COMMISSION
NINETEENTH REGULAR SESSION
Da Nang City, Vietnam
28 November to 3 December 2022

Catch and effort data summaries to support discussions on the TROPICAL TUNA CMMS

WCPFC19-2022-IP04
5 November 2022

Paper prepared by the Secretariat
and
Oceanic Fisheries Programme (OFP)
Pacific Community (SPC)

Contents

1. Purse seine fishery information

Table 1. Purse seine days fished in waters under national jurisdiction and in the high seas (20°N-20°S)

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

EEZ	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Notified / Estimated EEZ Limits	See NOTE(s)
AUSTRALIA	23	14	24	9	0	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	#	2,9,15
COOK ISLANDS	46	225	8	6	2	8	3	29	45	17	104	479	209	353	348	202	530	649	563	288	83	1,250	2,15
FIJI	12	5	10	26	36	6	6	23	12	29	27	27	32	0	50	43	31	3	12	1	0	300	2,15
FRENCH POLYNESIA	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2,15
INDONESIA	*485*	*443*	*496*	*672*	*933*	*767*	*572*	*373*	*409*	*274*	*567*	*1,347*	*2,925*	*1,676*	*1,174*	*2,362*	*3,022*	*838*	*1,256*	*1,302*	*1,362*	*	2, 4, 16,18
JAPAN	172	223	344	146	92	133	152	791	503	866	204	302	465	198	653	641	670	349	414	607	270	1,500	2,9,10,13,15
NEW ZEALAND	218	174	167	313	359	218	217	234	128	218	261	268	290	268	278	197	152	110	123	115	104	#	2, 9, 15
NIUE	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	200	2,15
PHILIPPINES	*918*	*969*	*1,347*	*1,421*	*1,311*	*1,352*	*1,520*	*1,792*	*1,250*	*808*	*491*	*491*	*1,010*	*1,389*	*1,052*	*1,143*	*1,521*	*995*	*1,128*	*1,517*	*1,107*	*	2,4,6,8,17,1
REPUBLIC OF KOREA	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*	2, 18
SAMOA	8	12	4	2	3	2	4	7	13	7	38	32	45	15	31	85	13	5	4	15	13	150	2,15
TOKELAU	100	374	25	67	126	30	47	132	210	190	875	721	380	623	1,322	189	729	885	208	403	150	1,000	2,13,15
TONGA	2	0	0	1	1	0	0	0	0	0	0	0	2	0	2	18	11	0	0	0	0	250	2,15
CHINESE TAIPEI	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*	2, 18
USA	339	482	223	294	136	186	100	63	122	35	49	209	189	261	90	111	134	104	79	143	133	558	2, 15
VANUATU	2	2	0	19	1	0	0	14	1	0	5	5	1	0	4	0	1	0	0	7	0	200	2,15
WALLIS AND FUTUNA	5	9	6	1	4	2	0	7	8	2	3	2	0	1	0	0	0	0	0	0	0	*	2, 18
PNA EEZs (excl AWs)	24,974	27,040	29,265	30,330	32,453	32,230	31,732	34,772	33,111	44,267	47,382	41,883	44,331	42,575	30,992	35,667	37,004	34,840	32,987	33,340	34,066	44,033	5, 12,15,20
PNA AWs only	2,426	2,215	3,553	3,093	4,656	3,918	5,710	6,320	7,289	6,255	8,663	8,826	7,996	6,711	3,812	3,806	5,384	3,937	2,823	5,369	4,067		5
PNA EEZs + AWs = TOTAL PNA	27,400	29,255	32,818	33,423	37,109	36,148	37,442	41,092	40,400	50,522	56,045	50,709	52,327	49,286	34,804	39,473	42,388	38,777	35,810	38,709	38,133		5
TOTAL EEZs - excl. PNA AWs	27,276	29,951	31,890	33,297	35,453	34,932	34,353	38,230	35,804	46,711	50,004	45,764	49,879	47,358	35,996	40,659	43,818	38,778	36,774	37,738	37,288		
TOTAL EEZs - excl. PNA AWs and ID/PH	25,873	28,539	30,047	31,204	33,209	32,813	32,261	36,065	34,145	45,629	48,946	43,926	45,944	44,293	33,770	37,154	39,275	36,945	34,390	34,919	34,819		
TOTAL EEZs + PNA AWs	29,730	32,189	35,473	36,400	40,113	38,854	40,063	44,558	43,102	52,968	58,670	54,592	57,875	54,070	39,808	44,465	49,202	42,715	39,597	43,107	41,355	46,763	
TOTAL INT. WATERS (20°N-20°S	7,365	8,114	8,493	10,382	8,924	6,889	8,185	8,617	10,100	1,495	1,528	2,451	6,131	5,693	8,284	6,935	6,631	7,421	8,509	7,822	6,530		6,8,11
TOTAL (EEZs + IW + PNA AWs)	37,095	40,303	43,966	46,782	49,037	45,743	48,248	53,175	53,202	54,463	60,198	57,043	64,006	59,763	48,092	51,400	55,833	50,136	48,106	50,929	47,885	53,293	
TOTAL minus ID/PH	35,192	38,391	41,623	44,189	46,293	43,124	45,656	50,510	51,043	53,381	59,140	55,205	60,071	56,698	45,866	47,895	51,290	48,303	45,722	48,110	45,416	50,824	
VIETNAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14

