Agenda Item D.1
Situation Summary
June 2013

NATIONAL MARINE FISHERIES SERVICE REPORT
HIGHLY MIGRATORY SPECIES

The National Marine Fisheries Service (NMFS) Southwest Region will provide a briefing on recent regulatory and international activities related to the Fishery Management Plan (FMP) for West Coast Fisheries for Highly Migratory Species (HMS) (see Agenda Item D.1.b, Southwest Regional Office Report).

The NMFS Southwest Fisheries Science Center will provide an update on HMS stock status and other research of interest to the Council.

Council Action:

None.

Reference Materials:

1. Agenda Item D.1.b, NMFS Report

Agenda Order:

a.. Agenda Item Overview	Kit Dahl
b. Regulatory Activities	Mark Helvey
c. Fisheries Science Center Activities	Russ Vetter
d. Reports and Comments of Advisory Bodies and Management Entities	
e. Public Comment	
f. Council Discussion	

PFMC
05/27/13

NATIONAL MARINE FISHERIES SERVICE SOUTHWEST REGION HIGHLY MIGRATORY SPECIES REPORT

CA Thresher Shark/Swordfish Drift Gillnet BiOp

On May 2, 2013, National Marine Fisheries Service (NMFS) completed a biological opinion (BiOp) on the California thresher shark/swordfish drift gillnet fishery. Consultation on this fishery was re-initiated last year. NMFS is working on implementing the terms and conditions of the BiOp, which include implementation of a Vessel Monitoring System (VMS) program in this fishery by August, 2015. A copy of the BiOp is available on the Southwest Regional Office (SWRO) website.

Marine Mammal Protection Act Negligible Impact Determination

On May 8th, 2013 NMFS published a draft Marine Mammal Protection Act (MMPA) Negligible Impact Determination (NID) for fin, humpback and sperm whales covering the California thresher shark/swordfish drift gillnet and sablefish pot fishery. Public comments closed June 7, 2013. A copy of the draft NID is available on the SWRO website.

2013 List of Fisheries

On April 22nd, NMFS published the proposed 2013 List of Fisheries (LOF) which included a recommendation to place the large mesh drift gillnet fishery in Category I due to observed entanglements of two sperm whales in 2010. Public comments on the proposed 2013 LOF closed on May 22nd. The final 2013 LOF should publish in June.

Shark Proposed Listing under ESA

NMFS recently took action on two species of hammerhead sharks. On April 5, 2013, NMFS published a proposed rule to list on the Endangered Species Act (ESA) six distinct population segments (DPS) of scalloped hammerhead sharks. The eastern Pacific DPS, which occurs off the U.S. West Coast, is proposed for listing as endangered. Public comment closed on June 4, 2013. Final action is anticipated in 2014. On April 26, 2013, NMFS published a 90-day finding and has begun its 12 month review of a petition to list great hammerheads on the ESA. Public comments are due by June 25, 2013.

On June 25th and August 13th, 2012, NMFS received petitions to list the northeastern Pacific (NEP) DPS of great white sharks as threatened or endangered under the ESA. On September 28th, 2012, NMFS published a 90 day finding announcing both petitions presented substantial information indicating that the petitioned action may be warranted, and initiated a status review of the NEP white shark population. NMFS expects to publish a 12 month finding and the results of the status review this summer.

Billfish Conversation Act of 2012

NMFS has issued an advance notice of proposed rulemaking (ANPR-78FR20291) to provide background information and request public comment on potential issues related to the implementation of the Billfish Conservation Act of 2012. A summary of the pertinent elements of the BCA 2012 were presented under the NMFS Report in the Briefing Book for the Pacific Council's March 2013 meeting and will not be repeated here.

Written comments regarding the issues in the ANPR must be received by 5 p.m., local time, on July 3, 2013. Comments may be submitted on this document, identified by NOAA-NMFS–2013–0004, by any of the following methods:

- Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to www.regulations.gov/#!docketDetail;D=NOAA–NMFS–2013`0004 and click the ''Comment Now!'' icon, complete the required fields, and enter or attach your comments.
- Submit written comments to: Kim Marshall, 1315 East-West Highway, SSMC3, Silver Spring, MD 20910.
- Fax: 301–713–1193; Attn: Kim Marshal

Inter-American Tropical Tuna Commission Resolution C-12-09

NMFS proposed regulations under the Tuna Conventions Act of 1950, as amended, to implement decisions of the Inter-American Tropical Tuna Commission (IATTC). At the 83rd Meeting of the IATTC in June 2012, the IATTC adopted a number of resolutions, one of which required rulemaking to implement in the United States. The final rule will implement the following decision: Resolution C-12-09, Conservation and Management Measures for Bluefin Tuna in the Eastern Pacific Ocean (EPO). The main objective of Resolution C-12-09 is to implement limits on the commercial catches of bluefin tuna in the EPO and is expected to publish in the Federal Register in early June 2013.

85th Meeting of the IATTC

The Inter-American Tropical Tuna Commission (IATTC) will meet in Veracruz, Mexico in early June 2013. NMFS will provide an update on issues relevant to the PFMC at its June meeting.

PFMC
05/29/13

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

JUN 19 2013

Mr. Dan Wolford, Chairman
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, Oregon 97220

Mr. Arnold Palacios, Chairman
Western Pacific Fishery Management Council
1164 Bishop Street
Honolulu, Hawaii 96813

Dear Chairmen Wolford and Palacios,

I am writing to you to share the outcomes of the 85th Meeting of the Inter-American Tropical Tuna Commsion (IATTC) held in Veracruz, Mexico. The United States was represented at this meeting by three of the four U.S. Commsioners, which included Don Hansen, Ed Stockwell, and myself. The Department of State was represented by two staff members including Council member David Hogan. The rest of the U.S. delegation was comprised of NOAA and NMFS staff as well as members of the U.S. fishing industry. Both Pacific Council and Western Pacific Council staff were also part of the U.S. delegation. Other U.S. observers of the meeting included Pew Chariatable Trusts, Defenders of Wildlife, and the International Sustainable Seafood Foundation.

The IATTC plenary was held immediately following several IATTC working group meetings and the annual meetings of the Agreement on the International Dolphin Conservation Program (AIDCP), all of which were occurred from June 3rd through 14th. Several procedural issues resulted in slowing the meetings' progress, hampering the IATTC's ability to complete the entirety of its Agenda. By way of this letter I would like to share with you those proposals adopted by the IATTC as well as NMFS' initial assesment of the regualtory actions that will result from the adoption of the proposals. I conclude with other meeting results that may be of particlar interest to the Pacific Council.

A Resolution on the Conservation and Management of Tropical Tunas
A proposal was adopted that amends Resolution C-12-01 on tuna conservation. This Resoluion extends the current conservation measures for yellowfin, bigeye, and skipjack tunas for both purse seine and longline fisheries for three additional years; unless stock assessment results indicate that an earlier change is needed.

Specifically, the IATTC agreed for 2014 through 2016 to: 1) a closure for all purse seine vessels for a period of 62 days; 2) a 30-day closure for all purse seine fishing in the area known as the Corralito for additional bigeye tuna protection; 3) a continuation of the annual bigeye tuna catch limits for large scale longline fleets including 500 metric ton bigeye tuna limit in the U.S. longline fishery in the eastern Pacific Ocean for vessels over 24 meters in length from; and (3) renewal of the tuna retention program that requires all bigeye, skipjack, and yellowfin tuna caught by a purse seine vessel of class sizes 4-6 (i.e., larger than 182 cubic meters carrying capacity) be retained on board and landed, except fish deemed unfit for human consumption for reasons other than size and the single exemption of this would be during the final set of a trip, when there may be insufficient well space remaining to accommodate all of the tuna caught in that set.

The proposed and final rulemaking implementing these measures will take place over the next several months and is anticpated to be in effect by early January 2014. This rulemaking amends regulations governing the longline and purse seine fisheries targeting tuna and tuna-like species in the eastern Pacific Ocean (EPO), and will be issued under authority of the Tuna Conventions Act of 1950.

Measures for the Conservation and Management of North Pacific Bluefin Tuna in the EPO
A Resolution for the conservation and management of Pacific bluefin tuna was jointly submitted by Japan, Korea and Mexico and was adopted by the IATTC. The measure is effective for 2014 only, and inludes a catch limit of 5,000 metric tons for commercial fleets in the EPO. As is currently the case, there is a provision for 500 metric tons for nations that have historically fished Pacific bluefin tuna in the EPO. Because the effect of fisheries in the western and central Pacific ocean (WCPO) is much greater than in the EPO, this Resolution contains a strong message to the Western and Central Pacific Fisheries Commission (WCPFC) that they should take effective measures to reduce fishing mortality in the WCPO. The Resolution indicates that continuation of conservation measures in the EPO beyond 2014 will be contingent upon effective action in the WCPFC. NMFS is currently undertaking rulemaking under the Tuna Conventions Act and antipates that this measure will be effective in early January 2014.

Resolution for the Collection and Analyses of Data on Fish Aggregating Devices (FADs)
A resolution requiring the identification/marking of FADs and reporting of the deployment, use, catch, bycatch, shark and turtle entanglements, retrieval, and design of FADs was adopted. The

provision requires that each member nation begin collecting data on FADs by January 1 of 2015. The data could be collected via logbooks or other domestic reporting requirments and NMFS is currently evaluating how to proceed. By the annual meeting of the IATTC in 2016, the scientific staff must analyze the data collected and make recommendations for managing FADs. This resolution also prohibits intentional setting of purse seines around whale sharks and requires release of whale sharks that are encircled non-intentionally.

Supplemental Resolution on North Pacific Albacore

A joint Canada and U.S. proposal was adopted that requires reporting of catch and effort in fisheries that target albacore and fisheries that land albacore that were caught incidentally to other target species. This Resolution supplements existing Resolution C-05-02 that calls on IATTC Members to not allow their fishing effort on albacore to increase beyond current effort levels. The new data reporting requirement for this supplemental Resolution will be completed by December 2013.

Additional Information

Many additional resolutions were considered, including a hammerhead shark catch prohibition, a more general shark conservation measure, port state measures, IUU identification procedure clarification, catch documentation scheme proposal, and data confidentiality changes. Although progress toward consensus on many of these proposals occurred, they were ultimately objected to by at least one party and will need to be resubmitted prior to next year's meeting. The United States supports many of the provisions within those proposals not adopted and therefore plans to work intersessionally with particular nations in the hopes of moving toward future consensus on the conservation and management of marine resources in the EPO.

Reference Points Recommended by IATTC Staff

As an interim measure, IATTC staff recommended that the Commission adopt specific target and limit reference points that were approved by the Indian Ocean Tuna Commission (IOTC). Many nations could not support this recommendation noting that there is not enough of a scientific basis to adopt these interim measures and any measures that are adopted should be specific to EPO fisheries. The U.S. and other nations encouraged the IATTC to prioritize this issue for their scientific staff and Scientific Advisory Committee, and that by next year's meeting develop specific target and limit reference points to be discussed. Further, member nations noted that any such target and limit reference points should be developed in conjunction with other tuna RFMOs.

