods, changes in urchin communities, effect on sport fishing CPUE for non-herbivorous species, change in benthic cover, movement patterns and large-scale recruitment episodes. SSC members suggested: 1) the application of ecosystem simulation modelling to further examine the impact of the catch regulations on the entire coral reef community; and 2) use of these data to validate existing models.

### **C. Public Comment**

One member of the public noted the overriding influence that wind and weather has on controlling and limiting bottomfish effort in the state and that the fishery does not receive any compensation/offset for many areas that are already closed to bottom fishing aside from the BRFA's, i.e. Kahoolawe. He strongly suggested that all the BRFA's should be opened to fishing and that their opening would not make a big difference to overall catch and effort with only a few boats being responsible for about 25% of total annual landings.

The SSC interpreted this comment to mean that there is a perception that fishermen have been unfairly burdened by the BRFA's in that resources within these and other refugia are not accounted for in the stock assessment, they have been prevented from fishing in the fishing grounds and in cases must travel further to access other grounds. The SSC noted this comment warrants further consideration by the state and NMFS

## **6. Program Planning and Research**

### **A. 2017 Annual Stock Assessment and Fishery Evaluation Report & Recommendations**

#### **1. Archipelagic Report Overview and Highlights**

Thomas Remington, Council contractor, presented the highlights of the 2017 Annual Stock Assessment and Fishery Evaluation (SAFE) report. Sections include the vital rates of the fisheries and stocks based on indicators selected and highlights on the contents to the ecosystem considerations. The report includes the recommendations surrounding the next set of changes to the archipelagic annual SAFE reports.

The SSC notes the challenges of using the creel survey expansion results to monitor the fisheries. There is a need to review the expansion system to determine its reliability in estimating catch, effort and CPUE.

**The SSC recommends the Council request that NMFS explore other reliable means of expanding the creel survey collected data.**

#### **2. Pelagic Report Overview and Highlights**

Thomas Remington, Council contractor, presented a summary of the 2017 Pelagic Annual SAFE report, which includes highlights of the fisheries in the Western Pacific Region and stocks, based

on indicators such as Catch-Per-Unit-Effort (CPUE) and stock assessments, and highlights on the contents of the ecosystem considerations. Recommendations from the Pelagic Plan Team and other advisory groups include improving the contents and format of the SAFE Report as well as assessment and research needs.

## **B. Evaluation of 2017 Catch to the 2017 ACLs (Action Item)**

Council staff presented the evaluation of 2017 catch relative to 2017 ACLs. Only the slipper lobster in CNMI exceeded the ACL. The Council's accountability measures require an adjustment to the ACLs by the amount that was exceeded in the previous year.

The following options were presented for consideration by the SSC to address the overages: 1) For the MUS that have catch estimates clearly affected by improvements in the fishery data collection no overage adjustment will be applied in 2018; 2) Apply the accountability measure and adjust the 2018 ACL by the amount of overage.

Council staff noted that the species will be designated as ecosystem components before the end of the year.

**The SSC recommends Option 2 apply the accountability measure and set the ACL to 0 lb for fishing year 2018.**

## **C. Updates to the Council's Research Priorities**

### **1. Five-Year Research Priorities**

Council staff presented the updates to the Council's research priorities. The presentation covered the status monitoring of the Magnuson-Stevens Fishery Conservation and Management Act (MSRA) 5 year research priorities and changes suggested by the Social Science Planning Committee and the Protected Species Advisory Committee. Council staff also described the development of a process that would allow better coordination between the Council and PIFSC in addressing the Council's research priorities through PIFSC's Annual Guidance Memo process. Since 2019 is the last year of the Council's Five-Year Research Priorities, a workshop is being planned to evaluate the work that has been accomplished and identify new research priorities for 2020-2024.

The SSC concurred with the changes to the Council's Five Year Research Priorities and **recommends the Council direct staff to identify the top priorities and send those priorities to PIFSC for consideration in their Annual Guidance Memo.**

### **2. Cooperative Research Priorities**

Council staff provided the updates to the Cooperative Research Priorities and the outcome of the annual Cooperative Research solicitation for FY 2018. The Archipelagic Plan Team also reviewed the Cooperative Research priorities and the team provided slight adjustments and clarifications to the priorities. The SSC concurred with the changes to the Cooperative Research Priorities.

### **3. Management Strategy Evaluation Priorities**

Council staff provided a brief overview of the Management Strategy Evaluation priorities from the insular fisheries, pelagic fisheries and protected species. The Pelagic Fishery MSE priorities were updated by the SSC working group that developed the Pelagic Research Plan. The SSC concurred with the changes to the MSE priorities.