NOTES

1. Source: Raised logsheet data.
2. CMM 2014-01, CMM 2015-01, CMM 2016-01 -- Para. 23. for years 2015-2017; CMM 2017-01, CMM 2018-01, CMM 2020-01 for years 2018 - 2021
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 2 of CMM 2008-01 (paragraph 5 of CMM 2012-01, paragraph 5 of CMM 2013-01 or its replacement CMM) using the best information available to SPC-OFP. However, in some cases, catches have not yet been 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).
4. Purse-seine days for Indonesia and the Philippines in domestic waters 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). The estimates exclude archipelagic waters (AW) effort.
5. The definition of days effort in this table may differ from the definition of days used in the PNA Vessel Day Scheme (VDS)
6. The Total International waters effort prior to 2013 does not includes estimates of effort for the Philippines domestic fleet at this stage.
7. Since 2011, some components of the tropical purse seine fleet have changed criteria for reporting days with searching (included as a fishing day) and transiting (not included as a fishing day) and this is reflected in the decline in fishing days since 2011.
8. Philippines effort in the high seas pocket 1 during 2013 was 1,352 sets with an estimated 1 set per three days to produce an estimate of 4,056 days effort.
9. Coastal States within the Convention Area either north of 20°N or south of 20°S. CMM 2014-01/CMM 2015-01 references: Para. 22 and footnote 6 on Page 7 -- relevant for 2014 onwards.
10. Operational data for Japan EEZ are not available. Japan effort in their EEZ for years 2001-2007 was determined as the best estimate from their aggregate data. Japan effort for since 2008 in their EEZ has been provided by Japan in their submission of Annual effort by EEZ/high seas areas.
11. International waters covers high seas in the WCPFC Conventional Area covering the area 20°N-20°S (valid for CMM 2014-01, CMM 2015-01, CMM 2017-01, CMM 2018-01 and CMM 2020-01).
12. CMM 2014-01 or its replacement CMM -- Para. 20. for 2014 -2018 "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 through the PNA Vessel Days Scheme".
13. CMM 2018-01 and CMM 2020-01 Attachment 1 includes a comment that PNA + Tokelau effort limits are to be managed cooperatively through the PNA Vessel Day Scheme.
14. The Vietnam purse seine fleet are understood to fish outside the WCPFC Convention Area (South China Sea).
15. CMM 2018-01 and CMM 2020-01 Table 1 provide the EEZ purse seine effort limits (CMM 2018-01 *or its replacement measure* paragraph 25)
16. ESTIMATED EEZ LIMIT --2015: Scientific estimates of catches and effort in Indonesia EEZ were recently revised to reflect distribution of catches between AW vs EEZ. Indonesia is yet to nominate a limit for purse seine effort in their EEZ in accordance with para 23 of CMM 2015-01. SPC advice as at 20 July 2014 (Table 1) – average of estimated EEZ fishing days effort in 2001-2004 is 507 days. CMM 2018-01 and CMM 2020-01 Table 1 says Indonesia's limit is yet to be notified to the Commission.
17. ESTIMATED EEZ LIMIT --2015: Scientific estimates of catches and effort in Philippines EEZ were recently revised to reflect distribution of catches between AW vs EEZ. SPC advice as at 20 July 2014 (Table 1) – average of estimated EEZ fishing days effort in 2001-2004 is 925 days. CMM 2018-01 and CMM 2020-01 Table 1 says Philippines's limit is yet to be notified to the Commission. In December 2019, the Philippines advised its EEZ limit was set at 42,000 fishing vessel days in lieu of the original submission, based on the current capacities and conditions of the small purse seine fishing vessels operating in the Philippines Pacific seaboard EEZ. These include wooden hulled ring net/purse seine fishing vessels (WCPFC16-2019-DP25).
18. CMM 2018-01 and CMM 2020-01 Table 1 indicates that the limit is yet to be notified to the Commission (Republic of Korea, Chinese Taipei, Indonesia, Philippines, Wallis and Futuna).

