



WESTERN
PACIFIC
REGIONAL
FISHERY
MANAGEMENT
COUNCIL

Report to the Council from the 89th Meeting of the Scientific and Statistical Committee

Council Office Conference Room
1164 Bishop Street, Suite 1400
Honolulu, HI 96813

May 17-19, 2005

Pelagic Fisheries

A. International Pacific Research Center

Kelvin Richards reported on IPRC and ocean modeling. The SSC heard with interest the work ongoing by IPRC for models of ocean circulation around Hawaii, particularly the potential to model ocean circulation and fish larval transport within the Hawaiian Archipelago.

B. Bigeye Overfishing Plan

International

Bob Skillman reported on the IATTC 1st Meeting of Data Correspondents and 6th Meeting of the Working Group on Stock Assessment. Skillman reported that the data workshop discussed problems relating to inconsistencies between yellowfin and bigeye catch estimates reported by observers, on logbooks, and from cannery landings. Spain reported that their longline fishery in the Pacific targets swordfish and that the landing made in Chile are transshipped to Spain. An SSC member also reported that landings and transshipment of swordfish from Spanish longliners is now also taking place in Papeete. Skillman noted China's catches are reported through the Organization for the Promotion of Responsible Tuna fisheries (OPRT) which reports shipments to Japan of Chinese caught fish.

Skillman reported briefly on an Eastern Pacific Ocean (EPO) bigeye (BET) stock assessment using an age-structured, catch at length analysis (A-SCALA) model, which is similar to MULTIFAN-CL but lack spatial structuring. The model indicates that the BET stock will continue to decline without reduction in fishing mortality (F), that the current level of F is well above that which would produce MSY, that catches have been about 5% above the MSY level, and that the spawning biomass ratio is 41% below the MSY level. Recent declines in recruitment have contributed to low spawning biomass ratio. The average size of BET in longline catches is well below that which would maximize the yield per recruit.

Skillman also reported on the yellowfin tuna (YFT) assessment, which looks a little more optimistic. The current spawning biomass ratio is close to but below the level at MSY, fishing mortality is above that which would produce MSY, and the average size is below that at which

the yield per recruit is maximized. However, biomass is not projected to decline significantly in the short-term because recruitment is still strong.

Charles Karnella also reported on international pelagics fishery issues. These included progress on U.S. ratification of the Western and Central Pacific Fisheries Convention (WCPFC, the recent bilateral meeting with Japan on North Pacific albacore, and the meeting of the General Advisory Committee (GAC) to the U.S. delegation to IATTC. The White House has recommended to the U.S. Senate ratification of the WCPFC convention, and NMFS and the Department of State are working with the Senate with the hope that hearings will be held in the near future. With respect to albacore, the US and Japan will likely introduce a motion at the next IAATC meeting in June this year to limit fishing effort to current levels in the EPO. Among the issues discussed at the IATTC GAC meeting was the Council's alternatives for the BET quota for US longliners in the EPO. The GAC favored the Council options that would exclude those fleets from the quota system which caught less than 500 mt annually, or setting the US quota at 250 mt.

Council Chair Roy Morioka provided additional comments on the IATTC GAC meeting. This included BET, yellowfin and albacore stock status. The GAC also heard preliminary results of a recent tagging study which indicated that tagged BET did not generally migrate more than 1000 nmi from their point of release.

This in turn generated discussion in the SSC about the population of bigeye in the Pacific and the different stock assessments conducted in the Eastern and Western Pacific.

The SSC notes that the separation of Pacific bigeye into two stocks at 150° W is an artificial separation made to enable separate stock assessments by the IATTC and WCPFC. A more realistic view is that the bigeye population in the Pacific is a single spatially heterogeneous population with slow mixing between regions. This viewpoint is supported by the results of genetic and tagging studies. A Pacific-wide stock assessment being conducted incorporates the tagging data and divides the Pacific resource into eight regions based on the distribution of key fisheries. The model estimates slow mixing among eight defined regions and considerably different impacts of the fisheries in the eight regions. These results suggest that recognizing the spatial heterogeneity of bigeye and implementing management actions differently in different regions would be more appropriate than managing on the basis of a single pan-Pacific stock. However, the eight fishery-based regions being employed in this assessment do not coincide with national or RFMO areas of jurisdiction.

BET overfishing plan

Paul Dalzell reviewed the draft amendment to the Pelagics Fishery Management Plan which contained a suite of measures for the Council to consider with respect to addressing overfishing on Pacific BET. These included:

- Council Management Process for Pacific bigeye tuna.

