



WESTERN
PACIFIC
REGIONAL
FISHERY
MANAGEMENT
COUNCIL

**MINUTES OF THE
179th MEETING OF THE
WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL**

(via Web Conference)

Thursday, August 8, 2019

Council Office Conference Room
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Approved by Council:

A handwritten signature in blue ink, appearing to read "Archie Soliai", is written over a horizontal line.

Archie Soliai, Chair

Western Pacific Regional Fishery Management Council

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I. Welcome and Introductions

The following members of the Western Pacific Regional Fishery Management Council were in attendance in person:

- Dean Sensui, acting chair (vice chair for Hawai‘i)
- Michael Goto (Hawai‘i)
- Edwin Watamura (Hawai‘i)
- McGrew Rice (Hawai‘i)
- Michael Tosatto, National Marine Fisheries Service (NMFS) Pacific Island Regional Office (PIRO)
- Lt. Jason Holstead (United States Coast Guard) (USCG)

The following Council Members were in attendance via web conference:

- Taotasi Archie Soliai, chair (American Samoa)
- John Gourley, vice chair (Commonwealth of the Northern Mariana Islands) (CNMI)
- Michael Duenas, vice chair (Guam)
- Ryan Okano, Hawai‘i Department of Land and Natural Resources (Hawai‘i DLNR) (designee for Suzanne Case)
- Christinna Lutu-Sanchez (American Samoa)
- Chelsa Muna-Brecht, Guam Department of Agriculture (DOAg)
- Michael Tenorio, CNMI Department of Lands and Natural Resources (CNMI DLNR) (designee for Raymond Roberto)
- Henry Sesepasara, American Samoa Department of Marine and Wildlife Resources (DMWR)
- Michael Brakke, US Department of State
- Brian Peck, US Fish and Wildlife Services (USFWS)

Council Executive Director Kitty Simonds, NOAA Office of General Council Fred Tucher and Scientific and Statistical Committee (SSC) member Erik Franklin were also in attendance in person.

Soliai opened the 179th meeting of the Council, welcomed Council members and the public and then handed the meeting to Sensui. Council members and staff introduced themselves.

II. Approval of the 179th Draft Agenda

Sensui asked for any requests to change the agenda. Hearing none, he asked for a motion to approve the agenda.

Moved by Rice; seconded by Goto.
Motion passed.

III. Managing Loggerhead and Leatherback Sea Turtle Interactions in the Hawai'i-based Shallow-set Longline Fishery (Final Action)

Asuka Ishizaki, Council staff, presented the final action for managing loggerhead and leatherback sea turtle interactions in the Hawai'i shallow-set longline fishery. Ishizaki gave an overview of the history of the fishery and how it has been managed. The Hawai'i shallow-set longline fishery was closed from 2001 to 2004 due to court order following a series of litigations. The fishery reopened in 2004 as a "model" fishery to reduce sea turtle interactions under Regulatory Amendment 3 and implemented gear measures such as the required use of large circle hooks, mackerel type bait and NMFS-approved dehooking devices. Measures were also implemented to control fishing effort such as a limit of 2,120 sets per year and turtle interaction limits (now called hard caps) of 17 loggerhead and 16 leatherback turtles per year. Additionally, 100 percent observer coverage was required in the Hawai'i shallow-set fishery beginning in 2004.

Sea turtle hard caps have varied over time, especially with loggerhead sea turtles. In 2010, the Pelagic Fishery Management Plan (FMP) Amendment 18 increased the hard caps to 46 loggerhead turtles while the leatherback hard caps remained at 16. The following year, in 2011, NMFS reduced the loggerhead hard cap back to 17 turtles implementing a court order due to litigation. A new Biological Opinion (BiOp) for the Hawai'i shallow-set longline fishery issued in 2012 led to an increase in the loggerhead hard caps to 34 and leatherbacks to 26 based on the incidental take statements (ITS) in the BiOp. When the hard caps were first implemented, they were not required under the Endangered Species Act (ESA).

During the 171st Council meeting in October 2017, the Council initiated discussion on whether the sea turtle hard caps were necessary to achieve the management objectives of the Pelagic Fishery Ecosystem Plan (FEP). During this meeting, the Council recommended developing a draft amendment to the Pelagic FEP to consider management options for hard caps and the potential removal of the sea turtle hard cap measure. After the 171st Council meeting, loggerhead sea turtle interactions increased over a two-month period from December 2017 to January 2018. Around the same time, the Ninth Circuit Court found that the 2012 BiOp no-jeopardy finding for loggerheads was arbitrary and capricious. The increase in loggerhead interactions over a short period of time was anomalous and at a level that had not been observed since the fishery implemented 100 percent observer coverage in 2004. There were two primary patterns in the interactions observed from December 2017 to January 2018. First, a small number of trips contributed to the majority of sea turtle interactions, and second, the majority of trips from December to January had at least one observed sea turtle interaction.

The Pacific Islands Fishery Science Center (PIFSC) conducted a preliminary analysis characterizing the increase in loggerhead interactions and did not find any obvious factors that would influence the recent spike in interactions. The spatial distribution of interactions and effort was not anomalous between December and January. Approximately 50 percent of loggerhead interactions were within the TurtleWatch temperature band during this time period, which is consistent with previous years. Additionally, the size of loggerhead sea turtles with which the fishery interacted was not anomalous when compared to turtles caught in December and January of past years. One potential link was the increase in loggerhead turtle nesting activity in Japan since 2008, which coincides with the turtle size class that is caught in the Hawai'i shallow-set

longline fishery. PIFSC continues to look into the increase in nesting activity and other oceanographic factors that may be influencing the increase in interactions.

The Council focused on two main considerations for managing sea turtle interactions in the Hawai'i shallow-set longline fishery: 1) a mechanism for early detection and response to higher interaction rates to identify a rapid accumulation of interactions, and 2) minimizing further interactions while ensuring a year-round supply of swordfish to meet domestic demand. The existing hard cap measures can maintain interactions below a certain level, but they do not provide a warning mechanism when interaction rates rapidly increase.