Table 2. Purse seine days fished in the high seas in the WCPFC-CA between 20°N and 20°S, by flag.

Table 2. 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	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	CMM limits for 2020	CMM limits for 2021	Max. Annual days for 2010-2012	See Notes
CHINA	89	123	152	424	501	229	332	251	871	14	7	26	14	8	22	23	12	26	22	16	37	26	26	26	11
COOK ISLANDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	72	29	185				
ECUADOR	0	0	0	0	0	0	26	10	14	2	0	13	1	1	0	0	0	0	0	0	0	**	**	13	7,9,
EL SALVADOR	3	28	0	0	0	0	205	205	80	46	33	32	24	50	53	25	12	28	10	30	27	**	**	46	7,9
EUROPEAN UNION	0	11	14	51	29	81	240	281	254	326	314	429	371	377	248	87	174	158	146	194	226	403	403	429	7
FSM	241	242	174	384	212	83	162	128	331	7	3	11	6	10	469	379	600	619	1,053	694	943				
INDONESIA	500	500	500	500	500	500	500	500	500	0	0	0	0	0	0	0	0	0	0	0	0	(0)	(0)		
JAPAN	1,350	1,260	1,752	1,854	1,757	1,473	1,334	1,067	1,592	6	3	1	14	8	102	22	0	6	29	21	0	121	121	6	
KIRIBATI	42	56	41	39	51	52	23	41	172	97	243	183	186	858	645	927	687	795	950	654	559				11
MARSHALL ISLANDS	168	208	441	397	402	155	170	283	169	68	30	1	5	6	845	393	626	302	955	698	394				
NAURU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130	188	398	116				
NEW ZEALAND	23	222	334	145	97	288	187	193	194	55	29	89	10	44	158	155	123	120	136	63	0	160	160		10
PAPUA NEW GUINEA	397	604	660	1,218	1,313	458	862	710	824	79	22	40	16	36	1,090	98	20	11	0	4	2				
PHILIPPINES	*30*	*79*	*482*	*473*	*350*	*166*	*33*	*98*	*20*	*2*	0	*209*	*4,096*	*2,665*	2,437	2,642	2,696	2,749	2,654	2,635	2,539	4,659	4,659		4,5
REPUBLIC OF KOREA	1,267	1,278	1,144	1,222	1,048	708	1,352	1,474	1,677	205	49	19	23	192	169	197	184	198	182	172	102	207	207	205	
SOLOMON ISLANDS	32	37	0	0	17	15	5	0	0	0	0	1	0	0	0	25	73	102	91	19	0				
TUVALU	0	0	0	0	0	0	0	0	38	4	4	1	0	1	85	147	103	57	71	127	186				
CHINESE TAIPEI	1,961	1,849	1,466	1,846	1,226	1,225	1,477	1,325	1,421	76	83	20	75	44	93	95	108	62	84	62	57	95	95	83	7,12
USA	984	1,315	887	1,007	765	531	793	1,534	1,734	397	569	1,237	1,016	1,152	1,665	917	831	1,551	1,485	1,658	721	1,270	1,270	1,237	7, 13
VANUATU	66	166	190	572	376	401	381	223	103	37	31	6	7	2	0	163	203	123	147	140	126				
TOTAL	7,153	7,978	8,237	10,132	8,644	6,365	8,082	8,323	9,994	1,421	1,420	2,318	5,864	5,454	8,081	6,295	6,452	7,037	8,275	7,614	6,220				

