WESTERN PACIFIC REGIONAL FISHERY MANAGEMENT COUNCIL

Recommendations to the Council from the 74th Meeting of the Scientific and Statistical Committee

Pelagics

Council Office Conference Room
Honolulu, Hawaii
16-18 May 2000

A. 1st quarter 2000 Hawaii and American Samoa longline fishery report

Paul Dalzell presented a brief overview of the performance of the American Samoa longline fishery in the 1st quarter of 2000. The most important aspect of the fishery was the continued decline in the catch rate of albacore, which is the main target species of the fishery. Dalzell noted that a parallel decline in albacore CPUE had been noted in neighboring Western Samoa. The decline in CPUE may indicate localized depletion or possibly a regime shift in environmental conditions affecting albacore catchability.

B. American Samoa framework measure

Paul Bartram reported that he had completed the revision of the framework measure document for American Samoa and this had been presented at the 102nd Council Meeting. At that meeting the American Samoa Council Members stated that the prefered50/30 nm closure in the document was not what American Samoan fishermen wanted, and they preferred a 100 nm closure around all islands in the territory. Council staff were directed to revise the document accordingly for the next Council Meeting.

At the 103rd Council Meeting, however, Kitty Simonds noted that there were indications from NMFS that they were prepared to accept a 50 nm closure, based on the strengths of the revised document. Also, as American Samoans were contemplating larger (>50ft) vessels themselves, they may not wish to handicap themselves by having to fish so far from the islands. Mrs Simonds had asked the American Samoa Council members to sound out the fishermen on agreeing to the 50 nm closure as an interim measure. She noted that this measure had been under consideration for 3 years and longline fishermen in American Samoa still had no protection against larger vessels entering the fishery.

C. Shark management .

1) Shark catch and disposition in 1st Q 2000 in Hawaii LL fishery

Mike Laurs reported on the shark catch by the Hawaii longline fishery in the 1st quarter of 2000. There was interest in this as the turtle closed area imposed since late December 1999, closed off areas of high shark CPUE. Laurs noted that the shark catch, which is mainly blue shark, had stabilized at around 80-90,000 sharks taken per year. Almost all sharks kept were finned, and this amounts to about 66.5 % of the total shark catch or about 55,000 sharks.

Average CPUE for longline caught sharks ranged between 13.2 and 45.2 sharks/1000 hooks. CPUEs in 1st quarter 2000 were slightly below the long term average. These CPUEs referred only to swordfish trips, tuna and mixed trip shark CPUEs were very flat and virtually unchanged from year to year.

2) Blue shark stock assessment

Pierre Kleiber outlined the data sources and approaches being adopted to generate an up to date stock assessment of the blue shark in the North Pacific. These included both Japanese and US longline data and Japanese large mesh and squid high seas gill net data. Kleiber described how the longline data for Japanese and Hawaii based longline fisheries were partitioned spatially and with respect to mean target depth. A MULTIFAN CL model was fitted to quarterly CPUE data over several decades using a constrained maximum likelihood estimator. The model permits investigation of fishing where catchability improves over time. The model outputs are fishing mortality (F), natural mortality (M), recruitment, and relative and absolute biomass.

Means of handling apparent under-reporting of shark catches by longline vessels was described by Kleiber. The size data also used in the MULTIFAN model had generated growth parameters which were similar to published values for Pacific blue shark. Preliminary results showed that the squid drift gill net fishery and large mesh gill net fishery selected strongly for a wide range of sub-adult blue sharks, but that there was no obvious influence on recruitment

In the discussion a question was asked about model outputs that would be used to generate numbers for the SFA overfishing requirements. It was noted that the results of Klieber's model would be used in conjunction with Marc Labelle's operation simulation model to generate this type of data.

The SSC heard the presentation on the stock assessment of blue shark in the North Pacific Ocean and is pleased with the progress that has been made to date with these analyses and encourages further development of this work. The SSC notes that the stock assessment takes a very conservative approach, counting all sharks taken in longline and drift gillnet fisheries as fishing mortality. The SSC noted it appeared that either the blue shark population appeared to recover in the 1990s following a period of heavy exploitation by drift gill net fishing in the 1980s; or that the catchability of blue shark in the longline fishery had increased during the 1990s.

