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REVIEW OF CCMs' IMPLEMENTATION OF, AND COMPLIANCE WITH, CONSERVATION AND MANAGEMENT MEASURES

WCPFC-TCC4-2008/31 (Rev.1)¹

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Paper prepared by the Secretariat

Introduction

1. The Commission's Conservation and Management Measures (CMMs) that apply equally to Members, Cooperating Non-Members and Participating Territories (CCMs) are listed in **Table 1**. These measures impose reporting and monitoring obligations on CCMs. A summary of reports received from various CCMs in respect of each CMM is presented at **Table 2**.

Record of Fishing Vessels and Authorization to Fish

2. CCMs' implementation of, and compliance with CMM 2004-01 [Record of Fishing Vessels and Authorization to Fish] is addressed in WCPFC-TCC5-2009/17 [Status of, and Developments Related to, the WCPFC Record of Fishing Vessels].

Conservation and Management Measures for South Pacific Albacore

3. Paragraph 1 of CMM 2005-02 states that CCMs shall not increase the number of their fishing vessels actively fishing for South Pacific albacore in the Convention Area south of 20°S above current (2005) levels or recent historical (2000-2004) levels. There have been difficulties in monitoring CMM 2005-02 with the data provided to the Secretariat at this point. Information specifically listing the number of vessels fishing for South Pacific albacore south of 20°S per year has been provided by Australia, Belize and New Zealand (**Table 3**), but could potentially be obtained from other CCMs if they provided complete operational data.

4. Except for Australia, Belize and New Zealand, the following problems currently exist:
- a. the Secretariat has only been provided with aggregate catch/effort, without vessel numbers, for the distant-water fleets fishing south of 20°S, so it is impossible to determine annual active vessel numbers for these fleets; and
 - b. annual active vessel numbers could be obtained for fleets operating south of 20°S using operational data, when available, but the coverage of operational data would need to be 100 per cent.

¹ This revision relates to the addition of information on CMM 2008-03 [Sea Turtles] and CMM 2006-08 [High Seas Boarding and Inspection Procedures]

Conservation and Management Measures for North Pacific Albacore

5. Conservation and Management Measure 2005-03 (CMM 2005-03) states that all CCMs shall report:

- a. all catches of North Pacific albacore to the WCPFC every six months, except for small coastal fisheries which shall be reported on an annual basis. Such data shall be reported to the Commission as soon as possible and no later than one year after the end of the period covered; and
- b. annually to the WCPFC all catches of albacore north of the equator and all fishing effort north of the equator in fisheries directed at albacore. The reports for both catch and fishing effort shall be made by gear type. Catches shall be reported in terms of weight. Fishing effort shall be reported in terms of the most relevant measures for a given gear type, including at a minimum for all gear types, the number of vessel-days fished. The first report was due on April 30, 2006 covering calendar year 2004.

6. At the time of writing of this paper the Secretariat has received information on estimated catches of North Pacific albacore covering recent activities for the following fleets:

- a. Canada Troll (2004-2008);
- b. Chinese Taipei distant-water and offshore longline (2004-2008);
- c. Cook Islands troll (2004-2008);
- d. Japan longline (2004-2007);
- e. Japan pole-and-line (2003-2008);
- f. Japan purse seine (2004-2007);
- g. Japan gillnet (2004-2007);
- h. Japan troll (2004-2007);
- i. Korea longline (2004-2007);
- j. USA troll (2004-2008);
- k. USA longline (2004-2008);
- l. USA pole-and-line (2004-2008);
- m. USA gillnet (2004-2008); and
- n. Vanuatu longline (2004-2008).

7. The scope of data provided varies among CCMs. Some CCMs provide all the data required by the Measure, others report catch but not effort, and a few report effort in terms of “days fished”.

Conservation and Management Measure for Striped Marlin in the Southwest Pacific

8. Paragraph 4 of CMM 2006-04 states, in part, that “...CCMs shall provide information to the Commission, by 1 July 2007, on the number of their vessels that have fished for striped marlin in the Convention Area south of 15°S, during the period 2000-2004, and in doing so, nominate the maximum number of vessels that shall continue to be permitted to fish for striped marlin in the area south of 15°S.” At the time of writing this paper, the Secretariat has received this information from Australia, Cook Islands, Korea, New Caledonia, Chinese Taipei and the U.S. A summary of the responses relating to CMM 2006-04 received by the Secretariat is presented in **Attachment 1**.

9. In relation to CMM 2006-04, Vanuatu has provided monthly longline catches (mt) of striped marlin taken south of 15°S for the period 2002-2005 but not the number of vessels involved.

Western and Central Pacific Fisheries Commission Boarding and Inspection Procedures

10. WCPFC5 adopted a TCC4 recommendation that for the purpose of the High Seas Boarding and Inspection Procedures, CCMs shall provide to the Secretariat the contact information for the authorities of their fishing vessels (para. 108(1)). At the time of writing this paper, the Secretariat has received contact information for the authorities of their respective fishing vessels from only nine (9) CCMs (Belize, Canada, Cook Islands, European Community, France, Japan, New Zealand, Chinese Taipei and USA).

Conservation and Management Measures to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds

11. Paragraph 4 of CMM 2007-04 states that “For research and reporting purposes, CCMs with longline vessels that fish in the Convention Area area south of 30°S or north of 23°N shall submit to the Commission in part 2 of its annual report for 2007 (due in 2008) information describing which of the mitigation measures in Table 1 they require or will require their vessels to use, as well as the technical specifications for each of those mitigation measures. Each such CCM shall also include in its annual reports for subsequent years any changes it has made to its required mitigation measures or technical specifications for those measures.” As noted in Table 2, three (3) CCMs have provided information about mitigation measures to the Secretariat under the now-rescinded CMM 2006-02, and these three CCMs and another CCM have provided the information required under paragraph 4 of CMM 2007-04 in their respective Annual Report (Part 2) for 2007.

12. Paragraph 4 of CMM 2007-04 also states that “Each such CCM shall also include in its annual reports for subsequent years any changes it has made to its required mitigation measures or technical specifications for those measures”. At the time of writing this paper, no CCM has reported any such changes.