Appointment of IATTC Director

Unfortunately, the IATTC was not able to agree upon a process for appointing a new Director or reappointing the current Director. The term of the current Director is defined in the Antigua

Convention as four years. That term expires in August 2014. Intersessional work will need to be done if the IATTC is to avoid a lapse in the Directorship.

Meeting of the Working Group for the Review of Implementation of Measures Adopted by the Commission

During the review by all Parties of the progress in implementing the measures adopted by IATTC, the United States noted that it has not yet completed domestic regulations to require all vessels 24 meters in length or greater (subject to Resolution C-04-06, on Vessel Monitoring Systems (VMS)) to carry a VMS. The U.S. noted that we are currently pursuing rulemaking for those vessels not yet covered. Unfortunately, Mexico continued to press the issue questioning if U.S. vessels 24 meters or greater in length that are not now carrying VMS are IUU fishing. In developing the new VMS regulations, NMFS will make use of VMS equipment that is already required on U.S. vessels and will attempt to integrate this requirement with other VMS requirements.

Cooperating non-member appointments

Four cooperating non-member applications were approved for 2013 (Bolivia, Cook Islands, Honduras, and Indonesia). Bolivia and Cook Islands were renewed while Honduras and Indonesia were new applications.

86th Meeting of the IATTC

The 2014 IATTC annual meeting will be held in Lima, Peru. Dates were not confirmed during this meeting, but preliminary discussions focused on holding the meeting during the first two weeks of July.

Sincerely,

Rodney R. McInnis
U.S. Commissioner

cc: Will Steele, Regional Administrator, NWR
Michael Tostatto, Regional Administrator, PIRO

HIGHLY MIGRATORY SPECIES ADVISORY SPECIES REPORT ON THE NATIONAL MARINE FISHERIES SERVICE REPORT

The Highly Migratory Species Advisory Subpanel would like to inform National Marine Fisheries Service through the Council that there can be incidental catch encountered with the hammerhead and great white sharks that are being petitioned for Endangered Species Act listing. These occasional encounters would not endanger the survival of the species and some type of fishery exemption may be necessary to prevent the fisheries from being shut down.

PFMC
06/20/13

U.S.-CANADA ALBACORE TREATY UPDATE

As reported at the March 2013 Council meeting, the U.S. and Canada have been in negotiations over a fishing regime, as described in Annex C of the U.S.-Canada Albacore Treaty, governing reciprocal access to each country's Exclusive Economic Zone (EEZ) by albacore vessels from the other country for the 2013 fishing season. At a meeting between the US and Canada in Portland, Oregon, April 16-17, 2013, the two parties successfully concluded an agreement in principle on the fishing regime for 2013. Attachment 1 is a summary report by Council staff attending the meeting.

The key elements of the agreement are as follows:

- Term of Regime: 2013 only.
- Level of Participation: 45 Canadian vessels allowed in the U.S. EEZ, the number of U.S. vessels allowed in the Canadian EEZ is not limited.
- Length of season: June 15-September 15 for Canadian vessels, June 15-October 31 for U.S.vessels.
- Capacity Issues: The first 45 vessels on the ranked list of eligible vessels put forward by Canada in May 2012 may fish in the U.S. EEZ; vessel replacement requests were subject to approval by an intergovernmental review body through June 1, 2013.
- Code of Conduct/Etiquette: Fishing industry organizations will address the issue of vessel behavior and code of conduct on the fishing grounds. The issue is referred to in the inter-governmental correspondence.
- International Cooperation and Management. Catch attribution to be described in exchange of notes along the lines as the previous negotiation but for an indefinite term. A jointly-funded research mechanism organized by fishing industry organizations is referred to in the inter-governmental correspondence.

The US also made it clear, that 2013 represents the beginning of a phase-out period for reciprocal access. The details of the phase-out, such as its duration and the number of vessels allowed access in each step of the phase-out, will be the subject of a future negotiation.

Although the 2013 fishing regime will already be in place by the onset of the June Council meeting, the Council may wish to comment on elements of any future regime including the proposed phase-out of reciprocal access.

Council Action:

Adopt, as Necessary, Recommendations for the Fishery Regime Pursuant to the U.S.-Canada Albacore Treaty.

Reference Materials:

1. Agenda Item D.2.a, Attachment 1: Summary of April 16-17, 2013, Meeting Between the U.S. and Canada to Discuss Albacore Treaty Issues (Prepared by Council Staff).

Agenda Order:

a. Agenda Item Overview — Kit Dahl
b. Reports and Comments of Advisory Bodies and Management Entities
c. Public Comment
d. **Council Action**: Adopt, as Necessary, Recommendations for the Fishery Regime Pursuant to the U.S.-Canada Albacore Treaty

PFMC
05/29/13

MEETING SUMMARY
U.S.-CANADA ALBACORE TUNA CONSULTATIONS

April 16-17, 2013
First Floor Conference Room
1201 NE Lloyd Blvd, Suite 1100
Portland, OR 97232

Prepared by Council Staff

Delegation Introductions

David Hogan, Deputy Director, Office of Marine Conservation (OES/OMC), U.S. Department of State, headed the US delegation. The Canadian Delegation was led by Sylvie LaPointe, Department of Fisheries and Oceans Canada. The delegations included representatives from government and industry.

Discussion of Elements of a Future Regime

The meeting focused on reaching agreement on the elements of a reciprocal fishing regime for 2013. The following elements were discussed:

- Term of Regime
- Level of Participation
- Length of season
- Capacity Issues
- Conduct/Etiquette
- International cooperation and management

Over the course of the meeting these elements were reviewed several times. In the interest of clarity this report is organized around these topics rather than strictly according to the meeting chronology.

At the outset Mr. Hogan made it clear that the US was questioning the value of the Treaty given changed conditions since the Treaty was originally negotiated and the lack of support from harvesters for its continuation. Canada responded by acknowledging a fundamentally different perspective on the benefits from the Treaty. Canada believes there are and will be mutual economic benefits of the Treaty and regime, from harvester, processor, states, and other perspectives. It is a matter of "tweaking" the Treaty regime in light of changed circumstances.

Term of Regime

Mr. Hogan made clear that the US would only agree to a 1-year regime for 2013. Canada responded by noting the proposals it put forward at the last bilateral negation in February 2013.

Level of Participation

Mr. Hogan began by stating that for the US the starting point for considering participation was 2012 when there was no regime and Canadian vessels were not allowed to fish in US waters. Participation would be

based on reducing negative interactions with the US fleet while recognizing the importance of the regime for Canada. The US noted that Canada had put forward a proposal indicating a level of 55 vessels as indicative of pre-1998 levels of participation. However, the US takes a broader review of reciprocity and the history of Canada's participation in the US EEZ. In today's context that suggests a level of participation more in the neighborhood of 20-25 vessels. This would better represent the levels of effort and catch that occurred in the pre-1998 era given the current capacity of Canadian vessels. Canada countered by stating their previous proposal didn't specify a number of vessels but a 30% reduction to 75-80 vessels would be appropriate. Canada stated they had trouble understanding the argument that fleet capacity and conditions would be substantially different in 2013. The level it proposes represents the core fleet that has been fishing in the US zone for many years. After further discussion Canada emphasized that the elements of a regime are interlinked so agreement on this provision would depend on what other elements were agreed to.

Length of season

Under the previous regime the season was June 15-October 31. From the US perspective the length of the fishing season is more important with respect to port access. Canada noted the statutory framework for port access, which dictates that the Minister of Fisheries and Oceans must approve port access based on the conditions established under the Treaty. In the past the Minister would grant port access out of season based on the existence of a regime in that year. The US emphasized that even in the absence of a regime establishing reciprocal access for fishing US vessels would like to be granted port access for purposes other than landing fish. This is likely to be relevant in the future when reciprocal access may be eliminated. The US opined on the linkage between season length and port access. Canada responded that while the Minister has discretion in this matter such a situation might require a change in the controlling legislation. As to the length of the season for the purposes of fishing, Canada expressed a preference for the previous duration of June 15-October 31. The US emphasized the linkage between the level of participation and length of season and suggested a season structure where Canada would have access to the US EEZ earlier in the season, say June 15-August 31, while the US would have a year-round season for the purpose of port access. Canada responded that the port access and fishing season elements should not be linked. Canada would prefer the same season for both US and Canadian vessels for the purposes of fishing while finding a mechanism to allow port access for US vessels year-round. The legal implications of reciprocal port access outside of a fishing season were discussed.

Capacity Issues

The US underscored the importance of the proposal to fix the list of authorized Canadian vessels to ensure permit trading and vessel substitution would not occur. The US began by stating its preference that no substitutions be allowed. Since the US is looking for progressive reductions in the number of vessels granted access to the US EEZ in the future, attrition from the vessel list could compliment scheduled reductions in the number of vessels granted access. There was discussion about what year would be used to determine which vessels are on the list. Canada made clear that when it originally put forward this proposal it had established the list based on those vessels on the list in May 2012. The US was interested in looking at the beginning of the previous regime (2009) but Canada made it clear that it would not be possible to use an earlier date for legal reasons. There was discussion about how different the list would be if based on 2009 and Canada stated that there has been very little change in those vessels that are ranked near the top of the list.

Canada stated that as part of their proposal changes in the vessel list would not occur inseason but there would still be a possibility for replacements. This would involve a rigorous process with a bi-national review committee and a limitation on replacements to a vessel of the same size or smaller. This would be structured as a government-to-government board or committee. (Canada had also proposed a *force*

majeure provision.) Canada said that relative to a future phase-out of reciprocal access, it didn't see the need to employ attrition as a strategy. The US sought clarity on specifics to ensure that replacement provisions would not open the door to the type of permit transfers that happened in the past. Canada said that ultimately the Minister has complete discretion over permit transfers (and thus vessel replacement) barring arbitrary decisions. Canada discussed the criteria that could be employed in the review of vessel replacements. Previously, the proposal set a deadline of May 1 for considering replacements but this may need to be extended by two weeks given the need to set up the inter-governmental review board if a transfer is requested. Canada also emphasized that since this is a 1-year regime, problems with the vessel replacement provisions could be improved in the subsequent regime based on experience in 2013.

Canada went on to explain in greater detail how the vessel list was compiled in relation to the permits granting access to fishing in the US EEZ under previous fishing regimes ("USA68" licenses). This list was originally compiled in 2006 and had 179 vessels, based on a formula weighting the number of years of fishing in the US EEZ at 60% and catch at 40% during a 1995-2005 eligibility period. In 2008 the Minister reviewed the process for issuing licenses and determined it was fair and equitable. This list was used to identify the 110 vessels eligible under the previous regime.

The US concluded by accepting the Canadian proposal with respect to the vessel eligibility list, including the mechanism for reviewing requests for vessel replacement (and the *force majeure* exception). The US emphasized its understanding that the vessel list and associated USA68 permits are inextricably linked such that permit trading would not be a feature of this or future regimes. Canada agreed with this understanding. The US also requested that the transmitted list provide as much information as possible about each vessel, including photographs. Since this is a requirement for the IATTC Regional Vessel Register, Canada said it would not be a problem. This information would be provided to US harvesters so they can monitor Canadian vessels and assist in identifying possible violations.