This measure was an analog of the procedure adopted by the Pacific Council for dealing with international management of highly migratory species (HMS) in the eastern Pacific, and the

foundation plan for international management of HMS in the Atlantic. This management process was previously reviewed by the Pelagics Plan Team, and **the SSC edited and approved the Management Process during their review and comments on the PPT recommendations (see below).**

- Specific management measures for bigeye tuna in the WCPO

There was considerable discussion by the SSC concerning management measures for the western Pacific that might be proposed by the US Delegation to the Western and Central Pacific Fisheries Commission. The alternatives proposed by the Council included the following:

Limited entry

Time/area closures

Quotas

Gear restrictions (primarily on Fish Aggregating Devices or FADs)

The SSC recommends that the US Delegation to the WCPFC continue to give the highest priority to examining input controls such as limits on the number of vessels, limited entry programs including transferable catch and effort quotas, limits on fishing effort, time and/or area closures and prohibition of sets on FADs and floating objects. The SSC notes that work is ongoing on the analyses of the WCPFC BET management options and looks forward to reviewing the results at future meetings.

- Management measures for bigeye in the EPO

The SSC reviewed the alternatives in the draft amendment for the BET quota established by the Inter-American Tropical Tuna Commission (IATTC) in the eastern Pacific Ocean (EPO).

Given the small size of U.S. longline catches as well as those of the other coastal American nations, the SSC does not believe that the U.S. or the other coastal American longline fleets individually or collectively contribute significantly to the bigeye overfishing problem. Also, given the small differences in the harvest levels proposed in the first four alternatives, the SSC doubts that any rigorous scientific analysis can be completed in the limited time available that would provide the basis for selecting the optimum alternative. If the Council chooses Option 1 as the preferred alternative, it should be edited to provide a specific harvest level, for example:

Longline fleets that continue to take less than 1% of the total average BET catch, as reported between 1999-2003 (555 mt) in the EPO, should be exempted from current quota regulations.

- Management measures for bigeye tuna in Hawaii's coastal fisheries

The SSC reviewed the management measures proposed in the draft amendment document for non-longline fisheries catching BET in the US EEZ around Hawaii. The SSC continues to be extremely frustrated by the lack of progress on documenting the catches by Hawaii's coastal fisheries, especially those with apparent sizable catches of bigeye tuna and other tunas. Lack of such data reduces the Council's ability to manage the pelagic fishery based on scientific information including stock assessment. In addition, lack of such data could place the U.S. and particular segments of our fishery at a disadvantage in deliberations of the WCPFC and IATTC.

Thus, the SSC continues to recommend that the Council adopt alternative 2 as amended by the SSC (Implement a federal permit and reporting program for all pelagic fishermen) because it encompasses the whole data issue. The SSC has in the past suggested an incremental approach to implementing alternative 2 in recognition that some segments of the fishing community and governmental agencies would be concerned by the scope and costs of fully implementing alternative 2. The SSC notes that Alternatives 3 (Implement a federal permit and reporting program for offshore mixed-line fishermen), 6 (Expand the Hawaii Marine Recreational Fisheries Survey, and 8 (Assist the State of Hawaii to improve its fishermen and dealer reporting systems) would be among such incremental steps.

C. Plan Team Recommendations

Keith Bigelow presented the Pelagic Plan Team (PPT) recommendations. Overall the SSC were supportive of the PPT recommendations but made edits as noted by underlined text

American Samoa

1. The Pelagic Plan Team reiterates its recommendation that DMWR seek grants to develop infrastructure and processes to utilize bycatch.

2. The Pelagic Plan Team recommends that once the limited entry program is implemented, the Council explore additional options for managing capacity in the American Samoa longline fishery such as a limit on the maximum number of hooks deployed in the US EEZ around American Samoa.

Two local groups have received approval for federal grant funds to set up bycatch processing facilities. The SSC notes apparent significant progress on recommendation 1 and fully supports recommendation 2.

Guam/CNMI

3. The Pelagic Plan Team recommends that the Council continue to urge the Governments of Guam and CNMI to draft legislation requiring fish vendors to report their purchases directly from fishermen to their respective fisheries agencies.

The SSC recommended that the Council provide sample legislation and support as appropriate to the Governments of Guam and CNMI.

Hawaii

4. The Pelagic Plan Team recommends that the HMRFS program consider an alternative sampling design for registered recreational boat fishermen, in addition to the random digit dialing telephone survey. It is envisaged that this would lead to more precise estimates of catch and effort from the HMRFS survey, by concentrating on the universe of known recreational boat fishermen.

The SSC supports the intent of this recommendation with the edit as noted above

5. With respect to the offshore (Cross Seamount, NOAA weather buoys, Private FADs) mixed line tuna fishery, the Pelagic Plan team notes the following:

1. The advent of the use of multiple shortlines (longlines less than 1 nautical mile (nm) in length) means that pelagic longline fishing can be conducted which is not subject to federal regulations (permits, logbooks, observers, VMS, area closures, turtle bycatch mitigation, seabird bycatch mitigation etc). The Council's intent for the provision for longlines less than 1 nm in length was not intended to be interpreted in this manner, and was a provision for fishermen employing a 'kaka' line. The Pelagic Plan Team recommends that the Council revisit the definition of longline gear less than 1 nm in length, and considers regulations for this gear, particularly the number of units that may be deployed by each vessel.

