COUNCIL RECOMMENDATIONS ON INTERNATIONAL HIGHLY MIGRATORY SPECIES MANAGEMENT

There are two international management topics the Council may wish to provide recommendations on: the status of negotiations on a fishing regime for 2013 and beyond pursuant to the U.S.-Canada Albacore Treaty and the Ninth Regular Session of the Western and Central Pacific Fisheries Commission (WCPFC) occurring December 2-6, 2012. Information on these topics is provided below. In addition, the Inter-American Tropical Tuna Commission (IATTC) has scheduled a special meeting on October 24, termed an extraordinary meeting in IATTC parlance. This meeting was called to discuss issues related to the overlap between the IATTC and WCPFC Convention Areas. Although the currently available agenda reflects requests from Mexico and others to expand the agenda, the European Union and the United States, among others, objected and the meeting is likely to be confined to the original topic. Attachment 1 is the agenda as shown on the IATTC website on October 15 along with the caveat that the agenda is still under discussion.

U.S.-Canada Albacore Treaty

The fishing regime, described in Annex C of the U.S.-Canada Albacore Treaty was not renewed for 2012. The regime governs reciprocal access to each country's Exclusive Economic Zone (EEZ) by albacore vessels from the other country, so Canadian vessels were unable to fish in U.S. waters and vice versa. At its June meeting the Council urged "the Department of State (DOS) and the National Marine Fisheries Service (NMFS) do what is necessary to enable negotiations to move forward expeditiously, and reach a successful conclusion such that a replacement regime is in place for the 2013 fishing season." This included a call for the prompt exchange of the key information relevant to the issues frustrating agreement on a new fishing regime.

The lack of a fishing regime in 2012 had several effects. Over the last decade Canadian vessels have expended increasing effort in the U.S. zone, which they were unable to do in 2012. U.S. harvesters were primarily affected because U.S. vessels were denied port privileges in Canadian ports. This prevented them from delivering fish to Canadian processors or picking up foreign crew. Also, U.S. vessels could not fish in the Canadian zone, although historically most U.S. vessels have not depended on fishing in Canadian waters. U.S. processors also did not benefit from landings from Canadian vessels, although analysis of 2012 landings could show adequate substitution by landings from U.S. vessels.

The US-Canada Albacore Treaty Data Working Group held a meeting on August 30 and the Economic Working Group met September 10. As of this writing a bilateral U.S.-Canada meeting has not been scheduled to discuss a replacement fishing regime for 2013.

Ninth Regular Session of the Western and Central Pacific Fisheries Commission

There are several issues likely to arise at the Commission meeting that the Council may want to comment on. They are briefly reviewed below.

Conservation measure for yellowfin, bigeye and skipjack tunas in the Western Pacific. The Commission adopted a 3-year conservation measure for these stocks in 2008. Although a replacement measure was to be considered at the 2011 meeting, the meeting was delayed at the last moment until March 2012 and there was apparently insufficient international appetite for a comprehensive revamping of the measure. Instead, CMM 2011-01 effectively rolls over the existing conservation measure for 2012 with the expectation that a new measure will be developed at the Ninth Commission meeting. Attachment 2 is a report to the Scientific Committee prepared by the South Pacific Commission Oceanic Fisheries Program on the effectiveness of CMM 2008-01. Attachment 3 is a proposed replacement CMM prepared by the WCPFC Chair and Vice-Chair and presented at the Eighth Technical and Compliance Committee meeting.

North Pacific striped marlin. CMM 2010-01 implemented a phased reduction in North Pacific striped marlin such that by January 1, 2013, catch is to be 80% of the 2000-2003 level. Based on the latest North Pacific striped marlin stock assessment completed by the Billfish Working Group, the International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific (ISC) found that the stock is overfished and experiencing overfishing. Attachment 4 excerpts the conservation advice for North Pacific striped marlin from the ISC12 Plenary Report. The ISC noted that "Fishing at the average 2001-2003 fishing mortality rate would lead to a spawning biomass decrease of 2% under recent recruitment to an increase of 6% under the stock-recruitment curve assumption by 2017." The ISC also provided projections of 2017 spawning biomass under various harvest scenarios for consideration by fishery managers. Eighty percent of 2000-2003 average catch works out to approximately 3,600 mt based on Table 14-4 in the ISC Plenary Report (providing estimates of total annual landings). The Northern Committee "noted that Commission members should take into account the valuable information contained in the ISC12 report when considering possible catch limits for NP striped marlin and options for improving the existing measure" (NC8 Summary Report).

Pacific bluefin tuna. Although the ISC Pacific Bluefin Working Group (PBFWG) had planned to complete a new stock assessment by ISC12 it was unable to do so due to disagreements within the WG over modeling issues. The PBFWG is scheduled to meet November 10-17 to complete the assessment and an ISC Plenary meeting (emergency) is scheduled for December 17-21 to consider the results. ISC12 repeated its previous advice that "it is important that the level of F is decreased below the 2002-2004 levels, particularly on juvenile age classes." The Northern Committee proposed a conservation measure for 2013 that essentially rolls over the existing measure (CMM 2010-04) with the same exemptions for artisanal fisheries (relevant to small-scale vessels in Japan) and Korean fisheries (see Attachment 5). The proposal adds a provision for countries to monitor and report to the Commission international trade in products derived from Pacific bluefin tuna. This is most relevant to imports by Japan from Korea and Mexico.

The Permanent Advisory Committee to the U.S. Section to the WCPFC will meet October 25-26. The Council Executive Director or his designee attends as an ex-officio member. Supplemental information on the results of this meeting will be provided to the Council.

Council Action:

Consider International Management Recommendations Including the U.S.-Canada Albacore Treaty and Recommendations to the U.S. Delegation to the Ninth Regular Session of the Western and Central Pacific Fisheries Commission

Reference Materials:

1. Agenda Item J.1.a, Attachment 1: Inter-American Tropical Tuna Commission 84th Meeting (Extraordinary), La Jolla, California (USA) 24 – 25 October 2012; Provisional Agenda
2. Agenda Item J.1.a, Attachment 2: Review of the Implementation and Effectiveness of CMM 2008-01, WCPFC-SC8-2012/ SC8-WCPFC8-01
3. Agenda Item J.1.a, Attachment 3: Conservation and Management Measure for Bigeye, Yellowfin and Skipjack Tuna in the Western and Central Pacific Ocean; Paper prepared by the WCPFC Chair and WCPFC Vice-Chair
4. Agenda Item J.1.a, Attachment 4: Excerpt from Report of the Twelfth Meeting Of The International Scientific Committee For Tuna and Tuna-Like Species in the North Pacific Ocean Plenary Session 18-23 July 2012, Sapporo, Hokkaido Japan
5. Agenda Item J.1.a, Attachment 5: Draft Conservation and Management Measure for Pacific Bluefin Tuna (Northern Committee Eighth Regular Session, September 3-6, 2012)
6. Agenda Item J.1.c, Public Comment: Letter from the American Albacore Fishing Association

Agenda Order:

a. Agenda Item Overview Kit Dahl
b. Reports and Comments of Advisory Bodies and Management Entities
c. Public Comment
d. **Council Action**: Consider International Management Recommendations Including the U.S.-Canada Albacore Treaty and Recommendations to the U.S. Delegation to the Ninth Regular Session of the Western and Central Pacific Fisheries Commission

PFMC
10/15/12

Agenda Item J.1.a
Attachment 1
November 2012

INTER-AMERICAN TROPICAL TUNA COMMISSION

84th MEETING (EXTRAORDINARY)

La Jolla, California (USA)
24 – 25 October 2012; 09:00

PROVISIONAL AGENDA

	Documents
1. Opening of the meeting	
2. Adoption of the agenda	
3. Overlap area between IATTC and WCPFC	IATTC-83-INF-B
4. Updated Resolution on North Pacific albacore	IATTC-83 J-1 REV2
5. Adoption of conservation measures for fishing in association with fish aggregating devices (FADs)	
6. Adoption of a monitoring program of tuna sizes per fleet	
7. Discusion of measures on bluefin tuna adopted within the WCPFC	
8. Trade, certification, and sustainability of tunas	
9. Other business	
10. Adjournment	

See the IATTC website for further information

SCIENTIFIC COMMITTEE
EIGHTH REGULAR SESSION

7-15 August 2012
Busan, Republic of Korea

Review of the Implementation and Effectiveness of CMM 2008-01

WCPFC-SC8-2012/ SC8-WCPFC8--01

SPC-OFP

EIGHTH REGULAR SESSION

Guam

25-29 March 2012

REVIEW OF THE IMPLEMENTATION AND EFFECTIVENESS OF CMM 2008-01

WCPFC8 -2011-43 Rev 1
9 March 2012

Paper prepared by SPC-OFP

Review of the Implementation and Effectiveness of CMM 2008-01

Executive Summary

The paper provides a review of the implementation and effectiveness of CMM 2008-01 using the most current data and stock assessments available.

Implementation of CMM 2008-01

The implementation of the CMM was reviewed for its key components – purse seine effort, the FAD closure, the high seas pockets (HSP) closure, longline catches and catches by other fisheries. The main conclusions from the paper regarding implementation are as follows:

Purse seine effort

Purse seine effort has expanded since the introduction of CMM 2008-01, with effort (excluding domestic purse seiners based in Indonesia and Philippines) in 2010 estimated to have increased by approximately 18% compared to effort in 2004. VMS data for 2011 indicate a further increase in effort of approximately 11% over 2010 and 31% over 2004.

FAD closure

The incidence of reported activity related to use of drifting FADs was considerably lower in 2010 (5.8%) compared to 2009 (14.0%). However, the observed incidence of vessels drifting at night with fish aggregation lights on increased from 2.2% to 6.2%. Total catch was below average during the 2009 closure and in September of the 2010 closure, although effort remained at around normal levels throughout both closures. Catches of skipjack and yellowfin were moderately reduced during the closures, but bigeye catches were strongly reduced. In 2010, the proportions of effort associated with FAD usage outside the closure period, particularly the months immediately before and after the closure, had lower FAD usage than is typically the case. However, available logsheet data indicates a return to high levels of FAD usage prior to FAD closure in 2011. While catches were reduced during the closures, the average size of the catch was higher for all species, particularly yellowfin, during the closures because of the larger average size of fish caught in unassociated sets. These larger average sizes, which have higher unit value, may offset to some extent the loss of revenue that occurs as a result of lower catches during the closures.

High seas pockets closure

Available data from all sources indicate that the HSP closure since 1 January 2010 has largely been respected. Since January 2010, effort has been concentrated mainly in the EEZs, with no apparent re-distribution of effort to the eastern high seas. The ENSO cycle remains a key driver of purse seine effort distribution, with the *La Niña* event that has occurred since Q1 2010 continuing to push purse seine effort to the west.

Longline catches

The 2010 longline catch of bigeye tuna in the WCPFC Convention Area of 64,953 tonnes[1] is approximately 77% of the average catch for 2001-2004. The main reason for the reduction was the reduced catches reported by several of the major fishing nations – e.g. Japan caught 14,565 tonnes in 2010 compared to their limit of 22,480 tonnes, and Korea caught 13,862 tonnes in 2010 compared to their limit of 17,159 tonnes. These reductions are greater than what is required under the CMM and therefore there is considerable scope for the catches to increase from the 2010 level in the future if conditions in the fishery were to allow.

The 2010 longline catch of yellowfin tuna in the WCPFC Convention Area was 73,836 tonnes[1] and so within the 2001-2004 average catch of 75,604 tonnes.

Other fisheries

For fisheries other than tropical purse seine and longline, total catches for 2010 are less than their respective average levels for 2001-2004 for both bigeye and yellowfin tuna.

Effectiveness of CMM 2008-01

To evaluate the effectiveness of CMM 2008-01, stock projections were undertaken using the reference case models for the 2011 assessments for bigeye, skipjack, and yellowfin tunas. These models were adopted by SC7 for the provision of management advice, and as such do not yet incorporate the revisions of longline catch provided by China in late 2010. The impact of the revised catch estimates on the projection results is expected to be minor. Similar methods were used as in previous years and the results are provided in the form of two excel files with a separate worksheet for each species contained therein.

Of particular interest from the projections is that maintenance of bigeye tuna catch and effort levels observed in the fishery in 2009 results in F/F_{MSY} remaining high, with a projected level of 1.39 in 2021. However, for the scenario best approximating the reported catch and effort in the fishery in 2010, F/F_{MSY} declines and is at a projected level of 0.97 in 2021. This is driven by several factors: the lower than usual FAD use in 2010, the lower longline catches, and a large (30%) reduction in reported catches from the domestic fisheries of Indonesia and the Philippines.

For scenarios that mimic a total purse seine closure, there is a relatively small incremental reduction in F/F_{MSY} compared to that achieved by a FAD closure. However, this comes at a cost of substantial reductions in total catch, particularly in the purse seine fishery. This conclusion is robust to the use of base years from 2001-2009 to characterize the differences.

The projection results were also used to quantify in an approximate way the impact of the various exemptions contained within CMM 2008-01. It was estimated that if the CMM was implemented without exemptions, approximately half of the overfishing that is estimated could occur under the CMM as written could be removed (reduction of bigeye tuna F/F_{MSY} from 1.35 to 1.17). This result is similar to previous analyses of this issue.

[1] Incorporating recent catch revisions submitted by China, but not including the estimates of 2,441 tonnes of bigeye and 9,513 tonnes of yellowfin reported by Vietnam for its fleet operating in the South China Sea. These estimates have been provided for 2010 only.

Finally, we estimated the individual impacts on bigeye tuna F/F_{MSY} of observed levels of catch or effort for the longline, purse seine and domestic Philippines and Indonesia fishery groups in 2009 and 2010 against a base of 2004. The reduction in purse seine FAD effort in 2010 has the greatest effect in terms of removing overfishing (67.4% of overfishing removed) followed by the reduction in longline catch in 2010 (34.7% of the overfishing removed).

1 Introduction

CMM 2008-01, adopted in December 2008, seeks to reduce fishing mortality on bigeye tuna by 30% from the 2001-2004 average level and limit yellowfin tuna fishing mortality to its 2001-2004 level, in order to maintain stocks at levels capable of producing the maximum sustainable yield (MSY). This objective is currently pursued though a combination of measures including longline catch limits, purse seine effort limits, a closure relating to purse seine fishing using fish aggregation devices (FADs) and a closure of two high-seas pockets (HSP) to purse seine fishing. Most of these measures have various exemptions or alternatives built in and are to be phased in over the period 2009-2011.

In section 2 of this paper, we review the implementation to date of the key elements of CMM 2008-01. This review covers primarily the year 2010, for which data are now reasonably complete, but also includes preliminary information for 2011 where possible. The key elements of the CMM reviewed here are purse seine effort levels, the 2009 and 2010 FAD closures, the high seas pockets closure to purse seine fishing, longline catches of bigeye and yellowfin tuna, and catches of bigeye and yellowfin tuna by fisheries other than purse seine and longline.

Section 3 of the paper focuses on an assessment of the impacts of a variety of combinations of catch and effort levels on bigeye tuna overfishing and on the catches of all three species, as recommended by SC7 (a preliminary version of which was presented to TCC7 as WCPFC-TCC7-2011-31). Two specific issues, the use of FAD versus total purse seine closures and the impact of the exemptions, are also analysed.

2 Implementation of key elements of CMM 2008-01

In this section we briefly review, on the basis of available data, the implementation to date of the key elements of CMM 2008-01 as they pertain to the achievement of the objectives.

2.1 Purse seine effort

CMM 2008-01 specifies certain limits on purse seine effort between 20°N and 20°S, as follows:

- Effort (measured in days fished) in the EEZs of PNA members combined is limited to no greater than 2004 levels;
- Compatible measures to reduce purse seine fishing mortality on bigeye tuna in the EEZs of non-PNA CCMs; and
- Effort on the high seas (measured in days fished) is limited for each individual CCM to no more than the 2004 or 2001-2004 average level[2];
- Purse seine fishing is prohibited in the two western high seas pockets (since 1 January 2010).
- Exemptions, exclusions and variations to the above include:
    - Small Island Developing States in paragraph 10 with respect to high seas effort;
    - Fleets of 4 vessels or less in footnote 2 of the CMM;
    - Preservation of existing rights under registered regional or bilateral fisheries partnership arrangements or agreements in paragraph 7; and
    - Exclusion of archipelagic waters from the scope of the CMM.

[2] Since the CMM provides a choice between 2004 and 2001-2004, it is assumed that CCMs would always choose the higher of the two.

Purse seine effort from 2001 to 2010, broken down by various categories of EEZs and high seas, is provided in WCPFC-TCC7-2011-IP11 and shown graphically in Figure 1.

Because of the difficulties of specifying purse seine effort of Indonesian and Philippines purse seiners both in their EEZs and on the high seas, it is not currently possible to precisely determine total purse seine effort in days fished in 2004 and subsequent years. However, based on the available raised logsheet data, it is clear that purse seine effort in the WCPFC tropical purse seine fishery in 2010, excluding domestic purse seiners based in Indonesia and Philippines, has increased considerably (by approximately 18%) compared to effort in 2004. Complete logsheet data are not yet available for 2011. However, complete VMS data (adjusted to remove in-port and other non-fishing days) for 2011 indicate a further increase in effort of approximately 11% over 2010 and 31% over 2004 (Figure 1, Figure 2).

2.2 FAD closure

Information on the implementation of the 2009 and 2010 FAD closures was reported to SC7 (WCPFC-SC7-2011-MI-WP-01). The key findings were:

- The incidence of reported activity related to use of drifting FADs was considerably lower in 2010 (5.8%) compared to 2009 (14.0%) (Table 1);
- The observed incidence of vessels drifting at night with fish aggregation lights on increased from 2.2% in 2009 to 6.2% in 2010;
- Total catch was below average during the 2009 closure and in September of the 2010 closure. Catches in July and August 2010 were about average. Effort remained at around normal levels throughout both closures;
- The catches of bigeye tuna were strongly reduced during both closure periods compared to the other months of those years (Figure 3);
- The impacts of the closures on skipjack and yellowfin catches were more moderate (Figure 3);
- The proportions of associated sets conducted during the 2010 closure were close to zero (Figure 4);
- In 2010, the proportions of effort associated with FAD usage outside the closure period, particularly the months immediately before and after the closure, had lower FAD usage than is typically the case. This may be associated with the retrieval and re-deployment of FADs, although this needs to be verified by other data (Figure 4);
- While catches were reduced during the closures, the average size of the fish in the catch was higher for all species, particularly yellowfin, during the closures because of the larger average size of fish caught in unassociated sets (Figure 5). These larger average sizes, which have higher unit value, may offset to some extent the loss of revenue that occurs as a result of lower catches during the closures.

As noted above, a significant observation is the relatively low proportion of total sets conducted on FADs and other floating objects in 2010 compared to previous years (26% FAD sets in 2010 compared to 48% in 2001-2009). However, available logsheet data for 2011 indicate a return to relatively high FAD usage in the months leading up to the 2011 FAD closure (Figure 4).