Conduct/Etiquette

While recognizing this is an important issue, the US did not favor a government-to-government arrangement. But a 2013 regime must represent a sincere effort to address concerns of US harvesters with respect to conduct on the fishing grounds. Canada responded by emphasizing the importance of this issue. Canada thinks that a purely industry-based response is insufficient. The US suggested a mechanism to refer to a Code of Conduct, which would be implemented through industry organizations. Canada emphasized the need for political support to insure industry moves forward on this but agreed to an arrangement where a Code of Conduct would be referenced in diplomatic exchanges but not be part of a treaty annex.

International Cooperation and Management

The first international cooperation issue is catch attribution in the event an allocation by the IATTC is based on catch history. The exchange of notes for the previous regime included an agreement on catch attribution and the US would like to reinstate that arrangement on a permanent basis. Canada expressed concern about agreeing to a provision with an indefinite duration, because it sees the current discussion as an element of a package of measures for 2013 only.

A second element of international cooperation is an arrangement for research funded jointly by Canadian and US fishing associations. Like conduct, the US sees this as something for the harvesting associations to work through and establish the details of jointly considering and funding research proposals. Canada noted its disappointment that the US did not want to include this as part of the formal agreement (e.g., Treaty annexes). Canada agreed to formula similar to the etiquette issue where this element would be referred to outside of any of the treaty annexes.

Economic and Data Workgroups Intersessional Work

Canada proposed an expanded study by the Economic Workgroup to examine the socioeconomic benefits of reciprocal access (primarily benefits to US fishing communities from Canadian access to the US EEZ). The US questioned the necessity of such a study given the intent of the US to negotiate a phase-out of reciprocal access in the subsequent regime (from 2014 onward). Canada also did not see an immediate need to dissolve the workgroups.

Conclusion of the Meeting

The US discussed its intent to include in diplomatic correspondence a statement with respect to proposing a phase-out in reciprocal access as part of the next regime for 2014 and beyond. (The duration of the phase-out period was not discussed.) As noted above, the code of conduct and jointly funded research would also be referenced in correspondence but not be part of the treaty annexes or the exchange of notes. The parties returned to the issue of level of participation. Since neither country appeared willing to move from its opening position in a plenary setting Canada recommended a government-to-government format. The plenary broke at about 11:00 a.m. on April 17.

The plenary did not reconvene but David Hogan reported the outcome of government-to-government discussions to the US delegation:

- Term of Regime: 2013 only
- Level of Participation: 45 Canadian vessels, US vessels not limited
- Length of season: June 15-September 15 for Canadian vessels, June 15-October 31 for US vessels.
- Capacity Issues: Canadian proposal accepted with vessel replacement requests entertained by the intergovernmental review body through June 1, 2013.
- Conduct/Etiquette: Referred to in correspondence as discussed previously
- International cooperation and management. Catch attribution to be described in exchange of notes along the lines as the previous negotiation but for an indefinite term; jointly-funded research mechanism to be referred to in correspondence.

Mr. Hogan also said that the US's intent to negotiate a phase-out of reciprocal access in the next regime was made clear and will be discussed in covering correspondence from the US to Canada at the exchange of notes. The US prefers this be accomplished within a single regime for a period of years beginning in 2014.

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON U.S. - CANADA ALBACORE TREATY UPDATE

The majority of the Highly Migratory Species Advisory Subpanel (HMSAS) requests that the Council write a letter to the U.S. Department of State asking for a two to three year phase-out of the fishing regime under the U.S./Canada Albacore Treaty beginning in 2014.

This request would be in line with the U.S. Department of State informing the Canadian head of delegation at the May bilateral meeting in Portland, Oregon, that after the 2013 regime a phase-out would be on the agenda for the next meeting.

The HMSAS notes the increased benefits to U.S. fishermen in increased per-vessel catches in 2012, better access to fishing grounds by smaller coastal vessels, as well as increased economic benefits to U.S. ports and businesses, because of the increased catches by U.S. vessels delivered in U.S. ports.

There was discussion on other ways to make an equitable future agreement involving reciprocal catches in each other's Exclusive Economic Zones instead of a complete phase-out of the regime. This approach could preserve future U.S. access to Canadian waters. The albacore harvesting sector representatives of the HMSAS oppose any reciprocal fishing.

PFMC
06/20/13

Agenda Item D.3
Situation Summary
June 2013

PRELIMINARY EXEMPTED FISHERIES PERMIT APPROVAL

Council Operating Procedure (COP) 20 specifies the protocol for submission and review of proposals requiring the issuance of an exempted fishing permit (EFP) for highly migratory species (HMS) fisheries. Proposals must be submitted at least two weeks before the start of the June Council meeting. According to the COP, the HMS Management Team and HMS Advisory Subpanel will review EFP proposals in June and make recommendations to the Council for action; the Council will consider those proposals for preliminary action. Final action on EFPs will occur at the September Council meeting. Only those EFP applications that were considered in June may be considered in September.

June 6 is two weeks before the first day of the Council meeting. No EFP proposals were received before distribution of the advance briefing book on June 5th.

Council Action:

Adopt EFPs for Highly Migratory Species Fisheries for Public Review.

Reference Materials:

None.

Agenda Order:

a. Agenda Item Overview — Kit Dahl
b. Reports and Comments of Advisory Bodies and Management Entities
c. Public Comment
d. **Council Action**: Adopt EFPs for Highly Migratory Species Fisheries for Public Review

PFMC
05/24/13

RESPONSE TO PACIFIC BLUEFIN TUNA OVERFISHED STATUS

On April 8, 2013, the Council received notification from National Marine Fisheries Service (NMFS) that Pacific bluefin tuna continues to be subject to overfishing and is now overfished (Attachment 1). This letter triggers the requirements in the Magnuson-Stevens Fishery Conservation and Management Act (MSA) at section 304(i) requiring the Council to respond within one year: "(A) develop recommendations for domestic regulations to address the relative impact of fishing vessels of the United States on the stock and, if developed by a Council, the Council shall submit such recommendations to the Secretary; and (B) develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stocks, taking into account the relative impact of vessels of other nations and vessels of the United States on the relevant stock." In 2012 the Council responded to a similar declaration that the stock was subject to overfishing (Attachment 2).

The Council has until April 8, 2014, to formulate its response. At this meeting the Council could merely identify a schedule for developing a response by that date and make assignments to its advisory bodies, or, if it determines that sufficient information is available at this time, formulate its response.

Council Action:

Consider Response to MSA Requirements associated with the Declaration of International Overfishing of Bluefin Tuna.

Reference Materials:

1. Agenda Item D.4.a, Attachment 1: April 8, 2013, Letter from Rodney McInnis, NMFS Southwest Region Administrator to Dan Wolford, Council Chair.
2. Agenda Item D.4.a, Attachment 2: March 26, 2012, Letter from Executive Director, Donald McIsaac, to Deputy Assistant Secretary, David Balton.

Agenda Order:

a. Agenda Item Overview — Kit Dahl
b. Reports and Comments of Advisory Bodies and Management Entities
c. Public Comment
d. **Council Action:** Adopt Response to Magnuson-Stevens Act Requirements associated with the Declaration of International Overfishing of Bluefin Tuna

PFMC
05/30/13

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southwest Region
501 West Ocean Boulevard, Suite 4200
Long Beach, California 90802-4213

150404SWR2013SF00092:JI

Mr. Dan Wolford
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, Oregon 97220

Dear Chairman Wolford:

This letter is to inform you that the National Marine Fisheries Service (NMFS) has determined that Pacific bluefin tuna (*Thunnus orientalis*) continues to be subject to overfishing and is now overfished. Pacific bluefin is a management unit species in the Council's Fishery Management Plan (FMP) for U.S. West Coast Fisheries for Highly Migratory Species (HMS) and the Western Pacific Fishery Management Council's (WPFMC) Fishery Ecosystem Plan for Pelagic Fisheries of the Western Pacific Region (FEP). NMFS is also informing the WPFMC about the change in status.

In December 2012, the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) completed their assessment of the status of Pacific bluefin using data through 2011 and concluded that the stock is still experiencing overfishing and is now overfished. The ISC assessment estimated the current spawning stock biomass of 22,606 metric tons (mt) to be about 3.6 percent of the unfished SSB. Unfished SSB was estimated at 633,468 mt. Current SSB is far below that associated with maximum sustainable yield (124,498 mt) and is near historic low levels. The Southwest Fisheries Science Center affirmed that the stock assessment was the best available science.

Although the criteria for making status determinations are identified in the HMS FMP, specific values for maximum fishing mortality threshold (MFMT) and the minimum stock size threshold (MSST) reference points have not been identified for Pacific bluefin tuna. Therefore, the assessment cannot directly evaluate the stock's status based on the FMP criteria.

Pacific bluefin tuna is considered to be a single North Pacific-wide stock. Its conservation and management are the responsibility of the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC). The United States is a member of both regional fishery management organizations. Although both organizations have internationally agreed upon management measures in place for Pacific bluefin tuna that expire at the end of 2013, these measures may be insufficient to end overfishing. Consequently, NMFS has determined that Section 304(i) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) applies because: (i) the overfished and overfishing condition of Pacific bluefin is due to excessive international fishing pressure and (ii) the IATTC and WCPFC have inadequate measures in place to correct the problem.

Under MSA Section 304(i)(2), the Council is required to develop domestic regulations to address the relative impact of the domestic fishing fleet on Pacific bluefin tuna. Section 304(i)(2) also requires the Council to develop recommendations to the Secretary of State and to Congress for international actions to end overfishing and rebuild Pacific bluefin tuna. The Council should develop recommendations in consultation with the Secretary that take into consideration relevant provisions of the Magnuson-Stevens Act as well as National Standard 1 Guidelines that address international overfishing.[1] NMFS encourages the Council to work cooperatively with the Western Pacific Fishery Management Council to develop management recommendations for this purpose.

My staff is ready to work with the Council on these efforts. Please do not hesitate to contact me or Mark Helvey, Assistant Regional Administrator for Sustainable Fisheries, if you have any questions.

Sincerely,

for Rodney R. McInnis
Regional Administrator

[1] 50 CFR 600.310(k)(2)

Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101, Portland, OR 97220-1384
Phone 503-820-2280 | Toll free 866-806-7204 | Fax 503-820-2299 | www.pcouncil.org
Dan Wolford, Chairman | Donald O. McIsaac, Executive Director

March 26, 2012

Mr. David A. Balton
Deputy Assistant Secretary for Oceans and Fisheries
Bureau of Oceans and International Environmental and Scientific Affairs
U.S. Department of State
2201`C St. NW, Ste 3880
Washington, D.C. 20520

Dear Mr. Balton:

On April 7, 2011, National Marine Fisheries Service sent a letter of notification to the Pacific Fishery Management Council (Pacific Council) that it had determined overfishing is occurring on Pacific bluefin tuna (*Thunnus orientalis*) pursuant to Section 304(i) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA). Section 304(i) applies to stocks where overfishing is the result of excessive international fishing pressure. It requires the Pacific Council, within 1 year of the notification, to

- develop recommendations for domestic regulations to address the relative impact of fishing vessels of the United States on the stock, and
- develop and submit recommendations to the Secretary of State, and to the Congress, for international actions that will end overfishing in the fishery and rebuild the affected stock, taking into account the relative impact of vessels of other nations and vessels of the United States.