The SSC supports this recommendation.

2. While there has been great improvement on the reporting of bigeye tuna (BET) catches through the State of Hawaii's fishermen and dealer report systems, there are concerns that the volume of reported landings do not match the perceived volumes of fish landed by troll and handline/mixed-line fisheries in Hawaii. The Plan Team recommends that WPacFIN and DAR convene two workshops: the first to review the catch and effort reporting systems, and algorithms for the expansion of BET and yellowfin (YFT) landings; and the second to review the results of any changes in the application of these modified algorithms in estimating the BET and YFT landings in the troll and handline/mixed-line fisheries in Hawaii

The SSC supports this recommendation.

3. There was a lack of consensus for the perceived need for federal permitting of the offshore mixed line fishery and the following aspects should be investigated prior to proposing additional regulations on this fishery:
 - Strengthening the existing mechanisms for the State of Hawaii reporting of catch and effort from this fishery.

- Estimating the administrative burden of federally permitting the various fisheries sectors that are catching BET and YFT. This includes:
 - i. Federal permit for all pelagic small boat fishermen
 - ii. Federal permit and reporting for offshore mixed line fishery
 - iii. Federal permit and reporting for recreational pelagic small boat fishermen
- Accurately estimating the magnitude of BET catches by the non-longline fisheries sectors in Hawaii in relation to the total domestic BET catch.

The SSC supports recommendation to the extent that it leads to the implementation of the prior SSC recommendation for full federal reporting of all pelagic catches made in federal waters.

Region-wide

6. The Plan Team recommends that the Council and WPacFIN explore standardized training options for fisheries technical staff on species recognition, especially coral reef and bottomfish species. Such training may result in a certification program for technical staff in completion of a course of instruction.

The SSC supports this recommendation.

International

7. The Pelagic Plan Team recommends that the Council ask both the chair of the International Scientific Committee and the chair of the North Pacific Albacore Working Group about North Pacific albacore stock assessment results be presented in the context of the Western Pacific Council's reference points for stock status determination. The Council's annual SAFE report requires outputs from stock assessments on the ratios of current biomass and biomass at MSY ($B_{\text{current}}/B_{\text{msy}}$) and current fishing mortality and fishing mortality at MSY ($F_{\text{current}}/F_{\text{msy}}$).

The SSC supports this recommendation.

8. The Pelagic Plan Team supports the previous SSC recommendation that the Council have formal standing in the US delegations to Regional Fishery Management Organizations (RFMOs) such as the Western and Central Pacific Fishery Commission and the Inter-American Tropical Tuna Commission (IATTC).

The SSC supports this recommendation.

9. The Pelagic Plan Team recommends that the Council's Pelagics FMP be amended to include the following protocol for how the Council will address the problem of overfishing on Pacific highly migratory fish stocks:

1. Council receives notice of the declaration of overfishing or an overfished condition with appropriate documentation from NMFS, including stock assessment, area of consideration, fishery and stock data supporting the NMFS notice, and time frame for Council action.
2. Council refers NMFS report to its Pelagics Plan Team, advisors and SSC for review and advice with focus on
 - a. The condition of the stock involved
 - b. The possible reasons for the stock condition including fishery and environmental conditions that may be relevant to the stock condition
 - c. The relative role of U.S. fisheries in overall stock harvests
 - d. Existing conservation and management measures of the Regional Fishery Management Organization (RFMO) with jurisdiction over the stock involved
 - e. Possible measures to end overfishing or rebuild the stock involved
3. Council considers possible domestic fishery conservation measures.
4. Council considers possible international fishery conservation measures to be suggested to RFMO.
5. Council compare and evaluate alternative measures, including distinction between Pacific-wide and regional measures effects and effectiveness
6. Council considers reports from advisory bodies
7. Council selects initial preferred alternative for corrective action to address problem
8. Council distributes draft decision document for public review and advice
9. Council takes final action
 - a. Recommendations for domestic regulations
 - b. Recommendations for international actions
 - c. The Council seeks representation on any US delegation to Regional Fishery Management Organizations
10. Council drafts a position paper on how overfishing may be ended and/or stock(s) rebuilt for Pacific HMS.
11. Council staff should also scrutinize RFMO meeting agendas to identify issues of importance to the Council, not simply those that pertain to overfishing. The Council should clearly and forcefully state its position to the US Delegation on every substantial issue.
12. Regional fishery management organization meets and acts on fishery conservation and management needs
13. Council is advised on RFMO actions, US. government positions, and requirements under applicable treaties
14. Council determines appropriate regulatory response for domestic fisheries consistent with international agreements and M-SA.
15. Council submits recommendations (if any) to NMFS for implementation
16. NMFS implements approved recommendations as necessary.