Conservation and Management Measures for Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean

13. Paragraph one of CMM 2008-01 describing the objectives of the Measure states in part:

“Achieve, through the implementation of a package of measures, over a three-year period commencing in 2009, a minimum of 30% reduction in bigeye tuna fishing mortality from the annual average during the period 2001-2004 or 2004; and

Ensure that there is no increase in fishing mortality for yellowfin tuna beyond the annual average during the period 2001-2004 average or 2004.”

14. Information that may indicate whether or not CMM 2008-01 is achieving these objectives, compiled by the Commission’s data manager, SPC-OFP, is appended at **Attachment 2**.

15. Paragraphs 12 and 18 of CMM 2008-01 state, “Other non-PNA CCMs shall implement compatible measures to reduce purse seine fishing mortality on bigeye tuna in their EEZs.” Pursuant to para. 45 of CMM 2008-01, other non-PNA CCMs would be expected to report on the implementation of their respective compatible measures through their Annual Report Part 2, starting in 2010.

16. Paragraph 30 of CMM 2008-01 grants an exemption from the measure for developing skipjack purse seine fisheries, between 20°N and 20°S, that can provide verifiable evidence of minimal yellowfin and bigeye catch, with 100 per cent observer coverage, and with a legitimate development plan. This paragraph further states that existing plans shall be tabled at the Commission for information. As noted in Table 2, one CCM has provided to the Secretariat a development plan for developing skipjack fisheries.

17. Paragraph 36 of CMM 2008-01 states:
“The catch limit for China for 2009 and 2010 will remain at 2004 levels pending agreement being reached to develop an arrangement for the attribution of Chinese catch taken as part of domestic fisheries in the EEZs of Pacific Island Countries.”
18. The Secretariat continues to work with SPC-OFP and relevant CCMs to correctly attribute catch.
19. Paragraph 39 of CMM 2008-01 states:
“Beginning in 2009, CCMs shall take necessary measures 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 fisheries taking less than 2,000 tonnes of bigeye and yellowfin, shall not exceed the average level for the period 2001-2004 or 2004. CCMs shall provide the SC with estimates of fishing effort for these other fisheries or proposals for the provision of effort data for these fisheries for 2009 and future years.”
20. At the Fifth Regular Session of the Scientific Committee (SC5) in August 2009 the WCPFC Executive Director advised that no CCMs had responded to a request from the Secretariat to provide this information by 1 July 2009. He noted that the Secretariat already holds this information for several CCMs (WCPFC-SC5-2009/GN-WP-09). SC5 noted that the deadline for submission of this data has already passed, encouraged CCMs to submit this data as soon as possible, and recommended that non-compliance with data submission obligations be referred to the TCC for its consideration and action.
21. Paragraph 40 of CMM 2008-01 states:
“CCMs shall provide within the agreed timeframes each year, catch and effort data, and size composition data for all fleets in the format required by the rules and requirements adopted by WCPFC as “Scientific Data to be Provided to the Commission”.
22. Tables 1-5 in the SC5 Statistics Specialist Working Group (SWG) Working Paper ST-WP01² and the WCPFC website³ provide summaries of the recent provisions of scientific data to the WCPFC. By 31 August 2009, 2008 annual catch estimates had not been provided for certain fishing gears for one CCM, and no estimates at all for two CNMs and two countries seeking CNM status. By 31 August 2009, 2008 aggregate catch and effort data had not been provided for certain fishing gears for five (5) CCMs, and no aggregate data at all for two CNMs and two countries seeking CNM status.
23. Paragraph 23 of CMM 2008-01 states:
“By 1 July 2009, CCMs fishing on the high seas shall submit to the Commission Management Plans for the use of FADs by their vessels on the high seas. These Plans shall include strategies to limit the capture of small bigeye and yellowfin tuna associated with fishing on FADs, including implementation of the FAD closure pursuant to paragraphs 13 and 19 above. The Plans shall at a minimum meet the Suggested Guidelines for Preparation for FAD Management Plans for each CCM (Attachment E).”
24. At the time of preparation of paper, eight (8) CCMs had submitted FAD Management Plans (Australia, Federated States of Micronesia, Japan, New Zealand, Papua New Guinea, Solomon Islands, Chinese Taipei, Vanuatu – see Table 2) while twenty (20) CCMs support purse seine vessels in the WCPO purse seine fishery.

² <http://www.wcpfc.int/system/files/documents/meetings/scientific-committee/5th-regular-session/statistics-swg/working-papers/SC5-ST-WP-01%20%5BData%20Gaps%20%28final%29%5D.pdf>

³ <http://www.wcpfc.int/statprov>

Conservation and Management of Sea Turtles

25. Paragraph 7(a)(iii) of CMM 2008-03 states in part, “Starting on 1 January 2010, CCMs with longline vessels that fish for swordfish in a shallow-set manner shall, *inter alia*, “...use any other measure, mitigation plan or activity that has been reviewed by the Scientific Committee (SC) and the Technical and Compliance Committee (TCC) and approved by the Commission to be capable of reducing the interaction rate (observed numbers per hooks fished) of turtles in swordfish shallow-set longliner fisheries”. At the Fifth Regular Session of the Scientific Committee it was indicated that Australia will report on its compliance with CMM 2008-03 to the WCPFC as part of its Part 2 Report to the Technical and Compliance Committee on an annual basis. Australia’s Eastern Tuna and Billfish Fishery Sea Turtle Mitigation Plan (TMP) is presented in WCPFC-TCC5-2009/IP-05.

Conservation and Management of Swordfish

26. Paragraph 3 of CMM 2008-05 states, “No later than 30 April 2009 CCMs shall nominate the maximum total catch of swordfish that it shall continue to be permitted to fish in the area south of 20°S in 2009. Paragraph 4 of CMM 2008-05 states, “The catch limits established under paragraph 2 (of CMM 2008-05) will apply for 2009”.

27. At the time of writing this paper, the Secretariat has received this information from Australia, Japan, New Zealand, Chinese Taipei and the U.S. A summary of the responses relating to CMM 2008-05 received by the Secretariat is presented in **Attachment 3**.