3) Pelagics FMP amendment for shark management

Paul Dalzell stated that the time line for amendment 9 to the Pelagics FMP was a month behind, due to events that occured at the 102 Council Meeting, where a ban on demersal longlining for sharks was omitted from the Council's recommendation. Dalzell noted that this had been taken care of during the 103rd Council Meeting and amendment 9 was being finalized for submission to NMFS later this month.

4) State/Federal shark fin legislation

The SSC heard about the State of Hawaii's legislation banning the landing of shark fins only. Dalzell stated that this may be The Council acknowledges the state's authority to enforce regulations on landing of sharks and shark fins with respect to state-registered vessels fishing within the state waters (0-3 nm) under the state's jurisdiction.

Dalzell stated that the Council believed that the bill is inconsistent with the PFMP to the extent that it would regulate fishing activities by longline vessels, operating under federal permits seaward of state waters. The passage of amendment 9 to the PFMP will not require Hawaii-based longline vessels to land blue shark (*Prionace glauca*) whole, but will require all other pelagic sharks to be landed whole.

5) Utilization

Kevin Kelly explained about the Council's intent to develop a committee to investigate the utilization of the blue sharks. He noted that this would include participation by the Oceanic Institute, Maui Diamond Bay Seafoods and a local conservation NGO. There was interest from Maui Diamond Bay Seafood's partner company Biostim in the livers of blue sharks based on observations in the USSR where shark liver extracts had been believed to cause remnission in cancer patients. Venture capital was available to test out blue shark livers. The local NGO was interested in providing fishermen with individual "body bags" to isolate blue sharks from the rest of the catch and thus encourage landings of the whole fish should a market in Hawaii be developed.

6) Research

The SSC was asked if other sharks taken by the longline fishery should also be studied, given that work on the blue shark was well advanced.

The SSC believes that other issues such as the post hooking survival of blue sharks, marlins and turtles are of more immediate concern. The SSC notes the conservative quota of one non-blue shark per trip and does not anticipate any immediate problems with these species resulting from Council managed fishing.

D. Seabird management

1) Status of amendment/Biological Opinion on Short-tail

Kathy Cousins explained that the regulatory framework adjustment document and the Biological Opinion on Short-tail albatrosses were still both in review. The proposed rule for the mitigation measures was expected soon and would require mandatory attendance at an annual protected species workshop by longline vessel skippers and owners, release of hooked birds to ensure survival and the use of 2 out of 6 approved mitigation measures There was still some discussion on whether the boundary for the mitigation area should be 23 or 25 deg N as specified in the document. Further the selection of two measures form a pick list of six for mitigating interactions continued to receive criticism by people who did not appreciate the Council's strategy. Cousins explained that no individual mitigation measure was 100 % effective or enforceable.

The Council's strategy was to give fishermen an opportunity to experiment with different measures and elect which they favored most. SSC members noted that there was both economic and social science literature to show that mandated approaches are not always effective, and the SSC approved this approach being taken by the Council which allowed the fishermen to be part of the decision making process.

2) 2nd Albatross Symposium/Black-footed Workshop 2

Kathy Cousins reported on the 2nd Black-footed Workshop held at the end of the Albatross Symposium. This had resulted in the formation of a steering committee to oversee the population biology research on Black-footed and Laysan Albatrosses in the NWHI being conducted by USFWS in Honolulu. Results from the USFWS studies suggested that the nesting population of Black-footed albatrosses were stable while nesting Laysan populations were in decline. The steering committee would include representatives from USFWS, NMFS, the Bird Banding Lab, Pacific Seabird Group and National Audubon.