The SSC supports this recommendation with the edits as noted above..

Turtles

10. The Pelagic Plan Team applauds the progress of the Council's Sea Turtle Conservation Program and endorses the Council's Turtle Advisory Committee (TAC) recommendations.

The SSC supports the TAC's endorsement of the Council's Sea Turtle Conservation Program



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Ecosystem and Habitat

A. MPA Objectives and Criteria DRAFT

Tony Beeching provided an overview of the MPA Working Group's draft document on MPA Objectives and Criteria for Establishing, Monitoring and Evaluating MPAs. He said that the document is still a work in progress and will serve as a guide for the Council and resource managers when considering or designating MPAs. Beeching then requested comments on the document from the SSC.

Several members of the SSC noted that there should be more discussion on the purpose of the document in the introduction to provide readers more context on what the document is to achieve and why it is being produced.

The SSC encouraged the MPA Working Group to think about the role of federalizing state MPA as an example of a cooperative option.

The SSC noted that more information on economic impacts/benefits of MPAs should be included in the socio economics sections of the document.

The SSC suggested an additional section be added to the draft MPA Objectives and Criteria document which addresses the potential regulatory implications and expected funding needs

The SSC suggested that the purpose, need and context of the document be expanded within the introduction to the document.

B. Ecosystem Science and Management Planning Workshop

Makaiau briefly summarized highlights of the Ecosystem Science and Management Planning Workshop held in the Council office on April 18-22, 2005. The workshop was attended by 60 participants representing federal and state agencies and national and international academic and science institutions and non-government organizations from the United States, Canada, Australia, and New Caledonia.

He stated the Council also invited an Expert Panel of ecosystem scientists and modelers to help identify the science requirements to support ecosystem-based approaches to marine resource management in the Western Pacific Region and provide recommendations on key issues pertaining to data, models and ecosystem indicators. Members of the Expert Panel included: Villy Christensen and Carl Walters, University of British Columbia; Neil Gribble, Queensland Department of Primary Industries; Steve Murawski, National Marine Fisheries Service; Jerry Ault, University of Miami; David Fluharty, University of Washington; and Mike Fogarty, National Marine Fisheries Service.

He then provided an overview of the workshop process and summarized some of the major points synthesized by the Expert Panel which include:

- Ecosystem Based Approaches to Fisheries Management is a given and the Magnuson Stevens Act will likely include provisions to direct this policy;
- Ecosystem Based Fisheries Management will likely be place based and fisheries will be managed for abundance not scarcity (i.e. lower harvest rates from higher biomass) and will have to be place based.;
- Ecosystem indicators should be determined by Regional Fishery Management Councils;
- In the Western Pacific, there are many fishery dependent and fishery independent data sets in disparate formats which should be analyzed and assessed for their utility in ecosystem modeling;
- Managers should understand and be aware of the limitations of ecosystem models;
- Should policy and management issues direct ecosystem modeling? Or should ecosystem modeling drive policy and management?
- Council should work with the local experts to determine ecosystem indicators for each archipelagic region (e.g. Mariana, Hawaii, Samoas and the remote island areas); and
- A separate ecosystem workshop which focuses on social sciences should also be convened.

Makaiau stated that the workshop report will be completed in July 2005.

John Hampton noted that implementation of ecosystem based approaches to fisheries management is not intended to replace the existing management paradigm and need for single species stock assessments. Instead, an ecosystem-based approach to fisheries management should build upon the existing single species management system by taking into consideration, ecosystem parameters which affect fishery resources and the marine environment.

John Sibert noted that this point was not explicitly made at the workshop however, several of the expert panelist noted single species stock assessments were a necessary component of ecosystem management.

The SSC notes that Ecosystem based fisheries management does not eliminate the imperative to monitor stocks of target species and that single species stock assessments are a critical component of Ecosystem management.

C. Report on the Mariana FEP Pilot Project

Makaiau provided an update on the progress of the Mariana Archipelago FEP Pilot Project. He said that progress continues on developing a baseline description of the biological, ecological and physical components of the Mariana Archipelago, including baseline information on environmental cycles, resource rhythms and human use patterns over time. In addition, work began on establishing partnerships with user communities and government and non-government organizations in order to examine practice based methods that allow for experimentation to facilitate learning and adaptive management. Two candidate study areas are being investigated, one on the southside of Guam and the other on Guam's offshore banks.

Paul Callahan noted that it is difficult to define the term community in Guam due to the number of diverse stakeholders who utilize the nearshore waters for many diverse purposes and who hold diverse values.

The SSC notes that defining communities is not always a straightforward task. Like ecosystems, communities can be thought of at different scales. For the purpose of defining a community with which to work on ecosystem-based fishery management plans, a community could be a village or town, a group of villages, a region, or even an entire island or country. Regardless of which scale is identified as appropriate for a given situation, place-based definitions of community using existing political or geographic boundaries may not be adequate for some purposes.