The notification letter asks the Pacific Council to work closely with the Western Pacific Fishery Management Council (Western Pacific Council) in developing measures and recommendations. A June 27, 2011, letter from the Western Pacific Council Executive Director contains a recommendation from the Western Pacific Council calling on the Pacific Council to address the stock's overfishing status, given the larger domestic catches of Pacific bluefin in the Pacific Council area. This letter represents a joint response from the Pacific Council and Western Pacific Council on recommendations to address Pacific bluefin tuna overfishing.

The attached report provides background information on the status of the Pacific bluefin tuna stock, domestic landings on the west coast and Hawaii, international and domestic management measures, and joint recommendations from the Pacific and Western Pacific Fishery Management Councils. These recommendations are:

Domestic Management Measures

The Councils do not recommend new domestic management measures to address the relative impact of U.S. fishing vessels on the Pacific bluefin stock. Current regulations for fisheries off west coast states and in the western Pacific adequately address the very low impact of U.S. fisheries on the stock of Pacific bluefin tuna.

Based on the most recent catch tables of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), Japan, Mexico, Chinese Taipei, and Korea have caught an average of 99 percent of the northern bluefin tuna landings in the Pacific Ocean from 2005-2009. For the past five years (i.e., 2005-2009), U.S. domestic fisheries have accounted for a very small portion (less than 1 percent on average) of the total Pacific northern bluefin tuna catch. For example, since 1990 the U.S. Pacific bluefin fishery has been opportunistic, and landings have varied from a low of 60 tons (2004) to a high of 4,749 tons (1996). For the last decade, the U.S. has not been a factor in overfishing the North Pacific bluefin stock.

Thus, the Pacific Council recommends that overfishing be addressed at the international level rather than through unilateral domestic measures that are unlikely to result in any significant conservation benefits to Pacific bluefin tuna. Any proposed measures should consider the annual variability in U.S. catch and effort of bluefin in the eastern Pacific Ocean, to enable the U.S. fleet to target bluefin in years when they are available off the U.S. West Coast.

Recommendations for International Actions that will End Overfishing in the Fishery and Rebuild the Affected Stock

The Councils strongly support the immediate adoption of Pacific bluefin tuna conservation and management measures in the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC). The reduction of the fishing mortality of juvenile age classes is a key step to ending overfishing. Catches of juvenile age classes appear higher in the western Pacific. International measures should reflect the relative impact of fisheries on the stock by age.

Currently, the WCPFC has a Pacific bluefin tuna conservation and management measure in place (i.e., Conservation and Management Measure [CMM] 2010-04) to limit fishing effort in 2011-2012 to the 2002-2004 levels and to limit the catch of juveniles (age 0-3) to below the 2002-2004 levels. The measure currently includes an exemption for artisanal fisheries and Korea. As this measure expires at the end of 2012, the Councils strongly support adoption of a replacement measure at the 2012 WCPFC meeting, including removing the exemptions for artisanal fisheries and Korea if they are not well-justified. The Councils may provide more detailed recommendations to U.S. delegations to Pacific Regional Fishery Management Organizations on potential management measures after the next bluefin stock assessment is complete and WCPFC proposed management measures are available to review. The ISC is scheduled to conduct the stock assessment in May 2012, and the ISC plenary will review the stock assessment and provide conservation advice in July 2012.

The Councils also support adoption of IATTC conservation and management measures to reduce fishing mortality on juvenile age classes of Pacific bluefin tuna in the eastern Pacific Ocean. The

expected to provide detailed recommendations on potential management measures after the next bluefin stock assessment is complete, currently scheduled for later in 2012.

Lastly, please note that a major portion of the Southern California commercial passenger fishing vessel recreational fishery traditionally operates off the Mexican coast, and the U.S. recreational fleet needs to maintain that fishing opportunity to sustain their operations. Therefore, it is important to continue to foster the cooperative relationship that has developed between the two countries in the management of tuna stocks targeted by recreational fisheries in the Southern California Bight and off Baja California, Mexico. When considering proposals at the IATTC and other international forums, their effect on current, positive bilateral relations relative to recreational fisheries should be taken into account.

Sincerely,

D. O. McIsaac, Ph.D.
Executive Director, Pacific Council

Kitty M. Simonds
Executive Director, Western Pacific Council

KRD:kam

Attachment: Pacific Bluefin Tuna Overfishing Report

cc. The Honorable Doc Hastings, House of Representatives
The Honorable Edward Markey, House of Representatives
The Honorable Jay Rockefeller, United States Senate
The Honorable Kay Hutchison, United States Senate
Mr. David Hogan, Deputy Director, OMC, DOS
Mr. Russell Smith, Deputy Assistant Secretary for International Fisheries, NOAA
Ms. Rebecca Lent, Director of Office of Internal Affairs, NOAA
Mr. Sam Rauch, Deputy Assistant Administrator for Regulatory Programs, NOAA
Mr. Rod McInnis, Southwest Regional Administrator, NOAA
Pacific Council Members
HMSMT Members
HMSAS Members
Mr. Peter Flournoy, Chair IATTC GAC and WCPFC PAC
Mr. Svein Fougner, Vice Chair PAC
Dr. Kit Dahl

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON RESPONSE TO PACIFIC BLUEFIN TUNA OVERFISHED STATUS

As stated in the Situation Summary, the Council received notification from National Marine Fisheries Service (NMFS) that Pacific bluefin tuna continues to be subject to overfishing and is now overfished. The Situation Summary also noted that the Council is specifically required to develop recommendations for domestic regulations to address the relative impact of United States vessels on the stock (Magnuson-Stevens Act [MSA] Section 304(i)(2)(A)) and to submit recommendations to the Secretary of State and Congress for international actions to end overfishing and rebuild the stock (MSA Section 304(i)(2)(B)). The deadline for providing such recommendations is April 8, 2014.

The HMSMT notes that the status of bluefin tuna has not improved and the biomass level is near its historic low. In recent years US fisheries have accounted for less than 1 percent of stock-wide catch. The HMSMT also notes that current measures in the HMS Fishery Management Plan, including recreational bag limits and logbook reporting requirements, adequately address the very low impact of U.S. fisheries on the stock of Pacific bluefin tuna. In view of the limited impact of U.S. catch the HMSMT recommends the Council focus on the need for conservation at the international level. The HMSMT suggests that the Council strongly support the new Pacific bluefin tuna measures adopted by the Western and Central Pacific Fisheries Commission (WCPFC) and the Inter-American Tropical Tuna Commission (IATTC) since 2011.

Recommendations in the November 2011, I.2.b Supplemental HMSMT Report, which include measures to reduce age zero bluefin catch, remain appropriate at the international level. The HMSMT could, at the Council's direction, provide more detailed recommendations on potential management measures.

PFMC
06/21/13

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON
PACIFIC BLUEFIN TUNA OVERFISHED STATUS

Under Agenda Item D.4 the Council requested additional information to inform its discussion on a response to the notification that Pacific bluefin tuna is subject to overfishing and is now overfished. Specifically the Council requested information on:

- US catch by sector for last 10 years
- Bag limits for catches in recreational fisheries for the three West Coast states
- Clear description of international measures.

Note that the US (NMFS) has taken the position that recreational fisheries are not subject to conservation measures adopted by the IATTC unless the measure specifically states such applicability.

Data on Commercial Landings and Recreational Catch

The HMS SAFE includes PacFIN and RecFIN data on recent landings and catch. In addition, the ISC compiles information from member nations on stock-wide catch.

Table 1. West Coast commercial landings and revenue of Pacific bluefin tuna, 1999-2012. (Source: 2013 SAFE, Table 4, unpublished)

Year	Landings (mt)		Year	Landings (mt)
1999	186		2006	1
2000	313		2007	45
2001	196		2008	1
2002	11		2009	415
2003	36		2010	1
2004	10		2011	118
2005	207		2012	43

Table 2. Annual landings of Pacific bluefin tuna in the North Pacific Ocean by country and by gear (mt), 1999-2011). Excerpted from ISC Catch Table.

Year	Chinese Taipei	Japan	Korea	Mexico	USA										Grand Total
	Total	Total	Total	Total	Drift Gillnet	Harpoon	Longline	Pole and Line	Troll	Hook and Line	Other Gears	Purse Seine	Recreational	Total	
1999	3,089	22,557	256	2,404	21		54	2	20		87	184	441	809	29,115
2000	2,782	24,475	2,401	3,118	30		19	13	1			693	342	1,097	33,873
2001	1,843	14,065	1,276	864	33		6	1	6			292	356	694	18,744
2002	1,527	14,002	942	1,710	6		2	2	1			50	654	715	18,896
2003	1,884	10,173	2,601	3,254	14		1	3				22	394	434	18,347
2004	1,717	13,827	773	8,894	10		1						49	60	25,271
2005	1,368	21,427	1,318	4,543	5							201	79	285	28,941
2006	1,149	13,851	1,012	9,816	1		1						96	98	25,926
2007	1,401	14,403	1,281		4							84	28	116	17,201
2008	979	17,680	1,866		1	0	0	0	0	0	102	0	93	196	20,721
2009	877	14,463	936	3,019	4	0	1	0	0	0	151	410		566	19,861
2010	373	8,555	1,196	7,745	1		0				0		122	123	17,992
2011	302	13,336	670	2,730	16	1	0				1	99	456	573	17,613
Total	19,291	202,819	16,528	48,096	146	1	85	21	28	0	341	2,035	3,111	5,767	292,501
Percent	7%	69%	6%	16%										2%	100%

Table 3. West coast recreational catch (number of fish) of Pacific bluefin tuna, 1999-2011. (Source: 2012 SAFE, Table 4-59)

Year	No. of fish
1999	0
2000	0
2001	1000
2002	900
2003	0
2004	100
2005	100
2006	200
2007	0
2008	400
2009	200
2010	0
2011	100

Table 4. Catch in California and Mexico waters by US CPFVs, thousands of fish. (Source: 2012 SAFE, Table 4-63 and 4-64, CEFIS logbook data).

Year	California	Mexico
1999	1,623	35,174
2000	1,569	19,100
2001	3,835	18,078
2002	13,246	20,153
2003	2,858	19,433
2004	485	2,906
2005	723	5,034
2006	1,349	6,124
2007	187	841
2008	3,159	7,028
2009	2,788	9,350
2010	306	8,147
2011	2,743	28,279

Note that data on private recreational catch in Mexico waters by US anglers is not available.

As far as a state breakdown of catch, Washington has negligible catch of Pacific bluefin. Recent Oregon catch is shown in Table 5. California could not obtain catch information for this report but the data in Table 3 approximates California catch since, as indicated, catches in Oregon and Washington are very small.

Table 5. Estimated recreational catch of Pacific bluefin in Oregon. Source: ODFW.