PURSE SEINE DAYS FISHED in WCFPC-IATTC OVERLAP AREA

Flag	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2020	See Notes
ECUADOR	0	0	0	0	0	0	43	176	77	52	40	86	106	72	101	5	109	254	124	142	141	7
EL SALVADOR	22	35	3	0	0	0	27	130	25	19	22	4	127	155	43	72	37	26	24	21	29	7
EUROPEAN UNION	126	75	91	52	43	116	34	30	13	16	18	11	36	18	71	39	13	41	15	28	47	7
USA	1	0	0	0	2	0	0	0	3	0	2	4	0	1	0	528	11	36	58	20	74	7
TOTAL	149	110	94	52	45	116	104	336	118	87	82	105	269	246	215	644	170	357	221	211	291	

Notes:

1. Source: Raised logsheet data.
2. 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 (paragraph 5 of CMM 2012-01, paragraph 5 of CMM 2013-01 or its replacement CMM) using the best information available to SPC-OFP. However, in several cases, catches have not yet been 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). Under CMM 2017-01 paragraph 8 Charter provisions are not applicable to high seas purse seine effort attribution.
3. 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)
4. The measures that the Philippines will take are in Attachment C of CMM 2014-01 (or its replacement CMM) for years from 2014 onwards. Attachment C para 10 describes two limits: 1) total number of catcher vessels fishing in HSP-SMA is limited to 36, and 2) an effort limit in vessel days of 4,659 days (ref Table 2(b) WCPFC9-2012-IP09_rev3)
5. The Total International waters effort prior to 2012 does not includes estimates of effort for the Philippines domestic fleet at this stage. Philippines effort in the high seas pocket 1 (HSP#1) during 2012 was 209 days for the period Oct-Dec based on observer data. Philippines effort in the high seas pocket 1 (HSP#1) during 2013 was 1,352 sets with an estimated 1 set per three days to produce an estimate of 4,056 days effort. Philippines effort in the high seas pocket 1 during 2014 was listed as 2,667 days according to the Philippines Annual Report Part 1 produced for SC11. Estimates for HSP#1 since 2015 have been based on observer data with 100% coverage. Estimates include the Philippines ringnet fleet.
6. Since 2011, some components of the tropical purse seine fleet have changed criteria for reporting days with searching (included as a fishing day) and transiting (not included as a fishing day) and this is reflected in the decline in fishing days since 2011.
7. The days presented in Table 2 exclude effort in the overlap area because it takes into account the WCPFC9 decision on the application of measures in the part of the WCPF Convention Area that overlaps with the IATTC Convention Area (WCPFC9 Summary Report paragraph 80). European Union is a WCPFC member who is also an IATTC member, notified WCPFC in April 2013, of their choice of IATTC measures in the overlap area. Given that Ecuador and El Salvador are members of IATTC, the rules of the RFMO of which it is a member apply in the overlap area between WCPFC and IATTC, even if the CCM is a cooperating non-member of the other RFMO. The USA notified WCPFC in November 2021 of their choice of IATTC measures in the overlap area. Total days in Table 2 do not therefore reconcile with total high seas days in Table 1.
8. "CMM limits" are taken from CMM 2014-01 (or its replacement CMM) - Attachments D and apply from 2015 -2017. “CMM limits in 2018” are taken from Attachment 1 Table 2 of CMM 2017-01
9. Subject to CNM on participatory rights, in accordance with paragraph 6 of CMM 2014-01 (or its replacement CMM) for years from 2015 onwards
10. The basis of the CMM 2014-01 (or its replacement CMM) high seas days limit for New Zealand was the average of 2006-2008 effort with an agreed reduction in line with CMM 2013-01 and it's predecessor CMMs.
11. For China and Kiribati, the 2015–2016 effort estimates reflect their WCPFC charter notifications for these years. For WCPFC charter notifications, the 2017–2021 high seas effort estimates have been attributed to the flag state for these years.
12. CMM 2017-01 Att 1 Table 2 specifies a limit of 95 days for Chinese Taipei. However Chinese Taipei has advised they will apply a limit of 80 days in 2018, to take into account the amount the limit was exceeded in 2017. CMM 2018-01 Att 1 Table 2 specifies a limit of 95 days for Chinese Taipei for 2019.
13. A high seas purse seine effort limit may be adjusted in accordance with para 30 of CMM 2017-01, CMM 2018-01 and CMM 2020-01.