The SSC congratulated Kathy Cousins on the successful outcome of the follow-up workshop on Blackfoot Albatross and concurred with the workshop recommendation to form a permanent steering committee to guide and monitor USFWS albatross population biology studies in the Hawaiian Archipelago

E. Turtle management

1) Expert panel review of time/area closures

John Hampton explained the recent panel review of the NMFS analyses of time/area closure options for the Hawaii longline fishery, with respect to mitigating interactions with leatherback turtles. Hampton noted that all panelists agreed that these analyses were done well, that there was

a paucity of data on which to base interaction studies, and that estimating fishery impacts was difficult because it was hard to predict the redistribution of fishing effort after an area closure.

Hampton reviewed the final recommendations from each panelist, noting that there was no guidance on the scale of reduction in interactions. The plaintiffs scientist had argued for a 75 % reduction in mortality and a 25% reduction in the fishery revenues, even though this would probably kill-off the longline industry in Hawaii. The NMFS scientists had argued for a 50% reduction arguing that this would only involve a 10% reduction in revenues. Both plaintiff and NMFS scientist argued for closing the fishery for part of the year. Hampton explained his startegy was to make use of the courts constraints and instead of having a closed area, have an area where 100% observer coverage was required to gain more data on the interactions.

2) Status of litigation

Charles Karnella explained that NMFS had decided to proceed with a modified version of their scientists recommendation, which would close large areas of the ocean to the fishery, with some limited access at 20% of the average effort for 1997-1999, and 100% observer coverage. They had filed a motion with the court to make this change. The judge would decide on the 20th June to proceed with this new closure, or to maintain the closure he had imposed or some other measure. If a closed area was imposed, it would remain in place until the EIS was finalized.

3) Draft EA

Karnella noted that a draft EA had been produced as an interim measure to producing a full EIS. The EIS should be completed by October 2001.

4) Turtle research/Azores project update

Mike Laurs outlined the various research project being conducted in the NMFS Honolulu Laboratory and elsewhere on turtles. These included population modelling, post-hooking mortality, factors associated with interactions and the protected species workshop which included safe handling of hooked turtles. The PIAO had also funded a study looking at the behavior of hatchlings and juvenile turtles in response to light sticks, and NMFS Office of Protected Species had funded a project in the Azores to look at the effect of circle hooks. Longline fishing in the Azores often interacted with turtles which were plentiful there. The disintegration of the observer program would hamper new research initiatives, which included: seasonal movement dynamics of leatherbacks, artificial bait to reduce takes, refinements to the TURTSIM model and more analyses of factors responsible for turtle-longline interactions. SSC discussion focused on several of these issues. Caution about behavioral responses to light sticks was expressed since adult and juvenile responses may be different. Artificial bait had already shown great promise in reducing shark catches in Alaskan demersal longline fisheries and it was hoped to repeat this success with turtles and pelagic longline fisheries.

5) SSC review of the scientific basis of NMF proposed time/area closures for Hawaii LL fishery

The SSC made the following comments and recommendations concerning the scientific basis of NMFS proposed time/area closures for the Hawaii longline fishery:[1]

The process by which permutations of time/area closures were generated is based on a paucity of data. Such a small amount of data means that the confidence limits around estimates developed by modeling will be large and that the foundation for results and conclusions is not robust.

SSC members agreed that reductions in the mortality rates of turtles by the Hawaii-based longline fishery will have negligible influence on these turtle populations as a whole. Hawaii-based longliners account for only 10-20% of the total longline fishing effort in the present closed area and would be a smaller fraction of all longline fishing in the closed areas proposed by NMFS. **Further, the effect of time/area closures will result in the redistribution of effort over the remaining areas of ocean that may result in greater interactions with leatherback turtles as well as gear conflict between Hawaii-based longline vessels and between longline vessels and other Hawaii-based pelagic fisheries.**

The area closure proposed by NMFS will almost certainly lead to the demise or marked reduction in the Hawaii-based longline fleet, especially for those vessels targeting swordfish. This will mean the elimination of the one fleet from which data on turtle interactions has been collected on a regular basis and on which other potential mitigation methods could be tested. Such measures may include different hook designs, artificial baits, bait color, light stick color, duration of soak times, and numbers of hooks set. **The SSC believes that NMFS needs to develop incentives for fishermen to reduce the level of turtle/longline vessel interactions. Further, more population dynamics studies of turtle populations were required, including the wider use of the TURTSIM operational model to investigate and quantify impacts such as fishery takes. In this regard, the demise or contraction of the Hawaii longline fishery would also result in a lost opportunity to tag all turtles with conventional tags, as well as continue the tagging with high tech satellite tags.**