Year	Tuna Angler Trips	Est. Bluefin Catch (fish)
2003	2,248	0
2004	1,359	2
2005	3,023	0
2006	4,068	0
2007	2,456	15
2008	3,333	2
2009	12,029	40
2010	7,105	0
2011	10,353	38
2012	11,311	27

Current Recreational Measures

All three west coast states have recreational bag limits for pelagic species on a per angler basis:

- Washington: 2 bluefin per day
- Oregon: aggregate of 25 offshore pelagic species per day
- California: 10 bluefin per day

All three states also have dockside sampling programs for recreational fisheries. In California, private recreational vessels returning from Mexico are only sampled in intercept surveys as part of the general random sampling frame.

Excerpts of Key Provisions in International Measures

WCPFC
CMM 2012-06 Conservation and Management Measure of Pacific Bluefin Tuna [excerpt]

1. The interim management objective for Pacific bluefin tuna is to ensure that the current level of fishing mortality rate is not increased in the Convention Area. Initially, control over fishing effort will be used to achieve this objective as follows:

2. The Commission Members, Cooperating Non-Members and participating Territories (hereinafter referred to as CCMs) shall take measures necessary to ensure that total fishing effort by their vessels fishing for Pacific bluefin tuna in the area north of the 20 degrees north shall stay below the 2002-2004 levels for 2013, except for artisanal fisheries. Such measures shall include those to reduce catches of juveniles (age 0-3) below the 2002-2004 levels, except for Korea. Korea shall take necessary measures to regulate the catches of juveniles (age 0-3) by managing Korean fishery in accordance with this CMM. CCMs shall cooperate for this purpose.

3. CCMs shall also take measures necessary to strengthen data collecting system for Pacific bluefin tuna fisheries in order to improve the data quality and timeliness of all the data reporting;

…

5. The Northern Committee at its Regular session in 2013 shall review this CMM based on the new ISC stock assessment for Pacific bluefin tuna scheduled in late 2012 and take appropriate actions;

IATTC

Proposal IATTC-85 K-3 Measures for the Conservation and Management of Bluefin Tuna in the Eastern Pacific Ocean (Submitted by Japan, Korea, and Mexico) [excerpt of circulated proposal, subsequently modified in discussion]

1. In the IATTC Convention Area, the commercial catches of bluefin tuna by al the CPCs during 2014 shall not exceed 5,000 metric tons.
2. Notwithstanding paragraph 1, any CPC with a historical record of eastern Pacific bluefin catches may take commercial catch of up to 500 metric tons of eastern Pacific bluefin tuna annually.
3. CPCs shall take the measures necessary to ensure that the total catch of Pacific bluefin in the Convention Area in 2014 does not exceed the catch limit, For this purpose, each CPC shall report its catches to the Director in a timely fashion… [specific reporting requirements modified in discussion]

Domestic Implementation of IATTC Resolution C-21-09 for 2013 (78 FR 33240)

- In accordance with the 10,000 metric ton cumulative catch limit adopted in Resolution C–12–09 for both 2012 and 2013 combined, the cumulative catch limit for all CPCs for 2013 is 3,295 metric tons…
- …targeting and retention of Pacific bluefin tuna by all U.S. commercial fishing vessels in the EPO shall be prohibited for the remainder of 2013 when the cumulative catch by all CPCs reaches 3,295 metric tons of Pacific bluefin tuna, and when the commercial catch of Pacific bluefin tuna by the U.S. fleet has reached or exceeded 500 metric tons in 2013.
- If the U.S. commercial fishing fleet has not caught 500 metric tons of Pacific bluefin tuna in 2013 when the cumulative catch limit for all CPCs is reached, then the U.S. commercial fishing fleet may continue to target and retain Pacific bluefin tuna until the 500 metric ton limit is reached.
- The U.S. commercial fishing fleet may retain more than the 500 metric tons of Pacific bluefin tuna in 2013 unless and until the international fleet reaches the limit of 3,295 metric tons.

PFMC
06/21/13

NORTH PACIFIC ALBACORE TUNA PRECAUTIONARY MANAGEMENT FRAMEWORK

At its June 2012 meeting the Council was briefed on the Western and Central Pacific Fisheries Commission (WCPFC) Northern Committee's (NC) work to develop a precautionary framework for the management of North Pacific albacore (see Agenda Item E.2, Situation Summary, June 2012). Attachment C to the meeting report from the 2011 NC meeting describes the management framework as "including agreed upon biological limit and target reference points and decision rules should those reference points be exceeded." Although the NC discussed the precautionary framework at their September 3-6, 2012, meeting, substantive progress was not made beyond a request to the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean to evaluate candidate reference points (see Agenda Item D.5.a, Attachment 1). According to its workplan, the NC is supposed to complete the precautionary management framework next year, coincident with the next North Pacific albacore stock assessment.

At the March 2012 meeting the Council tasked the Highly Migratory Species Management Team (HMSMT) to work with the HMS Advisory Subpanel (HMSAS) and Scientific and Statistical Committee (SSC) HMS Subcommittee to further develop information to allow the Council to provide input on the development of a management framework at the June 2012 meeting. In March 2013 the Council provided further guidance to the HMSMT on information that would be helpful to the Council for developing recommendations on the precautionary management framework:

> …to identify potential measures that should be implemented pursuant to the precautionary management framework for North Pacific albacore currently under development at the international level. This should include identification of appropriate biological reference point(s) and both effort-based and catch-based control rules, at the international level of applicability as opposed to domestic fishery specificity. This information will be ready for the June Council meeting so the Council can develop recommendations to the US delegation to the Western and Central Pacific Fisheries Commission (WCPFC) Northern Committee meeting in September 2013. The HMSMT will also provide comments on potential complementary initiatives that may be adopted by the Inter-American Tropical Tuna Commission (IATTC) for the Eastern Pacific Ocean (EPO). (March 2013 Council Meeting Decision Summary Document)

In response to this guidance, the HMSMT met May 28-30, 2013, and drafted the attached HMSMT Report. The HMSMT Report outlines objectives for a management framework, identifies candidate biological reference points and harvest control rules, and provides an overview of the pros and cons of the range of management measures that could be implemented at the international level to control fishing mortality. As noted in the Report, the HMSMT may submit a supplemental report with additional information on these topics.

The 85th Meeting of the Inter-American Tropical Tuna Commission (IATTC) occurred June 10-14, 2013, in Veracruz, Mexico. At that meeting, Canada was expected to submit a Draft Proposal on North Pacific Albacore, which would replace Resolution C-05-02. That resolution

limits the total level of fishing effort for North Pacific albacore tuna in the Eastern Pacific Ocean to "current levels." Canada's proposal, among other things, defines "current effort" as the "average level of fishing effort from 2002-2004 as the baseline." Staff will update the Council on the outcomes of the IATTC meeting.

This meeting is an opportunity for the Council to develop recommendations on elements that should be included in the NC albacore precautionary management framework as it is developed in the NC international forum. The next NC meeting is scheduled September 2-5, 2013, in Fukuoka, Japan.

Council Action:

Adopt Elements of a Precautionary Management Framework for North Pacific Albacore Tuna.

Reference Materials:

1. Agenda Item D.5.a, Attachment 1: Summary Report of the Eighth Regular Session of the WCPFC Northern Committee, Attachment E; North Pacific Albacore Reference Points, Requests to the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean.
2. Agenda Item D.5.b, HMSMT Report.

Agenda Order:

a. Agenda Item Overview — Kit Dahl
b. Reports and Comments of Advisory Bodies and Management Entities
c. Public Comment
d. **Council Action**: Adopt Elements of a Precautionary Management Framework for North Pacific Albacore Tuna

PFMC
05/31/13

Attachment E

The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Eighth Regular Session

Nagasaki, Japan
3–6 September 2012

NORTH PACIFIC ALBACORE REFERENCE POINTS
Requests to the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean

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1. For the purposes of determining potential limit reference points for a precautionary approach management framework for North Pacific albacore, Northern Committee (NC) requests advice from the ISC on the following:

   i) Is the stock-recruitment relationship known, and in particular a reliable estimate of the steepness parameter (h) for the stock?

   ii) Are the key biological (natural mortality, maturity) and fishery (selectivity) variables reasonably well estimated?

2. To determine the suitability of candidate reference points identified by the ALBWG in its 2011 stock assessment, NC8 further requests that the ISC provide advice with respect to the following:

   a) For each of the following levels of F, expected yields, with measures of variability of these expected yields, under high, low and historical average recruitment scenarios, over the course of 10-year projections (and, in addition, 25-year projections for $F_{SSB\text{-}ATHL}$), the probabilities of breaching (in at least 1 year of the projection period) the Interim Management Objective (average of the 10 historical lowest years of SSB) and each of the depletion levels $SB_{10\%}$, $SB_{20\%}$, $SB_{30\%}$ and $SB_{40\%}$;
      i) $F_{SSB\text{-}ATHL}$
      ii) F_{MAX}
      iii) $F_{0.1}$
      iv) F_{MED}
      v) $F_{10\%}$, $F_{20\%}$, $F_{30\%}$, $F_{40\%}$, $F_{50\%}$

   b) A determination of whether or not under different levels of fishing mortality (average $F_{2006\text{-}2008}$, average $F_{2002\text{-}2004}$) that the above candidate reference points will be exceeded.

   c) To provide the influence of the environmental variation such as regime shift and decadal change on F_{SPR} and empirical based reference points.

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT
NORTH PACIFIC ALBACORE PRECAUTIONARY MANAGEMENT FRAMEWORK

1. Introduction

At its September 2011 meeting, the Western and Central Pacific Fisheries Commission (WCPFC) Northern Committee (NC) proposed the development of a precautionary management framework for North Pacific albacore in their work plan. The objectives of the precautionary approach-based management framework include: (1) recommending appropriate reference points; (2) agreeing in advance to actions that will be taken in the event each of the particular limit reference points is breached (decision rules, which the HMSMT believes would include a harvest control rule as discussed below); and (3) recommending any changes to Conservation and Management Measure 2005-03 for North Pacific Albacore. The NC intends to complete these tasks by 2014 when the next North Pacific albacore stock assessment is scheduled.

This Report reviews various concepts that could be used as a basis for Council recommendations to the US delegation at the 9th Regular Session of the Northern Committee, scheduled for September 2-5, 2013, in Fukuoka, Japan. The team was tasked to develop recommendations on the NC's proposed precautionary management framework for North Pacific albacore.

According to advice provided to the WCPFC Science Committee (Berger, et al. 2012), a management framework should ideally contain the following elements:

- management objectives
- target and limit reference points consistent with those objectives
- performance metrics
- consideration of systemic uncertainties
- alternative management options (e.g. types of harvest control measures, data to be used, or stock assessment process)
- candidate harvest control rules

2. Management Objectives

Management objectives need to take into account both the manner in which the benefits from the fishery are to be realized, as well as the possible undesirable outcomes that are to be avoided. It is desirable that both the timeframe and likelihood for achieving the target (or avoiding a limit) is included in the formal specification of each management objective (International Seafood Sustainability Foundation, 2013). The HMSMT reviewed the list of Management Goals and Objectives (Section 2.2) in the Fishery Management Plan for West Coast Fisheries for Highly Migratory Species (July 2011 version) and synthesized them into the following particularly relevant management goals for a precautionary management framework for North Pacific albacore.