2.3 High seas pockets closure

CMM 2008-01 established a closure to all purse seine fishing in the two high seas pockets (HSP) shown in Attachment D of the CMM from 1 January 2010. Previous analyses (WCPFC6-2009-IP17) have determined that the impact of the closure on bigeye tuna overfishing depends on what happens to the purse seine effort that would have otherwise fished in the HSP (approximately 7,400 days per year in 2001-2004, or about 14% of the total managed purse seine effort). If that effort is removed from the fishery, there is a small reduction in F/F_{MSY}, while if the effort is redistributed, there is a small increase in F/F_{MSY} – under the assumption that such effort would redistribute to the eastern high seas areas (EHS)[3] given the existing limits on EEZ effort (see Table 7, WCPFC6-2009-IP17).

Figure 6 shows the distribution of purse seine effort since 1 January 2010 from three independent sources of data – logsheet, observer and VMS data. The three data sets show similar patterns, with both HSP largely devoid of effort since 1 January 2010. There is a small amount of VMS days in the HSP, presumably for transiting purposes. Historically, the proportion of total purse seine effort occurring on in the HSP has been about 10-20% annually; since 1 January 2010, on the basis of available logsheet data, it is 0.7%. While there is some purse seine effort in the eastern high seas area, there is no evidence of an increase in activity in this region since January 2010 compared to previous years (where it has comprised around 2-8% of total purse seine effort annually). However, the occurrence of purse seine effort in the eastern high seas is related to some extent to the ENSO cycle, being higher during *El Niño* events. Since most of the period since January 2010 has been under *La Niña* conditions, relatively low effort in the eastern high seas was expected.

2.4 Longline catch

CMM 2008-01 established certain bigeye longline catch limits for CCMs other than Small Island Developing States and Territories (SIDS). These limits, with some exemptions and variations, are based on reductions (10%, 20% and 30% in 2009, 2010 and 2011, respectively) from 2001-2004 average bigeye longline catches and are aimed at achieving an overall 30% reduction in bigeye longline catch from 2001-2004 or 2004 levels. The various exemptions and variations are:

- SIDS are exempted from the measure and therefore have no limits on bigeye catches by their domestic longline fleets;
- Non-SIDS CCMs with a base catch of <2,000 tonnes of bigeye tuna are limited to 2,000 tonnes;
- China, Indonesia and USA use 2004 as the base, rather than 2001-2004;
- The limits for China will remain at 2004 levels pending agreement regarding the attribution of Chinese catch taken as part of domestic fisheries in the EEZs of coastal states; and
- The reductions specified for 2010 and 2011 shall not apply to fleets with a total longline catch of <5,000 tonnes and landing exclusively fresh fish. This exemption effectively applies to the United States Hawaii-based fleet only.

[3] For the purpose of this paper, we define the eastern high seas as the high seas areas of the WCPFC convention area between 10°N and 20°S and east of 170°E. That part of the high seas pocket bounded by the EEZs of Federated States of Micronesia, Marshall Islands, Nauru, Kiribati, Tuvalu, Fiji and Solomon Islands that is east of 170°E is excluded from this definition.

The base bigeye tuna catches by flag were provided in CMM 2008-01 Attachment F. The inferred limits under the CMM as well as provisional catches by flag for 2010 are provided in WCPFC8-2011-21.Rev.2, Attachment 1, Table 3. The most notable revisions to the base catches compared to Attachment F in the CMM are a slight increase in the Chinese Taipei catch (from 15,854 to 16,125 tonnes) and a major decrease in the Indonesian catch (from 8,413 to 2,192 tonnes). Both of these revisions are consistent with the latest data provided by these CCMs and have been used in the most recent assessments.

The total average bigeye longline catch for 2001-2004 was 83,879 tonnes. In 2010, the bigeye catch (incorporating revisions in the catch by China provided in late 2011) was 64,953 tonnes (excluding a catch of 2,441 tonnes of bigeye reported for the first time by Vietnam from the South China Sea), the lowest since 1996 and approximately 77% of the average catch for 2001-2004. The main reason for the fall was reduced catches by several of the major fishing nations, e.g., Japan caught 14,565 tonnes in 2010 compared to their limit of 22,480 tonnes and Korea caught 13,862 tonnes in 2010 compared to their limit of 17,159 tonnes. These reductions are greater than what is required under the CMM and therefore there is considerable scope for the catches to increase from the 2010 level in the future if conditions in the fishery were to allow.

CMM 2008-01 also limited longline catches of yellowfin tuna to their 2001-2004 average levels for each CCM, excluding SIDS. The catches from 2001 to 2010, along with the inferred limits for each CCM, are provided in WCPFC8-2011-21.Rev.2, Attachment 1, Table 6. Total annual yellowfin catch in 2001-2004 averaged 75,604 tonnes. In 2010, the provisional total longline catch of yellowfin was 73,836 tonnes (excluding the catch of 9,513 tonnes by Vietnam from the South China Sea), and so within the overall limit of 75,604 tonnes as specified by the CMM.

2.5 Gear types other than tropical purse seine and longline

CMM 2008-01 requires CCMs to "ensure that the total capacity of their respective other commercial tuna fisheries for bigeye and yellowfin tuna, including purse seining that occurs north of 20°N or south of 20°S, but excluding artisanal fisheries and those taking less than 2,000 tonnes of bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004." (paragraph 39). The reference to "fishing capacity" as the limited quantity makes monitoring of the measure difficult, as the term is not defined for the purpose of this CMM (although there is reference to fishing effort) and data are not comprehensively provided. In the absence of specific data on fishing capacity or fishing effort for most of these fisheries, catch has been used as a proxy. WCPFC8-2011-21.Rev.2, reports bigeye tuna catches by gears other than longline and tropical purse seine in Attachment 1 Table 4, and similarly for yellowfin in Attachment 1 Table 5. In summary, the average bigeye catch for 2001-2004 was 12,817 tonnes, while the provisional catch for 2010 is 7,638 tonnes. For yellowfin, the average catch in 2001-2004 was 101,264 tonnes, while the provisional catch for 2010 is 90,687. Therefore, for both species, 2010 catches are less than their respective average levels for 2001-2004.

3 Effectiveness of the measure

3.1 Introduction

In this section of the paper, we present a series of stock projections for bigeye, yellowfin and skipjack tuna, to inform discussions regarding the effectiveness of CMM 2008-01, and how the stocks and catches might respond to strengthened measures. This work was presented at TCC7 WCPFC-TCC7-2011-31, and is reproduced here for convenience, along with follow-up work requested through the WCPFC Chair by the Delegation of the United States. The projections comprised a set of 'generic' projections of various combinations of catch and effort in the purse seine, longline, domestic Indonesian and Philippines and other fisheries. The full results of the projections are posted as Excel files next to this paper on the WCPFC8 web page. Using this set of projections, we (1) compared the results of continuing the 2009 and 2010 fishing conditions, as have been reported by CCMs; (2) compared the outcomes resulting from FAD and total purse seine closures; and (3) evaluated the impact of exemptions on the performance of the CMM.

3.2 Methodology

Similar assumptions were made in the current projections as in previous analyses (e.g. WCPFC7-2010-15). The main assumptions were:

- The reference case models from the 2011 bigeye (WCPFC-SC7-2011-SA-WP-02) yellowfin (WCPFC-SC7-2011-SA-WP-03) and skipjack (WCPFC-SC7-2011-SA-WP-04) stock assessments were used - these models were those adopted by SC7 for the provision of management advice in 2011;
- The projections were deterministic in that no process or estimation error was assumed;
- The projections were run for ten years after the full implementation of CMM2008-01, i.e. from 2012-2021;
- Two sets of results were generated for two hypotheses regarding future recruitment: (1) recruitment was assumed to occur at the average of the level estimated over the period 2000-2009, as recommended by SC6; and (2) recruitment was assumed to occur according to the stock-recruitment relationship estimated/assumed in the reference case assessments. There are separate spreadsheets available for each of these recruitment hypotheses. In this paper, we refer only to the first hypothesis (recent average recruitment).
- Catchability (which can have a trend in the historical component of the model) was assumed to remain constant in the projection period at the level estimated in the terminal year of the assessment model.

The projections started from the beginning of 2012, after the final year of reductions in fishing impact under CMM2008-01, allowing the investigation of management options following on from the CMM's implementation. It was assumed that the levels of catch and effort reported in 2010 would continue through to 2011. This assumption impacts the short-term post-2010 projections of biomass and catches, but does not significantly impact the main performance measures, which are the equilibrium outcomes at the end of the projection period.

A "base year" is chosen in order to express the catch and effort values for 2012 - 2021, which make up the particular fishing strategy or management option being projected into the future, in relative terms. These relative catch or effort values are referred to as scalars. Therefore, a scalar of 1.0

would mean a catch or effort level for a particular fishery group equivalent to that which occurred in 2009. We chose 2009 as the base year rather than 2010 (as recommended by SC7) for several reasons: a) at the time the projections were undertaken, there was considerable uncertainty in reported longline catches for 2010, and final estimates were not available for some key fleets (subsequently provided by China); b) the proportion of total purse seine effort that was based on FADs was abnormally low in 2010 and there is uncertainty as to whether this change in behaviour will persist into the future; and c) the use of 2009 means that results are more comparable to the previous analysis (WCPFC7-2010-15) which also used 2009 as a base.

We stress that the choice of base year is not critical for the projections, as a wide range of catch/effort levels are explored in the various scenarios. As stated above, the choice of 2009 as the base year simply means that all other catch or effort levels used in the projections are expressed relative to their respective levels in 2009. For example using Table 2 to approximate the 2004 conditions, the scalars would be: longline – 1.2; purse seine associated sets – 1.14; and purse seine unassociated sets – 0.57. These conditions can be approximated by a run from the grid – or by simple linear interpolation.

For each species, catch was used in projections for all longline fisheries and the fisheries in Indonesian and Philippines archipelagic waters, while effort was used for all others. The SC7 request, along with our comments and explanations for deviating from the request, are provided in Appendix 1.

For the generic projections, we applied catch or effort scalars (i.e. multipliers of the 2009 base values) to each of the (grouped) longline fisheries, purse seine fisheries, Indonesia and Philippines domestic fisheries and other fisheries (predominantly non-Indonesian pole-and-line and purse seine fisheries outside of 20^{o}N – 20^{o}S). The application of the catch or effort scalars for the respective fishery groups in all possible combinations resulted in 768 (8x8x2x2x3) projection scenarios for each of bigeye and yellowfin tuna (Table 2), and 96 (8x2x2x3) projection scenarios for skipjack (there are no commercially significant longline fisheries in the skipjack assessment, so this factor is omitted). The actual levels of catch and effort corresponding to the various scalars, and their observed values from 2001 to 2010 are shown in Table 3.

Two scenarios for the application of scalars to purse seine effort were modelled in the projections. In the first (denoted “transfer”), the scalars for the purse seine fishery were applied to the associated set effort, and the effort so removed (added) was added to (subtracted from) the unassociated set effort. This maintained total purse seine effort at a constant level and is intended to mimic the use of FAD closures with complete mobility of effort between set types. In the second scenario (denoted “managed”), the same scalars were applied simultaneously to both the purse seine associated set and unassociated set effort. This was intended to mimic a total purse seine closure measure, or other control on total purse seine effort that maintains the same composition of associated and unassociated sets in the total purse seine effort.

Performance statistics for all projections included F_{2021}/F_{MSY}, estimates of spawning biomass, and catches for different fisheries groups. Because of the use of recent average recruitment in the projections, the historical estimates of SB_{MSY} and SB_0 are no longer valid, especially when there is a considerable difference between the recent average recruitment level and the long-term average level (e.g. in the bigeye tuna assessment). In this circumstance, a depletion estimate ($SB_Y/SB_{F=0}$) would be more appropriate and this is included in the spreadsheet columns labelled “SB2021_SBF0”.

Also included are the spawning biomass per recruit (SPR) reference points recommended by SC7 at three alternative levels of SPR depletion – 20%, 30% and 40% of unfished levels. These are provided in the spreadsheet columns labelled "spr20", "spr30" and "spr40". The values provided are the ratios of the fishing mortality in 2021 to the fishing mortality that results in reduction of SPR to 20%, 30% and 40% of unfished levels.

3.3 Results and discussion

3.3.1 Projection of 2009 and 2010 conditions

Figure 7, Figure 8 and Figure 9 show the projected values of F/F_{MSY} for bigeye, skipjack and yellowfin, respectively, for the base (2009) conditions and an approximation to 2010 conditions (given by scenario (0.8, 0.7, 1.34, 0.7, 1.2) for bigeye and yellowfin and scenario (1, 0.7, 1.32, 0.7, 1.2) for skipjack. Maintenance of 2009 conditions results in F_{2021}/F_{MSY} of 1.39, 0.50 and 0.74 for bigeye, skipjack and yellowfin tuna respectively. For the scenario approximating 2010 conditions, we obtain F_{2021}/F_{MSY} of 0.97, 0.47 and 0.62 for bigeye, skipjack and yellowfin tuna respectively. This reduction, particularly significant for bigeye tuna, is driven by several factors: the lower than usual FAD use in 2010, the lower longline catches, and a large (30%) reduction in reported catches from the domestic fisheries of Indonesia and the Philippines. Therefore, 2010 as currently reported (see Table 3) provides a good example of the sort of regime that would meet MSY-based reference points as have been applied to date. In addition, under 2010 conditions, F_{2021} for bigeye is projected to be less than the SPR20 and SPR30 reference levels but above the SPR40 level. For skipjack and yellowfin, F_{2021} is well below all of the SPR reference levels.

3.3.2 Total purse seine closure vs. FAD closure

It is of interest to some Delegations to quantify the incremental advantage of a total closure of the purse seine fishery over a FAD closure. We investigated this by comparing the "transfer" and "managed" options for purse seine effort reductions (equivalent to FAD and total closures, respectively), both in terms of their impact on bigeye tuna (F_{2021}/F_{MSY}) and on the total catch of bigeye, skipjack and yellowfin tuna (Table 4 and Figure 10). The results indicate small percentage reductions in bigeye tuna F_{2021}/F_{MSY} by applying a total closure instead of a FAD closure. For example, for a 6 month closure, F_{2021}/F_{MSY} is 0.98 for a FAD closure and 0.88 for a total closure, representing an additional 10.3% reduction in F_{2021}/F_{MSY} of a 6 month total closure over a 6 month FAD closure. However, the additional reduction in total catch of a 6 month total closure is 22.2%. This is because, with a FAD closure, purse seiners can continue to fish on unassociated tuna schools, whereas with a total closure, the catch during the closure is zero. Interestingly, the projections predict that total catch is quite stable (and in fact increases slightly) for increasing duration of FAD closure. This is because of the higher yield-per-recruit that is achieved for all species resulting from the larger average size of tuna taken in unassociated sets compared to FAD sets (WCPFC-SC7-2011-MI-WP-01). On the other hand, total catch drops sharply for increasing total closure duration. Therefore, it can be concluded that a total closure results in a small additional reduction in bigeye tuna fishing mortality compared to a FAD closure, but the price that must be paid in terms of total catch reduction is relatively large.

Subsequent to TCC7, the WCPFC Chair received a letter (dated 19 October 2011) from the Delegation of the United States requesting that additional work be done to further evaluate the potential benefit of a total purse seine closure – in particular, basing analyses on years when no FAD

closure was in place, rather than 2009. In response, we conducted further analyses in which the purse seine fishing conditions in 2001-2008 (see Table 3) were used as the baseline for evaluating the relative impact of FAD and total closures of two and three month duration on bigeye fishing mortality and total tuna catches. Eight sets of projections were run – each using the pattern of FAD and unassociated purse seine effort that existed in each individual year of the period 2001-2008 – which therefore allows an assessment of the variation in the estimated impacts. For the FAD closure, the FAD fishery effort was transferred to the unassociated set fishery; for the total closures the effort of both FAD and unassociated purse seine setting was removed. Affected effort was 2/12 and 3/12 of the base effort for the two and three month closures respectively. Scalars for the non-purse seine gears were set to 1 so as to allow a direct comparison of the impacts of the closures in isolation. A total of 40 projections were run for each species – 8 years x 5 simulations per year (no closures, 2 and 3 month FAD closures, 2 and 3 month total closures).

Table 5 provides the estimates of bigeye tuna fishing mortality and species-specific catches as predicted for the year 2021 and Figure 11 provides a graphical summary of the relative performance for bigeye fishing mortality and total catch. Figure 12 and Figure 13 provide species-specific estimates of fishing mortality and catches, respectively, under the various closure regimes. This new set of projections using years 2001-2008 as the base provides a similar conclusion to the original analysis presented to TCC7, i.e., that total purse seine closures provide a small additional reduction in bigeye tuna F/F_{MSY} compared to FAD closures, but they also result in a proportionately greater reduction in total catches.

3.3.3 Effect of exemptions

In a previous analysis (WCPFC7-2010-15) we attempted to quantify the impact of the exemptions on the performance of CMM 2008-01. In this analysis, it was argued that scalars of 1.0 for longline catch, 1.0 for purse seine effort and 0.9 for the fisheries based in Indonesia and Philippines were consistent with CMM 2008-01 as written. Further, a hypothetical "no exemptions" set of scalars was estimated to be 0.9, 0.9 and 0.8, respectively for the above three fishery groups. The rationale for these choices is described in detail in WCPFC7-2010-15. Using these scalars in the current analysis (and retaining a scalar of 1.0 for other fisheries in both scenarios), we obtain the results as shown in Table 6. The removal of the exemptions is estimated to potentially remove approximately 50% of the overfishing estimated to occur under CMM 2008-01 (i.e. reducing F_{2021}/F_{MSY} from 1.35 to 1.17). This is a similar result to that obtained in WCPFC7-2010-15.

3.3.4 Individual fishery impacts under CMM 2008-01

At TCC7, the Delegation of Japan requested that the impacts of the different fishery reductions (or increases) that have occurred under CMM 2008-01 be quantified separately. This was done as follows:

- Estimate F_{2021}/F_{MSY} if the observed fishery catch and effort conditions in 2004 occurred for 10 years, from 2012. This is used as a base for comparison.
- Compute the F_{2021}/F_{MSY} that would have occurred under the 2004 baseline but with the following changes, implemented separately:
    - Longline catch in 2009
    - Longline catch in 2010
    - Purse seine effort in 2009 (incorporating FAD closure)

    - Purse seine effort in 2010 (incorporating FAD closure)
    - Domestic Indonesia and Philippines catch in 2009
    - Domestic Indonesia and Philippines catch in 2010
- The percentage of overfishing removed from the 2004 base F_{2021}/F_{MSY} obtained in each of the above scenarios indicates the separate contribution to overfishing reduction of the 2009 and 2010 conditions reported for each of the three main fishery components.