Annual report to the Commission

28. At TCC1 in 2005 CCMs agreed to provide an Annual Report to the Commission, the purpose of which is to report relevant information to the Commission on their respective fishing activities during the preceding calendar year, and management and compliance issues during the present year.

Annual Report (Part 1)

29. Part 1 of the Annual Report relating to information on fisheries, research and statistics was to have been submitted by 10 July 2009 or one month before the Fifth Regular Session of the Scientific Committee (SC5). While many of the Part 1 reports were submitted well after the due date, at the time of writing this paper, the Secretariat had received Part 1 reports from 31 CCMs.

Annual Report (Part 2)

30. The Fifth Regular Session of the Commission (WCPFC5) adopted enhanced guidelines for Part 2 submissions contained in Appendix B of WCPFC5-2008/IP07 and agreed that CCMs should use these guidelines for all future submissions of Part 2 reports.

31. Part 2 of the report relating to management and compliance covering the period 1 January-31 December 2008 was to be submitted by 31 July 2009.

32. A draft Annual Report Part 2 template for CCMs to report on their implementation of CMM 2008-01 is appended as Attachment 1 of WCPFC-TCC5-2009/19 for TCC’s consideration.

33. Preparation of the Annual Report Part 2 provides an ideal opportunity for CCMs to report progress on several issues, including:

- a. CCMs’ implementation of the IPOA-Seabirds, including, as appropriate, the status of their National Plans of Action for Reducing Incidental Catches of Seabirds in Longline Fisheries (CMM 2007-04); and
- b. Progress by CCMs with efforts to exercise reasonable restraint in expanding fishing effort on swordfish (CMM 2008-05).

34. Starting in 2010 the Annual Report Part 2 will be the means by which non-PNA CCMs will report on the implementation of compatible measures to reduce purse seine fishing mortality on bigeye tuna in their respective EEZs.

35. At the time of writing of this paper, the Secretariat had received Part 2 Reports for the period 1 January-31 December 2008 from 15 CCMs.

Outstanding Annual Reports

36. WCPFC5 was advised that:

- a. Part 1 of the Annual Report by CCMs was submitted to the Commission for 2007 by 30 CCMs, and information for the three participating territories who have not submitted Part 1 reports has been provided in the Part 1 reports submitted by the USA and France; and
- b. Part 2 of the Annual Report by CCMs for 2007 was received from 28 CCMs and one report was outstanding.

37. CCMs were urged to adhere to the deadlines for Part 1 and Part 2 reports as receipt of these reports during or after the SC or TCC meetings hinders compilation of the submissions by the Secretariat, and effectively prevents reviews of the reports by other CCMs. CCMs were invited to note the summary of outstanding submissions in WCPFC5-2008/IP06, Table 3, and submit any outstanding Part 1 and Part 2 information to the Secretariat.

38. **Table 4** lists the numbers of Annual Reports that have been provided to the Secretariat to date with the numbers of outstanding reports in parenthesis.

Advice and Recommendations

39. TCC5 is invited to note, and provide advice and recommendations to the Commission, as appropriate, in relation to:

- a) the lack of information available to the Secretariat in relation to CMM 2005-02, except for Australia, Belize and New Zealand (para.4);
- b) the recent improvement in information on estimated catches of North Pacific albacore received from CCMs in respect of the reporting requirements provided for in CMM 2005-03 (para.6);
- c) six (6) CCMs provided information on the number of vessels that fished for striped marlin in the south west Pacific consistent with CMM 2006-04 (para.8);
- d) the Secretariat has received contact information for the authorities of their respective fishing vessels from only nine (9) CCMs (para.10);
- e) three (3) CCMs responded to the requirements of CMM 2006-02 in respect of seabird mitigation, that these three CCMs and another CCM have responded, during 2008, to the requirements of CMM 2007-04 (para. 11), and no changes have been reported during 2009 to required mitigation measures or technical specifications for those measures (para.12);
- f) in respect to provision of information about fishing effort on other commercial tuna fisheries for bigeye and yellowfin tuna, no CCMs had responded to a request from the Secretariat to provide this information by 1 July 2009 (para.20);
- g) eight (8) FAD management plans have been received by the Secretariat (para.24);
- h) Australia's Eastern Tuna and Billfish Fishery Sea Turtle Mitigation Plan (TMP) is presented in WCPFC-TCC5-2009/IP-05 (para.25);
- i) five (5) CCMs provided information on the maximum total catch of swordfish that they shall continue to be permitted to fish in the area south of 20°S in 2009. (para.27);

- j) the late submission of Part 1 reports by many CCMs, although 30 were received by the end of SC5 (para.29);
- k) the late submission of Part 2 reports for the period 1 January-31 December 2008; only 15 were received at the time of posting this paper. This makes any analysis of the information contained in Part 2 reports in advance of TCC extremely difficult – for both CCMs and the Secretariat (para.35); and
- l) the number of Part 1 and Part 2 reports outstanding for previous years (para.38).

Table 1 Conservation and Management Measures of the Western and Central Pacific Fisheries Commission, as of 1 September 2009