Table 3. Estimated FAD sets undertaken in the tropical purse seine fishery, by flag, 2001-2021.

2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	CCM
15	139	159	511	861	923	826	1,218	1,603	688	2,013	1,127	1,415	1,428	754	63	502	230	16	0	0	CHINA
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	43	14	63	COOK ISLANDS
0	0	0	0	0	0	74	365	163	221	439	443	284	342	140	50	235	411	327	258	270	ECUADOR
9	29	1	0	0	0	54	152	161	136	185	212	296	304	176	96	73	82	49	58	89	EL SALVADOR
71	34	59	81	46	126	242	412	328	363	488	460	515	430	327	94	151	190	160	211	290	EUROPEAN UNION
324	386	489	790	497	282	338	484	732	417	788	820	537	605	633	*534*	1,364	1,348	1,292	2,139	1,797	FSM
?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	INDONESIA
2,320	2,021	2,266	3,162	2,379	2,617	2,437	2,607	2,403	833	1,320	1,619	1,038	1,027	663	887	635	560	297	623	907	JAPAN
71	61	62	96	103	66	61	99	288	243	552	488	667	822	1,075	*430*	*1,905*	2,998	3,019	2,784	3,155	KIRIBATI
392	578	876	1,064	934	741	854	469	596	630	1,544	1,386	1,165	1,212	1,048	670	1,317	1,226	1,108	1,051	1,557	MARSHALL ISLANDS
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	256	1,075	1,600	NAURU
124	274	429	411	195	491	384	441	373	192	203	161	134	165	49	21	75	41	36	2	0	NEW ZEALAND
738	1,246	1,086	2,705	2,078	2,079	1,643	1,377	1,682	973	1,284	1,761	1,349	1,680	1,224	1,942	1,721	1,720	1,063	295	398	PAPUA NEW GUINEA
998	1,073	1,064	918	1,002	779	239	510	557	380	404	595	521	384	350	261	23	55	2	12	0	PHILIPPINES (distant-water)
?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	?	PHILIPPINES (domestic)
551	1,220	708	2,519	891	2,297	1,868	1,959	2,133	1,097	2,116	1,421	1,167	1,091	1,529	1,582	1,878	2,390	1,801	1,498	1,689	REPUBLIC OF KOREA
150	118	100	88	109	252	130	86	173	80	146	191	134	99	107	234	352	440	329	119	100	SOLOMON ISLANDS
1,616	2,621	1,839	3,215	2,737	3,050	2,813	2,285	2,723	1,703	2,941	2,925	2,628	2,639	1,780	1,499	1,895	2,277	2,024	1,867	2,177	CHINESE TAIPEI
0	0	0	0	0	0	0	0	20	40	58	92	78	49	36	59	59	107	83	119	327	TUVALU
2,021	1,772	1,557	2,067	1,315	1,543	1,393	2,756	3,800	2,384	3,388	3,432	3,132	3,696	2,026	2,125	2,437	2,910	1,890	1,725	1,220	USA
36	143	182	655	528	467	632	230	388	169	391	261	260	229	123	37	123	95	136	331	423	VANUATU
9,436	11,715	10,877	18,282	13,675	15,713	13,988	15,450	18,123	10,549	18,260	17,394	15,320	16,202	12,040	10,584	14,745	17,170	13,931	14,181	16,062	