This analysis was conducted at TCC7 by interpolating the required catch and effort scalars in the suite of projections. This is an approximation, and so the analysis was subsequently repeated post-TCC7 with specific projections for each of the scenarios required. The results are given in Table 7. They vary only slightly from the approximation distributed at TCC7. They indicate that the reduction in purse seine FAD effort in 2010 has the greatest effect in terms of removing overfishing (67.4% of overfishing removed) followed by the reduction in longline catch in 2010 (34.7% of the overfishing removed).

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Table 1. Summary statistics for various vessel behaviours documented by observers during the CMM 2008-01 FAD Closures in 2009 (1 Aug – 30 Sep) and 2010 (1 Jul – 30 Sep). Archipelagic waters, which are outside the scope of CMM 2008-01, are not included in the summary statistics. Based on processed observer data available as at 10 Nov 2011.

	2009 (Aug – Sep)	2010 (Jul – Sep)
Number of observer trips processed to date	156	264
Number of observed fishing and searching days processed to date (Coverage rate)	3,073 (43.4%)	4,917 (47.3%)
Number of observed sets processed to date (Coverage rate)	3,158 (45.6%)	6,032 (49.4%)
Number of nights drifting with fish aggregation lights (activity = 14) (% of total)	69 (2.2%)	303 (6.2%)
Number of days setting or investigating Drifting FADs (SCH_ID = 4) (% of total)	122 (4.0%)	135 (2.7%)
Number of days reported as "No fishing, drifting with floating object" (Activity = 12) (% of total)	171 (5.6%)	108 (2.2%)
Number of days reported with any activity related to a drifting FAD (Activity = 9,10,12,23,24,25,26) (% of total)	430 (14.0%)	286 (5.8%)

Table 2. Combinations of catch and effort used for fishery groups modelled in the generic projections.

Factor	Options	Dimensions
Longline catch	1.2, 1.1, 1.0, 0.9, 0.8, 0.7, 0.6, and 0.5 times **2009** catches	8
Purse seine FAD effort 20N - 20S	1.2, 1.1, 1.0, 0.9, 0.8, 0.7, 0.6, and 0.5 times **2009** effort	8
Purse seine UNA effort 20N - 20S	Identical reduction as for FAD effort and perfect reallocation of FAD effort changes	2
Indonesia & Philippines domestic fisheries	1 and 0.7 times **2009** catch	2
Other fisheries (Pole and line, and purse seine outside 20N - 20S)	1.2, 1.0, and 0.8 times **2009** effort	3
TOTAL RUNS		768

Table 3. Catch and effort levels of projected fishery groups associated with the various scalars. The two columns for purse seine unassociated (PS UNA) effort refer to the alternative projection scenarios: 1. ASS effort changes are transferred to UNA effort, thus maintaining total PS effort at a constant level (transfer); and 2. The same scalars are simultaneously applied to both PS ASS and PS UNA effort (managed). The observed values of catch and effort for the projected fishery groups for 2001-2010 are provided in the lower panel. Note that catches are reported for 'Other' fisheries to indicate their relative contribution to the overall fishery; in the projections, effort was specified rather than catch.

Scalar/ Year	Longline catch (mt)		PS ASS effort	PS UNA effort (transfer)	PS UNA effort (managed)	Indonesia-Philippines catch (mt)			Other catch (mt)		
	Bigeye	Yellowfin	(days)	(days)	(days)	Bigeye	Yellowfin	Skipjack	Bigeye	Yellowfin	Skipjack
1.2	80,200	92,674	30,646	17,405	27,016				2,046	7,236	103,466
1.1	73,516	84,951	28,092	19,959	24,764						
1.0	66,833	77,228	25,538	22,513	22,513	17,777	142,085	392,295	1,705	6,030	86,222
0.9	60,150	69,505	22,984	25,067	20,262						
0.8	53,466	61,782	20,430	27,621	18,010				1,364	4,824	68,978
0.7	46,783	54,060	17,877	30,174	15,759	12,444	99,460	274,606			
0.6	40,100	46,337	15,323	32,728	13,508						
0.5	33,417	38,614	12,769	35,282	11,257						
2001	62,080	66,717	15,714	17,501		15,842	139,692	256,630	2,326	5,307	187,817
2002	79,267	69,526	18,633	17,875		13,550	140,803	275,630	2,992	5,199	175,217
2003	71,488	74,748	20,292	18,829		14,907	154,612	284,983	2,302	6,118	225,645
2004	80,193	75,300	29,177	12,932		15,385	158,754	297,347	4,161	5,162	142,558
2005	66,213	66,893	23,087	20,299		18,552	175,458	297,568	1,788	6,491	195,976
2006	70,819	62,677	24,208	16,628		19,272	170,310	350,973	4,849	6,369	158,185
2007	69,872	58,915	21,870	20,924		14,791	186,763	368,893	3,767	4,391	152,345
2008	73,314	60,526	23,332	22,749		17,866	180,175	396,051	1,845	7,203	140,778
2009	66,833	77,228	25,538	22,513		17,777	142,085	392,295	1,705	6,030	86,222
2010	55,420	78,313	17,415	33,739		11,897	112,569	324,661	2,432	4,119	109,596

Table 4. Effect on F_{2021}/F_{MSY} and total catch of FAD only and total purse seine closures of different durations. The columns labelled "Increment (%)" provide the percentage change of a total closure over a FAD closure. Catch levels for the longline, Indonesia-Philippines and other fisheries were held at the base level (scalar = 1.0).

Scalar	Closure duration (months additional to 2009 closure)	Bigeye F_{2021}/F_{MSY}			Total catch (mt)		
		FAD closure	Total closure	Increment (%)	FAD closure	Total closure	Increment (%)
1.0	-	1.39	1.39	-	2,357,314	2,357,314	-
0.9	1.2	1.31	1.29	-1.4	2,366,335	2,284,568	-3.5
0.8	2.4	1.23	1.19	-3.1	2,375,026	2,201,002	-7.3
0.7	3.6	1.14	1.09	-5.1	2,383,381	2,104,842	-11.7
0.6	4.8	1.06	0.98	-7.5	2,391,384	1,993,985	-16.6
0.5	6.0	0.98	0.88	-10.3	2,399,029	1,865,933	-22.2

Table 5. Simulations of the predicted impact of two and three month FAD and total purse seine closures based on the conditions in each year from 2001-08.

TYPE	Base year	BET-F/FMSY	BET catch	YFT catch	SKJ catch	TOTAL catch
Base	2001	1.01	132,337	479,480	1,495,448	2,107,265
FAD2	2001	0.93	130,668	487,402	1,505,252	2,123,322
TOTAL2	2001	0.9	128,716	452,846	1,394,831	1,976,393
FAD3	2001	0.88	129,641	491,228	1,509,469	2,130,338
TOTAL3	2001	0.85	126,426	437,602	1,337,343	1,901,371
Base	2002	1.12	134,540	489,593	1,544,446	2,168,580
FAD2	2002	1.02	133,186	498,418	1,554,296	2,185,900
TOTAL2	2002	1	131,404	463,156	1,442,357	2,036,917
FAD3	2002	0.97	132,306	502,839	1,559,094	2,194,239
TOTAL3	2002	0.93	129,302	447,820	1,383,780	1,960,902
Base	2003	1.19	135,577	498,554	1,582,184	2,216,315
FAD2	2003	1.08	134,508	507,923	1,592,219	2,234,650
TOTAL2	2003	1.05	132,813	472,332	1,479,702	2,084,847
FAD3	2003	1.02	133,757	512,597	1,597,086	2,243,440
TOTAL3	2003	0.98	130,865	457,059	1,420,990	2,008,914
Base	2004	1.49	136,184	489,447	1,602,399	2,228,030
FAD2	2004	1.33	136,557	502,283	1,616,446	2,255,286
TOTAL2	2004	1.31	135,546	465,293	1,499,316	2,100,155
FAD3	2004	1.25	136,391	508,726	1,623,192	2,268,309
TOTAL3	2004	1.21	134,485	450,960	1,439,943	2,025,388
Base	2005	1.3	136,695	511,488	1,638,642	2,286,825
FAD2	2005	1.17	136,170	521,547	1,648,428	2,306,145
TOTAL2	2005	1.14	134,654	485,847	1,535,957	2,156,458
FAD3	2005	1.11	135,656	526,583	1,653,170	2,315,409
TOTAL3	2005	1.06	132,999	470,719	1,476,930	2,080,648
Base	2006	1.32	136,383	496,526	1,597,700	2,230,609
FAD2	2006	1.19	135,882	507,345	1,609,155	2,252,382
TOTAL2	2006	1.16	134,495	471,073	1,494,465	2,100,033
FAD3	2006	1.12	135,350	512,724	1,614,532	2,262,606
TOTAL3	2006	1.08	132,902	456,280	1,435,650	2,024,832
Base	2007	1.25	136,498	511,893	1,633,024	2,281,416
FAD2	2007	1.13	135,800	521,556	1,642,715	2,300,071
TOTAL2	2007	1.11	134,194	486,196	1,531,360	2,151,750
FAD3	2007	1.07	135,202	526,368	1,647,137	2,308,707
TOTAL3	2007	1.03	132,402	470,787	1,471,808	2,074,997
Base	2008	1.31	137,081	522,482	1,674,772	2,334,335
FAD2	2008	1.19	136,722	532,380	1,683,682	2,352,784
TOTAL2	2008	1.16	135,204	497,223	1,573,050	2,205,477
FAD3	2008	1.12	136,298	537,433	1,688,287	2,362,018
TOTAL3	2008	1.08	133,610	482,049	1,513,967	2,129,626

Table 6. Approximate scalars of catch and effort that are estimated to reflect the requirements of CMM 2008-01 as written, and CMM 2008-01 without exemptions. The last row of the table indicates the estimated F_{2021}/F_{MSY} resulting from the application of the catch and effort levels represented by these scalars.

Fishery group	CMM 2008-01	No exemptions
Scalars		
Longline	1.0	0.9
Purse seine	1.0	0.9
Indonesia and Philippines domestic	0.9	0.8
Other fisheries	1.0	1.0
Bigeye F_{2021}/F_{MSY}	1.35	1.17

Table 7. Percentages of overfishing removed from the 2004 base for individual changes in catch and effort of various fishery groups that have occurred under CMM 2008-01.

Catch/Effort Conditions	F/F_{MSY}	% of 2004 overfishing removed
2004 (base)	1.57	-
LL 2009, rest 2004	1.46	19.1
LL 2010, rest 2004	1.37	34.7
PS 2009, rest 2004	1.46	18.8
PS 2010, rest 2004	1.19	67.4
PH/ID 2009, rest 2004	1.65	-13.5
PH/ID 2010, rest 2004	1.47	17.2
Combined effects – 2009	1.39	31.6
Combined effects – 2010	0.97	105.3

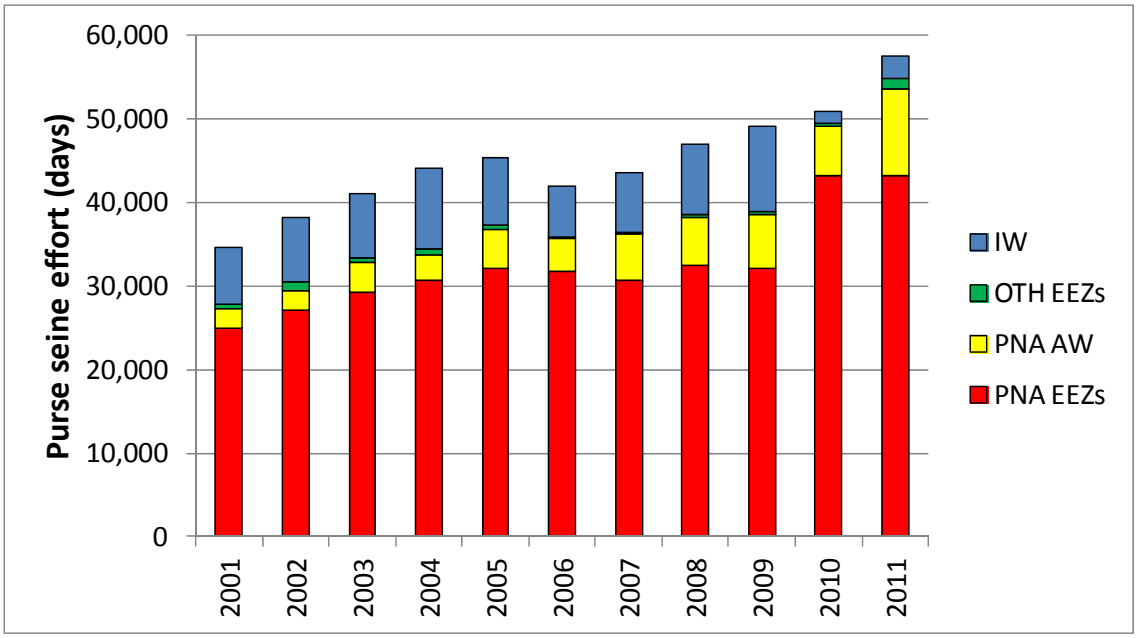

Figure 1. Purse seine effort (days fishing and searching) in the WCPFC Convention Area between 20°N and 20°S, excluding domestic purse seine effort in Philippines and Indonesia. 2001 – 2010 estimates are based on raised logsheet data. The 2011 estimate is provisional and is based on VMS data adjusted to represent fishing days.

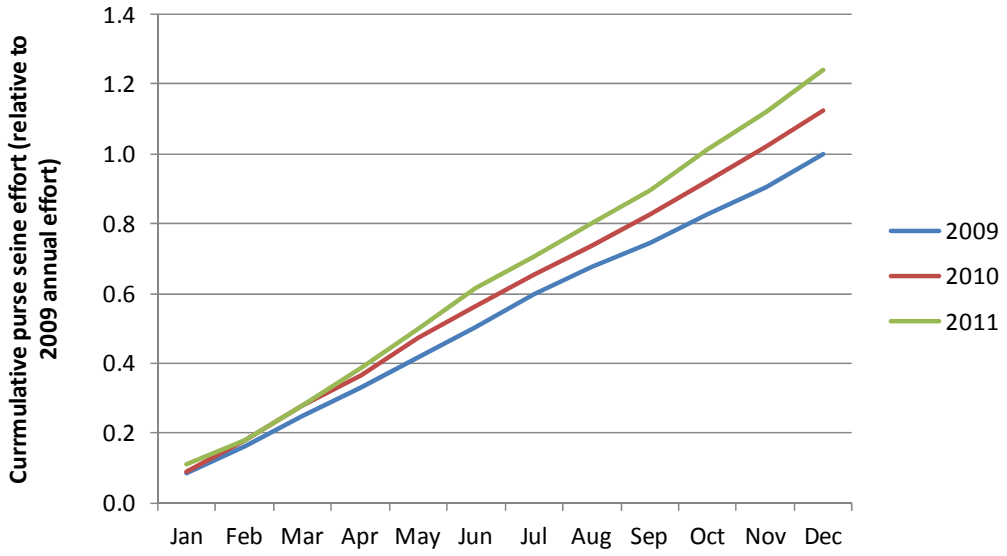

Figure 2. Cumulative VMS days at sea in 2009, 2010 and 2011 for the WCPFC Convention Area between 20°N and 20°S. Source: composite VMS data (WCPFC and FFA) excluding days in port. Fleets not covered by VMS (e.g. the domestic purse seine fleets of Philippines and Indonesia) or not providing VMS data to either of the FFA or WCPFC systems are not included.

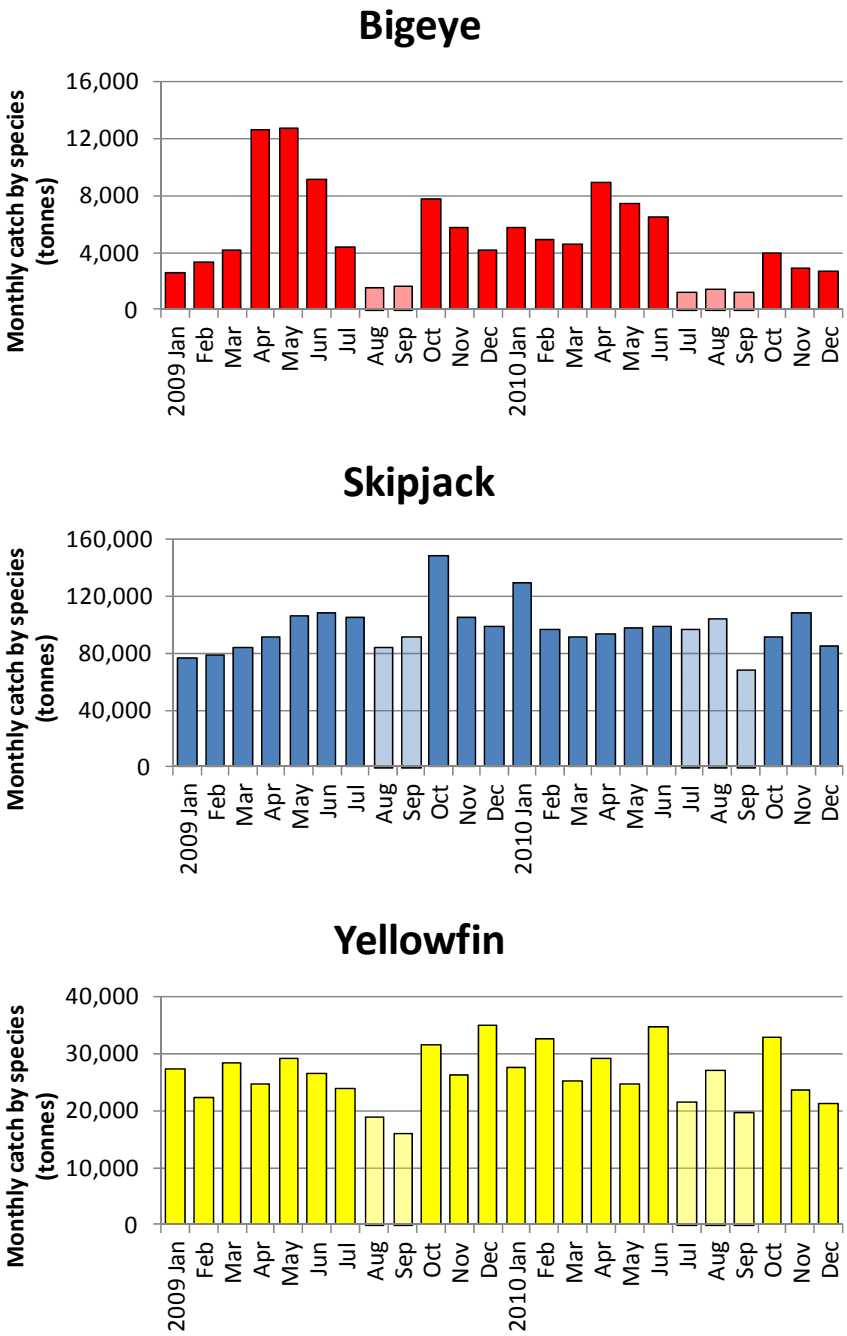

Figure 3. Monthly catch by species (raised logsheet data with species composition adjusted using observer sampling with grab sample bias correction). FAD closure months are shaded in lighter colour. Data excludes the domestic fisheries of Indonesia and Philippines.