1. Maintain the long-term conservation and sustainable use of North Pacific albacore. Implement harvest strategies which achieve optimum yield, prevent overfishing, and rebuild overfished stocks, as needed.
2. Maintain and support long-term economic and social benefits for the Nation's albacore fishing industry, giving due consideration to traditional participants.
3. Provide a long-term, stable supply of high-quality, locally caught fish to consumers.
4. Establish procedures to facilitate rapid and successful implementation of future management actions, as necessary.
5. Implement measures to adequately account for total mortalities, including any discards.
6. Implement harvest strategies that are robust with respect to scientific and management uncertainty.

3. Target and Limit ReferencePoints

Reference points can either be target reference points (used to guide management objectives for achieving a desirable outcome and not to be exceeded on average, or at least 50 percent of the time) or limit reference points (limits beyond which the state of a fishery and/or a resource is not considered desirable and remedial management action is required). In addition, reference points can address growth overfishing – when mortalities by weight exceed weight gains in the population by growth, or recruitment overfishing – fishing mortality above which the recruitment to the exploitable stock becomes significantly reduced. Not all reference points are useful depending upon the stock assessment modeling approach and knowledge of the stock dynamics.

The ISC Albacore Working Group estimated current fishing mortality, or F, ($F_{2006\text{-}2008}$) relative to several F-based reference points used in contemporary fisheries management. In addition to the simulation-based interim reference point, $F_{SSB\text{-}ATHL}$, these included F_{MAX}, F_{MED} and $F_{0.1}$, reference points that are based on yield-per-recruit analysis, and the $F_{20\text{-}50\%}$ reference points that are spawning biomass-based proxies of F_{MSY}. A summary of the results of the 2011 assessment with respect to these reference points and some of the problems identified with using each of the reference points is provided in Table 1. (For description of these reference points see section 7 at the end of this report.)

Table 1. Estimated ratio of Fcurrent to commonly used F reference points, equilibrium spawning biomass and equilibrium yield for the 2011 north Pacific albacore assessment.

Reference Point	$F_{2006\text{-}2008}/F_{ref}$	SSB (t)	Equilibrium Yield (t)	Drawbacks
$F_{SSB\text{-}ATHL}$	0.71	346,382	101,426	Not useful when there is a declining biomass trend because the lowest biomasses during the end of the time series will be contributing to the average of the 10 historic lowest biomass levels (ATHL).
F_{MAX}	0.14	11,186	185,913	Difficult to estimate when Y/R curve is asymptotic, as for the 2011 assessment.
$F_{0.1}$	0.29	107,130	170,334	Not useful for recruitment overfishing; estimates highly sensitive to changes in M.
F_{MED}	0.99	452,897	94,080	Assumes a stock recruitment relationship; may not be robust if number of recruits are estimated from narrow range of SSB.
$F_{20\%}$	0.38	171,427	156,922	Difficult to specify which %SPR is an appropriate proxy; advice in literature based on assumptions about stock productivity; not robust to changes in selectivity; does not consider impacts of environmental change on productivity.
$F_{30\%}$	0.52	257,140	138,248	
$F_{40\%}$	0.68	342,854	119,094	
$F_{50\%}$	0.91	428,567	99,643	

This list also encompasses the reference points that the NC directed the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC) to evaluate more closely as an outcome of their 2012 meeting (see Attachment to the Summary Report of the Eighth Regular Session).[1] Therefore, it seems reasonable to narrow the range of F-based reference points for consideration to this list. The HMSMT recommends that the Council's position with respect to reference points for international management of North Pacific albacore be consistent with the reference points selected for domestic management. Specifically, F_{MSY} (a Level 1 reference point, see box below) should be the fishing mortality limit reference point of choice, if it can be well-estimated with the stock assessment model. However, because of the lack of understanding about the relationship between spawners and recruits (i.e., steepness, a measure of the productivity of the stock), F_{MSY} is not well-estimated in the current assessment and is therefore not recommended as a reference point for management at this time. (In the above table the quantities associated with F_{MAX} are equivalent to F_{MSY}. for the 2011 assessment because of the lack of a stock-recruitment relationship.) For this reason, in the short term at least, a proxy would have to be used for F_{MSY}. Like F_{MSY}/F_{MAX}, F_{MED} requires knowledge of a stock recruitment relationship, so it is not an appropriate choice for a proxy either. The interim reference point, $F_{SSB\text{-}ATHL}$, appears to be reasonably precautionary given the current assessment time series, as the projected simulated median yield and spawning stock biomass (SSB) fall close to the equilibrium yield and SSB for $F_{40\%}$. However, since this reference point is based on historical minimum stock biomass values, it would become progressively less precautionary if stock biomass is on a declining trend.

[1] The NC request additionally included $F_{10\%}$.

Categorizing Biological Reference Points

The WCPFC Scientific Committee has discussed classifying biological reference points into three categories based on the biological information available about the stock in question. (Preece, et al. 2011, p. 18): **Level 1**: If steepness is well-estimated, then F_{MSY} and B_{MSY} are appropriate limit reference points; **Level 2**: If the steepness is not well-estimated (and essentially unknown) and if the relevant life-history and fishery information (natural mortality, selectivity, maturity) are both available and reliably estimated, then $F_{SPRx\%}$ and γSSB_0 are appropriate candidate F and SSB limit reference points, respectively (with an appropriately justified rationale for the selection of the fractions x and γ); **Level 3**: If the relevant life-history and fishery information are not reliably estimated then only use the SSB-based limit reference point, γSSB_0 is appropriate.

A better choice may be to use one of the $F_{SPR\%}$ proxies (Level 2 reference points), which do not depend on knowledge of a stock recruitment relationship. In their June 2012 report, the SSC agreed with the ISC Albacore Working Group's recommendation that "spawning potential ratio (SPR) reference points be considered as potential F_{MSY} proxies for albacore." For tuna management, and albacore in particular, which are considered quite productive, $F_{20\%}$ may be a reasonable limit reference point. SPR-based reference points are more directly related to stock productivity.

For a target reference point to be precautionary, it should be set lower than the limit reference point. This reduces the likelihood that the limit reference point will be breached. Such a precautionary reduction could be determined in several different ways:

- Similar to domestic annual catch limit (ACL)-based management, it could be selected by taking into account uncertainty in stock assessments. Based on the most recent north Pacific albacore assessment, sources of uncertainty include the lack of understanding about the relationship between spawners and recruits, potential regional differences in growth, conflicts between indices of abundance for fisheries with the same size selectivity, a lack of stockwide indices, and uncertainty about stock structure.
- If an SPR-based F limit is chosen, a more precautionary SPR reference point could be chosen as the target, e.g. $F_{20\%}$ as the limit and $F_{30\%}$ as the target.
- The HMS FMP identifies a 25% reduction from MSY or its proxy for setting the limit reference point for vulnerable stocks. Analogously, such a percentage reduction from the limit reference point could be chosen to determine the target F reference point.

At the international level, biomass reference points have not been explicitly discussed for North Pacific albacore. Biomass reference points are useful for specifying a different, or more precautionary, management response when biomass declines are encountered (e.g., implementation of a stock rebuilding plan). At this stage, the Council may wish to simply recommend that biomass reference points be taken into account as part of the North Pacific albacore precautionary management framework. The Council's SSC noted that B_{MSY} had been proposed as a potential limit reference point internationally and stated that "while B_{MSY} may be an appropriate target reference point, it is not an appropriate limit reference point. If used as a limit reference point, one would expect the stock to be overfished approximately half the time due to assessment uncertainties and management imprecision when fishing at F_{MSY}" (Agenda Item E.2.b, June 2012). Alternatively, consistent with the HMS Fishery Management Plan (FMP)

framework, a biomass limit reference between B_{MSY} and $0.5B_{MSY}$ could be identified. The management framework could implement a steeper linear reduction in the F limit when biomass falls below this biomass threshold (i.e., such that F is reduced to zero before B equals 0) in the harvest control rule (which we assume is equivalent to the "decision rules" identified by the NC).

4. Harvest Control Rules

Harvest control rules (HCRs) identify a pre-agreed course of action which results from reaching stock status benchmarks (e.g., triggers, thresholds or buffers) or some established economic or environmental conditions relative to reference points. Evaluation of alternative HCRs is best done in consultation with stakeholders and managers.

The HMSMT reviewed six HCR forms outlined in Berger, et al. (2012): constant, threshold (or knife-edge), stair step, and three types of sliding scale HCRs (simple linear, complex linear, and non-linear). Sliding HCRs reduce harvest along a continuum when the stock falls below a threshold, while a constant HCR does not adjust with changes in stock status. Figure 1 shows the simple and complex sliding scale HCRs. The HMS FMP specifies a simple linear HCR with a linear reduction in F when biomass falls below B_{MSY}. A complex sliding scale form can include one or more regions where the fishing mortality rate remains constant across a range of biomass levels.

For fishery management purposes, it may be desirable to build buffers into HCRs such that stakeholders and managers have some indication that reference points are being approached. Buffers allow for both the stochastic elements (e.g., recruitment) and the deterministic elements (e.g., harvest) of the stock to co-occur within some "comfort zone." For example, stock status could be allowed to fall within some range below a threshold for a period of time before triggering a linear reduction in F, catch, or effort (the vertical axis in the figures below). The buffer could be visualized as some form of the complex linear form.

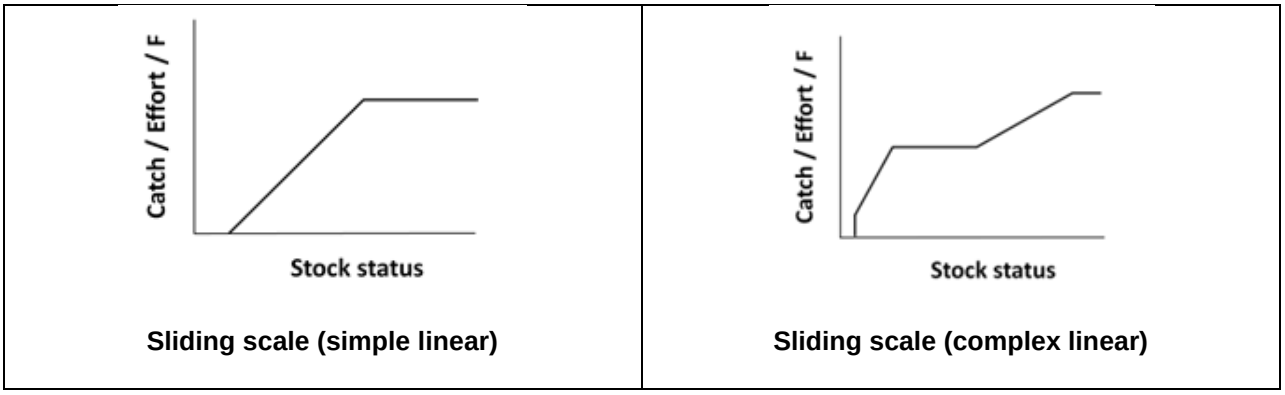

Figure 1. General form of simple and complex sliding scale HCRs. The horizontal axis, "stock status," is relative stock biomass. The vertical axis represents the management response. (Source: Berger, et al. 2012)

In examining the range of HCR forms described in Berger, et al. (2012) the HMSMT recommends the sliding scale form be considered as an appropriate candidate family for a North Pacific albacore HCR. Either the simple or complex form could be appropriate. By changing the reference biomass levels at which adjustments are made, as well as the desired slope (rate) of the change, the complex form is considered more adaptable. Such an HCR would reduce the

frequency of management adjustments by including a "plateau" in the region around B_{MSY} (or the target B) but well-above a biomass level that might trigger more aggressive measures to rebuild the stock.