Notes

1. Source: Raised logsheet data.
2. Covers Drifting FAD, Log and Anchored FAD sets in the tropical purse seine fishery of the WCPFC Convention Area (20°N-20°S), by flag
3. Excludes archipelagic waters. Fleets from Indonesia, Kiribati, Papua New Guinea, Philippines (DW), Philippines (domestic) and Solomon Islands in this list are normally the only fleets active in archipelagic waters.
4. Includes high seas
5. Excludes Vietnam domestic fleet
6. Complete information from Indonesia and Philippines domestic fisheries are not available.
7. CMM 2015-01– Paras. 14 and 17, and ATTACHMENT A, provides information on the 2016 FAD set limits that applies to FSM, Japan, Kiribati, Korea and United States of America.
8. CMM 2016-01 – Paras. 14 and 17, and ATTACHMENT A, provides information on the 2017 FAD set limits that applies to Japan, Korea and United States of America.
9. CMM 2014-01 – Paras. 14 and 17, and ATTACHMENT A, provides information on the 2015 FAD set limits that applies to FSM, Japan, Kiribati and Korea.
10. CMM 2013-01, Para 16 (ii) annual limit of FAD sets for 2015 (as set out in Column 'A' of Attachment A of CMM 2014-01) applies to FSM, Japan, Kiribati and Korea
11. Annual FAD sets consider CMM 2014-01 (or its replacement CMM) footnote 3 notifications (vessels that are managed outside of FAD set limit). This exemption applied to certain Kiribati vessels for 2016-2017.
12. In 2016, FSM applied CMM 2014-01 footnote 3 notifications, but formally chose the 4th month FAD closure for 2017.
13. The 2016 and 2017 estimates of FAD sets for Kiribati and China reflect their respective WCPFC charter notifications.
14. This table does not include FAD sets for the exemptions under CMM 2014-01 (see Notes 11, 12 and 13)
15. "CMM 2016-01 – Adjusted Baseline", applies to Kiribati in 2017. The adjusted baseline includes average annual FAD sets for Kiribati vessels that were previously exempt prior to 2017 (due to being newly-introduced since 2012) that had operated for three years prior to 2017.
16. Annual FAD sets count does include CMM 2017-01 (footnote 2) and CMM 2018-01 AND CMM 2020-01 (footnote 1) FAD Sets of domestic purse seine vessels of PNA countries which are notified as being managed under the PNA 3IA while operating in that PNA CCMs national waters during the 3-month FAD closure period of July – September of a particular notified year.
17. Figure 11 includes the respective exemptions described in Note 14 and 16.

Table 4. Tropical purse seine tuna catch and effort by set type and species in the WCPFC Convention Area.