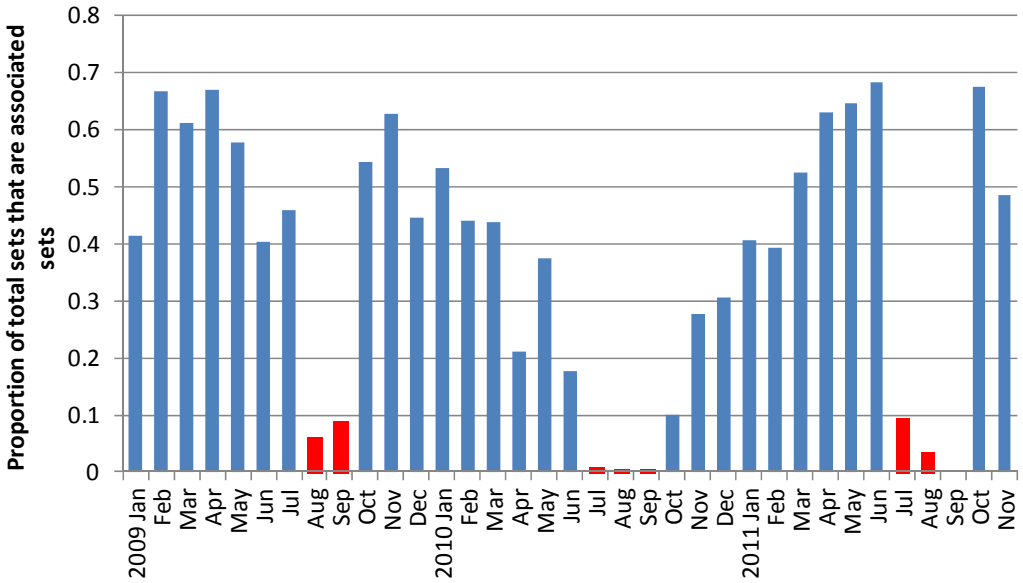

Figure 4. Proportion of the total purse seine fishing activity comprising associated sets, as indicated by logsheet data. Red bars indicate the FAD closure months. Activities in archipelagic waters and in the domestic purse seine fisheries of Indonesia and Philippines are excluded. Estimates from July 2011 on are based on low logsheet coverage and are therefore provisional.

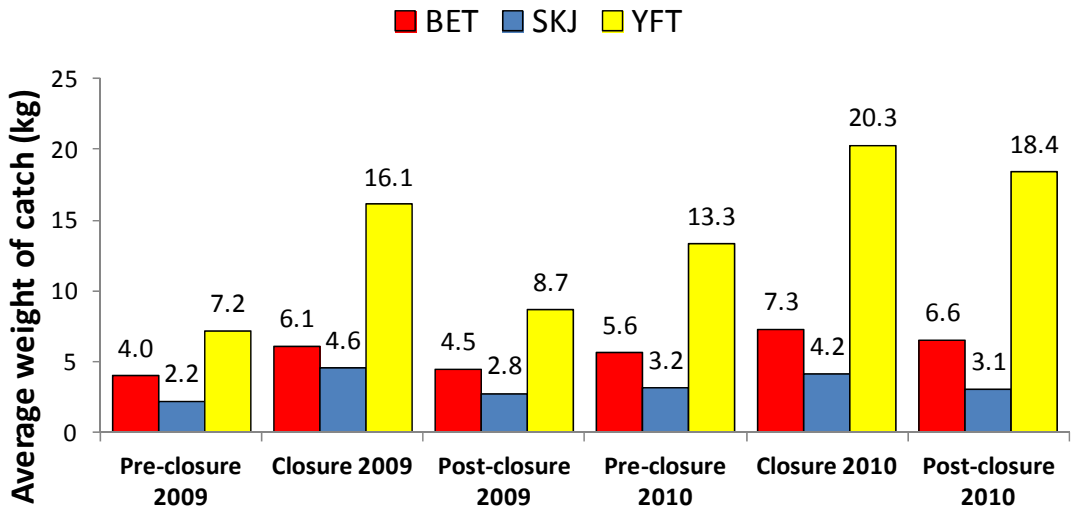

Figure 5. Average weight of bigeye, skipjack and yellowfin tuna, estimated from observer sampling data, during 2009 and 2010.

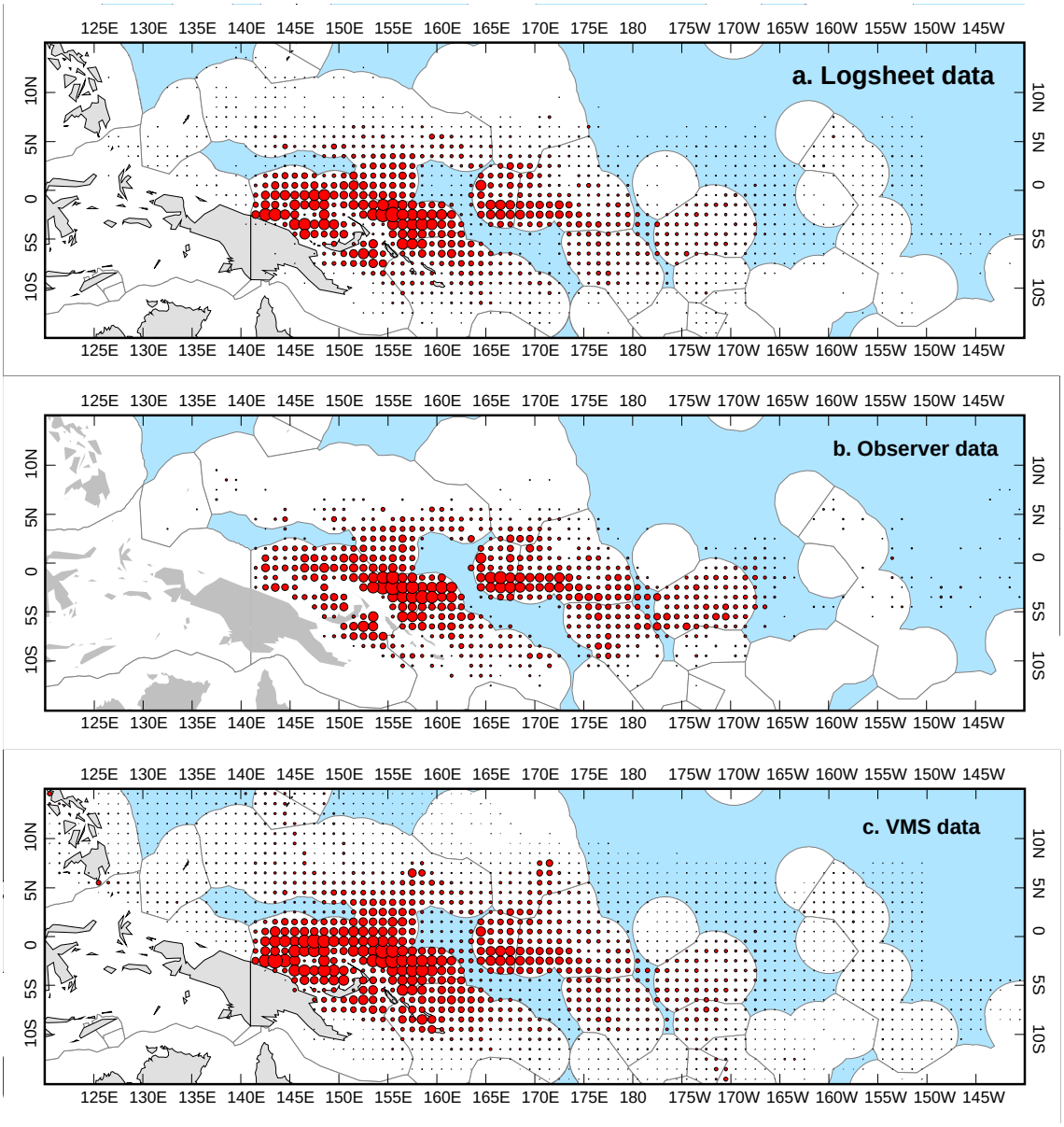

Figure 6. Distribution of purse seine effort (days) since 1 January 2010 from a. logsheet data, b. observer data, and c. VMS data.

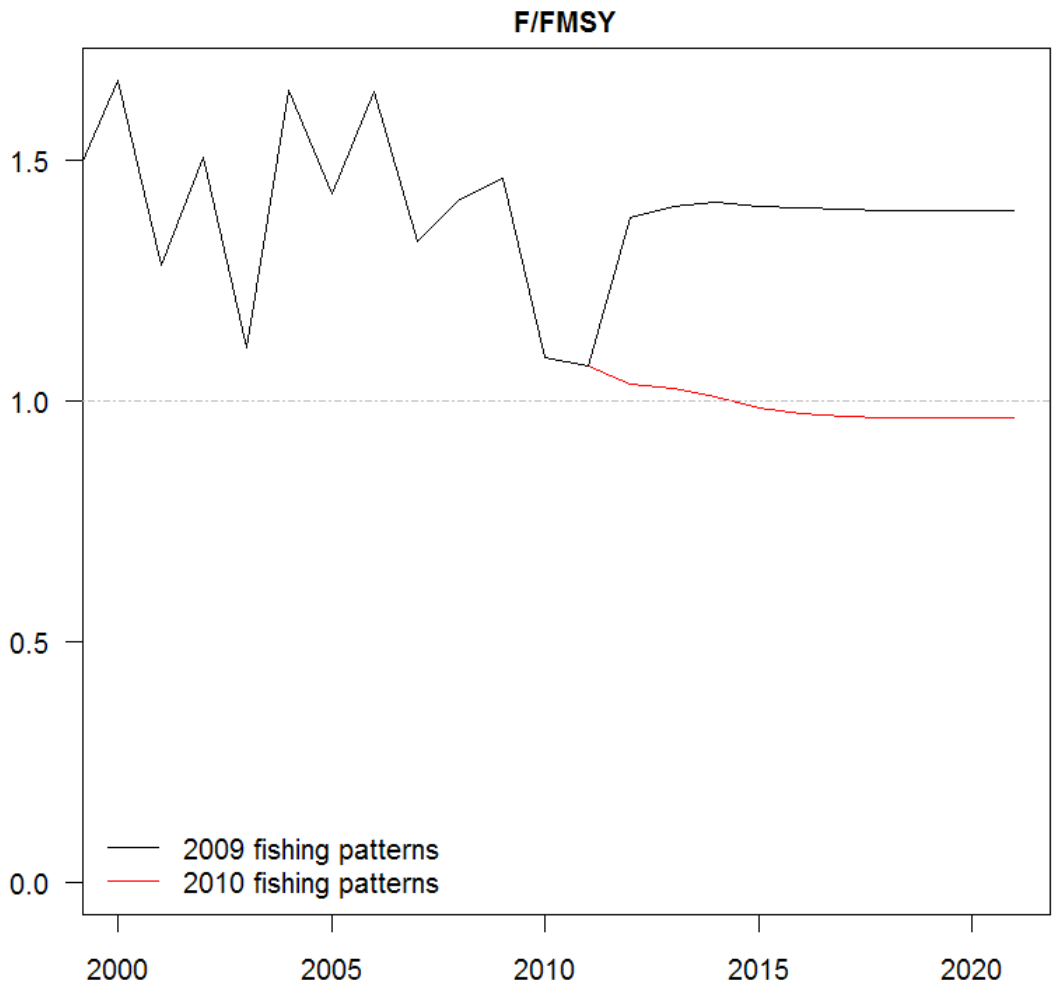

Figure 7. Recent historical and projected F/F_{MSY}, for BIGEYE tuna under the 2009 and 2010 fishing patterns, assuming that future recruitment is constant at its average 2000-2009 level.

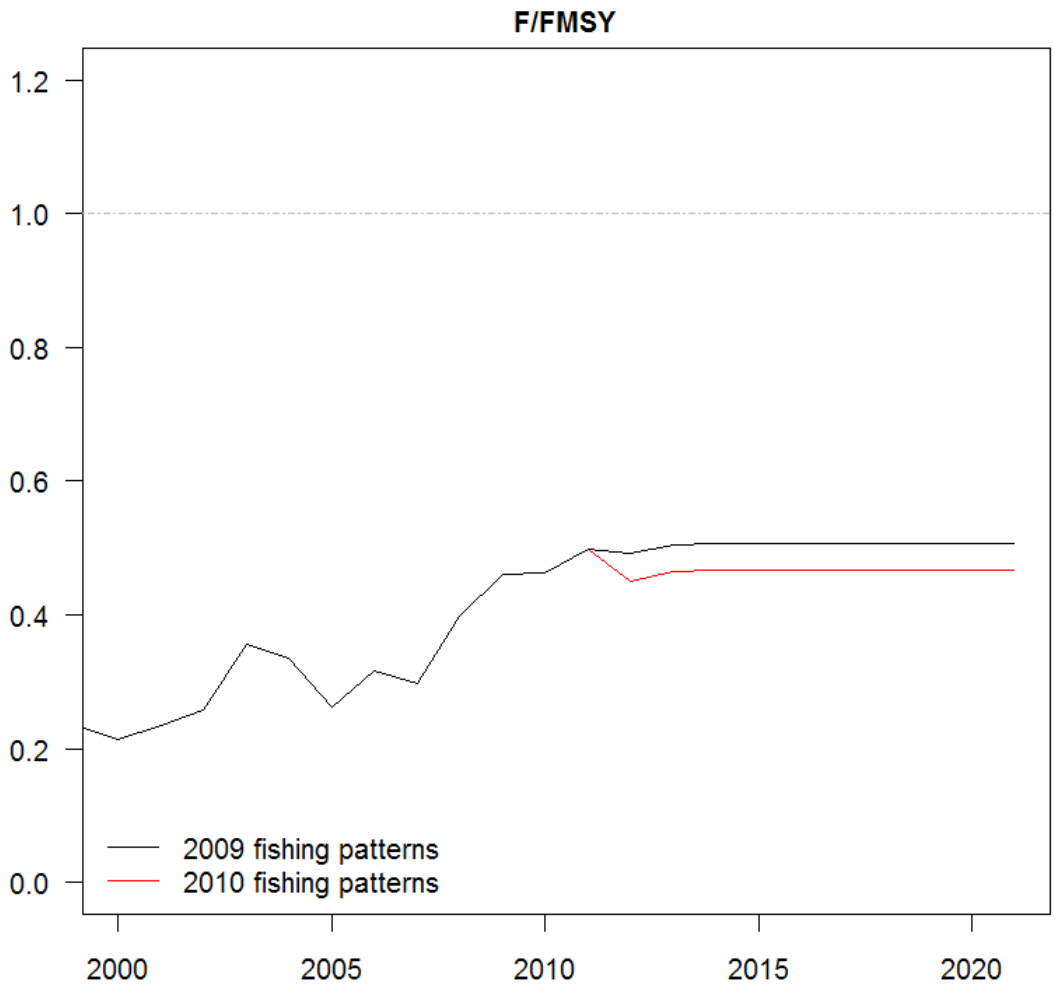

Figure 8. Recent historical and projected F/F_{MSY}, for SKIPJACK tuna under the 2009 and 2010 fishing patterns, assuming that future recruitment is constant at its average 2000-2009 level.

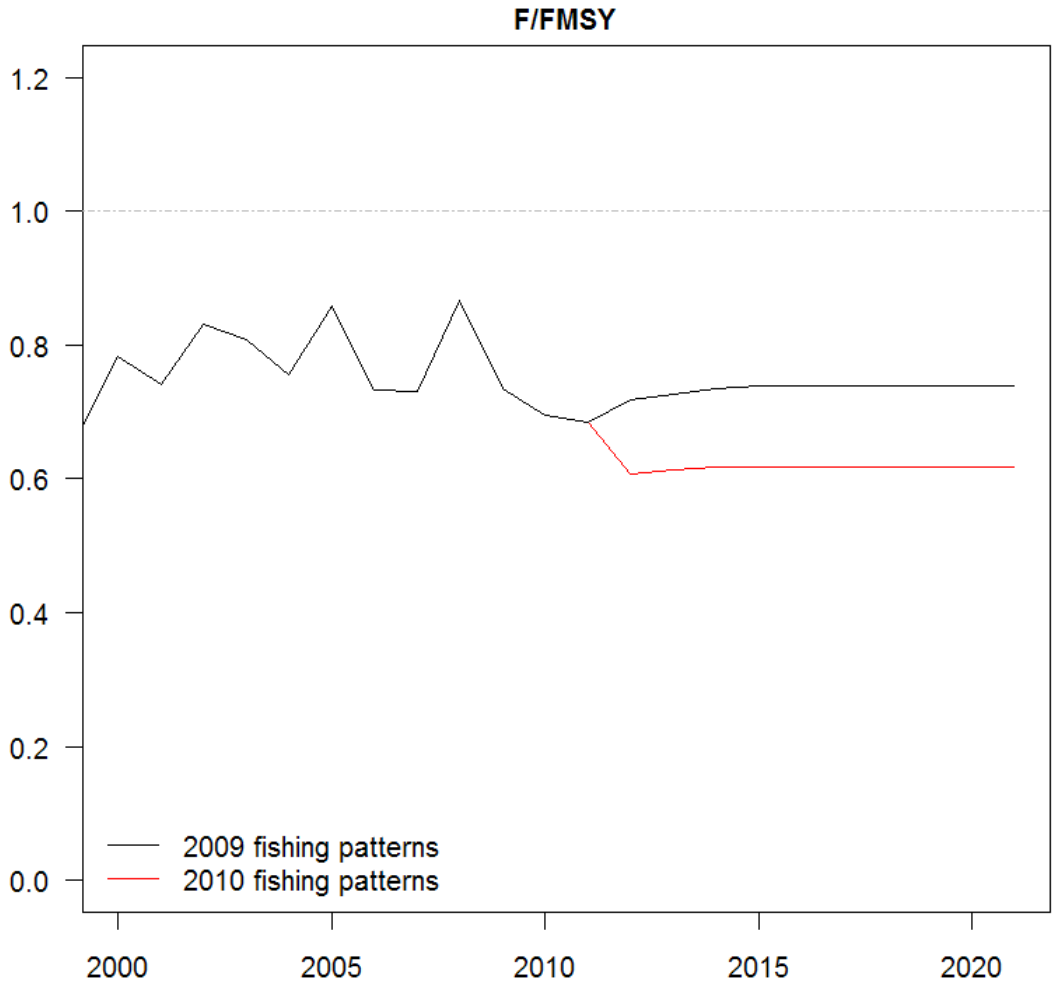

Figure 9. Recent historical and projected F/F_{MSY}, for YELLOWFIN tuna under the 2009 and 2010 fishing patterns, assuming that future recruitment is constant at its average 2000-2009 level.