In December 2017, the Ninth Circuit Court found that the 2012 BiOp no jeopardy finding for loggerhead turtles was arbitrary and capricious. On May 4, 2018, NMFS reached a settlement agreement resulting in portions of the 2012 BiOp regarding loggerheads to be vacated and the shallow-set fishery closed for the remainder of the year. NMFS was to reinstate a loggerhead hard cap of 17 turtles when the fishery reopened on Jan. 1, 2019, and could not increase the hard cap except through new regulations after a new BiOp. At the time of the settlement, ESA consultation for the Hawai'i shallow-set longline fishery had already been reinitiated.

At the 172nd Council meeting in March 2018, the Council reviewed a number of measures for managing loggerhead and leatherback turtle interactions that could be incorporated into the Pelagic FEP. The Council recommended development of a management framework including specification of hard caps, in-season hard cap measures, real-time spatial management measures and non-regulatory components such as further investigating the effects of trailing gear. The Council additionally directed staff to work with industry to consider an industry-implemented cooperative framework.

At the 173rd Council meeting in June 2018, the Council recommended amending the Pelagic FEP to establish a management framework for the shallow-set longline fishery that consists of 1) annual fleet-wide limits on the number of loggerhead and leatherback interactions consistent with the anticipated level of annual take, and 2) individual trip interaction limits for loggerheads and leatherbacks. The hard cap limit recommendations were based on the biological evaluation that initiated the reconsultation of the shallow-set longline fishery; the Council planned to review its recommendations if the new BiOp were inconsistent with the recommended measures. The Council additionally established a three-year timeline for monitoring the development and review of industry-implemented turtle interaction avoidance pilot program utilizing fleet communication. The Council also requested NMFS to provide funding for further research on trailing gear and post-hooking mortality rate because 99 percent of loggerheads and 100 percent of leatherbacks were released alive.

At the 174th Council meeting in October 2018, the Council expected to receive the draft BiOp. However, it was delayed so Council deferred action on the management measures. At this meeting, the Council received information on sea turtle population assessments that showed an increasing trend in North Pacific loggerheads and a decreasing trend in the leatherback population.

At the 175th Council meeting in December 2018, the Council discussed additional leatherback mitigation measures considering the declining population estimates. It deferred

action until the draft BiOp and more information on the fishery's impact to leatherback sea turtles became available.

The draft BiOp was released for the Council to review on March 28, 2019, after the 176th Council meeting. The draft BiOp concluded no-jeopardy for all ESA listed species and included an ITS with Reasonable and Prudent Measures (RPMs). The ITS specifies the impact of incidental take in a no-jeopardy BiOp and RPMs specifies measures that NMFS considers necessary or appropriate to minimize the impact of take. The ITS also sets forth Terms and Conditions (T&C) that must be complied with by the federal agency or applicant to implement RPMs. RPMs and T&C may only make minor changes to the action. The ITS in the draft BiOp was based on the 95-percentile value of the predicted anticipated level of interaction. The draft BiOp ITS for leatherback sea turtles was 21 interactions with three mortalities; for loggerhead sea turtles, it was 36 interactions with six mortalities per year.

The draft BiOp included a suite of RPMs, some of which required additional changes to the fishery. RPM 1 required individual vessel limits of six loggerhead and two leatherback turtles to reduce the impact of a small number of vessels causing a large proportion of interactions. Once a vessel reached the vessel limit, it could no longer participate in the shallow-set longline fishery for the remainder of the year. RPM 2 required additional mitigation measures to reduce sea turtle interactions by 25 percent within two years, which would require the leatherback hard cap to be reduced to 16, which is below the ITS. RPM 3, 4, 5 and 6 consisted of typical RPM language such as data collection, minimizing post-hooking mortality, sea turtle handling and retention of dead turtles. RPM 7 would modify fishing practices in order to minimize interactions with oceanic whitetip sharks and giant manta rays.

The BiOp Review Advisory Panel reviewed the draft BiOp and provided comments to the Council. The panel determined that the loggerhead and leatherback assessment in the draft BiOp was comprehensive although likely overestimated the threats posed by the Hawai'i shallow-set longline fishery. The panel noted that the oceanic white tip assessment was missing important recent information regarding fisheries impacts, and the draft BiOp's conclusions regarding transferred effects were deemed inadequate. Additionally, the panel said that the RPMs would require more than minor changes to the fishery, specifically regarding vessel limits.

At the 177th Council meeting in April 2019, the Council compared its recommendations from the 173rd Council meeting with the draft BiOp RPMs. The Council recommended hard cap limits of 37 loggerhead and 21 leatherback sea turtles whereas the draft BiOp required the hard cap limits to be set at 36 loggerheads and 16 leatherbacks. Additionally, the Council recommended individual trip limits of five loggerhead turtles, whereas the draft BiOp required implementation of annual vessel limits of six loggerheads and two leatherbacks. The Council had previously recommended trip limits over vessel limits because trip limits would provide an economic incentive to minimize interactions despite both mitigation measures likely resulting in similar levels of conservation benefits. Furthermore, the additional burden of prohibiting vessels from fishing in the shallow-set fishery if a vessel limit is reached would not likely result in meaningful conservation gain. The low vessel limits for leatherbacks may discourage participation in the fishery, whereas individual trip limits allow vessels to remain in the fishery while encouraging avoidance behavior. The Council at its 177th meeting maintained its recommendation from the 173rd Council meeting for amending the Pelagic FEP to establish

management framework consisting of hard caps and individual trip limits and additionally recommended setting a leatherback trip limit of two interactions per trip.

The final BiOp was issued on June 26, 2019, during the 178th Council meeting. The Council deferred final action and recommended convening a 179th meeting by teleconference to consider final action and convene the Hawai'i Archipelago FEP Advisory Panel (AP) and SSC in advance. The Council also directed staff to work with PIRO Sustainable Fisheries Division (SFD) to prepare necessary analysis incorporating the final BiOp RPMs, to inform final action and to ensure a timely review and submission of the amendment following the 179th meeting.