Berger, et al. (2012) recommend a management strategy matrix to convey management advice and trade-offs associated with different decisions. The matrix is a way to convey the probability of achieving given objectives within a certain timeframe when alternative HCRs are applied. Short of a full management strategy evaluation (MSE), the HMSMT recommends such an approach for evaluating candidate HCRs for the North Pacific albacore precautionary management framework. Because of uncertainty in the fishery system, such as biases in the data, incorrect population assumptions (e.g., growth rates, fecundity) and other aspects, it will be important to more fully test different reference points and control rules through a MSE. The HMSMT may expound more fully on these methods in a supplemental report.

5. Management Measures to Reduce Fishing Mortality

Once a control rule is established, management measures are needed to achieve any required fishing mortality reduction in response to declines in biomass below the target or limit. Catch-based and effort-based measures are used as proxies for mortality reduction. Effort-based measures limit fishing mortality indirectly based on a presumed positive correlation between a given effort measure and catch; effort-based measures would need to relate the effort measure used for regulation to the expected reduction in catch mortality. Potential effort-based measures include time-and-area closures, capital controls (e.g. restrictions on numbers of lines, vessel size, hold capacity or other technological constraints on fishing power), or limits on numbers of vessels permitted to fish or on days fished. Catch-based management measures typically involve establishing a Total Allowable Catch (TAC) in concurrence with the control rule, which may be allocated by season, by sector, or by fishery based on gear selectivity for different age classes of fish.

The HMSMT discussed issues which arise with implementing mortality-reduction measures. Days fished or numbers of vessels fishing are conceptually simple, but create incentives to increase fishing power, for example due to changes in vessel capital. In principle, this could be addressed by also imposing gear or other vessel capital restrictions, though such capital restrictions would be difficult to verify, and might also restrict vessels from the most economically efficient fishing methods. Another possibility would be to require a larger-than-proportional reduction in effort compared to the desired reduction in fishing mortality, in anticipation of an offsetting increase in fishing power. Limiting the number of vessels in a fishery would be easier to implement and verify than days fished. Given heterogeneity of fishing power across a fleet, attention would need to be paid to the relative fishing power of vessels which stopped fishing versus those which remained active.

Monitoring, control and surveillance needs pose a challenge to reducing mortality in an international management context, with respect to costs, feasibility and reciprocal verification. High observer costs might potentially be reduced by using a vessel monitoring system or other electronic surveillance technology as a substitute. Placing observers on board may not be feasible for some vessels. Self-reporting of catch or effort creates incentives for underreporting,

suggesting the possible need for reciprocal verification to prove the effectiveness of mortality reduction measures.

TACs would need to reflect total catch, not just landings. Limiting catch might lead to high-grading or unreported discards, resulting in the need for additional monitoring. The measure of mortality for monitoring and reporting would need to be in comparable terms across fleets and national fisheries, whether by weight, number of fish, economic yield, or population impacts based on fleet selectivity and age structure. A standardized measure of population impacts based on age selectivity for the different methods used and locations fished could provide flexibility in how different national fleets achieve a required mortality reduction.

Allocations could be made flexible by making them transferable or tradable, allowing an overage in one season to be balanced by a reduced allocation the next, or averaging catch over several seasons. The uncaught portion of one sector's allocation could be reallocated to others later in the season.

In establishing management measures, the HMSMT recognized that it is important for fishery managers to have the greatest understanding of whether particular reference points are appropriate for management and to assess the impacts of the fisheries on the stock dynamics. Therefore, in order to be most useful, assessment results should include: 1) an F-at-age matrix; 2) Y/R analysis by fishery; and 3) a fishery impact analysis. With such information, allocations can be applied by fishery or by life history stage, if needed.

The HMSMT did not have sufficient time to develop recommendations on general types of management measures that would be the most appropriate as part of a precautionary management framework. Such recommendations may be included in a supplemental report.

6. References and Materials Consulted for this Report

Berger, AM, S J Harley, G M Pilling, N Davies, and J Hampton. 2012. Introduction to Harvest Control Rules for WCPO Tuna Fisheries. Eighth Regular Session of the Scientific Committee, August 7-15, 2012. Busan, Korea. WCPFC-SC8-2012/MI-WP-03

Deroba, Jonathan J. and James R. Bence. 2008. A Review of Harvest Policies: Understanding Relative Performance of Control Rules *Fisheries Research* 94(3): 210-223.

Harley, SJ, AM Berger, GM Pilling, N Davies, and J Hampton. 2012. Evaluation of Stock Status of South Pacific Albacore, Bigeye, Skipjack and Yellowfin Tunas and Southwest Pacific Striped Marlin against Potential Limit Reference Points. WCPFC Management Objectives Workshop, Manila, Republic of the Philippines, 28-29 November 2012. MOW1-IP/04 (WCPFC-SC8-2012/MI-WP-01_rev1).

IATTC Proposal IATTC-85 J-1 Submitted by Canada: Draft Proposal on North Pacific Albacore

IATTC Resolution C-12-01: Amendment to Resolution C-11-01 on Tuna Conservation

International Seafood Sustainability Foundation (ISSF). 2013. Report of the 2013 ISSF Stock Assessment Workshop: Harvest Control Rules and Reference Points for Tuna RFMOs, San Diego, California, USA, March 6-8, 2013. Available as WCPFC-SC9-2013/ MI-IP-01. Ninth Regular Session of the WCPFC Scientific Committee, August 6-14, 2013, Pohnpei, FSM.

IOTC-2012-S16-R[E] Appendix XV: Resolution 12/01, On the Implementation of the Precautionary Approach.

Maunder, M and R. Deriso. 2013. Reference Points and Harvest Control Rules. Inter-American Tropical Tuna Commission Scientific Advisory Committee Fourth Meeting. La Jolla, California (USA). 29 April - 3 May 2013. Document SAC-04-09.

Preece, A., Rich Hillary, R and C Davies. 2011. Identification of candidate limit reference points for the key target species in the WCPFC. Final Report to the WCPFC. Scientific Committee Seventh Regular Session, 9-17 August 2011, Pohnpei, Federated States of Micronesia. WCPFC-SC7-2011/MI-WP-03.

WCPFC CMM 2012-01: Conservation Measure for Bigeye, Yellowfin and Skipjack Tuna in the Western and Central Pacific Ocean.

WCPFC Northern Committee. 2012. Eighth Regular Session Summary Report, Attachment D: North Pacific Albacore Catch and Effort Data.

WCPFC Northern Committee. 2012. Eighth Regular Session Summary Report, Attachment E: North Pacific Albacore Reference Points, Requests to the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean

7. Description of Candidate Reference Points

Reference Point	Description
$F_{SSB-ATHL}$	Fishing mortality rate that maintain the spawning stock biomass (SSB) above the average level of its ten historically lowest points (ATHL) with a probability greater than 50%
F_{MAX}	F corresponding to maximum yield per recruit
$F_{0.1}$	F at which slope of Y/R is 10% of value at origin
F_{MED}	Fishing mortality rate corresponding to the median observed recruit/SSB ratio
$F_{x\%}$	F that reduces SSB/R to x% of unfished state

Source: ISC. 2010. A Review of Candidate Biological Reference Points for Northern Stocks of Highly Migratory Species in the North Pacific Ocean. ISC/10/Plenary/04.

Agenda Item D.5.b
Supplemental HMSAS Report
June 2013

HMSAS REPORT ON NORTH PACIFIC ALBACORE TUNA PRECAUTIONARY MANAGEMENT FRAMEWORK

The Highly Migratory Species Advisory Subpanel (HMSAS) is very concerned with the title for this Council action "Adopt Elements of a Precautionary Management Framework for North Pacific Albacore Tuna". The HMSAS understood that the Council directed the Highly Migratory Species Management Team (HMSMT) to analyze factors that would affect the U.S. fleet in the international negotiating arena such as biological reference points (BRPs) and harvest control rules (HCRs). The analyses would be forwarded with the pros and cons to the U.S. Delegation with the idea that the U.S. Delegation would negotiate at the NC and the Inter-American Tropical Tuna Commission (IATTC) to obtain the international management measures most favorable to the U.S. fleet. We view the Council action as forwarding the results of the HMSMT analyses to the U.S. delegation for the purpose of negotiating with the foreign governments. As indicated in several areas of their report, the best situation for the U.S. fleet is contingent on how the international agreement is finalized such as management measures based on an annual catch limit (ACL), some type of effort base, or some other type of biomass measurement. The HMSMT statement on page 4 suggests "At this point, the Council may wish to simply recommend that biomass reference points be taken into account as part of the North Pacific albacore precautionary management framework." There does not appear to be enough scientific agreement or information of foreign fleet catches to do any more than encourage the international scientists to get agreement on limit and target reference points for the following reasons:

It is apparent that not all countries are providing catch / effort data on their national harvest of North Pacific albacore. For example, there is almost no catch data from China. Japan reports catch and number of vessels for a portion of their fleet, but does not include their very large artisanal fishery. This information is critical in establishing the basis for management.

The Japanese fleet has the ability to move from a skipjack target harvest to an albacore target harvest depending on market and availability. There has been no information on how that could be handled in any future management measures.

The two RFMOs do not appear to be coordinated in their approach to determining BRPs.

As noted in the HMSMT paper, effort control is one of the potential means of basing management measures. This idea of effort control might come from fisheries such as yellowfin tuna where effort and gear are relatively homogenous and there is some relationship between catch and effort. Albacore is more complex with different gear and some fisheries have significant albacore bycatch. More research is essential on the harvest effects of juvenile (age 3-4 as occurs in the U.S. surface fleet) vs. the harvest effects of the adults (ages 5 and up occurring in the longline fleet). In the salmon world, this concept is called adult equivalence. The science is very complex. A scientist who sits on the Albacore Working Group of the International

Scientific Committee (ISC) believes the research will show that the surface fishery will have a marginally lower impact on spawning stocks than the longline fishery.

The scientist from the Albacore Working Group thinks that the Japanese will position a finding that a limit reference point similar to the current 10 low abundance years is perfectly adequate and useful for management. If this is the result of the international process, it would change the dynamics of current thinking that MSY is the basis for a biological target reference point.

In conclusion, the HMSAS advises that the Council recommend that the U.S. Delegation use the report of the HMSMT to work on getting international agreement on target and limit biological reference points and pursue the harvest control rules after international biological reference points are determined.