The SSC further notes that once a community is defined, there remains the issue of who represents the community. It is critical to be familiar enough with the community to identify the full range of stakeholders with whom to work on fishery management plans.

The SSC recommends that one goal of the upcoming Social Ecosystem Workshop be to explore the issue of defining communities and develop guidelines or principles

that would help the council implement its community-based ecosystem management programs in the Western Pacific.

Jeffrey Walters noted that the Coral Reef Ecosystem Plan Team emphasized the need to make every effort to include local resource management agencies in this pilot project initiative. Several members of the SSC agreed.

Makaiau also described a proposed range of alternatives to consider in designating Management Unit Species for the draft Mariana Archipelago FEP. The proposed alternatives are:

- Alternative 1. No action (combine MUS of FMPs for bottomfish/groundfish, crustaceans, coral reef associated species, precious corals whether they occur in Mariana archipelago or not).
- Alternative 2. Combine MUS of above FMPs that occur in Mariana Archipelago in FEP.
- Alternative 3. Alternative 2, plus macro-organisms known to be non-target species or to be associated with MUS in Mariana Archipelago through predator/prey or habitat relationships.
- Alternative 4. Alternatives 2 and 3, plus all organisms believed to be associated with MUS in Mariana Archipelago through food web or habitat relationships.

Some SSC members noted that there needs to be clarification regarding the definition of macrofauna in alternatives 3. To some ecologists, macrofauna includes very small organisms.

Members then engaged in a discussion on the designation of MUS pursuant to the Magnuson Stevens Act and the requirements which must be met for species managed by Councils. Of particular note is the Coral Reef Ecosystem Fishery Management Plan which already includes literally thousands of species and coral reef ecosystem MUS.

Regarding alternatives for the Mariana FEP, the SSC suggests that a composite of alternatives 2 and 3 may be appropriate and encouraged planners to avoid including too many tangential species as MUS.

The SSC notes that consideration to include any MUS within this management scheme should be flexible and issue driven rather than pre-prescribed by an all inclusive species list.

D. Coral Reef Ecosystem Plan Team Recommendations

Jeffrey Walters briefly summarized the discussion of the Coral Reef Ecosystem Plan Team. He noted that the plan team did not make any formal recommendations with respect to the agenda items that were discussed at the SSC.

E. Public Comment

No public comments were given



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Insular Fisheries

A. Bottomfish Management

MHI Bottom fish Overfishing Plan

Mitsuyasu reminded the SSC of the anticipated declaration of overfishing on MHI Bottom fish resulting from the implementation of the new MSY Control Rule. With respect to data improvement, he noted that feedback from the public hearings supported the proposed targeted survey of all MHI bottomfish fishermen. It was noted that this survey would need to be conducted under state authority and auspices, but that input from PIFSC social scientists and council social scientists into survey design and sampling strategy was critical.

- **The SSC recommends that the proposed targeted survey of MHI bottomfish fishermen be conducted in cooperation with the State of Hawaii as soon as possible. This survey should obtain data on fishing effort and targeting of bottomfish by recreational as well as commercial bottomfish fishermen.**

With respect to options to control effort, Bob Moffitt gave the plan team report and noted that the control rule estimate of overfishing was based on 02 data, and that the 03 data suggested continuing decline in effort. There was some discussion of the need to standardize cpue data especially since some MHI highliners based in Kewalo basin had left the fishery. The SSC reviewed the 8 proposed alternatives to reduce effort on MHI bottomfish. There was no support for option 6 to establish quotas at this time. There were expressions of concern about options 4 and 5 a control date and move toward limited entry, because of the lack of data on participating fishermen, especially from the recreational sector. There were concerns expressed about the lack of analyses of the effectiveness of the state's closed areas. The SSC focused on options 2, 3 and 8.

- **The SSC recommends that the Council give most consideration to management options 2, 3, and 8, as listed below:**
- 1. No action.
 2. Incorporate the State's Main Hawaiian Islands bottomfish management regime into Federal regulations.
 3. Establish new bottomfish area closures in Federal waters in the MHI in addition to the current state closures:
 - 3a. Close Federal waters around Penguin Banks to bottomfish fishing
 - 3b. Close Federal waters around Middle Bank to bottomfish fishing
 4. Establish a control date for future MHI fishery participation.
 5. Establish a limited entry program for the MHI fishery.
 6. Establish individual fishing quotas for MHI fishermen.
 7. Establish a Federal permit and logbook program for all fishermen targeting bottomfish on Penguin Banks or Middle Bank.
 8. Establish July-September seasonal closures for targeting and landing of bottomfish from the MHI
- **The SSC notes that Option 2 could lead to more effective cooperative enforcement as well as research. In addition, Option 3 could be combined with option 2, to modify existing, or creating additional, closed areas. These areas could include additional parts of Penguin Bank if scientifically based on new habitat data. Option 8 (seasonal closures) should be fully explored, including the possibility of even longer closure periods. The SSC also notes that the CPUE data for the Mau Zone needs to be re-standardized.**