The final BiOp resulted in no-jeopardy conclusions for all ESA listed species. The final ITSs for loggerhead and leatherback turtles were the same as those included in the draft BiOp, but the RPMs were revised in the final BiOp. RPM 1 requires evaluation and development of a minimization measure or a suite of minimization measures designed to reduce incidental catch and mortality of leatherback and loggerhead turtles, which includes leatherback hard caps and leatherback and loggerhead trip limits as immediate measures. Whereas the draft BiOp required vessel limits, the final BiOp requires trip limits. RPM 2 through 5 remained the same as the draft BiOp's RPM 3 through 6. RPM 6 in the final BiOp requires modifying fishing practices to minimize take of oceanic whitetip sharks and giant manta rays. RPM 6 requires additional development and does not require immediate action at this time.

RPM 1 of the final BiOp included T&Cs that require immediate action. Upon receiving the signed BiOp, T&C 1a requires that the annual leatherback hard cap limit be set to 16, and T&C 1b requires that individual trip limits are set at two leatherbacks and five loggerhead sea turtles. If a trip limit is reached, the vessel must return to port and cannot engage in the shallow-set longline fishery for five days while NMFS evaluates the vessel and turtle interactions to identify any problems and determine if guidance can be provided to reduce interactions. Additionally, if a vessel reaches the trip limit twice in one year, that vessel is prohibited from fishing in the shallow-set longline fishery for the remainder of the calendar year and is subject to a vessel limit of two leatherback and five loggerhead turtles for the following year. Additional T&Cs under RPM 1 require development of additional mitigation measures with a 25 percent interaction reduction goal, which may be used to replace measures under 1a and 1b. Further, T&C 1h states that if T&C 1a and 1b are not implemented by regulation by Jan. 1, 2020, the Hawai'i shallow-set longline fishery may reopen under the annual limit of 16 leatherbacks and 17 loggerheads.

The Council action at the 179th Council meeting was to review alternatives incorporating the final BiOp RPMs focusing on T&C 1a and 1b and consider taking final action on managing loggerhead and leatherback turtle interactions in the Hawai'i shallow-set longline fishery. Ishizaki reviewed the purpose and need for the management action, which largely remained the same from the 177th Council meeting, with the addition of the need to address consistency with RPM T&C 1a and 1b.

Ishizaki presented the alternatives for managing loggerhead and leatherback interactions in the shallow-set longline fishery for Council consideration at this meeting. Alternative 1 is no action/status quo where the fishery operates under the current hard cap limits of 17 loggerheads and 26 leatherbacks. Alternative 2 is to implement the Council's recommendation from the 177th

Council meeting to modify annual fleet-wide hard cap limits to 36 loggerheads and 16 leatherbacks and establish individual trip limits for loggerhead and leatherback turtles. Alternative 3 is to modify the loggerhead and leatherback mitigation measures consistent with RPM T&C 1a and 1b in the 2019 BiOp and modify the loggerhead turtle fleet-wide hard cap limit equivalent to the ITS in the current BiOp. Alternative 4 is to modify the loggerhead and leatherback turtle mitigation measures consistent with RPM T&C 1a and 1b without setting a loggerhead fleet-wide hard cap limit.

Ishizaki presented additional background information on the fishery and sea turtle interactions to inform the analysis of the alternatives. The Hawai'i shallow-set longline fishery accounts for approximately half of the US domestic swordfish production while it only comprises about 10 percent of the Hawai'i longline effort as most of the effort is in the deep-set fishery. The target North Pacific swordfish stock is healthy (i.e., not overfished and not in an overfishing condition). With respect to impacts of hard cap closure on the fishery, past data indicate that there may be significant impacts to the fishery given effort and revenue reduction when the fishery reaches a hard cap earlier in the year. Gear mitigation measures implemented in the shallow-set fishery in 2004 resulted in a reduction of leatherback and loggerhead turtle interactions by about 90 percent. Since 2004, an average of 12.9 loggerhead and 6.9 leatherback interactions has occurred per year with most interactions resulting in the turtle being released alive.

Population assessment the North Pacific loggerhead and Western Pacific leatherback populations conducted by PIFSC show that the loggerhead population is increasing whereas the leatherback population is declining. The final BiOp concluded that the shallow-set longline fishery is not likely to appreciably reduce the loggerhead or leatherback likelihood of surviving and recovering in the wild. The level of anticipated loggerhead turtle mortality from the Hawai'i shallow-set longline fishery is about 0.04 percent of the adult population and 0.0018 percent of the total population. Similarly, the level of anticipated leatherback turtle mortality from the shallow-set longline fishery is about 0.2 percent of the adult population and 0.004 percent of the total population. Ishizaki also described the greater context in which the Hawai'i fishery operates, including foreign longline effort throughout the Pacific, with limited data on sea turtle interaction impacts from those fisheries due to low observer coverage.

Ishizaki provided detailed descriptions and a summary analysis of impacts for each of the alternatives. For Alternative 1, the fishery would operate under the existing hard cap limits per existing regulations of 17 loggerhead and 26 leatherback turtles and no new measures would be implemented. Under this scenario, the loggerhead hard cap limit would not be based on recent data and the fishery is likely to occasionally reach the hard cap. Furthermore, the leatherback hard cap would not be consistent with the 2019 BiOp ITS.

For Alternative 2, the hard cap limits would be set according to the Council recommendation from the 177th Council meeting (i.e., 36 loggerheads consistent with the ITS and 16 leatherbacks consistent with RPM T&C 1a) and individual trip limits would be set at five loggerheads and two leatherbacks. If either of the hard cap limits is reached, the fishery would close for the remainder of the year. If a vessel reaches a trip limit, determined based on the data from the NMFS observer on board, the vessel would be required to return to port without making additional sets. The vessel may resume fishing in the shallow-set longline fishery after returning

to port and providing the required 72-hour notice. Additionally, the trip limit performance would be reviewed in the Annual Stock Assessment and Fishery Evaluation (SAFE) Report. Under Alternative 2, the hard cap limits ensure that the interactions do not exceed the ITS threshold that triggers reinitiation of ESA consultation, while the individual trip limits prevent a large proportion of loggerhead interactions to be taken in a small number of trips and the leatherback trip limit may serve as a preventative measure. Ishizaki presented an analysis of the potential benefits of trip limits in minimizing further interactions based on simple simulations that applied trip limits to past observer data. Benefits from trip limits are anticipated before a vessel reaches a limit due to the disincentive of being required to return to port. Under Alternative 2, additional action would be necessary to fully implement T&C 1b and to ensure consistency with ESA.