#### **D. Report on the Best Scientific Information Available Framework**

Jim Lynch, SSC Chair, reported on the SSC working group's review of the NMFS Best Scientific Information Available (BSIA) Framework. The group emphasized the importance of providing the SSC sufficient time to conduct its evaluation and also be engaged early in the BSIA process. The working group also suggested that there should be a feedback mechanism by which the SSC is informed about the final BSIA determination by NMFS on Council Actions and Stock Status. A comment letter was submitted to Patrick Lynch on April 19, 2018.

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

There was no public comment.

### **7. Pelagic and International Fisheries**

#### **A. Hawaii Shallow Set Longline Fisheries**

##### **1. Status of the Hawaii Shallow Set Longline ESA Consultation**

Ann Garrett (NMFS PIRO) reported on the status of the Hawaii shallow-set longline fishery Biological Opinion (BiOp) under development by NMFS PIRO Protected Species Division (PRD). An "analysis plan" is being prepared and will be provided to NMFS PIRO Sustainable Fisheries Division by end of June. PRD is aiming to have the draft BiOp available to the Hawaii Longline Association, which is the "applicant" under the Endangered Species Act (ESA), by October 1, 2018. The final BiOp is scheduled to be completed by October 31, 2018.

The SSC considered that the Hawaiian shallow-set fleet would likely have lesser impacts on these turtle populations than other fleets operating in the region. This is due to the 100% observer coverage and regulatory measures currently in place. The SSC notes that there could be an increased biological risk to these endangered turtle populations if the shallow set fishery was closed and other fleets increased their effort to fill the market space.

**The SSC recommends that evaluation of this potential 'transfer effect' be included in the Biological Opinion as an indirect effect of the proposed action rather than part of the environmental baseline.**

**The SSC recommends the formation of a working group to assist staff in reviewing the analysis plan when it is made available to the Council. The working group members are: Lynch, Martell, Harley, Hospital, and Kobayashi.**

## 2. Loggerhead and Leatherback Turtle Population Vulnerability Analysis

T. Todd Jones (NMFS PIFSC) presented on the population modeling of loggerhead and leatherback sea turtle populations that will be used in the ESA section 7 consultations (shallow-set and deep-set) on the effects of Hawaii-based longline fisheries on ESA-listed species. PIFSC has been requested by NMFS PIRO PRD to provide: population projections, estimates of population growth rates, and estimates of mean time and probability of each population reaching thresholds of 50%, 25%, and 12.5% reduction of current abundance.

The presentation focused on leatherback sea turtles and specifically the Western Pacific population that is known to interact with the Hawaii longline fisheries. Leatherback nesting beach trends were presented, including a likely outlier year early in the time series as well as gaps in monthly and annual nesting beach data. Leatherback life history information was briefly described, including relatively fast somatic growth in comparison to other sea turtles, age at maturity between 12 and 20 years, migratory patterns based on nesting season, and nesting periodicity of 3-4 years.

PIFSC is reviewing previous models used in the 2008 and 2012 Hawaii longline shallow-set BiOps and will make recommendations for the modelling approach to be used in the next BiOp.

PIFSC is considering two types of models: a) Population Viability Assessment based on nesting beach counts and b) demographic models. The model output and report will be sent out for independent desk review to include academia, NOAA, and an SSC member.

Discussion focused on a range of issues including non-Hawaii longline fishery impacts such as traditional harvests of eggs and adults and foreign fisheries as a result of spillover/transferred effects. With regards to climate change, there is no specific information known on whether rising temperatures are skewing the population's sex ratio at present, but over longer time horizons this is likely. With respect to population trends, Western Pacific summer nesting has shown an increase over the last few years after a several year decline.

Concerning loggerhead turtles, it was recognized that nesting beach trends were much higher in the last decade than in previous years and that the population is experiencing growth of around 9% per year.

Regarding the modeling approach, SSC the recommends that:

- The modelling consider a range of approaches including demographic models as well as PVA;
- Cross-validation techniques be considered to test the robustness of approaches being considered to impute missing count data;
- The modelling consider the robustness of the conclusions to the inclusion or exclusion of the winter nesting population that is thought to not interact with the Hawaiian longline fleet; and
- Further information be sought on the details, including any assessment of effectiveness, of interventions on the nesting grounds (e.g., effort to reduce human or animal related mortalities).

The SSC further recommends that the Council request that NMFS include an SSC member as one of the independent reviewers of the modelling work.