The key to solving the problem of declining turtle populations is a cooperative effort at the international level. All Pacific longline and other pelagic fisheries should make accurate assessments of turtle interactions and mortality rates to assess the scale of the problem. Similarly, action at the international level is required throughout the Pacific to maintain the safety of nesting female turtles and protection of eggs and hatchlings, and to make a complete enumeration of the source and levels of mortality.

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[1] The two NMFS Scientists on the SSC abstained from the development of these conclusions and recommendations

The SSC is deeply concerned about the sudden contraction of the NMFS observer coverage on the Hawaii-based longline vessels. The SSC would like to bring to the attention of the Council that two thirds of the ongoing and planned NMFS turtle research is dependent on observer data.

Therefore the SSC recommends that:

1. **the US should: pursue international cooperation on turtle population recovery in an appropriate international forum;**

2. **NMFS mount with the cooperation of industry a tagging program to tag all turtles brought aboard or alongside longline vessels;**

3. **NMFS continue the observer program on the Hawaii-based longline vessels at an enhanced coverage rate;**

4. **NMFS complete an inventory of the sources of mortality at all stages and locations in the lives of turtles;**

5. **NMFS increase emphasis on the need to document the population dynamics of turtle populations and to promote the wider use of the TURTSIM model;**

6 **fishing be allowed within the longline closed area under controlled conditions, including 100% observer coverage**.

F. International:

1) Outcome of MHLC6

Paul Dalzell summarized the outcome of the sixth and possibly penultimate Multi-lateral High Level Conference to establish a management commission for highly migratory species in the West-Central Pacific. Dalzell used the Chairman's closing statement to comment on progress and outstanding issues including; area of application, scientific advice, decision-making, financial arrangements, observer program, transhipment, compliance and enforcement (including vessel monitoring system), boarding and inspection, final clauses and entry into force

The meeting had also discussed a formula for assessing a country's financial obligations to the new management commission. This included:

$ an equal basic fee which should be kept as low as possible.

$ a wealth payment which would reflect the development status of the member and the ability to pay

- **$** a variable fee based upon catch from the convention area (excluding archipelagic waters for the purpose of budget issues) with a weighting factor to be applied to the catch taken by developing States by their own flag vessels in their own EEZ.

Consideration as to the value of the catch may also be appropriate.

Other outstanding issues included the omission of Philippine and Indonesian Archipelagic waters from the MHLC area, with wording in the draft articles specifically excluding the South China Sea. The China-Taiwan question was also dealt with given China's objection to Taiwan having full membership status and voting rights. There were also concerns about the ability of French territories to join the full convention and vote, given that France remained in charge of enforcement in their EEZs.

Japan and Korea stated that they can not accept the United Nations Implementing Agreement on the Law of the Sea as the legal foundation of the MHLC convention as both governments have not ratified that UNIA. Japan and Korea and cannot accept the boarding and inspection on the high seas requirements stipulated in the MHLC convention articles nor can Japan and Korea accept the current proposed decision making process that calls for both consensus and 4/5 majority vote process.

Small developing countries in the region, e.g. atoll micro-states such as Kiribati and Tuvalu are concerned about how much it will cost for them to join the MHLC convention. They don't have the funds to join up and want a subsidy from the developed nations to participate.

Philippines is concerned that it will be unable to install VMS on their high seas fleet of bancas or canoes. The Philippines also want to eliminate the provision limiting high seas transshipment due their current reliance on at-sea transhipment for their purse seine fishery.