For Alternative 3, the leatherback hard cap would be set at 16 interactions, consistent with RPM T&C 1a and the loggerhead hard cap would be set at 36 interactions based on the ITS from the 2019 BiOp. Further, an individual trip limit for loggerhead and leatherbacks would be implemented consistent with RPM T&C 1b, which sets the limit at five loggerhead and two leatherback interactions. If a vessel reaches the trip limit, the vessel must return to port without making any additional sets. The vessel would be prohibited from participating in the shallow-set fishery for five days after returning to port while NMFS evaluates the interactions. If a vessel reaches a trip limit twice in the same calendar year, the vessel would be prohibited from fishing in the shallow-set fishery for the remainder of the year and an individual vessel limit of five loggerhead or two leatherback interactions would be required for the following calendar year. The expected outcomes for this scenario are similar to Alternative 2. The hard caps ensure that the reinitiation trigger is not reached, and the individual trip limits are expected to help ensure year-round operations. While the likelihood of reaching a trip limit twice in a calendar year is low based on past data, the potential vessel limit of two leatherbacks may deter vessels from participating in the shallow-set fishery.

Alternative 4 is similar to Alternative 3, however, a loggerhead hard cap limit is not set such that, if the loggerhead ITS is exceeded, NMFS would reinitiate ESA consultation. Under Alternative 4, the leatherback hard cap limit would be set at 16 interactions, consistent with RPM T&C 1a, and individual trip limits would be set at five loggerheads and two leatherbacks, consistent with RPM T&C 1b and Alternative 3. The expected outcomes of leatherback sea turtle hard caps and individual trip limits with additional restrictions on vessels that reach the individual trip limit twice is similar to Alternative 3. The probability of exceeding the ITS for loggerhead turtles in any given year is approximately 5 percent, and the trip limits expect to further lower the probability of exceeding ITS. Additional considerations for not setting the loggerhead hard cap limit include the loggerhead hard cap measure being a FEP measure rather than an ESA or BiOp requirement; hard caps being a measure that was implemented to control sea turtle interactions on a model fishery while information was being gathered on new gear measures; the current increasing loggerhead turtle population trend compared to the declining trend at the time hard caps were first implemented; and the additional trip limit restrictions that vessels would be subject to under Alternative 4 for consistency with the RPMs.

Ishizaki presented logistical considerations for implementing the individual trip limits as intended under RPM T&C 1b, including attribution of interactions to a vessel's official number; attribution of interactions to the vessel that set the gear (rather than those that retrieve it, in the

event of a vessel retrieving gear for another vessel); definition of trip completion; and attribution of trips to calendar year based on the date that the vessel reached the trip limit (for purposes of counting the number of times a vessel reaches a trip limit in a calendar year).

Sensui thanked Ishizaki for the detailed presentation.

Watamura said that other fisheries do not use hard caps as management tools and asked why the Hawai'i shallow-set longline fishery implemented hard caps.

Ishizaki said it is because of the history of the litigation in the fishery. The hard cap was a tool that the Council implemented in 2004 knowing that the fishery was going from a court-ordered closure to a reopening with new mitigation measures that had not been previously tested in the Hawai'i fishery. The hard caps were introduced as an additional control measure to manage the number of total interactions in the fishery.

Watamura said there has been some tagging and tracking of turtles to determine the consequences of trailing gear and asked about the results from those studies.

Ishizaki said that NMFS developed a post-hooking mortality criterion based on tagging studies. However, all the tags were on hard-shell turtles. There is no tagging data specific to leatherbacks from this fishery. NMFS convened a workshop that resulted in the development of a post-hooking mortality criteria based on where the animal is hooked and how much gear is left attached to the animal, which are used to determine a post hooking mortality rate. The average mortality rate for loggerheads in the Hawai'i shallow-set longline fishery is 16 percent and the average mortality estimate for leatherbacks is 20 percent.

Watamura asked if the direct harvest of the leatherbacks is proportionately higher than the direct harvest of loggerhead sea turtles.

Ishizaki said it is hard to say whether the direct harvest of either is proportionately larger than the other. However, continuous harvest of adult and sub-adult leatherbacks are known to occur in Indonesia, whereas there are no reports of direct harvest of loggerheads in Japan. There is, however, direct harvest of loggerheads in Mexico in the eastern Pacific. There is currently insufficient data to quantify the percentage of direct harvest.

Watamura asked if the direct harvest of the turtle eggs is disproportionately larger in the leatherback population.

Ishizaki said the harvest of leatherback eggs is likely to be higher than for loggerhead turtles. All loggerhead nesting beaches are in Japan, which protects the nesting beaches. Egg harvest has been reported at the leatherback nesting beaches in Southeast Asia and Indonesia.

Watamura asked if egg predation by animals was greater in Southeast Asia and Indonesia than in Japan.

Ishizaki said that pigs and dogs depredate leatherback nests in Indonesia. There is also depredation on loggerhead eggs in Japan by animals such as crabs, birds and raccoons.

Rice asked if the international swordfish longline fleet is catching significantly more turtles than the Hawai'i shallow-set longline fleet being that the international fleet makes up a larger proportion of the shallow-set fishery and has less observer coverage.

Ishizaki said that the proportion of bycatch that the Hawai'i shallow-set longline fishery contributes to in the Pacific is very small. About 5 percent of the Pacific longline effort is attributed to the Hawai'i longline fishery. Further, the shallow-set fishery is only about 10 percent of the Hawai'i longline fishery. The bycatch estimates for international fleets is not well known because of the data limitation due to low observer coverage.

Goto said that the US demand for swordfish is being supplied regardless of the origin. When the Hawai'i shallow-set fishery closes, the swordfish predominately enters the US market from the southeastern Pacific. Goto asked Mark Fitchett, Council staff, to provide some insight on the status the southeast Pacific swordfish stock.