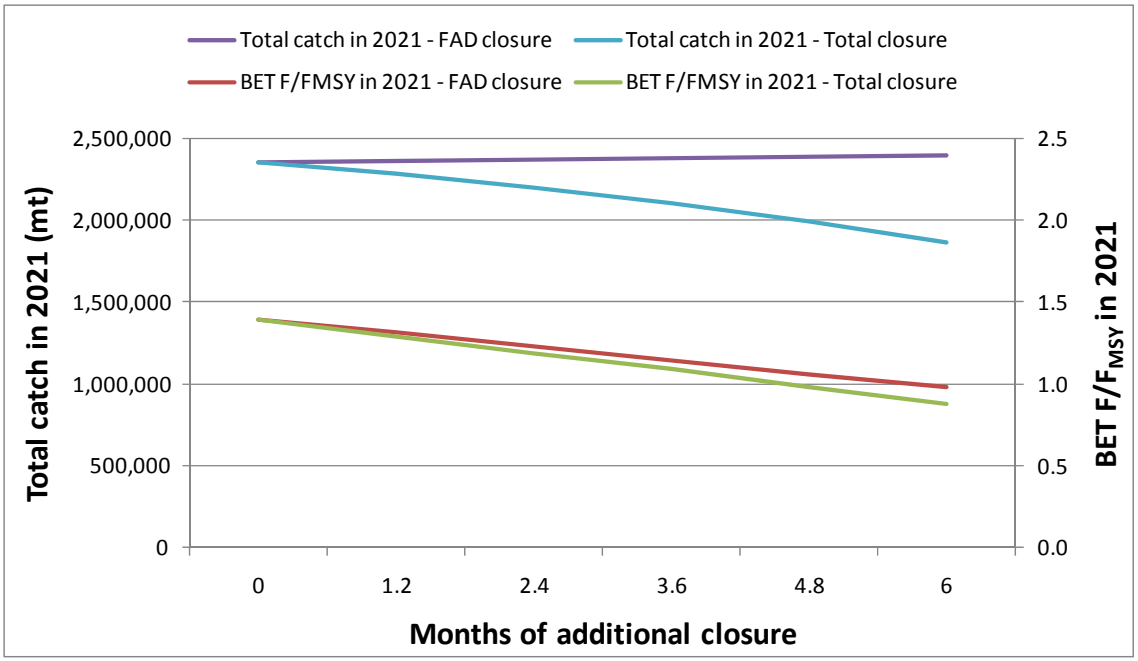

Figure 10. Change in predicted bigeye tuna fishing mortality and total tuna catches of FAD and total purse seine closures of increasing duration compared to the base year of 2009.

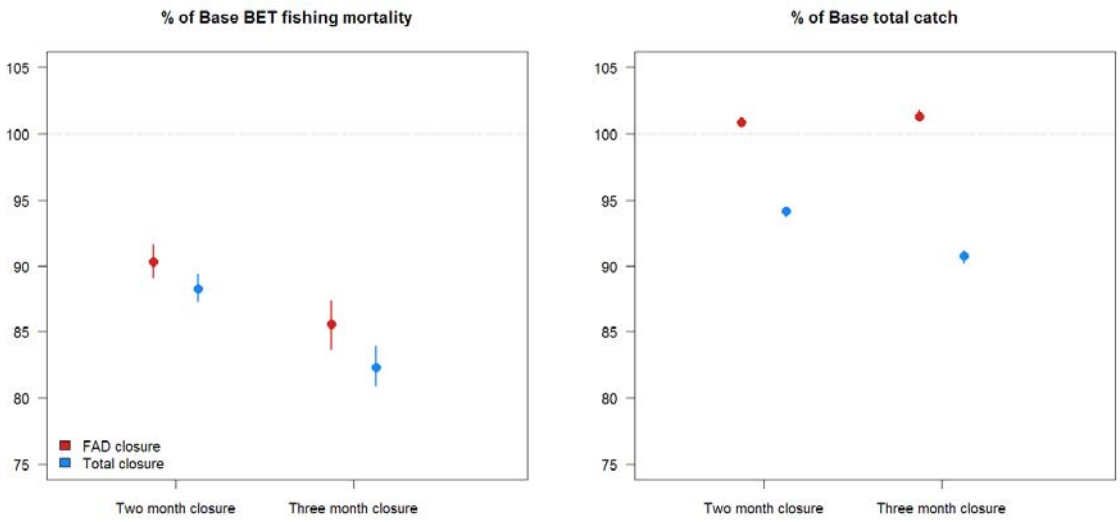

Figure 11. Relative change in predicted bigeye tuna fishing mortality and total tuna catches of two and three month FAD (red points) and total (blue points) purse seine closures based on the conditions in each year from 2001-2008. The points represent the mean change across the eight simulations and the extents of the bars represent their ranges.

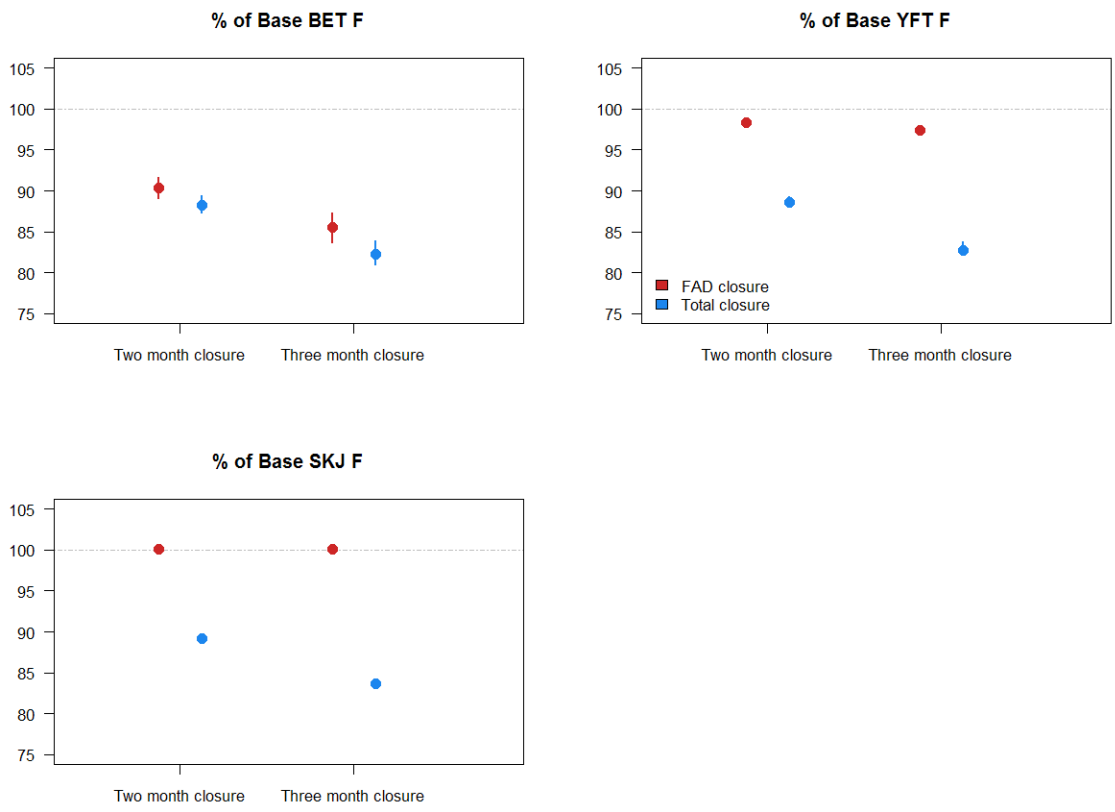

Figure 12. Relative change in predicted fishing mortality for bigeye, yellowfin, and skipjack tunas of two and three month FAD (red points) and total (blue points) purse seine closures based on the conditions in each year from 2001-2008. The points represent the mean change across the eight simulations and the extents of the bars represent their ranges.

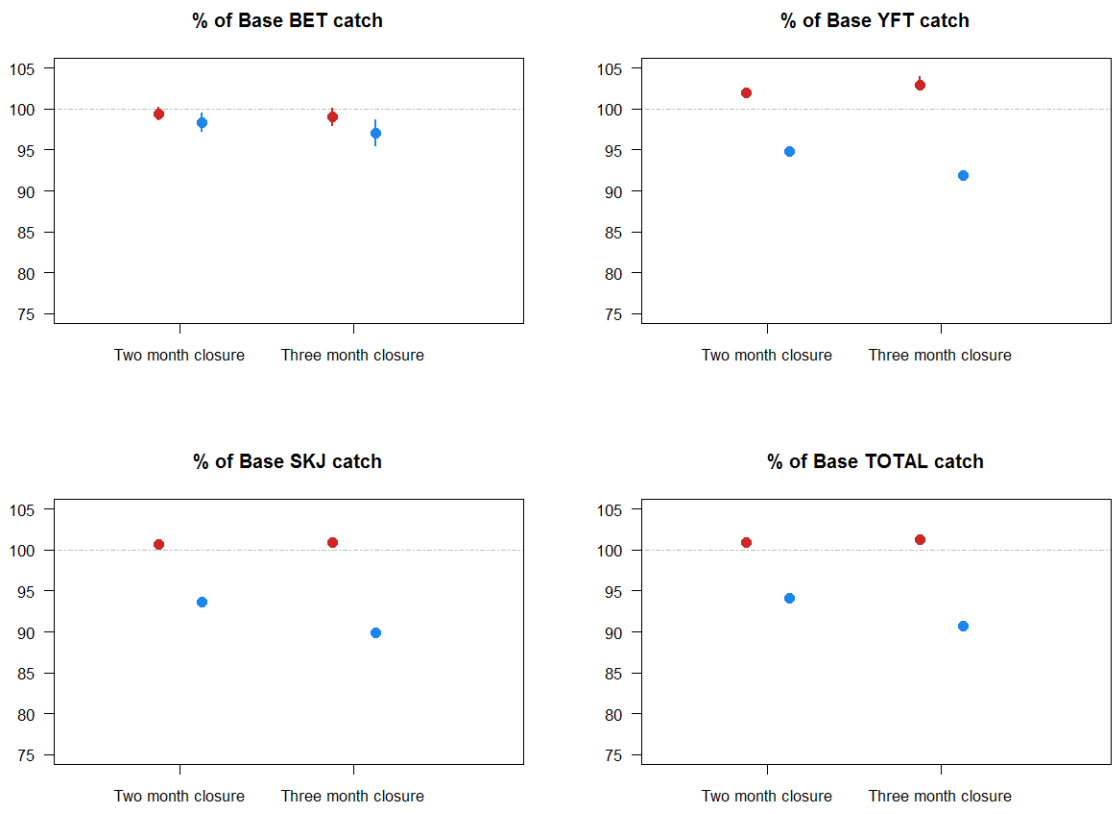

Figure 13. Relative change in predicted catches for bigeye, yellowfin, and skipjack tunas of two and three month FAD (red points) and total (blue points) purse seine closures based on the conditions in each year from 2001-2008. The points represent the mean change across the eight simulations and the extents of the bars represent their ranges.

APPENDIX 1. Comments on the SC7 Projections Request

The request from SC7 for analyses to be presented to TCC7 and WCPFC8 was summarized in paragraph 365 of the SC7 report. Recognizing that some scenarios can be approximated by either specific sets of scalars or through linear interpolation and some are redundant, some minor changes were made and are described in the comments section of the table. We are currently enhancing the implementation of stochastic projections in MULTIFAN-CL in order to account for the reference points requested by SC7 and alternative recruitment assumption – these analyses are now scheduled for completion for the 2012 Management Objectives Workshop.

Factor	Options	Dimensions	Comments
Model runs	Base case model	1	Done
Species	BET, SKJ, YFT	3	Done
Recruitment	Recent average and SRR	2	Done. The SRR results are not referred in the paper
Longline catch	1.2, 1.1, 1.0, 0.9, 0.8 times 2010 catches	5	Used 2009 catches as the base and 8 scalars to give a wider range (0.5 – 1.2; by 0.1) to better account for the wide range of catches observed over the past ten years. Longline variations were not required for skipjack.
Purse seine total effort (excl. ID/PH ex-APW)	2009 (low); 2010 (high)	2	We used 2009 effort levels of total effort with a wider range of scalars (0.5 – 1.2; by 0.1). FAD effort was either transferred to UNA effort (to simulate a FAD closure) or UNA effort had the same scalar applied (to simulate a total closure). 2010 FAD effort is consistent with a scalar of 0.7.
FAD/UNA set effort split (outside FAD closure)	2009 (high FAD use); 2010 (low FAD use)	2	
Purse seine FAD effort (including ID/PH ex-APW)	1.2, 1.1, 1.0, 0.9, 0.8, times total effort (with redistribution)	5	
ID/PH APW fisheries	2009 and 2010 catch	2	Done. We used 2009 catches with scalars of 1 and 0.7 – the latter approximated 2010 catches.
Other fisheries (e.g. Pole and line and JP coastal PS)	1.2, 1.1, 1.0, 0.9, 0.8 times 2010 effort	5	Only three scalars were used that covered the initial range. Initial projections results were relatively insensitive so only scalars of 1.2, 1.0, and 0.8 were used. 2009 was used as the base.

TECHNICAL AND COMPLIANCE COMMITTEE
Eighth Regular Session
27 September- 2 October 2012
Pohnpei, Federated States of Micronesia

CONSERVATION AND MANAGEMENT MEASURE FOR BIGEYE, YELLOWFIN AND SKIPJACK TUNA IN THE WESTERN AND CENTRAL PACIFIC OCEAN

WCPFC-TCC8-2012/27
14 September 2012

Paper prepared by the WCPFC Chair and WCPFC Vice-Chair

This is the latest iteration of a draft CMM to replace CMM 2008-01 and CMM 2011-01 which has been progressed by the WCPFC Chair and WCPFC Vice-Chair following WCPFC8.

It is proposed that this iteration of a draft CMM would be the main basis of discussions during TCC8, Agenda 4. *Discussion of a replacement CMM for CMM 2008-01 and CMM 2011-01*, which is currently scheduled to be considered during the 8.30 – 10.30am timeslots on Saturday 29th September and Tuesday 2nd October**.**

COMMISSION
NINTH REGULAR SESSION
Manila, Philippines
3-7 December 2012

CONSERVATION AND MANAGEMENT MEASURE FOR BIGEYE, YELLOWFIN AND SKIPJACK TUNA IN THE WESTERN AND CENTRAL PACIFIC OCEAN

WCPFC9-2012-01

Conservation and Management Measure 2012-01

The Western and Central Pacific Fisheries Commission (WCPFC):

Recalling that since 1999, in the Multilateral High Level Conferences, the Preparatory Conferences, and in the Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (the Commission), a number of resolutions and Conservation and Management Measures (CMMs) were developed to mitigate the overfishing of bigeye and yellowfin tuna and to limit the growth of fishing capacity in the Western and Central Pacific Ocean and that these measures have been unsuccessful in either restricting the apparent growth of fishing capacity or in reducing the fishing mortality of bigeye or juvenile yellowfin tuna;

Recalling that the objective of the Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean (the Convention) is to ensure through effective management, the long-term conservation and sustainable use of the highly migratory fish stocks of the Western and Central Pacific Ocean in accordance with the 1982 Convention and the Agreement;

Recalling further the final statement of the Chairman of the Multilateral High Level Conferences in 2000 that: "It is important to clarify, however, that the Convention applies to the waters of the Pacific Ocean. In particular, the western side of the Convention Area is not intended to include waters of South-East Asia which are not part of the Pacific Ocean, nor is it intended to include waters of the South China Sea as this would involve States which are not participants in the Conference" (Report of the Seventh and Final Session, 30th August- 5 September 2000, p.29);

Recognising that the Scientific Committee has determined that the bigeye stock is subject to overfishing, and that yellowfin stocks are currently being fished at capacity, reductions in fishing mortality are required in order to reduce the risks that these stocks will become overfished;

Recognizing further the interactions that occur between the fisheries for bigeye, yellowfin and skipjack tuna;

Noting that Article 30(1) of the Convention requires the Commission to give full recognition to the special requirements of developing States that are Parties to the Convention, in particular small island developing States and Territories and possessions, in relation to the conservation and management of highly migratory fish stocks in the Convention Area and development of fisheries on such stocks, including the provision of financial, scientific and technological assistance;

Noting further that Article 30(2) of the Convention requires the Commission to take into account the special requirements of developing States, in particular small island developing States and Territories. This includes ensuring that conservation and management measures adopted by it do not result in transferring, directly or indirectly, a disproportionate burden of conservation action onto developing States, Parties and Territories;

Taking note of Article 8(1) of the Convention requiring compatibility of conservation and management measures established for the high seas and those adopted for areas under national jurisdiction;

Recalling Article 8(4) of the Convention which requires the Commission to pay special attention to the high seas in the Convention Area that are surrounded by exclusive economic zones (EEZs);

Adopts, in accordance with Article 10 of the Convention, the following Measure with respect to bigeye, yellowfin and skipjack tuna, in particular.

OBJECTIVES

The objectives of this Measure are to ensure that:

General

1. compatible measures for the high seas and EEZs are implemented so that bigeye, yellowfin and skipjack tuna stocks are, at a minimum, maintained at levels capable of producing their maximum sustainable yield as qualified by relevant environmental and economic factors including the special requirements of developing States in the Convention Area as expressed by Article 5 of the Convention.

Skipjack

2. the average Fishing Mortality Rate (F) for 2006- 2009 for skipjack is not exceeded and that the total annual catch of skipjack does not exceed 1,650,00 mt.

Bigeye

3. the fishing mortality rate for bigeye tuna is returned to a level consistent with the maximum sustainable yield (Fmsy), which requires a 28 percent reduction in the level of fishing mortality rate from average level for 2001-2004 or a 39 percent reduction from the 2004 level and that the total annual catch of bigeye tuna is reduced from current levels to the maximum sustainable yield (ca.77,000 mt) by 2018.

Yellowfin

4. that the fishing mortality rate is not greater than 2001-2004 or 2004 levels and that the total annual catch of yellowfin tuna does not exceed 538,500 mt.

RULES OF GENERAL APPLICATION

Charter Arrangements

5. For the purposes of this Measure, catch and effort by vessels operated under charter, lease or other similar mechanisms as an integral part of the domestic fleet of the host State or territory, shall be counted against the catch/and or effort limits that apply to the host State or territory. Such charter, lease or other similar mechanism shall be conducted in a manner so as not to charter known illegal, unreported and unregulated (IUU) vessels. This paragraph is without prejudice to the rights and obligations of flag States under international law.

Non-Parties

6. In giving effect to CMM 2009-11 or its replacement the Commission shall advise non-Parties to the Convention wishing to acquire Co-operating Non Member (CNM) status as follows: (a) that for bigeye tuna the current fishing mortality rate is above that associated with MSY; yellowfin tuna is not being overfished but current F is close to Fmsy; (b) that the Scientific Committee recommends no increase in F for yellowfin tuna; (c) that skipjack tuna is not being overfished and that the Scientific Committee recommended that the Commission consider adopting limits on fishing for skipjack tuna and noted that additional purse seine effort on skipjack tuna will yield only modest long term gains in catches. Therefore, where necessary, the limits that apply to CNMs, particularly on the high seas, will be determined by the Commission in accordance with CMM 2009-11 or its revision.