FLEET	YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
		YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
					SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
CK	2019	1	1	73	18	453	100%	0	0%	0	0%	453	43	1,263	74%	121	7%	332	19%	1,716	61	1,716	121	332	2,169
CK	2020	1	1	29	0	0	0%	0	0%	0	0%	0	14	256	73%	39	11%	54	16%	349	14	256	39	54	349
CK	2021	1	1	185	34	949	90%	110	10%	0	0%	1,059	63	1,937	71%	241	9%	533	20%	2,711	97	2,886	351	533	3,770
CN	2010	12	10	2,784	2,095	20,842	72%	7,998	28%	190	1%	29,031	692	17,496	71%	5,537	23%	1,496	6%	24,529	2,788	38,410	13,613	1,691	53,714
CN	2011	12	10	4,019	1,396	10,973	72%	4,160	27%	186	1%	15,318	2,023	46,954	76%	10,964	18%	4,305	7%	62,223	3,419	57,927	15,124	4,491	77,541
CN	2012	13	12	2,205	706	10,669	77%	3,172	23%	61	0%	13,902	1,143	27,544	78%	5,210	15%	2,491	7%	35,245	1,849	38,214	8,382	2,552	49,147
CN	2013	14	13	3,617	2,329	28,210	92%	2,296	8%	234	1%	30,740	1,419	36,760	72%	10,636	21%	3,369	7%	50,765	3,750	65,177	13,020	3,631	81,828
CN	2014	19	18	3,012	1,351	16,630	87%	2,254	12%	181	1%	19,065	1,430	42,467	75%	10,515	19%	3,677	7%	56,659	2,781	59,097	12,769	3,858	75,724
CN	2015	20	16	2,007	897	11,198	71%	4,462	28%	232	2%	15,892	756	20,127	74%	4,985	18%	2,232	8%	27,344	1,653	31,325	9,447	2,464	43,236
CN	2016	2	6	504	401	6,271	76%	1,998	24%	12	0%	8,281	140	2,819	72%	949	24%	165	4%	3,932	544	9,154	2,979	178	12,311
CN	2017	3	2	761	84	450	85%	49	9%	30	6%	529	502	10,623	71%	3,482	23%	839	6%	14,945	586	11,074	3,532	869	15,474
CN	2018	3	2	608	336	4,793	86%	772	14%	35	1%	5,599	231	7,336	80%	1,301	14%	586	6%	9,224	567	12,128	2,073	621	14,823
CN	2019	0	0	18	5	154	96%	6	4%	0	0%	160	16	525	62%	166	20%	159	19%	850	21	679	172	159	1,010
EC	2010	14	6	319	21	49	28%	99	57%	27	15%	175	233	6,016	54%	2,695	24%	2,434	22%	11,145	254	6,065	2,795	2,461	11,320
EC	2011	8	7	556	41	235	28%	467	55%	149	18%	851	447	16,593	59%	4,749	17%	6,991	25%	28,333	488	16,827	5,216	7,141	29,184
EC	2012	8	7	605	17	474	82%	51	9%	51	9%	575	444	13,971	62%	3,047	14%	5,552	25%	22,570	461	14,445	3,098	5,602	23,145
EC	2013	7	7	480	70	1,798	80%	237	11%	201	9%	2,236	292	13,404	70%	2,105	11%	3,697	19%	19,206	362	15,202	2,342	3,898	21,442
EC	2014	7	7	477	57	1,153	89%	56	4%	88	7%	1,297	359	13,863	68%	2,855	14%	3,754	18%	20,472	416	15,016	2,911	3,842	21,769
EC	2015	7	4	162	1	0	0%	0	0%	0	0%	0	150	8,190	70%	1,537	13%	2,033	17%	11,759	151	8,190	1,537	2,033	11,759
EC	2016	2	3	42	0	0	0%	0	0%	0	0%	0	50	2,606	66%	622	16%	697	18%	3,925	50	2,606	622	697	3,925