Fitchett said that the last stock assessment conducted for swordfish in the eastern Pacific consisted of data through 2012. The catch from the Japanese fleet has nearly doubled over the last decade, and it is expected that catch from the Spanish fleet is going to increase. The last stock assessment estimated the biomass status to be slightly above B/B_{MSY} . However, catch already breached the limit reference point of F_{MSY} . Fitchett said the stock in the South Atlantic is experiencing overfishing and is overfished. The North Atlantic stock was rebuilt, but there are high levels of uncertainty that the stock is still experiencing overfishing despite the recent increase in biomass and reduction of catch.

Goto suggested that NMFS investigate the effects of the Hawai'i shallow-set longline fishery closure on the market and the Pacific swordfish stock in the southeast region. Goto said that Hawai'i has a healthy and successful swordfish fishery and market when the fishery is assessable.

Soliai asked what impacts the foreign fisheries have on loggerhead and leatherback populations.

Tosatto said he could not expand on what Ishizaki had said regarding the limited data associated with the foreign fisheries. The Western and Central Pacific Fisheries Commission (WCPFC) and Inter-American Tropical Tuna Commission (IATTC) have sea turtle bycatch mitigation measures modeled after the Hawai'i longline fisheries.

Soliai asked if there was anything more that the United States could do to address sea turtle bycatch on an international level.

Tosatto noted an ongoing national strategy to address bycatch of sea turtles. He said some countries that participate in WCPFC do not put great effort into protected species conservation. Over the last few years, the United States has been working to strengthen the expansion of the WCPFC sea turtle measures to include all shallow-set fisheries in contrast to only shallow-set swordfish fisheries.

Gourley said that Alternative 4 did not have a loggerhead hard cap. This would mean that, if the ITS is surpassed, NMFS would need to reinitiate consultation and subsequently the fishery would close until the new BiOp is released. He asked how long reconsultation would take and if the fishery would be closed the entire time the reconsultation is in progress.

Tosatto said that the fishery would not close if an ITS is exceeded. Instead, consultation would be reinitiated and the fishery would remain open under further investigation.

Gourley asked, if the ITS is exceeded by many turtles, would the fishery remain open and continue fishing until the new BiOp is released up to 130 days later.

Tosatto said keeping the fishery open in such a scenario would not be reasonable so NMFS would likely take some emergency action.

Lutu-Sanchez said it was discouraging that the Council has to discuss such issues considering the small number of vessels in the fleet. She said it is important to note that this fishery has had 100 percent observer coverage for more than a decade and the records show that the efforts by the Council, the agency and the industry have made a difference in the turtle populations, which have shown a quantifiable recovery in loggerheads.

Sensui asked what additional efforts have been made on developing techniques, strategies or equipment to minimize the effects of trailing gear on turtles.

Tosatto said there have been NMFS-wide efforts to look at bycatch reduction. However, he was unaware of any ongoing efforts in the Hawai'i shallow-set fishery. In the 2019 BiOp, RPM T&C 2f requires survivability studies for post-hooking leatherback turtles.

Ishizaki noted two current efforts with confirmed funding, one to develop a line cutter and another to develop a tagging method for leatherbacks since the turtles are not brought on board due to their size. These efforts should help reduce trailing gear on the leatherbacks and increase the certainty in the post-hooking mortality rates.

Sensui said that Tosatto noted that these hooking events are rare. Sensui asked what the primary cause of the leatherback population decline is if this is the case and most turtles are being released alive.

Ishizaki said it is difficult to determine one cause of decline. It is likely a combination of many factors such as impacts at nesting beaches and direct harvest.

T. Todd Jones, PIFSC, said that the model used in the BiOp showed the decline of the leatherback population although no single variable could explain the decline. While the Hawai'i shallow-set fishery has little impact on leatherback turtles, there are fishing practices that are detrimental to leatherbacks. For example, gillnet fishing in Southeast Asia produces a lot of sea turtle bycatch and can lead to drowning. Additionally, some longline fisheries still use J-hooks and squid bait, which have high interaction rates with turtles.

Sensui said it is disturbing that the Council is considering vessel limits, even though the Council did not recommend it and it affects the willingness of fishermen to participate in the fishery. The penalties associated with reaching the trip limit multiple times is excessive and punitive and do not help the Council's goal of trying to protect these species. By closing the fishery, the effort shifts from the Hawai'i fishery to foreign fisheries with less observer coverage and less developed mitigation measures.

Gourley said that it is unknown why certain vessels or captains catch more turtles than others. The trip limits stop fishing immediately after the turtle limit is caught while the efforts are to study the turtles. Further, the vessel limits stop the collection of data about the issue being investigated. If it could be determined why these vessels catch more turtles than others, then efforts could be made to create other mitigation measures that are not as draconian as the ones being suggested. He also said the RPM and T&C cannot alter the basic design, scope, duration or timing of the action and may make only minor changes. Vessel limits are not a minor change.

Tosatto said that, first, the agency determined that these are minor changes and otherwise would not have included it in the RPMs. Second, continuing fishing when catching a high number of turtles is not a viable option when dealing with endangered species.

Watumura said "we are swimming in the wrong ocean" because it is difficult to make a conscientious choice to protect a species when international observer coverage is lacking, eggs and sub-adults are directly harvested, and other fisheries have turtle bycatch.

Duenas asked if a mechanism is in place to provide vessel owners with regular updates on their current turtle count.

Tosatto said the regulations would detail several mechanisms. NMFS would operationally implement mechanisms given the RPM is accepted. A variety of mechanisms are currently in place to track the hard caps. The details regarding trip and vessel limits would be developed as time goes forward. Ultimately vessel owners are responsible for tracking the number of interactions of their vessels and should be held accountable.

Goto asked Tosatto to elaborate on sea turtle management at the commission level.

Tosatto said the United States was the driving force behind the adoption of sea turtle measures that are currently in place in the WCPFC. These measures are not the most developed, but they are what were accomplishable at an international scale.

Simonds asked the USCG if there may be any complications with enforcement of the additional vessel restrictions.

Holstead said the biggest challenge is operationalizing the hard cap limits.