Transfer of Effort

7. Members, Cooperating Non-Members and Participating Territories (CCMs) shall ensure that the effectiveness of this Measure is not undermined by a transfer of effort into other areas in the Convention Area.

Small Island Developing States

8. Unless otherwise stated, nothing in this measure shall prejudice the rights of those small island developing State Members and participating Territories in the Convention Area seeking to develop their domestic fisheries.

Area of Application

9. This Measure applies to all areas of high seas and all EEZs in the Convention Area except where otherwise stated in the Measure.

Duration of the Measure

10. This Measure shall remain in force until the Commission decides otherwise.

PURSE SEINE FISHERY

Effort Levels
EEZs

11. Coastal States within the Convention Area that are Parties to the Nauru Agreement (PNA) shall restrict the level of purse seine effort in their EEZs to 2010 levels, recognizing that consideration may need to be given to how this effort is expended in light of the objectives for bigeye and yellowfin tuna. The provisions of paragraph 8 shall not apply to this limit.

12. Other coastal States within the Convention Area shall establish effort limits for purse seine fisheries within their EEZs that reflect the geographical distributions of skipjack, yellowfin and bigeye tuna, and are consistent with the objectives for those species. Limits established pursuant to this provision shall be provided to the Commission by the relevant coastal States no later than 16 November 2013.

High Seas

13. The total level of purse seine effort on the high seas shall be the equivalent of 10,000 vessel days. Once this level is reached the high seas shall be closed to further fishing.

14. CCMs shall take necessary measures to ensure that total purse seine effort does not exceed this level by reporting the effort expended by their flagged vessels each month to the Secretariat not later than the 15th day of the next month.

15. The Secretariat will, to the extent possible, verify these reports though the use of any available data or information, for example vessel monitoring system and/or observer records, and notify CCMs of the date that the total purse seine effort reaches the limit specified above.

Discussion

The Commission must consider what framework it will apply to the management of the purse seine fishery on the high seas. The Commissions should include in its deliberation on this matter the following language from paragraph 21 of CMM 2008-01: "The Commission shall consider the development of a high seas vessel day scheme (HS VDS) to be compatible with the PNA VDS to provide a common currency for managing purse seine effort". Relevant considerations include:

a) Will high seas pockets be open or closed;
b) Will the commission allow the provisions of 2011-01 for Philippine effort in the westernmost high seas pocket to continue;
c) How would any allowable effort be allotted/allocated; equal shares, allocation scheme, will any allotted/allocated effort be free or will there be a payment to the Commission, if there is a payment for fishing on the high seas how is it to be used, etc;
d) How will the high seas pockets be managed? No fishing, limited fishing, extend the eastern pocket approach to all pockets?; and
e) Other.

Fish Aggregating Device (FAD)[1] Closure

16. A six (6) month prohibition on setting on FADs will be in place each year for all purse seine vessels fishing in EEZs and high seas in the Convention Area between 20 degrees north and 20 degrees south (see paragraphs 3-7 of CMM 2009-02 for the rules for the FAD closure; also need to deal with the language in paragraph 3 referring to 2008-01). No setting on FADs will be allowed during the months of January, February, March, July, August and September. The provisions of paragraph 8 shall not apply to the 6 month FAD prohibition.

17. During the FAD closure no sets shall be made during the time of 1 hour before local sunset and 1 hour after local sunrise.

18. CCMs shall report to the Technical and Compliance Committee (TCC) on the steps taken to implement and enforce this measure, including what use was made of observer reports in this effort.

[1] See definition in paragraph 3 of CMM 2009-02.

Observers

19. CCMs shall ensure that purse seine vessels entitled to fly their flags and fishing within the area bounded by 20° N and 20°S exclusively on the high seas, on the high seas and in waters under the jurisdiction of one or more coastal States, or vessels fishing in waters under the jurisdiction of two or more coastal States, shall carry an observer from the Commission's Regional Observer Programme (ROP).

20. CCMs shall require Observer providers to submit observer data from ROP trips to the Commission within 3 weeks of the end of the trip and that proper debriefing of all observers occur before the observer report is forwarded to the Commission for processing to ensure that all fields are accurate and correctly completed.

Additional Measures

21. CCMs are encouraged to take additional measures either to reduce the use of FADs by their vessels or to develop methods to reduce the catch of juvenile bigeye and yellowfin tuna in purse seine sets associated with FADs, and to report to the Commission whether or not such measures were successful in reducing the catch of juvenile bigeye and yellowfin tuna to the Commission in their Part 2 Annual Reports.

Catch Retention: Follow or amend CMM 2009-02 see paragraphs 8-13 in that CMM and do NOT include in 2012-01.

FAD Management Plans: Make this a separate effort, noting that the Commission should place high priority on adopting a measure regarding the management of FADs in the Convention Area that would apply to all CCMs.

LONGLINE FISHERY

Catch Levels

22. The catch levels for bigeye tuna will remain as specified for the year 2011 in CMM 2008-01 for all CCMs Attachment X.

23. The catch levels for yellowfin tuna will remain at levels specified Attachment Y.

OTHER COMMERCIAL FISHERIES

24. CCMs shall take necessary measures to ensure that the total effort of their respective other commercial tuna fisheries for bigeye, yellowfin and skipjack tuna but excluding artisanal fisheries and those fisheries taking less than 2,000 tonnes of bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004.

25. CCMs shall provide the Commission with estimates of fishing effort for these other fisheries or proposals for the provision of effort data for these fisheries for 2012 and future years.

26. To assist the Scientific Committee, the Technical and Compliance Committee and the Commission in evaluating compliance with this provision, each CCM shall conduct an inventory of vessels flying its flag that operate in fisheries other than purse seine and longline vessels that fish for tuna in the Convention Area. This inventory shall be provided to the Secretariat by 1 July, 2013 and shall include a report of the catch and effort of these vessels.

CAPACITY

(**Potential to include further text depending on the outcome of the DWFN small group discussions**).

EVALUATION OF EFFECTIVENESS

27. Each year the Scientific Committee (SC) and the Technical and Compliance Committee shall evaluate the effectiveness of each of the measures in this CMM and provide the Commission with recommendations on how the individual measures and the CMM as a whole can be improved taking into account the need for adequate time to appropriately assess the impact of measures.

28. The Commission shall adjust the individual measures or the entire CMM as necessary to meet the goals established. The Commission shall provide its reason(s) for not adopting any measure recommended by both the SC and the TCC.

FINAL CLAUSE

29. This Measure replaces CMM 2011-01.

ATTACHMENT Y. Longline catches and catch limits for bigeye tuna by flag under CMM 2008-01 and the limits agreed under CMM 2011-01.

CCM	2009 catch	2010 catch	2011 catch	CMM 2008-01 2009 limits	CMM 2008-01 2010 limits	CMM 2008-01 2011 limits	CMM 2011-01 limits
AMERICAN SAMOA	249	491					
AUSTRALIA	726	458		2,000	2,000	2,000	2,000
BELIZE	43	89		803	803	803	803
CHINA	15,289	13,924		11,748	11,748	8,224	8,224
CHINESE TAIPEI	13,319	11,552		14,513	12,900	11,288	11,288
COOK ISLANDS	217	192					
EUROPEAN UNION	46	15		2,000	2,000	2,000	2,000
FSM	1,395	899					
FIJI	689	532					
FRANCE (FRENCH POLYNESIA)	587	436					
FRANCE (NEW CALEDONIA)	51	44					
INDONESIA	4,000	1,221		2,000	2,000	2,000	2,000
JAPAN	16,650	14,565		25,290	22,480	19,670	19,670
KIRIBATI	0	3					
MARSHALL ISLANDS	381	257					
NAURU	0	0					
NEW ZEALAND	253	131		2,000	2,000	2,000	2,000
NIUE	10	4					
PALAU	0	0					
PAPUA NEW GUINEA	128	39					
PHILIPPINES	59	59		2,000	2,000	2,000	2,000
REPUBLIC OF KOREA	15,231	13,862		19,304	17,159	15,014	15,014
SAMOA	117	108					
SENEGAL	0	0					
SOLOMON ISLANDS	0	412					
TONGA	38	24					
USA	3,741	3,576		3,763	3,763	3,763	3,763
VANUATU	1,300	2,060					
VIETNAM		2,441					
Total	74,519	67,394					

Excerpt From

REPORT OF THE TWELFTH MEETING OF THE INTERNATIONAL SCIENTIFIC COMMITTEE FOR TUNA AND TUNA-LIKE SPECIES IN THE NORTH PACIFIC OCEAN

PLENARY SESSION

18-23 July 2012
Sapporo, Hokkaido
Japan

7.3 Striped Marlin

The BILLWG Chair presented the ISC12 conservation information for Western and Central North Pacific striped marlin (MLS) prepared by the BILLWG to the Plenary (*ISC/12/ANNEX/05 and ISC/12/ANNEX/07*). This was:

> *Reducing fishing mortality would likely increase spawning stock biomass and would improve the chances of higher recruitment. If one uses the median to measure the central tendency of the distributions of projected spawning biomass (Annex 1), then the projection results suggest that fishing at F_{MSY} would lead to spawning biomass increases of roughly 45% to 72% from 2012 to 2017. Fishing at a constant catch of 2,500 mt would*

[2] Mangel, M., Brodziak, J., and DiNardo, G. 2010. Reproductive ecology and scientific inference of steepness: a fundamental metric of population dynamics and strategic fisheries management. Fish and Fisheries 11:89-104.

lead to potential increases in spawning biomass of 133% to 223% by 2017. In comparison, fishing at the current fishing mortality rate would lead to spawning biomass increases of 14% to 29% by 2017, while fishing at the average 2001-2003 fishing mortality rate would lead to a spawning biomass decrease of 2% under recent recruitment to an increase of 6% under the stock-recruitment curve assumption by 2017 (see ISC/12/ANNEX/07 Appendix 1).

Discussion

The ISC Chair thanked the BILLWG Chair for his presentation and the BILLWG for their hard work.

The reliability of the Japanese longline CPUE index was discussed, given that MLS is not a target in the fishery. The WG Chair explained the methods used to stratify data for use in developing the index in order to address this issue. It was agreed that fishery-independent data would improve indices.

Stock Status and Conservation Advice

Given the new information, Plenary concluded the following regarding stock status and conservation advice:

Stock Status

The WCNPO stock of MLS is overfished and experiencing overfishing (Figure 7-3**). Reducing fishing mortality would likely increase spawning stock biomass and may improve the chances of higher recruitment.**

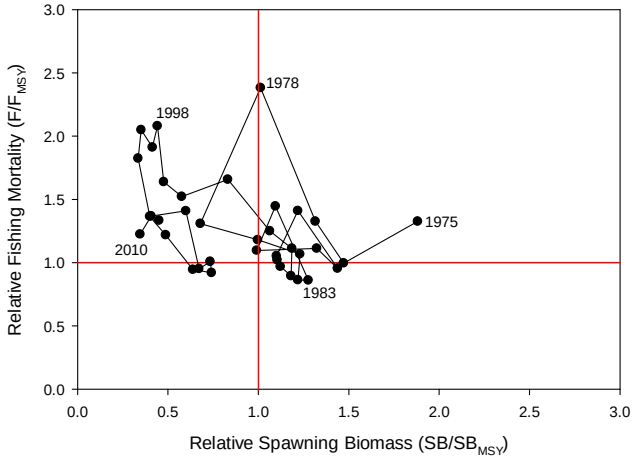

Figure 7-3. Kobe plot of the trends in estimates of relative fishing mortality and relative spawning biomass of Western and Central North Pacific striped marlin (*Kajikia audax*) during 1975-2010.

Conservation Advice

The ISC provides the following scientific information as conservation advice:

- **Fishing at F_{MSY} would lead to spawning biomass increases of roughly 45% to 72% from 2012 to 2017.**
- **Fishing at a constant catch of 2,500 mt would lead to potential increases in spawning biomass of 133% to 223% by 2017.**
- **Fishing at a constant catch of 3,600 mt would lead to potential increases in spawning biomass of 48% and 120% by 2017.**

In comparison

- **Fishing at the current fishing mortality rate would lead to spawning biomass increases of 14% to 29% by 2017,**
- **Fishing at the average 2001-2003 fishing mortality rate would lead to a spawning biomass decrease of 2% under recent recruitment to an increase of 6% under the stock-recruitment curve assumption by 2017.**

The median may be used as the measure of central tendency of the distributions of projected spawning biomass. Using the median, and based on the projection results that commence in 2010, examples of different F levels representing potential reference points are shown in Table 7-1.

Table 7-1. Percentiles of projected relative spawning stock biomass (SB_{2017}/SB_{2012}) in 2017.

	Recent Recruitment					Stock-Recruitment Curve				
Harvest Scenario	5th	25th	50th	75th	95th	5th	25th	50th	75th	95th
(1) F = $F_{current}$	0.85	1.03	1.14	1.23	1.36	0.83	1.09	1.29	1.51	1.82
(2) F = F_{MSY}	1.12	1.32	1.45	1.55	1.69	1.14	1.47	1.72	1.98	2.34
(3) F = $F_{2001\text{-}2003}$	0.72	0.87	0.98	1.06	1.18	0.66	0.88	1.06	1.25	1.52
(4) F = F20%	1.26	1.48	1.62	1.72	1.88	1.32	1.68	1.95	2.24	2.62
(5) F = F30%	1.90	2.18	2.35	2.48	2.68	2.08	2.56	2.91	3.28	3.79
(6) F = 0	4.93	5.49	5.82	6.06	6.47	5.43	6.33	7.07	7.81	8.72
(7) Catch = 2500 mt	1.41	1.97	2.33	2.67	3.1	1.63	2.49	3.23	4.03	5.28
(8) Catch = 3600 mt	0.98	1.18	1.48	1.80	2.25	1.05	1.51	2.20	3.01	4.37

Tables A1 and A2 in the *Executive Summary of the Western and Central North Pacific Striped Marlin Stock Assessment* (see Annex 1 of Appendix 1 in *ISC/12/ANNEX/07*) provide the information in response to WCPFC's request for the ISC to provide catch levels corresponding to various potential F reference points (WCPFC7 report, paragraph 114.ix.b) .

The Plenary notes that the choice of F or catch levels should be left to the discretion of fishery managers, given the ISC's science role. The purpose of the information provided here is to support informed decision making by managers.

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

DRAFT CONSEAVATION AND MANAGEMENT MEASURE FOR PACIFIC BLUEFIN TUNA

The Western and Central Pacific Fisheries Commission (WCPFC):

Recognizing that WCPFC7 adopted Conservation and Management Measure for Pacific bluefin tuna (CMM2010-04);

Taking account of the conservation advice from the 12th meeting of the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC) on this stock, which again highlighted the importance that the level of F is decreased below the 2002-2004 levels, particularly on juvenile age classes;

Also recognizing that the trend of spawning stock biomass has been influenced substantially by the annual level of recruitment and that collecting of fisheries data in an accurate and timely manner is critically important for the proper management of this stock, and;

Further recalling that paragraph (4), Article 22 of the WCPFC Convention which requires cooperation between the Commission and the IATTC to reach agreement to harmonize CMMs for fish stocks such as Pacific bluefin tuna that occur in the Convention Areas of both organizations;

Adopts, in accordance with Article 10 of the WCPFC Convention that:

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;

4. CCMs shall report to Executive Director by 31 July 2013 measures they used to implement paragraphs 2, 3, 6 and 7 of this CMM. CCMs shall also monitor the international trade of the products derived from Pacific bluefin tuna and report the results to Executive Director by 31 July 2013. The Northern Committee shall annually review those reports CCMs submit pursuant to this paragraph;

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;

6. The WCPFC Executive Director shall communicate this Conservation Management Measure to the IATTC Secretariat and its contracting parties whose fishing vessels engage in fishing for Pacific bluefin tuna and request them to take equivalent measures in conformity with paragraphs 2 and 3 above;

7. To enhance effectiveness of this measure, CCMs are encouraged to communicate with and, if appropriate, work with the concerned IATTC contracting parties bilaterally.

8. The provisions of paragraph 2 shall not prejudice the legitimate rights and obligations under international law of those small island developing State Members and participating territories in the Convention Area whose current fishing activity for Pacific bluefin tuna is limited, but that have a real interest in fishing for the species, that may wish to develop their own fisheries for Pacific bluefin tuna in the future.