Plan Team Report

The SS reviewed the Plan Team report and generally concurred with all the Plan Team's recommendations

- **The SSC concurs with all Bottomfish Plan Team recommendations as listed below. With respect to Guam Recommendation 2 and CNMI Recommendation 1, the SSC further recommends that the Council offer sample legislation and other appropriate assistance to the governments of Guam and CNMI to support the development of enabling legislation.**
- **The SSC recommends that PIFSC make every effort to acquire the necessary human resource staffing to enable the conducting of bottomfish stock assessments.**

The Plan Team recommendations are listed as follows:

Regarding American Samoa Recommendations, the Bottomfish Plan Team:

- 1) Requests the Council to coordinate a fish identification training workshop for fishery technicians from all Western Pacific Region fishery agencies to improve standardization of monitoring systems and improve data quality.
- 2) Requests the Council to support the establishment of a centralized fish market.
- 3) Requests the Council to encourage DMWR to require fishermen and store owners to allow technicians to conduct interviews.
- 4) Recommends that the FoxPro data collecting system be modified to allow data entry of scientific names in addition to common names or local names.
- 5) Supports a data sampling port being established near the boat docks to not only centralize interviews but to maximize the quantity of interviews.

Regarding Guam Recommendations, the Bottomfish Plan Team:

- 1) Recommends that DAWR complete the baseline biological survey of the red-gill emperor, *Lethrinus rubrioperculatus*. The contract to analyze Bank A trips has been out since 2003 and should be completed as soon as possible.
- 2) Asks that the Council should send a letter to the government of Guam requesting the necessary legislative and administrative actions be taken to provide legal authority to the local fishery departments to monitor and collect information from all fishing sectors.
- 3) Supports the following changes to the assessment and monitoring of Guam bottomfish resources:
 - a. Separate landing of BMUS and CPUE for BMUS in the shallow water and deep water species complexes.
 - b. Consider Guam and CNMI bottomfish resources as one stock, similar to what is done with Hawaii bottomfish.

Regarding Hawaii Recommendations, the Bottomfish Plan Team:

- 1) Asks that NMFS provide immediate guidelines on what level of action is required by the Council to properly address overfishing in Hawaii.
- 2) Suggests the Council immediately support options to collect landing and CPUE information from the main Hawaiian island recreational fishery.
- 3) Forms a sub-working group of Hawaii BPT members to meet immediately to develop and assess options for reducing main Hawaiian island effort in federal EEZ waters.
- 4) Asks the Council to request that PIRO establish a fast track method to vet the NWHI bottomfish observer data so that the information can be used by PIFSC.
- 5) Requests that the Council support efforts to provide additional resources to HDAR to improve processing fishing reports as required by state statutes.

Regarding CNMI Recommendations, the Bottomfish Plan Team:

- 1) Recommends the Council send a letter to the government of CNMI requesting the necessary legislative and administrative actions be taken to provide legal authority

to the local fishery departments to monitor and collect information from all fishing sectors.

Regarding Region-wide Recommendations, the Bottomfish Plan Team:

- 1) Recommends that the Council conduct a sensitivity analysis on the effects of MPAs on fishery based estimates of fishing mortality and CPUE for potential impacts in relation to overfishing/overfished thresholds.
- 2) Requests PIFSC to use the Stock Assessment (SAIP) funding to establish an ongoing program to collect bottomfish size frequency information in each island area; age at maturity; in support of addressing the Bottomfish Stock Assessment Workshop recommendations.
- 3) Recommends the Council, NMFS and State fund a contractor to conduct stock assessments on the bottomfish resources in the WPR.
- 4) Requests that the Council find resources to immediately support the high and medium recommendations from the Bottomfish Stock Assessment Workshop.
- 5) Recommends that the Council support a "SEDAR-type" stock assessment that includes the Council and public in the stock assessment review process. However, the peer review process should be less onerous and less costly than full blown SEDAR.

B. Black Coral Management

State of Hawaii Research

Tony Montgomery presented results from the State of Hawaii's black coral research. The State of Hawaii received a grant thru the Hawaii Undersea Research Laboratory to look at black coral and its age-size frequency distribution; growth rates; densities; and genetics. Montgomery reviewed Grigg's previous studies on black corals and replicated Grigg's methods for his 2004 survey.

Montgomery presented his results of the survey to the plan team with a comparison to Grigg's previous studies in 1975, 1998, and 2001. From the results, he showed that there was an increase in mortality and population structure; that the larger/older age class has diminished from the population; and that there are fewer smaller/young age classes found. From this, he has concluded that there have been continued changes in the population due to harvesting, and a potential for drop off in recruitment still exists. His results also reinforced Grigg's 2001 data and research.