Tosatto said that this region has been using hard caps for more than a decade. Measures and protocols are in place to communicate with captains and vessel owners when a hard cap is approaching. For trip and vessel limits, the vessels would know if they are restricted and can be held accountable.

Sensui asked if vessels that put forth more effort are more likely to reach trip limits more often. If so, a punitive measure like a vessel limit that would exclude them from the fishery puts an unfair burden on them.

Tosatto said that the vessels that fished the most were not catching the most turtles. Instead some of the vessels that had a mid-range effort interacted with the most turtles. The vessels with the most effort had a very low number of interactions with sea turtles. NMFS incorporated the Council's recommendation of including trip limits in the final BiOp but felt that there had to be a limit on the number of trip limits that could occur.

Simonds asked why the fishery needs additional restrictions and limits when the Hawai'i shallow-set fishery has a negligible impact on loggerhead and leatherback turtle populations.

Tosatto said that the BiOp resulted in a no jeopardy conclusion for loggerheads and leatherbacks and it is the Council's mandate to minimize interactions with protected species. The Council's mandate for minimizing interactions does not clearly state what that means. For the Marine Mammal Protection Act, there is a clear directive to approach zero. The intent is the same. To minimize means to approach zero rather than approaching the estimated level of impact.

Simonds said vessel limits could cause the fishery to lose vessels and asked if reducing the number of vessels is the way to minimize interactions with turtles.

Tosatto said that the intent of the RPM is to maintain the overall impacts well below 36 loggerheads and 16 leatherbacks in a year. The intent is for the vessels to avoid any individual trip limit and for the fleet to avoid reaching the hard cap or reinitiation trigger in any year.

Simonds asked why additional restrictions are being added when the overall impact on sea turtles has been low since 2004 except for the anomalous period between December 2017 and January 2018. The hard cap limits have been reached only twice in 14 years, and the percentage of mortalities is very low in this fishery.

Goto asked what PIRO's plan is to address the remainder of the RPMs and how will it coordinate with the Council.

Tosatto said that this meeting is focused on RPM 1. PIRO and the Council will need to review all of the RPMs. Many of the RPMs are ongoing and, existing programs will not require as detailed discussions. In the future, PIRO and NMFS will need to address the other RPMs such as reduction of bycatch by 25 percent and reduction of oceanic whitetip shark and giant manta ray interactions.

IV. Advisory Group Report and Recommendations

A. Hawai'i Archipelago Fishery Ecosystem Plan Advisory Panel

Josh DeMello, Council staff, presented the recommendation of the Hawai'i Archipelago FEP AP meeting convened on Aug. 7, 2019.

Regarding the Hawai‘i based shallow-set longline fishery management, the Hawai‘i Archipelago FEP AP recommended the Council select Alternative 4 to modify the loggerhead and leatherback turtle mitigation measures consistent with RPMs and T&C 1a and 1b and do not set a loggerhead turtle hard cap limit. Further, the AP noted that the additional restrictions are punitive and provide no additional conservation benefits and requested that they be removed in the near future. The AP further recommended that the Council consider providing fishermen greater fishing opportunities by changing the start of the fishing year from January 1 to October 1.

Watumura said he agrees with the AP recommendation and believes that instead of implementing punitive measures, providing educational measures to give guidance to the vessels that frequently interact with sea turtles would be preferable. Simply punishing the vessels does not help minimize interactions with protected species.

B. Scientific and Statistical Committee

Franklin presented the recommendation of the SSC. The committee met on Aug. 7, 2019. It discussed the report of the SSC working group and managing loggerhead and leatherback sea turtle interactions in the Hawai‘i shallow-set longline fishery. It made these recommendations:

The SSC endorsed the working group report and supported the no-jeopardy conclusion given the negligible impacts to both the loggerhead and leatherback sea turtle populations. The SSC deemed the 25 percent reduction goal in RPM 1 as aspirational, overly conservative and not supported by the scientific information presented in the final 2019 BiOp. The SSC supported the development of alternative models that further evaluate the long-term viability of marine turtle species exposed to the Hawai‘i shallow-set longline fishery.

The SSC noted that Alternatives 2, 3 and 4 are viable options but did not recommend a specific alternative. The SSC noted that in light of the no-jeopardy finding in the final BiOp, the additional RPMs are punitive and are not supported by the scientific information that the fishery has no adverse impacts to loggerhead and leatherback turtle populations. Some SSC members supported Alternative 2 as it provides flexibility for the fishery to operate under a higher loggerhead hard cap with less punitive individual trip limits. Others supported Alternative 4 as it provides more flexibility without the loggerhead hard cap limit, but the additional restrictions on the trip limits were considered to be honoris. None of the SSC members recommended Alternatives 1 or 3.

V. Public Comments

Eric Kingma provided public comment regarding the position of the Hawaii Longline Association (HLA) on managing loggerhead and leatherback sea turtle interactions in the Hawai‘i shallow-set longline fishery. He described the disproportionate burden that the Hawai‘i shallow-set longline fishery is subject to compared to other fisheries around the world. The main sea turtle species of concern do not nest in Hawai‘i or the United States. HLA believed NMFS should work with the fisheries in Indonesia and other Southeast Asian countries to reduce the impacts on these turtles instead of punishing the Hawai‘i fleet. HLA intends to see this fishery operate for the next century and longer. This Hawaii industry provides benefits to the United

States, which is not doing enough to address the impacts where they are the most severe. HLA requested that NMFS refocus on where the primary impacts occur, while also addressing the fisheries impacts.

HLA did not believe that the measures under consideration match the impact of the fishery. The industry is dedicated to reducing and minimizing impacts. The fishermen do not want to catch turtles. In most cases, caught turtles are released alive. HLA agreed that the vessel limits are not minor changes and thus are not consistent with ESA. HLA never agreed to hard caps and believed there should not be a loggerhead hard cap. A possible option for HLA is to initiate litigation against the agency, but litigation would only reinstate consultation, which would result in another multiyear process. HLA was highly concerned about how BiOps are being developed and believed that HLA was not fully involved in the development of the RPMs despite a requirement under ESA Section 7 that states that applicants should be fully involved in the development of RPMs.