Conservation and Management Measure	Symbol	Date Adopted	Date Entered into Force
Resolution on expansion of fishing effort and capacity (MHL CIV, February 1999)			
Resolution on expansion of fishing effort and capacity (MHL CV, September 1999)			
Resolution relating to illegal, unreported and unregulated fishing and limits on fishing capacity (PrepCon3, November 2002)			
Resolution on reduction of overcapacity	Resolution 2005-02		
Resolution on reduction of non-target fish species	Resolution 2005-03		
Record of Fishing Vessels and Authorization to Fish	CMM 2004-01	8 Dec. 2004	8 Feb. 2005
Specifications for the Marking and Identification of Fishing Vessels	CMM 2004-03	8 Dec. 2004	8 Feb. 2005
Resolution on Conservation and Management Measures	CMM 2004-04		
Conservation and Management Measure for South Pacific Albacore	CMM 2005-02	16 Dec. 2005	16 Feb. 2006
Conservation and Management Measure for North Pacific Albacore	CMM 2005-03	16 Dec. 2005	16 Feb. 2006
Conservation and Management Measure for Striped Marlin in the Southwest Pacific	CMM 2006-04	15 Dec. 2006	15 Feb. 2007
Conservation and Management Measure for the Regional Observer Programme	CMM 2006-07	15 Dec. 2006	15 Feb. 2007
Western and Central Pacific Fisheries Commission Boarding and Inspection Procedures	CMM 2006-08	15 Dec. 2006	15 Feb. 2007
Conservation and Management Measure for the Regional Observer Programme	CMM 2007-01	15 Dec. 2007	15 Feb. 2008
Commission Vessel Monitoring System (Revision of CMM 2006-06 to include the requirement that vessels in the Convention Area must maintain VMS transmission even while beyond the Commission boundaries at 20°N and 175°E)	CMM 2007-02	15 Dec. 2007	15 Feb. 2008
Conservation and Management Measure to Establish a List of Vessels Presumed to have Carried Out Illegal, Unreported and Unregulated Fishing Activities in the WCPO (Replacement of entire text of CMM 2006-09)	CMM 2007-03	15 Dec. 2007	15 Feb. 2008
Conservation and Management Measure to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds (Revision of CMM 2006-02)	CMM 2007-04	15 Dec. 2007	15 Feb. 2008
Conservation and Management Measure for Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean (Replaces CMM 2005-01 and CMM 2006-01)	CMM 2008-01	12 Dec. 2008	12 Feb. 2009
Cooperating Non-Members (Replaces CMM 2004-02)	CMM 2008-02	12 Dec. 2008	12 Feb. 2009
Conservation and Management of Sea Turtles	CMM 2008-03	12 Dec. 2008	12 Feb. 2009
Conservation and Management Measure to Prohibit the Use of Large Scale Driftnets on the High Seas in the Convention Area	CMM 2008-04	12 Dec. 2008	12 Feb. 2009
Conservation and Management of Swordfish (Replaces CMM 2006-03)	CMM 2008-05	12 Dec. 2008	12 Feb. 2009
Conservation and Management of Sharks (Replaces CMM 2006-05)	CMM 2008-06	12 Dec. 2008	12 Feb. 2009

Table 2		Summary of CCMs' compliance with reporting obligations under WCPFC Measures	
Conservation and Management Measure	Title	Reporting obligation	Number of reports received to date
CMM 2005-03	Conservation and Management Measure for North Pacific Albacore	Six-monthly reports of all catches	14
CMM 2006-02 (rescinded)	Conservation and Management Measure to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds	Mitigation measures	3
CMM 2006-04	Conservation and Management Measure for Striped Marlin in the South West Pacific	Reports of vessel numbers that fished from 2000-2004	4
CMM 2007-04	Conservation and Management Measure to Mitigate the Impact of Fishing for Highly Migratory Fish Stocks on Seabirds	Mitigation measures and technical specifications for each of those mitigation measures.*	4
CMM 2008-01	Conservation and Management Measures for Bigeye and Yellowfin Tuna in the Western and Central Pacific Ocean	FAD Management Plans	8
		Development plans for developing skipjack fisheries	1
CMM 2008-05	Conservation and Management of Swordfish	CCMs nominating maximum total catch	5

* 31 July 2008 deadline (in Part 2 of Annual Report for 2007)

Table 3: NUMBERS OF CCM-FLAG VESSELS THAT HAVE FISHED FOR SOUTH PACIFIC ALBACORE IN THE CONVENTION AREA SOUTH OF 20°S DURING THE PERIOD 2000 – 2008

Year	Australia	Belize	New Zealand
2000	139		
2001	137		
2002	135		
2003	130		
2004	120	2*	
2005	95		
2006	55		
2007	61	1**	197^
2008	54		

*See Belize Annual Report (Part 2) dated 1 September 2008.

**See Belize catch and effort data (by-catch) reported to the Commission on 29 April 2008.

^See New Zealand Annual Report (Part 2) for the period 1 January-31 December 2007.

Table 4: Number of Annual Reports Submitted (outstanding reports in parenthesis)

Annual Report (Part 1)

Submission Date	Reporting Period	Number of Reports
07 Jul. 2006	Previous year	27(3)
31 Jul. 2007	1 Jan.-31 Dec. 2006	29(4)
31 Jul. 2008	1 Jan.-31 Dec. 2007	30(4)
10 Jul. 2009	1 Jan.-31 Dec. 2008	31(2)

Annual Report (Part 2)

Submission Date	Reporting Period	Number of Reports
28 Aug. 2006	Previous year	29(1)
31 Jul. 2007	1 Jan.-31 Dec. 2006	30
31 Jul. 2008	1 Jan.-31 Dec. 2007	29(1)
31 Jul. 2009	1 Jan.-31 Dec. 2008	15(17)

NUMBERS OF CCM-FLAG VESSELS THAT HAVE FISHED FOR STRIPED MARLIN IN THE CONVENTION AREA SOUTH OF 15°S DURING THE PERIOD 2000 – 2008

Year	Australia	Cook Is.	Korea	New Caledonia	Chinese Taipei	USA
2000	140		22	14	51	
2001	159		26	13	51	
2002	144		24	24	52	
2003	134		28	24	67	
2004	121		28	26	47	
2005	100		7			
2006	55	0	7			0
2007	60	0	7			0
2008	50			0		0

Table 1. Purse seine days fished in waters under national jurisdiction and in International waters in the WCPFC-CA between 20°N and 20°S.