2) Tongan HMS FMP

Paul Dalzell explained that the Tongan Government had recently published a draft pelagic fisheries management plan, which limited entry to 25 longline vessels. Dalzell explained that while there were less than 25 Tongan vessel based in Toga, the Tongan Government was willing to entertain the possibility for joint-venture fishing with foreign companies. Fishing companies from Taiwan and Korea were believed to be interested in fishing in the Tonga EEZ. Previously, all foreign longline fishing had been banned from the Tongan EEZ. Foreign vessels would be displaced, however, as more Tongan vessels enter the fishery.

G. Recreational Fisheries Data Task Force

1) Survey of small-vessel pelagics fisheries production in Hawaii

Craig Severance reported on the recent TF Working Group that had put together a survey for Hawaii, which would generate a total pelagics catch for the state, which could be partitioned into

commercial and recreational catches. The survey was very simple, with a total of only 6 questions, and a focus on only key pelagic species (aku, ahi, bigeye, blue marlin, striped marlin, mahi and ono).

The survey would comprise a mail out to all the vessels listed on the USCG and DBOR registers, with a follow up mailing to non-responders. A phone survey would also be conducted on the people not responding twice to elicit their information through a phone call. If the full funding was not available then a sub-sample would be selected. It was also noted that catches should be reported in numbers not weights for the sake of accuracy. The focus of this project was catch and fishing effort, but socio-economic and socio-cultural data could be added to the survey depending on funding support.

The TF had noted the reduction in urgency of generating a total pelagics catch with respect to MHLC, since it appeared that TACs would not be declared until several years after the new Commission was established. However, the Council was still delinquent in having good recreational catch estimates for Hawaii, required under the Magnuson Act, which was due to be re-authorized. There were also questions about the approval that would need to be sought to conduct this work, specifically from the Office of Management & Budget (OMB) if this was to be a survey conducted by a federal agency, or the Human Research Cooperation of the University of Hawaii if done through JIMAR

2) PFRP project for Hawaii recreational fisheries

Paul Dalzell stated that his project with Sam Pooley on developing a data based comprised of past recreational and small boat data, supplemented with data from fishing clubs had been successful in getting funding from PFRP. He noted that the funding level was reduced but would still be sufficient to get the project established. This project would be instrumental in establishing long term trends in the recreational fisheries in Hawaii. A media blitz before the project started and a pre-sampling trial of the survey were recommended.

Dalzell finished by noting that at the last Task Force meeting, Mike Nelson, the creel sampling project manager for the HDAR MHI-MRI project had explained about the expansion of this projects activities. The project was expanding to cover more of the Big Island and Maui and would include both shoreline and boat based recreational fishing. It was thought that this project could be expanded to cover all of the Main Hawaiian Islands. Dalzell noted that the TF, which was an SSC recommendation, had accomplished a great deal in the 6 month period of its existence

The SSC views with satisfaction the progress made by the Recreational Data Task Force.

H. 1999 Annual Report

Paul Dalzell brought to the attention of the SSC the improved International Module in the Pelagics Annual Report, and that the Pelagics Plan Team intended that this would be analogous

to the SAFE report required under the Magnuson Act, as it reported on the condition of the main target stocks. Most of these updates were summarized from the SPC's Standing Committee on Tuna and Billfish, but could be augmented by studies elsewhere such as swordfish and blueshark from the NMFS Honolulu Laboratory and the blue marlin assessment made by IATTC.

I. Pelagics AP recommendations

Pelagics AP Chairman Bill Mossman presented the AP recommendations to the SSC.

The SSC supported the following AP recommendations, A1, A4, C2, C4, C7, C9, C10 and C11. The SSC recommended that recommendations C2 be edited as follows:

The Advisory Panel asks the Council to investigate the ecological and fisheries impacts and legal issues concerning untethered FADs in the Central-West Pacific.

The SSC also recommended that, given the recent down-sizing of the Hawaii longline observer program, C7 be reinforced with stronger language as follows:

The AP recognizes the value of observer programs and supports the NMFS PIAO efforts to secure additional funding to restore the coverage in the Hawaii longline fishery at least to the previous 3-5% level or if possible to expand beyond this minimum level of coverage.