PFMC
06/21/13

A Precautionary Management Framework for North Pacific Albacore: HMSMT Report Overview

Pacific Fishery Management Council Meeting
Agenda Item D.5.b HMSMT report
Garden Grove, CA
21 June 2013

Management Context

- The 2011 North Pacific albacore assessment: stock was not overfished and overfishing was not occurring
- The North American components of the fishery are considered sustainable
- A less favorable future assessment could require international and domestic management actions
- Management bodies should consider potential measures before a critical management need arises
- The Northern Committee is developing a framework for management that includes choosing reference points and establishing harvest control rules

Guide to HMSMT Report Sections

1. Introduction / Purpose of report and generic description of a management framework
2. Management Objectives (p. 1)
3. Target and Limit Reference Points (p. 2)
4. Harvest Control Rules (p. 5)
5. Management Measures to Reduce Fishing Mortality (p. 6)

Elements in Management Framework

The HMSMT chose to align our recommendations with elements for a management framework identified by the WCPFC Science Committee (Berger, et al. 2012), which include:

- defined management objectives
- target and limit reference points
- performance metrics
- consideration of systemic uncertainties
- alternative management options (e.g. types of harvest control measures, data to be used, or stock assessment process)
- candidate harvest control rules

Management Objectives

From the W. Coast HMS FMP, the HMSMT synthesized the following management goals:

1. Maintain long-term conservation and sustainable use of N. Pac. albacore.
2. Maintain and support long-term benefits for the Nation's albacore fishing industry.
3. Provide a long-term, stable supply of locally caught fish to consumers.
4. **Establish procedures to help implement future management actions.**
5. Implement measures to account for total mortalities, including discards.
6. **Implement harvest strategies with respect to scientific and management uncertainty.**

Target Reference Points

- The ISC Albacore Working Group is expected to recommend reference points to the July 2013 ISC Plenary.
- For a precautionary management framework the target fishing mortality (F) reference point should be set as a percentage reduction from the associated limit reference point to reduce the likelihood that a limit reference point will be breached.
- Similarly, a target B (biomass) reference point should be set as a percentage increase from the associated limit B reference point.

Potential Target and Limit F Reference Points for Albacore

- Interim reference point used in the North Pacific Albacore is $F_{SSB\text{-}ATHL}$
- For the 2011 assessment, reasonable estimates of MSY were not possible
- Spawning potential ratio (SPR%) reference points (level 2) are considered by many other tuna science advisors as good alternatives when MSY (level 1) cannot be reliably estimated
- The HMSMT believes SPR% reference points may be the next best choice

Potential Target and Limit B Reference Points for Albacore

- Biomass reference points (B-limit and B-target) are needed to comply with the National Standard 1 Guideline
- To be consistent with the HMS FMP, any selected B-limit reference points should be lower than B_{MSY} (or B_{MSY} proxy)
- Absent an assessment-derived MSY, a level 2 reference point could be considered, such as some fraction of unfished B

Harvest Control Rules (HCR)

- Among HCRs considered by HMSMT, the sliding scale (simple or complex linear) appears to be appropriate for albacore – these conceptual models are intended to generalize the relationship between stock status and control measures such as F or B and catch or effort.
- The complex form could help to buffer against uncertainties and natural fluctuation in stock status
- Whatever HCR is selected should balance the biological risks of overfishing or overfished stocks against the costs of lost fishing opportunity or unnecessary management.

Measures to Reduce Mortality

- Catch-based and effort-based measures are used as proxies for mortality reduction
- Catch-based management measures typically involve establishing a Total Allowable Catch (TAC) with the control rule
- Effort-based measures include time-and-area closures, effort controls (e.g. vessel size, hold capacity or other constraints on fishing power), or limits on numbers of vessels permitted.

Measures to Reduce Mortality (cont.)

Managing all NP albacore fisheries based on effort has been problematic for a number of reasons including:

- A lack of agreement on a common effort metric (basic format of data, vessels fishing, days fished, etc.)
- Submitted data are not independently verifiable
- These shortcomings are in part the reason the NC work plan seeks to establish a precautionary management framework for NP albacore

Conclusions

- Given that the effort information submitted to the NC is incomplete and the challenges with managing effort, it may be preferable to develop catch-based measures at the international level.
- The Council could incorporate some of the information in these HMSMT Reports in recommendations to the U.S. delegation for the upcoming NC meeting.

Agenda Item D.5.b
Supplemental HMSMT Report 2
June 2013

SUPPLEMENTAL HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON NORTH PACIFIC ALBACORE PRECAUTIONARY MANAGEMENT FRAMEWORK

The Highly Migratory Species Management Team (HMSMT) Report under Agenda Item D.5.b focused on F-based reference points that had been considered by the International Scientific Committee on Tuna and Tuna-like Species in the North Pacific Ocean (ISC) Albacore Working Group and the Northern Committee (NC), however, the HMSMT notes that biomass reference points (B-limit and B-target) are needed to comply with the National Standard 1 Guideline. The HMSMT reiterates that selected B-limit reference points should be lower than B_{MSY} (or B_{MSY} proxy) to be consistent with the HMS Fishery Management Plan. Until an assessment-derived maximum sustainable yield is provided, a level 2 reference point, such as some fraction of unfished B, could be considered. The ISC Albacore Working Group is most knowledgeable about the productivity of the stock and the impacts of the fisheries on it, and is expected to recommend reference points to the ISC Plenary at its July 2013 meeting.

In the investigation of harvest control rules (HCR), different 'functional forms' of HCRs were considered based on the figures provided in the Berger et al. (2012) document to the Western and Central Pacific Fisheries Commission (WCPFC) on HCRs. The Berger et al. (2012) graphs shown in the HMSMT Report visualize the relationship between stock status and control measures such as F, catch, or effort. The HMSMT's discussion focused on HCR relationships between B and F. Although the graphs were intended only to conceptualize these functional forms, it is important to distinguish the differences between F and catch-based measures. The HMSMT suggests that both of the HCRs presented in the Report could be useful in a precautionary framework for the management of albacore, with management based on either F or catch, although the more complex an HCR is, the more challenging it may be to implement.

Reference points chosen as HCR thresholds should consider all factors that explain variability in assessed stock levels including not only fishing mortality, but natural environmental variation and assessment uncertainty. HCRs should balance the biological risks of overfishing or overfished stocks against the costs of lost fishing opportunity or unnecessary management.

The HMSMT provided a summary of the general merits of catch- and effort-based control rules in their March 2013 Report on albacore management (March 2013 Agenda Item I.3.b, Supplemental HMSMT Report) and in the HMSMT Report under this agenda item. Despite not having an HCR for North Pacific (NP) albacore, the fishery has operated under conservation measures since the adoption of international measures to limit effort to 2002-04 levels (WCPFC CMM 2005-03, IATTC Resolution C-05-02). The WCPFC Northern Committee (NC) has begun compiling statistics on catch and effort for fisheries targeting NP albacore. The NC has been monitoring fishing effort with respect to 2002-2004 levels by collecting information by gear type on days fished and number of vessels fishing for NP albacore. At the recent Inter-American Tropical Tuna Commission (IATTC) meeting, a new resolution on North Pacific (NP) albacore requires comparable reporting.

Effort-based measures serve to limit fishing mortality indirectly based on the relationship between effort and catch. While some nations fishing for NP albacore, including the U.S., have demonstrated the ability to manage based on effort, it has become apparent at the international level that managing all NP albacore fisheries based on effort has been problematic for a number of reasons. There has been little appetite by most nations to agree on a common effort metric, and even the most basic form of data, such as vessels fishing or days fished, has been slow in coming. Furthermore, the submitted data have not been independently verified. The challenge with managing effort under the current resolutions is one of the reasons for the NC work plan to establish a precautionary management framework for NP albacore.

If a future stock assessment shows a need to reduce fishing mortality, catch or effort restrictions could be imposed. Using the simple linear HCR introduced in the HMSMT Report, if B is shown to be some level below the B-target, international managers could apply a catch limit to bring the catch level down to an associated level along the slope of the linear HCR or to some level that is considered sustainable based on the historical B time series. Catch limits could be adjusted iteratively based on the B trajectories of future assessments until annual B estimates remain around the B-target (i.e. the probability of B falling below B-target is approximately 50 percent). Similarly, if F is shown to be at some level above the F-target, catch restrictions could be imposed and adjusted iteratively until future assessments show that F estimates center around the F-target. Catch restrictions, in the form of quotas or total allowable catches could be applied equitably across fleets or may be more appropriately directed toward fleets having the greatest impact on the stock based on their patterns of selectivity. Likewise, the same example could be used for effort-based measures.

In conclusion, given that the effort information submitted to the NC is incomplete and the challenges with managing effort, it may be preferable to develop catch-based measures at the international level. The Council could incorporate some of the information in these HMSMT Reports in recommendations to the U.S. delegation for the upcoming NC meeting.

PFMC
06/21/13

SCIENTIFIC AND STATISTICAL COMMITTEE REPORT ON THE NORTH PACIFIC ALBACORE TUNA PRECAUTIONARY MANAGEMENT FRAMEWORK

The Scientific and Statistical Committee (SSC) reviewed the Highly Migratory Species Management Team (HMSMT) report to the Council on a precautionary management framework for North Pacific Albacore Tuna (Agenda Item D.5.b, HMSMT Report). Dr. Sippel from the HMSMT presented the report to the SSC. Dr. Kit Dahl was also available to answer questions. The SSC discussion focused on elements that should be included in the precautionary management framework for North Pacific Albacore Tuna being developed by the Northern Committee of the Western and Central Pacific Fisheries Commission.

Overall, the SSC supports the use of this document as a starting point for management discussions. The current interim reference point, $F_{SSB\text{-}ATHL}$, is effort-based and provides a status quo reference point that assumes that the current mix of gear types remains constant. The definition of effort is key to any reference point based on fishing effort, and some effort metrics may be more informative than others (e.g., number of vessels or vessel-days vs. number of hooks in the water). Currently, fishing effort for this species is not measured to the degree needed to support reference points based on fishing effort.

The SSC agrees with the HMSMT that management reference points should consider the availability and quality of catch data and biological information for the stock. Reference points can be based on biomass or fishing mortality, or proxies for F_{MSY}. The SSC has previously recommended that spawning potential ratio (SPR) reference points be considered as potential fishing mortality proxies for North Pacific albacore. Biomass-based reference points, which are a fundamental part of the control rules currently proposed, are problematic given the high uncertainty associated with biomass estimates for this species.

Harvest Control Rules (HCRs) need to consider data quality and the implementation of management recommendations. A more effective presentation of the information in Figure 1 of the HMSMT report would be to plot stock status versus catch and stock status versus effort/F separately because the interpretation of these plots depends greatly on the definition of the y-axis. The SSC recommends against considering the more complex sliding scale harvest control rule, as illustrated in the right-hand panel of Figure 1, because the high uncertainty associated with this stock's parameter estimates and status do not support implementation of a more complex HCR.

The SSC notes that the biomass-based HCRs currently proposed are not robust to the effects of decadal scale environmental variability on North Pacific albacore biomass and distribution.

PFMC
06/21/13