EEZ	2001	2002	2003	2004	Av. 2001- CMM 2005-		2005	2006	2007	2008 (prov.)
					2004	01				
COOK ISLANDS	46	236	8	6	74	74	4	8	15	10
FIJI	12	5	11	29	14	29	36	7	6	18
FRANCE (FRENCH POLYNESIA)	0	9	0	0	2	2	0	0	4	5
FRANCE (WALLIS AND FUTUNA)	5	3	4	0	3	3	4	0	1	3
INDONESIA	4,270	4,315	4,978	6,482	5,011	6,482	6,514	6,684	6,398	6,921
NIUE	0	0	1	0	0	0	0	0	0	0
PHILIPPINES	3,620	3,861	5,368	5,571	4,605	5,571	5,205	5,200	5,704	6,969
SAMOA	7	12	3	4	7	7	3	1	4	3
TOKELAU	99	403	27	67	149	149	127	34	45	93
TONGA	2	0	0	1	1	1	1	0	0	0
USA	386	600	268	337	398	398	185	237	111	104
VANUATU	2	2	0	23	7	23	1	1	0	0
PNA EEZs - TOTAL	27,299	29,438	32,802	33,709	30,812	33,709	36,672	35,528	35,992	36,431
TOTAL EEZs	35,748	38,884	43,470	46,229	41,083	46,448	48,752	47,700	48,280	50,557
TOTAL INT. WATERS	7,672	8,274	8,431	10,436			8,666	6,615	7,507	7,507
TOTAL (EEZs + IW)	43,420	47,158	51,901	56,665			57,418	54,315	55,787	58,064
TOTAL minus ID/PH	35,030	38,482	41,055	44,112			45,199	41,931	43,185	43,674

Notes:

1. Source: Raised logsheet data.
2. The column labeled "CMM-2005-01" does not take into account paragraph 6 and footnote 1 of CMM 2005-01
3. Catches and effort of vessels operating under charters and similar arrangements have been attributed to host island states or territories in accordance with paragraph 5 of CMM 2005-01 using the best information available to SPC-OFP.
4. Purse-seine days for Indonesia and the Philippines have been estimated according to Appendix A in the SC4 Statistics SWG Working paper WP-4 (Data relating to purse-seine effort on the high seas and in the zones of non-PNA member CCMs).

Source: SPC-OFP

Table 2(a). Purse seine days fished in international waters in the WCPFC-CA between 20°N and 20°S, by flag, based on available operational data.

PURSE SEINE DAYS FISHED INTERNATIONAL WATERS 20°N-20°S										
Flag	2001	2002	2003	2004	Av.	2005	2006	2007	2008	(prov.)
					2001-2004					
CHINA	95	126	149	428	200	428	507	230	335	241
CHINESE TAIPEI	1,969	1,865	1,487	1,913	1,809	1,913	1,262	1,242	1,505	1,279
ECUADOR	0	0	0	0	0	0	0	0	36	31
EL SALVADOR	32	37	0	0	17	17	0	0	87	92
EUROPEAN COMMUNITY	69	0	0	0	17	17	30	310	144	229
FSM	241	228	175	385	257	385	222	86	168	124
INDONESIA	500	500	500	500	500	500	500	500	500	500
JAPAN	1,374	1,274	1,756	1,859	1,566	1,859	1,832	1,535	1,120	1,896
KIRIBATI	40	52	40	35	42	42	46	53	22	12
MARSHALL ISLANDS	173	208	435	398	304	398	400	154	155	298
NEW ZEALAND	23	323	342	210	225	225	98	291	205	164
PAPUA NEW GUINEA	382	570	580	1,121	663	1,121	1,240	406	670	555
PHILIPPINES	13	55	435	452	239	452	306	150	104	82
REPUBLIC OF KOREA	1,307	1,226	1,152	1,234	1,230	1,234	1,071	739	1,398	1,555
SOLOMON ISLANDS	32	37	0	0	17	17	17	15	6	0
USA	968	1,333	863	987	1,038	1,038	771	534	726	1,575
VANUATU	66	163	181	571	245	571	376	394	372	216
TOTAL	7,284	7,997	8,095	10,093	8,367	10,217	8,678	6,639	7,553	8,849

Notes:

1. Source: Raised logsheet data.
2. The column labeled "CMM-2006-01" does not take into account paragraph 6 and footnote 1 of CMM 2005-01
3. Catches and effort of vessels operating under charters and similar arrangements have been attributed to host island states or territories in accordance with paragraph 5 of CMM 2005-01 using the best information available to SPC-OFP.
4. Purse-seine days for Indonesia have been arbitrarily assigned 500 days for high seas according to Appendix A in the SC4 Statistics SWG Working paper WP-4 (Data relating to purse-seine effort on the high seas and in the zones of non-PNA member CCMs)

Source: SPC-OFP

Table 2(b). Limit estimates for the high seas and the zones of non-PNA CCMs (and non-WCPFC members) established by CMM-2005-01 and CMM-2006-01 between 20°N and 20°S average vessel days 2001-2004 or 2004

Entity	Vessel days						SEE NOTE
	National Waters		High Seas (Pockets 1 & 2)		High Seas (remainder)		
	2004	2001-2004	2004	2001-2004	2004	2001-2004	
AMERICAN SAMOA	-	-	-	-	-	-	
AUSTRALIA	-	-	-	-	-	-	
CANADA	-	-	-	-	-	-	
CHINA	-	-	393	190	34	10	
CHINESE TAIPEI	-	-	1,836	1,459	77	349	
CNMI	-	-	-	-	-	-	
COOK ISLANDS	6	74	-	-	-	-	
ECUADOR	-	-	-	-	12	4	(1)
EL SALVADOR	-	-	-	-	-	17	
EC-SPAIN	-	-	-	-	103	73	(2)
FIJI	29	14	-	-	-	-	
FRENCH POLYNESIA	-	2	-	-	-	-	
FSM	-	-	346	214	39	43	
GUAM	-	-	-	-	-	-	
INDONESIA	6,363	-	500	-	-	-	(3)
JAPAN	-	-	1,715	1,396	144	171	(4)
KIRIBATI	-	-	32	40	3	2	
KOREA	-	-	1,521	1,343	10	228	(5)
MARSHALL ISLANDS	-	-	140	125	258	178	
NAURU	-	-	-	-	-	-	
NEW CALEDONIA	-	-	-	-	-	-	
NEW ZEALAND	-	-	137	247	73	95	(6)
NIUE	-	-	-	-	-	-	
PALAU	-	-	-	-	-	-	
PHILIPPINES	5,477	-	4,659	237	-	2	(7)
PNG	-	-	1,029	576	93	87	(8)
SAMOA	4	6	-	-	-	-	
SOLOMON ISLANDS	-	-	-	10	-	7	
TOKELAU	67	149	-	-	-	-	
TONGA	1	1	-	-	-	-	
TUVALU	-	-	-	-	-	-	
USA	342	396	507	448	480	618	(9)
VANUATU	23	7	316	129	256	116	
WALLIS AND FUTUNA	-	3	-	-	-	-	
<i>z Non-WCPFC CCM</i>	-	-	-	-	33	33	(10)
LIMIT ESTIMATE [CMM 2008-01]	12,524		13,259		2,322		

Source: SPC-OFP

Table 2(b) - NOTES

Where not stated, the estimates of high seas effort have been determined using raised operational logsheet data held by the SPC. Subject to interpretation of paragraph 6 and 7 of CMM 2008-01. Catches and effort of vessels operating under charters and similar arrangements have been attributed to host island States or territories in accordance with paragraph 2 of CMM 2008-01 using the best information available to SPC-OFP.