### **3. Framework for Managing Sea Turtle Interactions in the Hawaii Shallow-set Longline Fishery (Action Item)**

Council staff presented the proposed amendment to the Pelagic Fishery Ecosystem Plan to establish a framework for managing sea turtle interactions in the Hawaii shallow-set longline fishery. The purpose of this action is to develop a framework for effectively managing impacts to leatherback and loggerhead sea turtles, consistent with the requirements of the ESA and the Magnuson-Stevens Act (MSA), while maintaining fishing opportunities during peak swordfish season (October through March). The proposed framework considers the: a) specification of hard caps (e.g. annual hard caps), b) in-season measures for hard caps (e.g. trip limits), c) real-time spatial management measures, and d) non-regulatory components associated with industry-led initiatives (e.g. fleet-wide communication system).

Effective management of protected species interactions should consider responsive measures that can help ensure year-round fishing operations while supporting protected species conservation. The recent spike in loggerhead turtle interactions suggests the need for a conservation and management framework that can respond to higher interaction rates and fluctuations in sea turtle interactions. Development of a more responsive management approach would further minimize interactions, while helping to ensure the year round supply of fresh swordfish to meet market demands.

Discussion on the proposed framework revealed that information on real-time hotspots is not well known (aside from the general TurtleWatch SST band) and not suitable for regulatory action. There are also no clear trends that identify individual vessels with higher levels of interactions in comparison to other vessels in fleet. Information is also lacking on fishing behavior and whether or not some vessels move to other locations as a result of sea turtle interactions. Estimation of post-hooking mortality was discussed and the need to conduct a meta-analysis on existing data as well as continue tagging efforts. The issue of hard caps linked to the fishery's Incidental Take Statement (ITS) was noted to be problematic as there is no relationship between the ITS and threshold levels that relate to sea turtle population viability.

The SSC notes that the trip limits for loggerhead turtles will provide an economic incentive to minimize sea turtle interactions. The SSC discussed at length the appropriate trip limit for loggerhead turtles and did not reach consensus. The majority of SSC members supported limits of 4 or 5 with a minority of members supported a limit of 3.

The SSC considered at some length the value of in-season temporary closures (sub-alternative B(iii)) and notes that the additional biological benefits could be minimal if trip-limits were implemented. There are a range of socioeconomic considerations of this measure that the Council is best placed to consider. The SSC also notes that in-season temporary closures could introduce the potential for significant administrative burden. The SSC acknowledges the industry-led effort and supports its further development.



**Regarding the proposed framework, the SSC recommends that the Council consider for adoption:**

- **Annual hard caps set at the ITS of the new BiOp**
- **Loggerhead trip limits, but no trip limits for leatherbacks at this time**
- **Encouragement of a non-regulatory industry-led pilot program to address sea turtle interactions in the fishery**
- **Establishing hard caps that correspond to the fishing season rather than calendar year**

**The SSC also recommends that a meta-analysis of available data be undertaken on turtle post-release mortality to better inform future ESA consultations.**

**The SSC further recommends that PIFSC analyze loggerhead turtle interaction data for recent seasons and suggests that a range of statistical modeling approaches be applied to better understand factors associated with high number capture events.**

## **B. Pelagic Research Plan**

Council staff presented the draft Pelagics Fisheries Research Plan which will be used to inform the Council's Pacific Islands Fisheries Research Program and ongoing prioritization of research funding and implementation. The plan includes the following research categories:

- **Biology, Life History, Stock Structure and Connectivity**
- **Stock Assessment**
- **Ecosystem Considerations and Indicators**
- **Economics and Fishing Communities**
- **Fisheries Interactions and Management**

The following priority issues have been identified for focused research activities:

- 1) **Bigeye connectivity and spatial stock structure with an emphasis on high-latitude bigeye catches by the Hawaii longline fishery in the WCPO and EPO.**
- 2) **Lack of stock assessment for incidentally caught species including opah, monchong, and spearfish.**
- 3) **Effects on fisheries from spatial closures and large-scale marine protected areas.**
- 4) **Shark abundance and depredation in the Mariana Archipelago.**
- 5) **Advancing ecosystem-based fisheries management**

It was noted that the draft plan had already been refined based on feedback from an intercessional sub-group of SSC members. This group reconvened and revised the plan as appropriate.