Kingma said that the HLA supports the Council's development of this amendment and believes that this Council is doing more for sea turtle management than any other Council in the nation. HLA would not oppose the adoption of Alternative 4 because the industry needs the fishery to be viable and operational. The measures being proposed have a large impact on the lives of fishermen, even though it is known that the fishery has a small impact on these turtle populations. HLA supported the removal of the loggerhead hard cap and believed there should not be hard caps for the leatherbacks. Hard caps negatively affect the market and the industry. They were implemented as part of a model fishery in 2004, and the fishery is beyond that. It is time to take some of the observer funding and putting it towards real conservation. HLA is dedicated to the fishery and dedicated to minimizing interactions with protected species.

VI. Council Discussion and Recommendations

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai'i-based shallow-set longline fishery, the Council **recognized that NMFS partially addressed the Council's recommendation from the 177th meeting to revise the draft RPMs for consistency with the Council's recommended action by incorporating individual trip limits. Nevertheless, the Council found that the RPMs and associated T&Cs continue to be overly conservative and not commensurate with the BiOp's conclusion that the Hawai'i shallow-set longline fishery is not likely to jeopardize the continued existence of ESA-listed species, including the leatherback turtles and North Pacific distinct population segment (DPS) of loggerhead turtles. In particular, the Council has serious concerns that the additional restrictions on vessels that reach the trip limit twice are punitive and not likely to contribute to meaningful conservation benefit beyond those expected from the simple trip limits previously recommended by the Council.***

The Council noted that the Hawai'i shallow-set longline fishery, which accounts for approximately half of the nation's domestic production of swordfish, experienced an unnecessary closure in 2019 due to NMFS' delay in completing the BiOp under the statutory timeline. In 2019, the fishery operated under a loggerhead fleet-wide hard cap limit of 17 based on a 2004 BiOp, pursuant to a stipulated settlement agreement

and court order. The court order states that NMFS may not increase the allowable incidental take of loggerhead turtles above 17 loggerhead turtles except through a new regulation issued under applicable authority and after issuance of a new BiOp. The new BiOp completed on June 26, 2019, found that the anticipated level of interactions with up to 36 loggerhead turtles in a year is not likely to jeopardize the continued existence of the North Pacific DPS.

The Council recognized that the status of the North Pacific DPS of loggerhead turtles have improved since the Council first recommended implementing hard caps for this species in 2004. At the time, the population was projected to decline, whereas the most recent scientific assessment of the population indicates that the North Pacific DPS is increasing at a long-term average rate of 2.4 percent per year and that the total abundance is approximately 340,000 turtles. In light of the RPM T&C 1b requiring additional restrictions on vessels that reach a trip limit twice in a calendar year on top of the simple individual trip limit measure developed by the Council and considering the population growth of the North Pacific loggerhead turtles, the Council found that the fleet-wide hard cap limit for this species is not necessary at this time for the conservation of the loggerhead turtles.

The Council further recognized that the Western Pacific leatherback turtle population is exhibiting a long-term decline at an average rate of 5.3 percent per year but noted that the BiOp concludes that the impacts from the Hawai'i shallow-set longline fishery would be inconsequential and are not likely to appreciably reduce the species' chances of survival and recovery in the wild. The Council further noted that the underlying leatherback population data show an increase in the last few years of the dataset, suggesting some rebound capacity that may be reflective of the conservation efforts undertaken at nesting beaches over the past two decades by the Council, NMFS and various other entities.

The Council recommended amending the Pelagic FEP to modify loggerhead and leatherback turtle mitigation measures for the Hawai'i shallow-set longline fishery as follows:

- a. Set an annual fleet-wide hard cap limit on the number of leatherback turtle interactions at 16, consistent with RPMs and T&C 1a under the 2019 BiOp. A limit of 16 represents an approximately 25 percent reduction from the ITS of 21. Once this interaction limit is reached, the fishery closes for the remainder of the calendar year.
- b. Do not set an annual fleet-wide hard cap limit on the number of North Pacific loggerhead turtle interactions. If the fishery exceeds the ITS in the current valid BiOp, Section 7 consultation would be reinitiated as required by ESA. The Council retains the authority for setting an annual fleet-wide hard cap limit on the number of North Pacific loggerhead turtle interactions under the Pelagic FEP if necessary.
- c. Establish individual trip interaction limits for loggerhead and leatherback turtles for the Hawai'i limited entry permit vessels that declare their trips as a

shallow-set trip, consistent with RPMs and T&C 1b under the 2019 BiOp as follows:

- i. Set limits of five loggerhead turtles and two leatherback turtles per trip.**
- ii. Upon determining that a vessel has reached either the loggerhead or leatherback turtle trip interaction limit based on data from NMFS observers, shallow-set vessels will be required to return to port without making additional sets.**
- iii. The vessel will be prohibited from engaging in shallow-set longline fishing for five days after returning to port.**
- iv. Vessels that reach the trip limit for either leatherback or loggerhead sea turtles twice in a calendar year shall be prohibited from shallow-set longline fishing for the remainder of the calendar year. Such vessels shall have an annual vessel limit equivalent to a single trip limit for the following calendar year.**
- v. The Council may make recommendations to NMFS to revise the individual trip limits upon periodic review of the effectiveness of the limits and consistent with the RPM of the current valid BiOp.**

Further, the Council deemed that the regulations implementing the recommendations are necessary or appropriate in accordance with Section 303(c) of the MSA. In doing so, the Council directed Council staff to work with NMFS to complete regulatory language to implement the Council's final action. Unless otherwise explicitly directed by the Council, the Council authorized the executive director and the chair to review the draft regulations to verify that they are consistent with the Council action before submitting them, along with this determination, to the Secretary on behalf of the Council. The executive director and the chair are authorized to withhold submission of the Council action and/or proposed regulations and take the action back to the Council if, in their determination, the proposed regulations are not consistent with the Council action.

*Moved by Rice; seconded by Goto.
Motion passed with Tosatto abstaining.*

Goto asked what the NMFS process would be if the Council were to decide not to include the additional restrictions on trip limits in the recommendation.