1.	ECUADOR Values presented here are from Operational data provided to SPC under the IATTC-SPC data exchange agreement.
2.	EC-SPAIN [15 Oct 2008] Annual high seas effort by the EU fleet for period 2001-2007 provided (Sourced from VMS data). Source of EEZ coordinates used to determined high seas days unknown. Definition of "DAY" thought to be days at sea since the data are sourced from VMS. [13 Aug 2009] The estimates of purse seine effort based on VMS data for 2004 and the average of 2001-2004 were 90 and 58 days, respectively. The estimates of purse seine effort based on aggregate catch/effort data for 2004 and the average of 2001-2004 were 103 and 73 days respectively. The estimates based on the aggregate catch/effort data appear in Table 2 of CMM 2008-01 and provide consistency with the other flag estimates - these estimates will be used until operational data are made available to provide a better estimate.
3.	INDONESIA WCPFC (SPC-OFP) does not have any operational catch/effort data for the Indonesia domestic purse seine fleet to determine the extent of activities by area, so the following methods have been used in the absence of the data. 1. National waters For 2004, the average CPUE (SKJ+YFT+BET)/days = 24 MT/day in the tropical waters of the WCPFC Convention Area. Applying this to the total purse seine catch estimates for domestic Indonesia purse seine fishery in 2004 (164,721 mt) gives 6,363 days (after subtracting an arbitrary estimate of 500 days for activities on the high seas – see below). For 2003-2006, the average CPUE (SKJ+YFT+BET)/days = 26.5 MT/day in the tropical waters of the WCPFC Convention Area. Applying this to the annual average purse seine catch estimate for domestic Indonesia purse seine fishery for 2003-2006 (170,243 mt) gives 5,924 days (after subtracting an arbitrary estimate of 500 days for activities on the high seas – see below). 2. High seas WCPFC (SPC-OFP) doesn't have any effort data for the Indonesia domestic purse seine fleet but presumably they fish in the high seas enclave between FSM, PNG, Palau and Indonesia. If this effort is assumed to be similar to the effort of the Philippines fleet based in PNG, a value of 500 days could possibly be attributed to fishing in the high seas by the Indonesian fleet.
4.	JAPAN Complete operational logsheet data provided to the Commission on 16 th April 2009 in relation to CMM 2008-01. These data represent 100% coverage and therefore a better source of data to estimate high seas effort, so the estimates have been revised compared to information presented to WCPFC5.
5.	KOREA [12 Sep 2008] Advice from Korea Indicates that average fishing days from 2001 to 2004 are 1,571 days and fishing days in 2004 are 1,531 days. Yet to be reconciled since the source of EEZ coordinates used to estimate high seas days is unknown. Also we are not sure of their definition of "DAY". SPC estimates 1,234 days for 2004 and 1,230 as the average for 2001-2004.
6.	NEW ZEALAND The New Zealand purse seine fleet is covered by the reference in footnote 2 in paragraph 10 of CMM2008-01, and the days in Table 2 of CMM 2008-01. Using this footnote, New Zealand can use the days from 2003, which is 342 days – 247 days in high seas pockets 1&2 and 95 days in the remaining high seas areas.
7.	PHILIPPINES – WORK-IN-PROGRESS High seas effort by the Philippines (distant-water) fleet based in PNG has been determined to be 452 days [for 2004] and 239 (average 2001-2004) based on logsheet data. At this stage, it is not possible to accurately estimate the annual effort of the Philippines domestic purse seine fleet on the high seas in the WCPFC Convention Area in a manner consistent to the process undertaken for the other purse-seine fleets, due to the lack of operational (logsheet) data for this fleet. Since TCC4, the Philippines have contacted their fishing companies to obtain the necessary operational logsheet data and substantial operational logsheet data have been provided to the WCPFC who have conducted an evaluation of the data provided. Estimates of high seas effort by the domestic Philippines purse seine fleet for 2004 provided by the Philippines (but yet to be substantiated) are 4,659 days.
8.	PNG [20 Aug 2009] PNG provided revised purse-seine catch estimates for 2004–2007 in their 2008 provision of data to the WCPFC, which resulted in a change in the estimated purse seine effort.
9.	USA [13 Sep 2008] USA has provided a value of 1,066 days as the average for 2001-2004, but only 1,038 days have been determined using the data available to the WCPFC (SPC-OFP). The WCPFC (SPC-OFP) are currently working with US-NMFS to review the respective EEZ coordinates used in the process of determining high seas days. Effort limits cannot be applied to vessels operating under the US Multilateral purse-seine Treaty when in the national waters of Pacific Island countries, which is referenced in paragraphs 6 and 7 of CMM 2008-01.
10.	Other Non-WCPFC CCM

<p>This entity relates to fleets based in the Eastern Pacific Ocean or IATTC-member country fleets providing data to IATTC, but excluding fleets for which the WCPFC already hold operational data (e.g. Vanuatu, El Salvador, Ecuador, Spain and the USA) .</p> <p>Other fleets that may support purse seine effort on WCPO tuna stocks may include Malaysia and Vietnam but data are not available to include consideration of this possible effort here.</p> <p>1. Days in national waters within the WCPFC Convention Area.</p> <p>For 2001-2004, none of these fleets were licensed to fish in national waters according to information currently available, so no fishing activity by non-WCPFC CCM fleets has been attributed to national waters. (0 days)</p> <p>For 2003-2006, none of these fleets were licensed to fish in national waters according to information currently available, so no fishing activity by non-WCPFC CCM fleets has been attributed to national waters. (0 days)</p> <p>2. High Seas</p> <p>From IATTC data, after removing El Salvador, Ecuador, Spain and Vanuatu fleet effort (which are already counted), the effort in 2004 for these fleets fishing in the WCPFC Convention Area was the same as the average effort for 2001-2004. For 2001-2004, the number of days' effort in the WCPFC Convention Area was 33 days, according to aggregate data provided by IATTC data. (33 days).</p> <p>For 2003-2006, the number of days' effort in the WCPFC Convention Area was 21 days, according to best available operational and aggregate data provided by IATTC data.</p>
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Table 3. Reported longline catches of bigeye tuna in the WCPFC-CA, by flag. Numbers in red indicate estimates carried forward from the previous year.