A1 The AP recommends that HDAR improve the collection of Hawaii's offshore recreational fisheries catch and effort data.

A4 The AP requests that the council continue to support a synthesis of economic studies on recreational fisheries in Hawaii with the goal to identify appropriate economic multipliers, and to ensure that this analysis include a thorough review of similar studies undertaken in Texas, Florida, California, Costa Rica, Puerto Rico, Mexico and Panama, and their management implications.

C2 The AP asks the Council to investigate the impact and legal issues concerning untethered FADs in the Central-West Pacific.

C4 The AP requests the Council to continue to improve the various information and communication services on its website

C7 The AP recognizes the value of observer programs and supports the NMFS PIAO efforts to secure additional funding to maintain or increase coverage for pelagic fisheries.

C9 The AP requests the Council to continue its efforts to obtain funding to investigate the increased utilization of blue sharks.

C10 The AP requests the Council to recommend that the boundary above which longline-albatross mitigation measures be used remain at 25 deg N, and not as recommended in the USFWS BO at 23 deg N.

C.11. The AP requests the Council to ask NMFS to quantify what effect the turtle area closure to the Hawaii longliners has had on reducing turtle mortality rates from longline fishing within the closed area.

J. Pelagics PT recommendations

Pelagics Plan Team Chairman Chris Boggs presented the Plan Team recommendations

1) Region-wide recommendations

The SSC endorsed the following region-wide recommendations, but were concerned about recommendation 4. Although this recommendation sought consistency with recreational fishing in the Atlantic, catch and release of fish was not a zero-mortality issue. The SSC perspective was that this measure unfairly absolved recreational fisherman from bycatch responsibilities as stipulated by the Magnuson Act.

1. The Council should support an analysis of trends in mahimahi and ono landings and catch rates, and other incidental catches (i.e. opah pomfret rainbow runner etc), throughout the western Pacific region, including data from EEZ and distant water fisheries

2. Because the longline fishing is expanding in terms of ports of landings the Council should authorize NMFS to use VMS information to monitor logbook compliance. The Plan Team believes this information to be vitally important for other fishery monitoring and assessment purposes. At a minimum VMS data on noon positions should be provided to allow some approximate validation of logbook reported positions

3. All of the annual report modules should attempt to address bycatch reporting requirements of the SFA.

4. Council should seek similar provisions excluding tagged and/or released fish from being counted as bycatch as are given for Atlantic HMS.

2) PT recommendations on the Recreational Fisheries Data Task Force

The SSC supported recommendations 1-3, however, suggested better wording than 'quick fix' be used in recommendation number 1.

1. The Council should conduct a 'quick fix' mail and phone survey to estimate the total pelagic catch for Hawaii.

2. The Council and TF need to organize an education outreach program to encourage voluntary reporting of recreational fishery data.

3. The potential of the Div. of Boating & Ocean Recreation and the US Coast Guard data bases for assisting in generating recreational catch data should be investigated.

4. Beyond the recreational data issues the TF should continue to represent the interests of recreational fishermen in Hawaii

K. Other business

There was no other business

L. Public comment

During the discussion on the scientific basis for the turtle closed area, Attorney Paul Achitoff of Earthjustice, who represented the plaintiffs in the case commented on the basis for thelegal action against the National Marine Fisheries Service and the Hawaii-based longline fishery. He agreed with many of the statements and conclusions of the SSC but argued that the legalk action wa snot one of symbolism or policy, but that it was a legal issue. There were, he stated, certain legal realities that must be faced. When impacts on populations listed under the Endangered Species Act are assessed, this includes all sources of mortality. While this may be unfair, it is required by law. In this case, there had been no evidence that the fishing industry had pressured NMFS into making an effort to investigate mitigation measures to reduce turtle-longline interactions. Nor had NMFS itself undertaken such work until the court case required it of the agency. NMFS scientists had in fact made suggestions on possible means to reduce interactions that looked promising but no action was taken. Achitoff believed that this was only the beginning of further legal suits which would be brought against the Hawaii-based longline fishery.