Council Management Options

Joshua DeMello, Council staff, presented the SSC with the following management options for the black coral:

1. No Action
2. Eliminate the minimum base diameter requirement
3. Eliminate the minimum height requirement
4. Eliminate the exemption

5. Eliminate the exemption and base diameter requirement
6. Eliminate the exemption and height requirement

The SSC discussed adding a possible Option 7, closing the fishery, to the list.

Plan Team Recommendations

In regards to Precious Corals Fishery, the Plan Team:

- Recommended the Council remove the exemption allowing harvest of black corals with a minimum base diameter of 3/4 inch or minimum height of 36 inch by persons who reported harvest to the State of Hawaii within five years prior to April 17, 2002.

Recent scientific information indicates substantial loss of large black coral colonies and overgrowth of black coral substratum due to *Carijoa riisei*. This, coupled with harvesting pressure on large corals, may be reducing the overall recruitment of black corals in shallow harvested areas of the Auau Channel.

- Recommended the Council adopt a 48-inch height requirement for minimum harvest of black coral colonies.

The PC PT notes that the minimum base diameter as a measure to manage black coral fishery may be insufficient as base diameter may not have a positive correlation coefficient with maturity of black coral colonies. They also noted that the base of any black coral colony can be measured at different points and have different measurements. The Plan Team also agreed that having one measurement would be easier for enforcement.

SSC Discussion and Recommendations

The SSC was concerned about the apparent decline of black coral in Hawaiian waters. Recent surveys indicate that abundance of the adult, harvestable portion of the stock as well as recruitment has declined substantially from earlier years. It is not clear whether this is due to fishing, the invasion of *Carijoa riisei*, a combination of these or other factors. Because of these concerns:

The SSC recommends and supports an additional option 7, that a moratorium be placed on the harvest of black coral in Federal waters for a five year period, during which, research will be conducted as described below. If it can be shown that recruitment recovery has not occurred, the moratorium will remain in place.

The SSC further recommends that if recruitment recovers and the moratorium ends, harvest limitations be established based on a science-based sustainable harvest plan.

In addition, the SSC recommends that the Council voice its concern to the State of Hawaii about the apparent decline of black coral and recommends that the State of Hawaii adopt a similar management approach and continue to collaborate on research with NMFS.

The types of research that would support consideration of the moratorium and harvest limits include: 1) surveys to determine the size composition by depth and habitat zones; 2) reproductive biology of black coral; 3) the impacts of *Carijoa riisei* and other factors on recruitment; and 4) stock assessment model(s) to be able to evaluate the probable impacts on recruitment of alternative minimum harvest sizes.



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Report to the Council from the 89th Meeting of the Scientific and Statistical Committee

Council Office Conference Room
1164 Bishop Street, Suite 1400
Honolulu, HI 96813

May 17-19, 2005

Protected Species

A. Sea Turtles

Olive Ridleys Sea Turtle BiOp

The SSC heard updates on the progress of the Olive Ridley sea turtle Biological Opinion (BiOp). Brandee Gerke from PRIO provided an update on the status of the reconsultation. The approach to the jeopardy analysis for the 2005 BiOp will be similar to the approach taken in the 2004 BiOp, however, they will use a slightly different statistical approach. Various analyses (e.g., genetics) are still pending that are necessary for assessing exposure and subsequent analysis, thus a new schedule has been devised that will extend the formal consultation period by 35 days. Under the new schedule, formal consultation will conclude June 21, 2005 and the final biological opinion will be delivered on August 5, 2005.

The SSC expressed concern regarding the approach to be used in this consultation. In the past there was dissatisfaction regarding the methods and analysis used to determine jeopardy. They were assured that methods and results will be transparent in this BiOp.

Report on the Turtle Advisory Committee

At the second meeting of the Council's Turtle Advisory Committee (TAC), March 3, 2005, the Council's turtle program was reviewed and a number of recommendations were provided to strengthen conservation projects and further develop the program. Irene Kinan provided the SSC with an overview of the TAC's overarching recommendations. **The SSC applauds the progress of the Council's Sea Turtle Conservation Program and endorses the TAC recommendations** which include:

1. To continue the Council's five sea turtle conservation measures.
2. To expand nesting beach management projects in PNG (e.g., to Buang-Buassi about 30 km south of Kamiali). The TAC supports the suggestions of the Leatherback

Workshop (May 2004) to expand nesting beach management projects to the Solomon Islands (to quantify the exchange of animals between PNG & Solomons).