**The SSC recommends that the Council endorse the research plan for its purposes in advancing conservation of management of pelagic fisheries in the region.**

## **C. WCPFC Pre-Assessment Workshop**

Keith Bigelow (PIFSC) presented on the Western and Central Pacific Fisheries Commission

stock pre-assessment workshop convened by Oceanic Fisheries Programme (OFP) of the Pacific Community held in April 2018 . The workshop is convened annually to review and agree on the model parameters to be used in the stock assessments. This year workshop covered South Pacific albacore and WCPO bigeye, Pacific bluefin tuna, North Pacific shortfin mako shark, and North Pacific swordfish. The presentation focused on potential implications for Council managed fisheries that target bigeye and South Pacific albacore, which are Hawaii and American Samoa longline fisheries, respectively. Additional bigeye otoliths have been processed by Fish Aging Services Australia including fish larger than 130cm fork length and some individuals caught further south than those used in previous growth estimates. The resulting  $L_{\infty}$  (estimated excluding daily ages) was 157cm, similar to the 2017 estimate. It was noted that the WCPFC Scientific Committee will need to decide how to weight old growth estimates vs new growth estimate to estimate stock status. It was further noted that different methodologies are being utilized to age bigeye in the WCPO and EPO. The SSC thanks Bigelow for an informative presentation.

**The SSC recommends that the Council acknowledge and support a workshop to compare techniques and age estimates between otolith reading labs in the WCPO and EPO, to evaluate aging techniques and differences in growth models across the Pacific.**

#### **D. Report on IATTC 2018 Stock Assessments**

Kurt Schaefer presented on the status of EPO tuna stocks based on assessments conducted in 2018 for bigeye, yellowfin, and skipjack. Bigeye was determined to be experiencing overfishing, but is not overfished. Yellowfin was determined to be experiencing overfishing, but not overfished. There is not a formal stock assessment for skipjack, but stock status indicators do not indicate concern about stock status. The change in stock status for bigeye is attributed to the lower CPUE indices and size composition data in the Japanese longline fishery and high exploitation rates by purse seine vessels on small bigeye. Future assessments on bigeye include a spatially structured model incorporating tagging data and new growth model.

The SSC noted that while fishing mortality on the eastern Pacific bigeye tuna stock was not exceeding the current interim limit reference point of 1.6 FMSY, it was likely that fishing mortality was currently in excess of FMSY. The SSC notes that, while it might be anticipated that a fish stock being fully utilized can experience fishing mortality in excess of FMSY 50% of the time, it is important that robust management measures be in place.

The SSC acknowledges that the IATTC staff is recommending a limit on the number of purse seine sets on floating objects and unassociated schools in addition to the current conservation and management measure (C-17-01) of a 72-day purse seine closure. The SSC notes that the determination of bigeye stock status may require the Council to recommend further IATTC management actions.

**The SSC notes the unknown status of the EPO skipjack stock and encourages future research by IATTC that could support a formal stock assessment.**

## **E. Public Comment**

There were no public comments.

## **8. Protected Species**

### **A. Report of the False Killer Whale Take Reduction Team Meeting**

Ann Garrett, PIRO, provided a report of the False Killer Whale Take Reduction Team (FKWTRT) meeting held April 10-13, 2018. During the meeting, the FKWTRT evaluated the implementation and status of the False Killer Whale Take Reduction Plan and considered recommendations or modifications to the Plan to reduce mortality and serious injury. No consensus was arrived at to modify current procedures. Some discussion at that FKWTRT meeting also occurred on definition of serious injury determination criteria for FKW interactions and the guidelines for determining a serious injury. The FKWTRT will continue discussions through summer 2018 in an effort to reach consensus and finalize recommendations.

Seven false killer whale interactions have been confirmed in the deep-set longline fishery to date in 2018, four of which occurred inside the EEZ (1 confirmed serious injury) and three outside the EEZ. Three of the interactions inside the EEZ occurred after the April 2018 FKWTRT meeting, and if any of these interactions are confirmed to be serious injury, then this would trigger the Southern Exclusion Zone (SEZ) closure.

There was discussion about how the current mitigation measure is dangerous to fishermen and ineffective. The SSC strongly supported that modifications to current gear requirements and release procedures be developed and implemented to improve the success rate of hooks straightening to allow safe release of false killer whales without trailing gear. The SSC supports Council staff further exploring gear modifications and release procedures. **The SSC requests NMFS to provide a report of the follow-up presentation at its next meeting.**

The SSC thanks Garrett for an informative presentation.

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

Ann Garrett, PIRO, presented updates on ESA and MMPA actions of relevance to fishery management actions, including ESA critical habitat for green turtles, MHI insular false killer whales, humpback whales and corals; recovery planning for loggerhead turtles, insular false killer whales, humpback whales, monk seals and Indo-Pacific corals; and responses to ESA listing petitions on chambered nautilus and giant clams. A final rule for the chambered nautilus is due in October 2018. It was noted that the Hawaiian monk seal population in 2017 was around 1400.

## **C. Public Comment**

There was no public comment.