Tosatto said, if the Council does not provide a recommendation that meets the RPM T&C, NMFS could disapprove the measure and send it back to the Council with an explanation, which would delay the implementation of any measure. Alternatively, NMFS could approve the Council action but also find it deficient overall in meeting the requirements of the RPM and use secretarial authority under MSA or ESA authority to implement additional measures.

Goto asked for clarification on secretarial authority.

Tosatto said that under MSA, when the Council fails to act, the secretary has the authority to act under the MSA. There are a variety of circumstances when that may occur, such

as when the Council fails to act in timely way. NMFS tries to use that authority sparingly, which is why NMFS encourages the Council to take action.

Simonds asked if NMFS could approve the additional restrictions under ESA without disapproving the Council's action.

Tosatto said that is correct. If the Council were to recommend trip limits but not the limits on trip limits, NMFS could find that necessary and could take secretarial action. He said he would abstain from voting as this recommendation will be coming to him for a decision. He said he could not endorse the paragraphs in their entirety as they include not only factual information but also Council views that may not align with the views of NMFS.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai'i-based shallow-set longline fishery, the Council **recommended an annual review of the Hawai'i shallow-set longline fishery's performance under the individual trip limits in the Annual SAFE Report.***

Moved by Rice; seconded by Goto.
Motion passed.

Tosatto said that he will vote in support of this recommendation. He noted that RPM T&C 1d that requires NMFS to conduct analyses of fleet-wide interactions within 18 months of receiving a signed BiOp may be in time for the second review of the Annual SAFE Report.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai'i-based shallow-set longline fishery, the Council **recommended that NMFS, in coordination with the Council and other appropriate partners, prioritize addressing the recovery of the leatherback turtles through reduction of threats at nesting beaches and foraging areas in the Western Pacific, such as reducing direct harvest of nesting adults and foraging sub-adults and adults; reducing depredation and harvest of eggs and hatchlings at nesting beaches; and reducing bycatch in artisanal and coastal fisheries. The Council further recommended that NMFS support research to improve data quality and availability to allow for comprehensive demographic models to be employed on the North Pacific loggerhead and the Western Pacific leatherback turtle populations. The Council reiterated its previous recommendation that reducing post-hooking mortality and improving tools for fishermen (e.g., TurtleWatch) should be a focus for minimizing impacts for the Hawai'i shallow-set longline fishery and that RPMs that further restrict the fishery are not likely to contribute to recovery and divert resources away from more meaningful conservation efforts for the loggerhead and leatherback turtle populations.***

Moved by Rice; seconded by Goto.
Motion passed.

Tosatto said this recommendation crosses a number of issues and touches on focusing recovery on nesting beaches, supporting research and addressing the practical side of the fishery.

None of these issues are negative, but the Council must understand that these are independent approaches and could also be considered in individual recommendations.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai‘i-based shallow-set longline fishery, the Council **requested NMFS PIRO SFD to work with Council staff to develop a plan for addressing the remaining RPMs in the shallow-set longline BiOp, including proposed compositions for any working groups needed to address the RPMs. The Council requested NMFS PIRO present this plan to the Council at the October 2019 meeting.***

Moved by Rice; seconded by Goto.

Motion passed.

Tosatto asked that Council recommendations address PIRO and not target a specific division within PIRO, although he noted he would not call for an edit to the motion. He said the RPMs include a broad range of measures. While he understood the intent of the recommendation, he was uncertain whether every one of the RPMs would require working groups. He said the recommendation was good. He acknowledged Goto’s earlier comment regarding Council involvement in the remaining RPMs and the need for some organization to determine how to implement the full suite of RPMs.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai‘i-based shallow-set longline fishery, the Council **requested NMFS PIRO SFD to establish procedures for providing permit holders and vessel owners with updated turtle interaction counts based on observer data so that they have a mechanism to verify their records of loggerhead and leatherback turtle interactions with the data that will be used to make a determination on whether a vessel reached a trip limit.***

Moved by Rice; seconded by Goto.

Motion passed.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai‘i-based shallow-set longline fishery, the Council **directed staff to send a letter to NMFS expressing concern that the United States is importing foreign-caught swordfish from stocks that are overfished and experiencing overfishing (e.g., South Atlantic stock) or from stocks with considerable risk of being overfished and/or experiencing overfishing (e.g., North Atlantic stock, Eastern Pacific stock).***

Moved by Rice; seconded by Goto.

Motion passed.

Tosatto said that, at one of the past Council meetings, NMFS notified the Council of the status of the Eastern Pacific swordfish stock, noting that the Hawai‘i longline fishery’s effort off the California coast does impact that stock. In that letter to the Council, NMFS expressed its concern to the Council that overfishing is occurring on the stock and requested that the Council provide any recommendations to address the status of the Eastern Pacific swordfish stock through the Regional Fishery Management Organizations.

Simonds said that the US contribution to the Eastern Pacific swordfish catch is very little compared to other fisheries.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai‘i-based shallow-set longline fishery, the Council **requested NMFS PIRO International Fisheries Division draft a position for the 16th Regular Session of the WCPFC on incentives for participating countries to achieve and maintain at least a minimum of 5 percent observer coverage for longline fisheries, the data of which are used for estimating and monitoring bycatch interactions.***

Moved by Rice; seconded by Goto.

Motion passed.

*Regarding the management of loggerhead and leatherback turtle interactions in the Hawai‘i-based shallow-set longline fishery, the Council **directed staff to work with NMFS and the Hawai‘i longline fishing industry to consider providing fishermen greater fishing opportunities by changing the start of the fishing year from January 1 to October 1.***

Moved by Rice; seconded by Goto.

Motion passed.

Tosatto said that as staff works with NMFS, it will likely need statistical resources from PIFSC to consider the impacts and merits of changing the start of the fishing year.

Goto said that, over the 2018 and 2019 seasons, the re-opening date of January 1 displaced the fishery an entire month because landings did not reach port until early February. In previous years when the season was not closed, landings were reported in January.

VII. Other Business

Simonds said the 180th Council meeting will take place in American Samoa in October 2019.