3. To provide technical, on-the-ground assistance to nesting beach programs in PNG and Papua to strengthen research methodology and reporting, and help with experiments to quantify hatching success rates.
4. To incorporate anthropological/social science studies at the foraging ground projects (Kei Islands and Baja California) to gather information to better quantify the impacts and success of these programs in reducing poaching.
5. To contract an anthropologist to understand the social impacts of conservation activities in PNG, to understand how particular communities function relative to the cultural significance of turtles, as well as the social impacts of providing funds to secure conservation.
6. To continue progress on the turtle research database system, convene the steering committee to draft the terms of agreement (regarding data ownership), and work on distribution throughout the region.
7. To continue investigating options and opportunities to implement endowment funding for turtle conservation (e.g., fund for Pacific Sea Turtles). The TAC supports the theory of endowment funding, but requires more research in economics and mechanisms prior to any final decisions, and recommends that a business plan be developed.
8. The TAC does not recommend applying Council resources into the creation of a website (Sustainable Fisheries Alliance). But does recommend that if an informational website for fishers is necessary, that it be developed and supported through FAO.
9. To finalize and implement suggestions from the May 2004 Hawksbill Workshop.
10. The contractual hire of Dr. Nick Pilcher to provide the Kamiali project with technical assistance to strengthen research methods and reporting, as well as help implement experiments to validate hatch success. As part of his duties, Pilcher will also help SPREP's Database Officer and SPC to reconcile the SPREP and SEAFDEC data and reporting requirements within the database (TREDS), write the database user manual, and help with the ultimate distribution of the database throughout the region.
11. To assist in characterizing the pelagic and migratory habitats of the south Pacific loggerhead stock, the TAC recommends:
 - a. Increased [massive] deployment of satellite telemetry,
 - b. Promote collaborations between nations and pelagic longline fisheries (of the U.S., Australia, and Peru),

- c. Work with officials in New Caledonia to rear 30 or so local loggerheads for 1-2 years to a size where they can be released into pelagic waters with small satellite tags [successful application of this strategy was utilized with Japanese loggerheads in the North Pacific], and
 - d. Increase education and outreach activities throughout the south Pacific region to raise awareness and promote the exchange of fishers and researchers between Australia and Peru.
12. Continue efforts to promote and transfer “best practice” fishery technology to international longline fleets of the Pacific (e.g., Ecuador and Latin America).

Report on the Green Turtle Population Trends

For the information of the SSC, Dr. Milani Chaloupka provided a brief introduction to a manuscript under development which suggests the encouraging outlook of green turtle populations. Based on the six largest green sea turtle rookeries of the world (including the Hawaii population), population trends show upward and encouraging trends, discounting much of the pessimism that is often reported. The SSC was pleased to hear this report and know that it will be published in a core scientific journal.

B. Marine Mammals

Report on Marine Mammal Advisory Committee

Paul Dalzell provided a summary of the Marine Mammal Advisory Committee (MMAC) meeting that was held May 11 -12, 2005. **The SSC endorsed the following MMAC recommendations:**

1. The MMAC supports the continuation of studies to obtain information on the abundance, distribution, and stock structure of false killer whales and other cetaceans in the US EEZs in the Western Pacific (NMFS PIFSC, SWFSC, NOS-SPLASH).
2. The MMAC recommends that fishery interactions between the Hawaii longline fishery and false killer whales (as well as other cetaceans) be fully assessed. Studies should focus on spatial and temporal patterns, gear and target species associations, and characteristics of the depredation events during longline soaks (NMFS PIFSC & PIRO, and SWFSC).
3. The MMAC recommends that the magnitude and nature of fishery interactions between cetaceans and Hawaii nearshore fisheries be assessed (Hawaii DAR, NMFS PIFSC & PIRO).
4. The MMAC recommends that baseline studies on the foraging ecology of false killer whales be conducted. Specific studies should address cetacean sensory ecology and

diving behavior, oceanographic features, and trophic relationships. Further, studies should include characterizing the behavior of false killer whales and other cetaceans around longlines.

5. The MMAC encourages PIRO to work collaboratively with PIFSC to address cetacean data and sampling needs through the observer programs and the stranding program.
6. The MMAC recommends that the Council continues to encourage the Hawaii Longline Association to ask its members to facilitate the collection of biological samples from cetaceans by onboard observers, and communicate to its members the significance of data derived from sampling collection.
7. The MMAC encourages the study of live false killer whales and other cetaceans currently housed in research laboratories. Research should be aimed at increasing our understanding of cetacean morphology and sensory systems; issues that are relevant to management concerns to reduce and/or eliminate fishery interactions between cetaceans and longline fisheries.
8. The MMAC recommends that one or more MMAC members participate in the Take Reduction Team for the Atlantic longline fishery.
9. The MMAC recognizes the critical need for the inclusion of one or more fishermen on the Committee.
10. The MMAC recommends that efforts to implement mitigation strategies for false killer whales and other cetaceans with the Hawaii longline fisheries should include relevant information from existing studies of fisheries in other areas. This could include information from strandings, observer programs, and other workshops on this issue.
11. The MMAC recommends that an accomplishment report on the above recommendations be written and verbally presented to the Pacific Scientific Review Group when it meets in November 2005