9. The provisions of paragraph 8 shall not provide a basis for an increase in fishing effort by fishing vessels owned or operated by interests outside such developing coastal State, particularly Small Island developing State Members or participating territories, unless such fishing is conducted in support of efforts by such Members and territories to develop their own domestic fisheries

COMMISSION
NINTH REGULAR SESSION
Manila, Philippines
2-6 December 2012

PROVISIONAL AGENDA

WCPFC9-2012-02
22 October 2012

AGENDA ITEM 1. OPENING OF THE MEETING

1.1 Welcoming addresses
1.2 Adoption of agenda
1.3 Meeting arrangements
1.4 Action items from WCPFC8
1.5 Intercessional decisions
1.6 Items for discussion by exception

AGENDA ITEM 2. MEMBERSHIP AND OTHER APPLICATIONS

2.1 Status of the Convention
2.2 Applications for Observer status
2.3 Applications for Cooperating Non-Member status

AGENDA ITEM 3. EXECUTIVE DIRECTOR AND CCM REPORTS

3.1 Report of the Executive Director on the work of the Commission
3.2 Annual reports by CCMs
3.3 Statements of Non-Members
3.4 Special requirements of developing States
    3.4.1 CCM reports on the implementation of Article 30 of the Convention

AGENDA ITEM 4. REPLACEMENT MEASURE for CMM 2008-01 / CMM 2011-01

4.1 Review of the impact of CMM 2008-01/ CMM 2011-01
4.2 Consideration of the Chair's draft CMM

AGENDA ITEM 5. COMMISSION REVIEW

5.1 Review of the Secretariat's matrix

AGENDA ITEM 6. REPORT FROM THE MANAGEMENT OBJECTIVES WORKSHOP

AGENDA ITEM 7. REPORT FROM THE VMS SMALL WORKING GROUP

AGENDA ITEM 8. JOINT MANAGEMENT ARRANGEMENT WITH IATTC FOR OVERLAP AREA

AGENDA ITEM 9. SCIENTIFIC COMMITTEE

9.1 Report of the eighth regular session of the Scientific Committee
- 9.1.1 Stock status of key tuna species
- 9.1.2 Recommendations and advice
  - Data and statistics theme
  - Stock assessment theme
  - Management issues theme
  - Ecosystems and bycatch theme
  - Other issues

9.2 Future work programme and budget for 2013-2015

AGENDA ITEM 10. NORTHERN COMMITTEE

10.1 Report of the eighth regular session of the Northern Committee
- 10.1.1 Recommendations and advice
  - Pacific bluefin tuna
  - North Pacific albacore
  - North Pacific swordfish
  - Regional observer programme
  - Vessel monitoring system

10.2 Future work programme and budget for 2013-2015

AGENDA ITEM 11. TECHNICAL AND COMPLIANCE COMMITTEE

11.1 Report of the eighth regular session of the Technical and Compliance Committee

11.2 Proposed WCPFC IUU Vessel List for 2013

11.3 Compliance with conservation and management measures
- 11.3.1 Report on Compliance Monitoring Scheme
  - Provisional CMR and Executive Summary
  - Revised Annual Report Part 2 template, including online interface, and proposed addendum to Annual Report Part 1
  - CMR recommendations

11.4 TCC Summary Report recommendations
- 11.4.1 IUU listing procedures
- 11.4.2 VMS manual reporting bracketed text
- 11.4.3 ALC/MTU audit format
- 11.4.4 ROP-tag continuation
- 11.4.5 ROP data entry relocation
- 11.4.6 ROP budget maintained
- 11.4.7 IMS and electronic data priorities
- 11.4.8 Analysis of future ROP data entry
- 11.4.9 Non –CCM carriers and bunkers continuation
- 11.4.10 NZ transhipment at sea application

11.4.11 Charter notification scheme extension and lists
11.4.12 Appointment of the Chair of AHTG – Data
11.4.13 Eastern high seas pocket resourcing
11.5 Recommendations with papers
11.5.1 Art 24 (8) flick the switch
11.6 Regional observer programme
11.6.1 Annual regional observer programme report
11.6.2 WCPFC-IATTC cross endorsement of observers
11.7 Vessel monitoring system
11.7.1 Annual report of the vessel monitoring system
11.8 Future work programme and budget for 2013-2015

AGENDA ITEM 12. CONSERVATION AND MANAGEMENT MEASURES

12.1 Consideration of new CCMs and other conservation requirements
12.1.1 Port state measures
12.1.2 Prohibition of purse seine fishing associated with whale sharks
12.1.3 Catch documentation scheme
12.1.4 FAD management
12.1.5 Seabirds
12.1.6 CMM 2010-06 IUU
12.1.7 CMM 2010-03 Compliance Monitoring Scheme
12.1.8 CMM 2010-05 South Pacific Albacore
12.2 Report by PNA members on the vessel day scheme

AGENDA ITEM 13. AD HOC TASK GROUP – DATA

13.1 Chartering State data access

AGENDA ITEM 14. REPORT OF THE FINANCE AND ADMINISTRATION COMMITTEE

14.1 Budget approval for 2013 and indicative budgets for 2014 and 2015
14.2 Guidelines for the hosting of meetings

AGENDA ITEM 15. ADMINISTRATIVE MATTERS

15.1 Future structure of the Commission meetings
15.2 Election of officers
15.3 Venue for next meeting

AGENDA ITEM 16. OTHER MATTERS

AGENDA ITEM 17. SUMMARY REPORT

AGENDA ITEM 18. CLOSE OF MEETING

TO ALL COMMISSION MEMBERS, COOPERATING NON-MEMBERS AND PARTICIPATING TERRITORIES

Agenda Item J.1.a
Supplemental Attachment 7
November 2012

Circular No.: 2012/83
Date: 30 October 2012
No. pages: 4

IATTC – WCPFC Overlap Area considerations by IATTC

Dear All

Please find attached the outcome of the Inter-American Tropical Tuna Commission (IATTC) deliberations on the options for the management of the overlap area. Their preference initially is for a practical application of Option 4 with a view to move towards a more collaborative approach outlined in option 5.

We will need to discuss this in more detail at the Commission meeting. If it is to be progressed through the Chairs and Executive Directors of both organizations, we will need some instructions on how to move the issue forward.

Thanks

Professor Glenn Hurry
Executive Director

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Excerpts of descriptions of the relevant options from WCPFC8 paper: WCPFC-IATTC OVERLAP AREA (WCPFC8-2011/41 Rev 1 dated: 18 November 2011)

Option 4 Application of measures from both Commissions

Under this proposal the area would stay as it is as an overlap area and it would be managed by applying the rules of the Commissions as follows.

- Vessels from the WCPFC register would fish under WCPFC rules
- Vessels from IATTC would fish under IATTC rules
- Vessels flagged to parties that are members of both Commissions would need to select and advise under which Commission they wish to fish. The rules of that RFMO would then apply to those vessels on a permanent basis.

The advantage of this option is that RFMOs can decide to do this immediately. However, what this option does not do is limit and control fishing capacity and catch levels in the area as there is no decision on how much catch can be taken in the overlap area. IATTC has a capacity limit and catch limits for long liners but WCPFC does not restrict purse seine or longline catch in the area. Therefore before this option could be applied a decision would need to be reached among the parties as to the catch limits to be applied by gear type and species in the overlap area.

Option 5

Option 5 would involve both organizations taking a longer term view (10 years) of tuna management in the Pacific Ocean basin. This might involve a working group being established to consider in the longer term if there was potential for a joint authority to be established by both Commissions for species based tuna and billfish management for the entire pacific basin. The starting point could be to accept Option 2 above as a building block for the future and put a priority on establishing joint scientific activity including data collection and stock assessment. Then over time activities such as vessel registries, VMS and MCS activities could be aligned.

The challenge to making this option work is that conservation and management measures are already adopted within the framework of each Commission and it is possible that the measures adopted for a single transpacific stock could be weakened or blocked by the lack of consensus among the Commissions' members. As in option 2 both organization need to adopt similar measures.

Option 2 Management By Gear Type

This option is an extension of the concept mentioned above but takes into consideration the difference in the fisheries north and south of French Polynesia. Under this option is that IATTC would be tasked with managing the purse seine fishery where it occurs in the northern part of the overlap area drawing on their historical fishing in the area, noting the membership of both Kiribati and French Polynesia to IATTC and the capacity limits IATTC has in place.

WCPFC would manage long-lining in the area, noting its strong interest in southern swordfish and southern albacore management and that the WCPF Convention southern boundary abuts the Antarctic convergence zone boundary with CCAMLR. The IATTC southern boundary is limited to 50 south. Prior to the adoption of the management regime of one of the organizations, both will need to adopt similar measures with the purpose of jointly implementing these measures.

INTER-AMERICAN TROPICAL TUNA COMMISSION
84TH MEETING (EXTRAORDINARY)
La Jolla, California (USA)
24 Oct 2012

DRAFT RECOMMENDATION
IATTC – WCPFC OVERLAP AREA

Agenda Item J.1.a
Supplemental Attachment 7
November 2012

COMISIÓN INTERAMERICANA DEL ATÚN TROPICAL
84ª REUNIÓN (EXTRAORDINARIA)
La Jolla, California (USA)
24 Oct 2012

PROYECTO DE RECOMENDACIÓN
AREA DE TRASLAPO CIAT - WCPFC

The Members of the Inter-American Tropical Tuna Commission (IATTC) present at the 84th Meeting (Extraordinary):

Having considered and analyzed Document IATTC-83 INF-B prepared by the Directors of IATTC and WCPFC on the overlap area between the two organizations:

1. Recognize that a fundamental and essential objective of the work of the two Commissions is to develop and strengthen their cooperation in order to promote the achievement of the objectives of their respective conventions, within the limits of their respective competencies;
2. Note that such cooperation is an obligation for the organizations and their members under international law and under the specific provisions of their respective Conventions;
3. Note that the existence of the overlap area, although unfortunate, is a fact whose consequences must be addressed to avoid any negative impact on the achievement of the objectives of their respective conventions;
4. Notwithstanding the merits of all five options presented by the Directors, the IATTC Members consider that, for the time being, the most appropriate course of action would be a two-step approach:
   a. In the short term, agree on the most practical arrangement, applicable only in the overlap area, which would be to adopt a solution along the lines defined by the Directors of the IATTC and WCPFC as Option 4, *i.e.*:
      i. Vessels listed exclusively in the WCPFC register shall apply the con-

Los Miembros de la Comisión Interamericana del Atún Tropical (CIAT) presentes en la 84ª Reunión (Extraordinaria):

Tras examinar y analizar el Documento IATTC-83-INF B preparado por los Directores de la CIAT y la WCPFC sobre el área de traslapo entre las dos organizaciones:

1. Reconocen que un objetivo fundamental y esencial de la labor de las dos Comisiones es desarrollar y fortalecer su cooperación a fin de asegurar el logro de los objetivos de las respectivas convenciones, en el ámbito de sus respectivas competencias;
2. Manifiestan que dicha cooperación es una obligación para ambas organizaciones y sus miembros en virtud del derecho internacional y en base a las disposiciones específicas de sus respectivas convenciones;
3. Señalan que la existencia de la zona de solapo, aunque desafortunada, es un hecho cuyas consecuencias deben ser abordadas a fin de evitar cualquier impacto negativo sobre el logro de los objetivos de las respectivas convenciones;
4. Sin menoscabar los méritos de las cinco opciones presentadas por los Directores, los Miembros de la CIAT presentes en la 84ª reunión (extraordinaria) consideran que, por el momento, el curso de acción más apropiado sería un proceso de dos etapas:
   a. En el corto plazo, llegar a un acuerdo sobre el arreglo más práctico, aplicable solamente en el área de traslapo, que sería la adopción de una solución que se base en lo definido por los Directores de la CIAT y WCPFC como opción 4, es decir:

servation and management measures of the WCPFC when fishing in the overlap area.

ii. Vessels listed exclusively in the IATTC register shall apply the conservation and management measures of the IATTC when fishing in the overlap area.

iii. In the case of vessels listed in the registers of both organizations, the corresponding flag Member ~~or Cooperating Non-Member (CPC)~~ shall decide and notify to both Commissions under which of the two commissions those vessels shall operate when fishing in the overlap area, as regards the application, for a period of not less than [three] years, of the conservation and management measures of that Commission.

~~iii.~~iv. In the case of vessels listed in the registers of both organizations, the vessels of a Cooperating Non-Member shall apply the conservation and management measures of the commission of which it is a member, when fishing in the overlap area.

b. Initiate in parallel a longer-term process ~~along the lines of Option 5, as described in the Directors' document,~~ through the establishment of a joint working group to explore avenues for managing tuna stocks in the entire Pacific Ocean, considering, *inter alia*, the joint management components outlined in Option 5 defined by the Directors of the IATTC and the WCPFC in Document IATTC-83 INF-B.

5. Recognize the need for each commission to facilitate granting to the members of the other commission the status of Member or Cooperating Non-Member.

i. Los buques inscritos exclusivamente en el registro de la WCPFC aplicarán las medidas de conservación y ordenación de la WCPFC cuando pesquen en el área de traslapo.

ii. Los buques inscritos exclusivamente en el registro de la CIAT aplicarán las medidas de conservación y ordenación de la CIAT cuando pesquen en el área de traslapo.

iii. En el caso de los buques que estén inscritos en los registros de ambas organizaciones, el Miembro ~~o No Miembro Cooperante (CPC)~~ del pabellón correspondiente decidirá y notificará a ambas Comisiones bajo cuál de las dos comisiones operarán dichos buques cuando pesquen en el área de traslapo, en cuanto a la aplicación, por un periodo no menor de [tres] años, de las medidas de conservación y ordenación de esa Comisión.

~~iii.~~iv. En el caso de los buques que estén inscritos en los registros de ambas organizaciones, los buques de un No Miembro Cooperante aplicarán las medidas de conservación y ordenación de la cual es miembro, cuando pesquen en el área de traslapo.

b. Iniciar en paralelo un proceso a plazo más largo ~~basado en la opción 5, tal como se describe en el documento de los Directores,~~ mediante el establecimiento de un grupo de trabajo conjunto para explorar vías para la gestión de las poblaciones de atún en el Océano Pacífico entero, considerando, entre otros, los componentes de manejo conjunto delineados en la opción 5 definida por los Directores de la CIAT y WCPFC en el Documento IATTC-83-INF B.

5. Reconocen la necesidad de que cada comisión facilite el otorgamiento a los miembros de la otra comisión del estatus de Miembro o No Miembro Cooperante.

HIGHLY MIGRATORY SPECIES ADVISORY SUBPANEL REPORT ON COUNCIL RECOMMENDATIONS ON INTERNATIONAL HIGHLY MIGRATORY SPECIES MANAGEMENT

U.S.-Canada Albacore Treaty

The Highly Migratory Species Advisory Subpanel (HMSAS) recommends that the Council remains involved in U.S.-Canada Albacore Treaty negotiations, and continue to support and coordinate positions promoted by the U.S. albacore fishing industry.

Information from the just-completed albacore season received from the fleet found, for the first time in many years, a much less stressful fishery and one more productive for U.S. vessels. Albacore again were generally located in a narrow band off the Oregon and Washington coasts where an additional influx of foreign vessels would have made fishing problematic. U.S. effort beyond 200 miles remained limited due in part to high fuel costs.

No schedule has been developed by the U.S. to resume negotiations, and this needs to be done soon as any solutions will require much work over the next 6 months. However, prior to any new "fishing regime" under the treaty the HMSAS recommends that the Council help expedite the following issues that need to be addressed and resolved.

- Encourage more timely data collection by the Data and Economic Working Groups as well as open and transparent information from the Canadian government on their fleet composition, total Canadian catch in the U.S. Exclusive Economic Zone (EEZ) and the economic contributions of the U.S. and Canadian removals of albacore caught in the U.S. EEZ that are landed in Canada.
- The Council should recognize that, while the activities of the treaty working groups can be informative, they do not necessarily supplant the Council's role in ensuring management measures for U.S. or Canadian vessels in the U.S. EEZ that fulfill the statutory requirements.
- Help develop information on the potential negative effects of the Canada/European Union (EU) Free trade agreement and its effects on U.S. markets to the EU. Also, additional exploration of Canada's other free trade activities and potential economic impacts to U.S. stakeholders are needed.
- Encourage solutions on re-establishing port access for U.S. boats for the purposes of marketing and unloading albacore, crew transfers, and vessel maintenance. Encourage the Department of State (or Department of Justice) to investigate Canada's action to selectively withhold port authorization from U.S. albacore vessels.
- Find a reasonable solution to the problem of re-measuring large Canadian vessels to less than 5 net tons for the purpose of obtaining a U.S. state registration number in order to be able to use that vessel in the U.S. EEZ to fish albacore. There are reports that some vessel owners have obtained "paper" U.S. owners, while the actual owner has retained Canadian citizenship.

- Support actions that benefit and protect U.S. albacore fishermen while ensuring a reduction of Canadian fishing in the U.S. EEZ to pre-1998 average level of effort, in accordance with the amendment approved by Congress.
- The treaty needs to clarify which country receives credit for albacore caught in each others' EEZ toward any future international quotas or allocation.
- The Northern Processor on the HMSAS would like to see a reasonable and fair fishing regime resumed in 2013.

Western and Central Pacific Fisheries Commission

The HMSAS suggests the following recommendations for the Council to forward to the U.S. delegation to the Western and Central Pacific Fisheries Commission (WCPFC). We ask that our representatives keep these principles in mind:

- That regulations are not agreed upon that put the U.S. Fleet at a disadvantage on the fishing grounds or access to a fair share of the international allowed harvest.
- That regulations that are agreed to are capable of being fairly enforced to regulate all countries to include catches described as bycatch and catches termed as artisanal.

North Pacific Albacore: Since no issues involving North Pacific Albacore will be addressed at the WCPMC annual meeting, the HMSAS has no comments at this time.

North Pacific Striped Marlin (Eastern Pacific Ocean Stock): Since no issues involving the Eastern North Pacific striped marlin stock will be addressed at the WCPFC annual meeting, the HMSAS has no comments at this time.

South Pacific Albacore: If area quotas are imposed in the South Pacific on albacore, the HMSAS recommends that such measures should address increased effort in the longline fishery only. The HMSAS recommends troll and baitboat effort south of 30°S latitude be exempt due to minimal historic effort and lack of stock issues.

Skipjack: The HMSAS is concerned that vastly increasing effort and catch on skipjack in the Western Pacific will lead to decreased skipjack abundance and increased effort on albacore. The Japanese pole and line fleet that targets skipjack would likely shift effort to North Pacific albacore when skipjack abundance falls.

Pacific Bluefin Tuna: The HMSAS notes that the Northern Committee of the WCPFC is proposing a conservation measure for 2013 that does not reasonably deal with the critical problem of fishing for immature Pacific bluefin tuna in the Western Pacific. Both Japanese vessels engaged in artisanal fisheries and fisheries catching Pacific bluefin in the Sea of Japan are exempted from the requirement in the measure to reduce fishing mortality on the stock, especially of juvenile fish. These fisheries target immature bluefin tuna. A continuation of those fisheries adversely impacts the bluefin spawning stock in the Sea of Japan, and necessarily the effective conservation and management of the Pacific bluefin fishery throughout the Northern Pacific. Therefore, HMSAS requests the PFMC take the position that the proposal of the

Northern Committee as it applies to the artisanal Pacific Bluefin fisheries of Japan and Korea, be modified to prohibit the taking of Pacific Bluefin Tuna of age zero (0) and age one (1) year.

Fish Aggregation Device (FAD) Recommendation: The HMSAS would like the U.S. Delegation to the WCPFC to get a clarification on the definition of FAD. There is a concern that the term FAD, as defined for the commercial purse seine tuna fisheries could be broadened to include vessels that use live bait to attract tuna in the U.S. West coast recreational and commercial tuna fisheries. Our recommendation is that a vessel should not be considered a FAD.

Catch Documentation Scheme: It is important that any Catch Documentation Scheme is the same for all countries as opposed to each country having a different catch scheme.

Catch Monitoring Scheme: It is important that any accepted Compliance Monitoring Scheme does not overburden the fishermen and processors with unnecessary paperwork requirements.

PFMC
11/05/12

HIGHLY MIGRATORY SPECIES MANAGEMENT TEAM REPORT ON COUNCIL RECOMMENDATIONS ON INTERNATIONAL HIGHLY MIGRATORY SPECIES MANAGEMENT

U.S. Canada Albacore Treaty

The Highly Migratory Species Management Team (HMSMT) discussed recommendations the Council could make regarding renegotiation of the U.S. Canada Albacore Treaty. The HMSMT recognizes the efforts of the Economics and Data Working Groups established under the Treaty are essential to providing information to support future Treaty negotiations. The HMSMT is concerned that there appears to be confusion regarding whether catch and effort for Canadian vessels fishing in U.S. waters is being attributed to Canada or the U.S. in both domestic and international fora and suggests that the Council encourage the Treaty delegates to provide clarification on how the reciprocal catch and effort have been and will be reported in the future (i.e. which nation is accountable for the catch and effort).