CCM	2001	2002	2003	2004	Av.	CMMs	2005	2006	2007	2008
					2001-2004	2005-01				(prov.)
AMERICAN SAMOA	75	196	242	227	185	2,000	134	181	198	124
AUSTRALIA	1,307	1,002	1,024	892	1,056	2,000	791	499	1,008	1,026
BELIZE	1,322	812	782	297	803	2,000	425	254	158	89
CHINA	2,227	2,312	8,965	9,314	5,705	9,314	6,399	9,790	7,821	8,761
CHINESE TAIPEI	12,435	16,645	14,429	20,992	16,125	16,125	15498	14,295	14,760	15,229
COOK ISLANDS	1	56	204	394	164	2,000	220	166	188	244
EUROPEAN COMMUNITY	0	0	0	42	11	2,000	17	62	62	77
FSM	651	759	656	542	652	2,000	182	172	1,395	970
FIJI	662	853	889	1254	915	2,000	423	771	556	671
FRANCE (FRENCH POLYNESIA)	745	649	439	502	584	2,000	606	498	478	490
FRANCE (NEW CALEDONIA)	128	189	142	90	137	2,000	76	35	53	63
INDONESIA	659	711	625	8413	2,602	8,413	7707	10,317	10,197	10,197
JAPAN	27,466	29,574	26,110	29,248	28,100	28,100	23,130	27,229	26,451	26,451
KIRIBATI	0	0	1	0	0	2,000	0	0	0	44
MARSHALL ISLANDS	0	0	0	1	0	2,000	0	0	3	375
NAURU	6	3	10	0	5	2,000	0	0	0	0
NEW ZEALAND	481	201	204	177	266	2,000	175	177	213	132
NIUE	0	0	0	0	0	2,000	10	22	18	1
PALAU	21	1	1	7	8	2,000	0	0	0	0
PAPUA NEW GUINEA	240	318	390	399	337	2,000	237	216	111	201
PHILIPPINES	264	310	394	403	343	2,000	729	804	927	643
REPUBLIC OF KOREA	22,172	28,533	17,151	17,941	21,449	21,449	15622	12,489	10,054	17,001
SAMOA	185	137	110	104	134	2,000	64	128	101	106
SOLOMON ISLANDS	187	401	385	294	317	2,000	3	0	0	0
TONGA	191	215	94	40	135	2,000	125	117	129	81
USA	2,418	4,396	3,618	4,181	3,653	4,181	4,462	4,381	5,381	4,526
VANUATU	17	396	841	1,949	801	2,000	1,914	1,864	2,098	1,020
Total	73,860	88,669	77,706	97,703	84,485	129,582	78,949	84,467	82,360	88,522

Notes:

1. Source: Annual catch estimates, WCPFC Tuna Fishery Yearbook 2008 (provisional).
2. Catch estimates in red have been carried over from previous years.
3. Indonesia has recently revised the proportion of catch taken by gear type for their domestic fisheries which has resulted in a much larger allocation to their longline (at the expense of catches in the "unclassified" fisheries) since 2004 than has been reported in previous years.
4. The column labeled "CMM-2005-01" does not take into account paragraph 6 and footnote 1 of CMM 2005-01.
5. Catches and effort of vessels operating under charters and similar arrangements have been attributed to host island states or territories in accordance with paragraph 5 of CMM 2005-01 using the best information available to SPC-OFF. In some cases, catches may not yet be attributed to the CCM responsible for the "charter or similar arrangements" since the flag state CCM has yet to advise that it has excluded these catches from their data (and thereby avoid double-counting).
6. The year 2004 shall apply to China, the United States and Indonesia. (CMM 2008-01 Footnote 3).

Table 4. Estimates of total annual catches of bigeye tuna in the WCPFC Statistical Area for fisheries other than longline and tropical purse seine.

GEAR	FLAG	BIGEYE									
		2001	2002	2003	2004	Av. 2001-2004	CMM 2006-01	2005	2006	2007	2008 (prov.)
Gillnet	Japan	3	12	11	5	8	2,000	6	11	3	3
Handline	Indonesia	881	951	835	0	667	2,000	835	835	835	835
	Philippines (large-fish)	349	336	472	263	355	355	670	555	521	637
	Philippines (small-fish)	3,659	4,274	5,436	5,548	4,729	5,548	3,078	3,391	3,914	3,914
	Total	4,889	5,561	6,743	5,811	5,751	7,903	4,583	4,781	5,270	5,386
Pole-and-line	Fiji	0	0	0	0	0	2,000	0	0	0	0
	French Polynesia	0	0	0	0	0	2,000	0	0	0	0
	Indonesia	972	1,048	921	5,920	2,215	5,920	5,423	7,260	7,176	7,176
	Japan	1,377	1,755	857	3,393	1,846	3,393	1,334	3,553	1,754	1,756
	Solomon Islands	0	0	0	0	0	2,000	0	0	37	0
	USA	0	0	0	0	0	2,000	0	0	0	0
	Total	2,349	2,803	1,778	9,313	4,061	17,313	6,757	10,813	8,967	8,932
Ring-net	Philippines	285	37	385	311	255	2,000	336	823	713	322
Purse seine	Japan	801	963	1,341	1,110	1,054	2,000	828	1,710	2,123	724
Troll	Japan	182	126	105	83	124	2,000	538	1,136	1,430	400
	USA	226	586	213	381	352	2,000	295	303	386	222
	Total	408	712	318	464	476	4,000	833	1,439	1,816	622
Unclassified	Australia	0	0	12	23	9	2,000	3	8	21	0
	Chinese Taipei	1	1	1	1	1	2,000	1	1	1	1
	French Polynesia	1	2	2	2	2	2,000	0	0	0	0
	Indonesia	6,275	6,768	5,945	13,711	8,175	13,711	13,198	8,313	8,310	8,310
	Japan	26	23	26	21	24	2,000	100	39	65	65
	New Zealand	0	1	1	8	3	2,000	1	1	0	1
	Philippines	117	140	190	174	155	2,000	167	184	213	210
	Total	6,420	6,935	6,177	13,940	8,368	25,711	13,470	8,546	8,610	8,587
Total "other fisheries"		15,152	17,011	16,742	30,949	19,964	58,927	26,807	28,112	27,499	24,573
Percentage of total WCPFC-CA		13	13	14	20			19	19	19	16
WCPFC Bigeye Catch		116,704	131,045	118,809	157,173			141,605	146,249	146,971	157,738

Notes:

- Catch estimates in red have been carried over from previous years.
- French Polynesia 'pole-and-line' catches include the *bonitier* and *poti marara* fleets; both use various gear types (pole-and-line, troll, handline, harpoon, gill net).
- Japan purse seine is north of 20°N.
- Reference to the level of "less than 2,000 tonnes" mentioned in CMM-2006-01 paragraph 1 has been assumed to mean that fisheries taking less than 2,000 t. of bigeye should not exceed 2,000 t. of bigeye.
- The column labeled "CMM-2006-01" does not take into account paragraph 6 and footnote 1 of CMM 2005-01

Table 5. Estimates of total annual catches of yellowfin tuna in the WCPFC Statistical Area for fisheries other than longline and tropical purse seine.

GEAR	FLAG	YELLOWFIN									
		2001	2002	2003	2004	Av. 2001-2004	CMM 2006-01	2005	2006	2007	2008 (prov.)
Gillnet	Japan	20	32	21	10	21	2,000	13	13	16	16
Handline	Indonesia	9,368	10,104	8,875	1,041	7,347	7,347	954	1,277	1,262	1,262
	Philippines (large-fish)	8,914	9,943	12,540	13,099	11,124	13,099	12,990	14,498	16,853	15,712
	Philippines (small-fish)	38,904	45,406	57,763	58,974	50,262	58,974	51,295	56,524	65,241	65,241
	Total	57,186	65,453	79,178	73,114	68,733	79,420	65,239	72,299	83,356	82,215
Pole-and-	Fiji	44	44	44	44	44	2,000	44	44	44	44
	French Polynesia	84	99	77	142	101	2,000	104	126	152	83
	Indonesia	8,744	9,432	8,285	11,449	9,478	11,449	10,488	14,041	13,877	13,877
	Japan	3,139	3,378	2,868	3,042	3,107	3,107	3,641	3,192	2,697	2,697
	Solomon Islands	153	405	669	257	371	2,000	538	734	321	189
	USA	2	2	33	17	14	2,000	68	3	23	23
	Total	12,166	13,360	11,976	14,951	13,113	22,556	14,883	18,140	17,114	16,913
Ring-net	Philippines	2,727	1,995	3,866	4,560	3,287	4,560	5,979	6,175	6,652	8,421
Purse seine	Japan	2,549	2,289	3,556	2,668	2,766	2,766	3,118	3,196	767	4,696
Troll	Japan	2,840	2,524	2,683	2,294	2,585	2,585	3,419	1,767	578	578
	USA	832	600	735	746	728	2,000	679	504	756	632
	Total	3,672	3,124	3,418	3,040	3,314	4,585	4,098	2,271	1,334	1,210
Unclassified	Australia	2	1	5	11	5	2,000	1	3	2	0
	Chinese Taipei	155	155	155	155	155	2,000	155	155	155	155
	French Polynesia	264	307	211	379	290	2,000	245	419	419	409
	Indonesia	56,472	60,913	53,504	18,215	47,276	47,276	16,686	22,337	22,078	22,078
	Japan	277	285	360	290	303	2,000	325	281	348	348
	New Zealand	8	1	1	22	8	2,000	3	0	0	2
	Philippines	1,236	1,420	1,798	1,849	1,576	2,000	1,775	1,956	2,257	7,915
	Total	58,414	63,082	56,034	20,921	49,613	59,276	19,190	25,151	25,259	30,907
Total "other fisheries"		136,714	149,303	158,028	119,254	140,825	173,163	112,507	127,232	134,482	144,362
Percentage of total WCPFC-CA		32	36	36	31			26	29	31	27
WCPFC Yellowfin Catch		427,201	409,836	442,446	378,865			438,650	433,590	438,423	542,842

Notes:

- Catch estimates in red have been carried over from previous years.
- French Polynesia 'pole-and-line' catches include the *bonitier* and *poti marara* fleets; both use various gear types (pole-and-line, troll, handline, harpoon, gill net).
- Japan purse seine is north of 20°N.
- Unclassified Indonesian catches of yellowfin in 2004 are considerably reduced because these catches were attributed to other gear types, mainly purse seine. This may suggest that unclassified catches prior to 2004 also contain large components by purse seine.
- Indonesia has recently revised the proportion of catch taken by gear type for their domestic fisheries which has resulted in a much larger allocation to their domestic purse seine and longline (at the expense of catches in the "unclassified" fisheries) since 2004 than has been reported in previous years.
- Reference to the level of "less than 2,000 tonnes" mentioned in CMM-2006-01 paragraph 1 has been assumed to mean that fisheries taking less than 2,000 t. of yellowfin should not exceed 2,000 t. of yellowfin.
- The column labeled "CMM-2006-01" does not take into account paragraph 6 and footnote 1 of CMM 2005-01

**NOMINATED MAXIMUM TOTAL CATCH OF SWORDFISH IN AREA SOUTH OF 20°S
IN 2009**

CCM	CATCH (MT)
Australia	2,126
Japan	588
New Zealand	1,027
Chinese Taipei	466
USA	Not nominated