Regarding public comment to the Council on the Treaty, the HMSMT takes exception to the accusation in the October 11, 2012 letter from Mr. Chip Bissell of the American Albacore Fishing Association that we have "carelessly comingled U.S. and Canadian albacore fishery data without appropriate disclosure, transparency, or establishment of an appropriate scientific foundation for such actions." The HMSMT once again emphatically asserts that we have never intentionally misrepresented any data or facts as claimed by Mr. Bissell. The HMSMT is and has always been open to suggestions from constituents on how to clarify information in our reports. We encourage any entity or individual seeking to better understand HMSMT data reports to seek our assistance.

Western and Central Pacific Fisheries Commission

The HMSMT discussed recommendations the Council could make to the U.S. delegation to the Western and Central Pacific Fisheries Commission (WCPFC). Numerous issues and proposals will be discussed at the WCPFC meeting; however, the HMSMT is only providing recommendations on issues that seemed most relevant to the Council.

North Pacific Striped Marlin

A stock assessment for the western and central North Pacific Ocean (WCNPO) stock of striped marlin was conducted by the International Scientific Committee (ISC) for Tuna and Tuna-like Species in the North Pacific Ocean Billfish Working Group in spring 2012. The results showed that overfishing is occurring and the stock is overfished. Fisheries managed by the Council do not interact with the WCNPO stock, and the last assessment of the Eastern Pacific Ocean (EPO) stock conducted by the Inter-American Tropical Tuna Commission indicated the EPO stock is healthy. Thus, the HMSMT does not believe the Council needs to provide recommendations on North Pacific striped marlin at this time. As stock structure for striped marlin and other HMS in general is still uncertain and an active area of research, the Council should continue to monitor WCPFC activities on striped marlin.

Bluefin Tuna

In view of the ongoing concern over the stock of bluefin tuna in the North Pacific Ocean, the Northern Committee drafted a Conservation and Management Measure (CMM) to replace CMM 2010/04. The proposed CMM is essentially a continuation of CMM 2010/04 with a few minor changes. However, the Bluefin Working Group of the ISC is due to conduct a full stock assessment later in November after which the ISC has planned an extraordinary meeting to review the assessment and develop conservation advice. The HMSMT recommends that if the stock assessment results are available before the WCPFC meeting, the Council review the results and conservation advice that are provided by the ISC. In the event results are available before the WCPFC meeting and the assessment is more pessimistic than the last one, and further restrictions on bluefin fisheries are advised, the Council should consider promoting a stronger CMM.

Albacore

The Northern Committee progressed with their workplan to establish better reporting of North Pacific albacore catch and effort in order to track compliance with CMM 2005/03 and to develop a framework for albacore management including developing reference points and decision rules for management should reference points be breached. The HMSMT recommends that the Council encourage continuation of this work so that a management framework will be in place by completion of the next North Pacific albacore stock assessment in 2014.

Oceanic Whitetip Shark

The Science Committee reviewed a stock assessment of WCPO oceanic whitetip sharks and concluded that the stock is overfished and overfishing is occurring. The WCPFC has a conservation measure in place (CMM 2011/04) to prohibit retention of and promote release without harm of this species. The HMSMT recommends that the U.S. delegation to the WCPFC iterate the importance of compliance with CMM 2011/04 given the poor condition of the stock and its potential connectivity with EPO oceanic whitetip sharks.

Fish Aggregating Devices (FADs)

The HMSMT understands that the U.S. supports a strong measure to collect detailed data and conduct research on the impacts of fishing on FADs. The HMSMT recommends that the Council support any FAD fishing proposal that at a minimum requires detailed data collection regarding the impacts of fishing on FADs, a logbook specific for FADs and a marking scheme for FADs.

PFMC
11/05/12

AMERICAN ALBACORE FISHING ASSOCIATION
www.AmericanAlbacore.com
4364 Bonita Road, #311
Bonita, California 91902
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October 11, 2012

Via Email To: pfmc.comments@noaa.gov

Mr. Dan Wolford, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: Agenda Item J.1.c – U.S.-Canada Albacore Treaty and Efforts at Progress

Dear Mr. Wolford and Council members:

Following the Council's recommendations in March and June of this year, U.S. fishermen sought information that would allow evaluation of the treaty. In efforts to avoid the delays that have plagued previous treaty discussions, American albacore fishermen attempted to initiate dialog and information sharing with the Department of State and National Marine Fisheries Service. Fishermen sought to promote progress toward evaluation of the treaty and its impacts. It is well understood that appropriate evaluation of the treaty is essential to any consideration of a future fishing regime.

Data Needs:

Despite repeated recommendations for action and requests for information that could enable progress by stakeholders, none of the requested documents and data sets has been provided by either NMFS or the Department of State.

NMFS has decided to review AAFA's request under the Freedom of Information Act and has requested over $5,000 to provide just a small portion of the information requested. As a result of NMFS' decision, U.S. fishermen must now pay for data in order to evaluate the treaty and better protect the fishery that is their livelihood. Not only must fishermen pay for such information, NMFS has allowed valuable months to slip by. As a result, U.S. fishermen are heading into November without the U.S. delegation having discussed or addressed the concerns that led to the failure of negotiations last November.

The current course of action, or rather inaction, by the DOS and NMFS is disconcertingly similar to years past.

It is essential that reliable information serve as a foundation for evaluating the treaty. Without the right information and, equally as important, sufficient time for evaluation of potential options, rushing into negotiations would only be counter-productive.

Data Quality:

In the course of discussions with NFMS personnel and FOIA Coordinator, it has come to light that years of inadequate monitoring and a persistent lack of compliance with treaty requirements have rendered NMFS unable to advise U.S. fishermen or this Council with respect to the nature and extent of Canadian vessels fishing in the U.S. EEZ and landing in U.S. ports.

Despite the need for effort limitations that prompted the 2004 amendment, inadequate data collection, monitoring, and enforcement have allowed the treaty to continue producing negative impacts on U.S. albacore fishermen.

Recent efforts to assess the performance of the amendment's effort limitation regime have raised concerns over the lack of transparency surrounding the treaty's interpretation, monitoring, enforcement, and reporting.

American albacore fishermen support appropriate management measures through the application of sound science and quality data. Yet the Council must not tolerate poor data and inaccurate reports that misrepresent and negatively impact a U.S. fishery while allowing a foreign fishing fleet to increase capacity and effort in the U.S. EEZ.

Scientific Policies & Review:

Fishermen are frustrated to find what appear to be significant errors in reports that have been presented before this Council at past meetings; meetings at which decisions were made regarding the U.S. albacore fishery and the U.S.-Canada albacore treaty. At the April Council meetings of 2010 and 2011, reports were presented before the Council for consideration of effort limitation in the U.S. albacore fishery. Clarifications obtained from authors of those reports suggest that these reports, and others, have carelessly comingled U.S. and Canadian albacore fishery data without appropriate disclosure, transparency, or establishment of an appropriate scientific foundation for such actions. These practices may have served, either intentionally or unintentionally, to misrepresent or obscure the cumulative negative impacts suffered by U.S. albacore fishermen as a result of the operations of a foreign fishing fleet in the U.S. EEZ.

NOAA has in place standards for scientific integrity, a scientific code of conduct, and a code of ethics for science supervision and management.[1] It is essential that the scientific reports and data analysis presented to this Council be held to these standards since the future of the U.S. albacore fishery at stake. With the treaty's negative impacts on the U.S. albacore fleet, we ask the Council to consider initiating an independent review of reports and data which have been presented to this Council.

Protect and Promote U.S. Albacore Fishery:

The HMS FMP is required to contain measures applicable to foreign fishing, measures which are necessary and appropriate to protect, restore, and promote the long-term health and stability of the U.S. albacore fishery.[2]

In considering recommendations regarding this treaty, we ask the Council to recommend efforts that protect, restore, and promote a vital U.S. albacore fishery.

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[1] NOAA Administrative Order 202-735D, Scientific Integrity Policy (rev. 2011).
[2] Contents of Fishery Management Plans, Magnuson-Stevens FCMA §303, 16 U.S.C. 1853.

In summary, we believe that the lack of communication and information from the State Department and NMFS continues to hinder progress toward addressing the long-standing concerns surrounding the treaty. We respectfully ask the Council to:

1. Present a letter to NFMS and the Department of State, requesting they specify what measures they have implemented to address the concerns that led to the expiration of the reciprocal fishing regime under the treaty;
2. Request NMFS waive FOIA fees associated with providing U.S. fishermen with information pertaining to this treaty;
3. Consider initiating an independent review of reports and data that have been presented to this Council regarding the U.S. albacore fishery.
4. Recommend pursuit of policy options that protect, restore, and promote the health and stability of the U.S. albacore fishery.

Thank you for your time and consideration.

Sincerely,

Chip Bissell
American Albacore Fishing Association

AMERICAN ALBACORE FISHING ASSOCIATION
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November 1, 2012

Mr. Dan Wolford, Chair
Pacific Fishery Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: U.S.-Canada Albacore Treaty Observations and Status

Dear Mr. Wolford:

The American Albacore Fishing Association (AAFA) would like to take this opportunity to offer its comments on the U.S-Canada albacore treaty evaluation and its recommendations with respect to future negotiations.

AAFA would like to express its sincere gratitude to this Council for its recognition of U.S. albacore fishermen's concerns and its subsequent recommendations against rushing to implement reciprocal fishing without appropriate evaluation of the treaty's impacts.

Fishermen are a valuable component to the process of reasoned decision-making necessary to protect and revitalize the U.S. albacore fishery. AAFA seeks to improve fishermen's collaboration with NMFS and this Council to benefit this process. We are eager to engage in constructive dialog on fishery management policies and science. AAFA looks forward to working with all U.S. stakeholders, NMFS, and this Council to help develop the best path forward.

In 2002, the U.S. and Canada agreed to amend the treaty and reduce Canada's fishing effort in U.S. waters to pre-1998 levels. As implemented, the amendment was not effective in addressing the concerns that made the amendment necessary. The treaty's negative impacts continued unresolved until culminating in the expiration of the treaty's fishing regime in 2011.

In the absence of a fishing regime, the 2012 albacore season was unlike any in recent memory. U.S. albacore fishermen were able to fish in the U.S. EEZ free from crowding and interference by a foreign fishing fleet. While other U.S. fishermen may take this exclusivity for granted, for U.S. albacore fishermen the 2012 season highlighted the need for a renewed commitment to protect and promote this historic U.S. fishery.

AAFA has long sought to develop treaty terms that would assess and resolve long-standing concerns and inequities that have negatively impacted U.S. fishermen and their communities. AAFA greatly appreciated the State Department's request for Canada to produce data to help inform this evaluation of its pre-1998 effort levels. The U.S. Congress considered and approved this objective during the amendment process. Unfortunately, the absence of the requested Canadian data has impaired progress toward developing an effective description of the required effort limitation.

In the absence of access to U.S. waters, Canada opted to selectively withhold authorization from U.S. albacore vessels that sought to land in Canadian ports. These and other actions by Canada have created an impression that Canada views the absence of Canadian vessels in the U.S. EEZ as the equivalent of terminating the treaty.[1]

[1] Canada Coastal Fisheries Protection Regulations, Ch. 413, Para. 5, Sect. (1.3) *"The Minister **shall**, on receipt of an application for a license and in accordance with (the U.S.-Canada Albacore Treaty), **issue a license** authorizing a United States fishing vessel and its crew to enter Canadian fisheries waters for any of the purposes set out in that Treaty."* (Emphasis added)

The Magnuson Act established a dynamic science-based management process. Not only to ensure healthy fish stocks, but to benefit fishermen - U.S. fishermen - and their fishing communities. The U.S. EEZ extends out 200 miles to eliminate competition from foreign fishing fleets off our coasts. These protections should not be sacrificed lightly.

Without a fishing regime in place, the conflicts that were so common in previous years were absent. Many U.S. fishermen have reported that their fishing operations were noticeably more efficient due to the lack of crowding by foreign fishing vessels. This improved efficiency reduces overall operating costs and improves the economic viability of U.S. fishermen and the vitality of west coast fishing communities.

AAFA believes there has not been adequate progress to achieve the objectives of the 2002 amendment. Under the treaty, west coast U.S. port communities have lost infrastructure and fishery participation while Canada increased its fishing effort in the U.S. EEZ. Through subsidies and assistance programs, Canada contributed to an uneven playing field that threatens the future of this U.S. fishery.

Canada's aggressive pursuit of international free trade agreements has left U.S. albacore exports saddled with a 24% EU tariff while Canadian albacore exports are exempt. Canada is pursuing similar free trade agreements with other markets that will only increase the inequities of the treaty.

This Council has recognized the need to resolve long-standing treaty issues before the resumption of negotiations with Canada. If this Council and U.S. stakeholders cannot develop and recommend measures that effectively define Canada's pre-1998 average level of effort, then restarting negotiations will only prove more burdensome than beneficial.

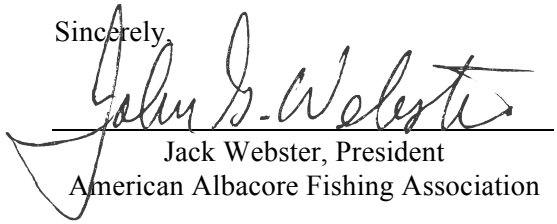
If 2012 is any indication; the continued deferral of negotiations could mark the beginning of a process to restore U.S. fishing opportunities and create local jobs while generating increased benefits for west coast port communities and the nation. We encourage the State Department to inquire of Canada's inaction on permitting U.S. albacore vessels to enter its ports. To single out and punish U.S. albacore vessels seems a possible violation of the treaty and Canadian regulations.

As you consider recommendations regarding this Treaty, AAFA asks the Council to make the recommendation that ensures the greatest benefits to U.S. fishermen and their communities.

In summary, the Board of Directors for the American Albacore Fishing Association strongly believes it is better to not resume negotiations until there is adequate evaluation of the amendment's performance and agreement on a U.S. position that benefits and protects U.S. albacore fishermen and their communities while restoring this U.S. albacore fishery.

AAFA is pleased to maintain a good working relationship with the Western Fishboat Owners Association (WFOA) on behalf of our members. It was through our joint efforts and the promotion of our mutual goal of ending the inequities of the reciprocal fishing regime that such great progress has been made. We agree with the concerns and opinions expressed in their October 30, 2012 letter to this Council; and look forward to continuing our work with WFOA on the US-Canada albacore treaty to ensure that the best interests of the US fishery are implemented. Thank you for your time and consideration.

Sincerely,



Jack Webster, President
American Albacore Fishing Association

cc: Mr. Dave Hogan - U.S. Department of State
Mr. Mark Helvey - NOAA/NMFS
WFOA Board of Directors

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Agenda Item J.1.c
Supplemental Public Comment 3
November 2012

October 30, 2012

Mr. Dan Wolford, Chair
Pacific Fisheries Management Council
7700 NE Ambassador Place, Suite 101
Portland, OR 97220-1384

Re: U.S./Canada Albacore Treaty Issues and Observations

Dear Mr. Wolford:

Western Fishboat Owners Association (WFOA) would like to provide its comments and recommendations for Council action regarding the U.S.-Canada albacore treaty.

As the 2012 albacore season comes to a close, it marked the first time since the treaty was adopted in 1981 there has been no reciprocal fishing. It was a good opportunity to gain some perspective from the fishermen that live and work at sea fishing for albacore off the U.S. west coast, and how the lack of a regime has impacted their operations.

WFOA members report better fishing conditions existed on the grounds this season, and U.S. fishermen were able to adequately supply U.S. processors. The ability to fish in an orderly manner is what WFOA has been seeking since the inception of the treaty in 1981, which was promoted at the time by U.S. albacore fishermen. This was the result was realized in the 2012 season. Most fishermen from large vessels to small, as well as some recreational fishermen have commented on the "peacefulness" that resulted in better ability to stay on the albacore in the narrow historical band off the NW and the lack of crowding at-sea and in port.

One issue WFOA found problematic in the absence of a fishing regime is the inability to enter Canadian ports to unload product and take on foreign crews. Despite a mechanism by the Canadian government to allow US vessels to unload or conduct crew transfers, and despite a number of applications filed by US boats to do such, not one single request was granted. Also, Canadian buyers were lacking fish this season and could only buy albacore over U.S.. docks which took competition out of the market. Fishing vessel owners paying for freight and handling to ship fish from the U.S. to Canada by land resulted in at least a 10% price reduction to fishermen for albacore sold.

The ability to pick up foreign crews in Canada on some vessels was also costly to US fishermen. Vessel owners have had to resort to having to make transfers in Mexico, American Samoa, or Guam to comply with Customs and Border patrol regulations. WFOA is working with Congress to make crew transit consistent within ports, and to perhaps make it possible to arrange transit through the U.S. We

encourage the Council as a stakeholder and advocate of U.S. fishing to add it's support to this effort when and if it is appropriate.

We would also like to bring to the Council's attention reports of an apparent loophole whereby some Canadian fishermen are working in U.S. waters through questionable permit transfers or use. Some Canadian boats have been "creatively" measured to comply with state laws less than five net tons. Some 50-60 net ton vessels have suddenly become five net tons thus obtaining a state registration #, combined with a "paper" U.S. owner and are on the grounds in 2012 in the U.S. EEZ fishing for albacore.

Further, WFOA wishes to bring to the Council's attention that there has been little serious movement by Canada on fleet reform, and negotiations have come to a standstill. We have only now received some preliminary information on economics, which we expect more to follow, that needs to be thoroughly reviewed. In light of the slow progress we are asking the Council's support not in not formulating a plan for 2013 until more complete economic data is presented. WFOA also would like to see concrete proposals to address the areas still of concern to U.S. fishermen. Just to name a few, issues such as port access, clarification of fish caught in the U.S. EEZ applying to future U.S. quota, ramifications of potential Canada/EU free trade agreement putting the U.S. at a competitive disadvantage especially if Canada catches fish in the U.S. EEZ and markets it in the EU.

Overall, WFOA hopes the Council will recognize that we have participated in good faith to develop a mutually advantageous fishing regime for both nations, and that WFOA has repeatedly sought to fairly resolve the existing differences. WFOA is now in the process of accessing the season and formulating a position regarding the future. This process is ongoing and based on members input as well as adequate data from the working groups. WFOA urges the PFMC to support U.S. albacore fishermen's positions that a fishing regime not be established until key issues are resolved.

The Western Fishboat Owners Association (WFOA) and American Albacore Fishing Association (AAFA), together representing the vast majority of US troll and baitboat albacore vessels on the West Coast, have recently consulted on the treaty issues. Both associations have been, and remain, in agreement on the US/Canada albacore issues mentioned above. We would like to remind regulators and managers that sometimes the two organizations may present the issues in different ways, however, all should be aware that the two organizations are in basic agreement with each other and plan to cooperate fully in bringing these issues to the attention of the Council, the State Department, and NOAA/NMFS.

If you have further questions I will be glad to respond to them.

Sincerely,

Wayne Heikkila

Wayne Heikkila
Executive Director

cc: Mr. Dave Hogan - U.S. Department of State
Mr. Mark Helvey - NOAA/NMFS
WFOA Board of Directors