EC	2017	4	4	237	2	66	65%	17	17%	18	18%	102	235	8,477	63%	1,530	11%	3,463	26%	13,469	237	8,543	1,547	3,481	13,571
EC	2018	4	4	441	12	103	79%	0	0%	26	20%	130	412	16,201	73%	1,584	7%	4,530	20%	22,315	424	16,304	1,584	4,557	22,445
EC	2019	8	5	374	9	107	19%	394	68%	76	13%	578	327	18,451	75%	2,324	10%	3,782	15%	24,557	336	18,558	2,719	3,859	25,135
EC	2020	4	4	279	3	47	98%	0	0%	1	2%	48	261	9,149	65%	1,922	14%	3,041	22%	14,111	264	9,195	1,922	3,042	14,159
EC	2021	5	5	304	5	118	86%	9	7%	10	7%	137	271	8,744	54%	3,135	20%	4,215	26%	16,094	276	8,863	3,144	4,225	16,231
ES	2010	4	4	720	26	625	76%	195	24%	0	0%	820	364	18,549	65%	5,376	19%	4,724	17%	28,648	390	19,174	5,570	4,724	29,468
ES	2011	4	4	753	30	665	50%	650	49%	19	1%	1,334	488	23,820	63%	6,861	18%	7,436	20%	38,117	518	24,485	7,511	7,455	39,451
ES	2012	4	4	787	57	2,372	86%	385	14%	10	0%	2,767	461	18,057	61%	4,730	16%	6,616	23%	29,403	517	20,429	5,115	6,626	32,170
ES	2013	4	4	837	56	1,984	66%	1,032	34%	10	0%	3,026	515	27,485	64%	7,437	17%	8,219	19%	43,141	571	29,470	8,468	8,229	46,167
ES	2014	4	4	753	89	3,364	80%	846	20%	2	0%	4,213	431	24,854	69%	4,260	12%	7,133	20%	36,247	520	28,218	5,106	7,135	40,460
ES	2015	4	4	529	28	1,329	97%	37	3%	2	0%	1,368	326	23,685	74%	4,565	14%	3,591	11%	31,840	355	25,014	4,601	3,592	33,208
ES	2016	2	2	130	1	0	0%	0	0%	0	0%	0	94	6,130	71%	556	6%	2,013	23%	8,699	95	6,130	556	2,013	8,699
ES	2017	2	2	210	0	0	0%	0	0%	0	0%	0	151	7,573	65%	693	6%	3,458	30%	11,724	151	7,573	693	3,458	11,724
ES	2018	2	2	266	4	96	100%	0	0%	0	0%	96	190	7,591	74%	930	9%	1,811	18%	10,332	194	7,687	930	1,811	10,428
ES	2019	2	2	221	0	0	0%	0	0%	0	0%	0	160	7,805	79%	1,136	11%	993	10%	9,934	160	7,805	1,136	993	9,934
ES	2020	2	2	264	3	1	100%	0	0%	0	0%	1	215	7,385	69%	1,757	16%	1,613	15%	10,754	218	7,386	1,757	1,613	10,755
ES	2021	3	3	284	9	385	69%	169	30%	5	1%	560	290	7,710	60%	2,278	18%	2,798	22%	12,786	299	8,096	2,447	2,803	13,346

Table 4. (continued)

FLEET	YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
		YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
					SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
FM	2010	7	8	1,305	612	8,444	79%	2,129	20%	72	1%	10,645	419	10,802	77%	2,198	16%	1,078	8%	14,078	1,031	19,246	4,327	1,150	24,723
FM	2011	7	7	1,641	483	5,961	78%	1,678	22%	22	0%	7,661	790	13,498	72%	3,899	21%	1,435	8%	18,832	1,276	19,467	5,579	1,459	26,505
FM	2012	9	9	1,573	464	6,534	78%	1,779	21%	119	1%	8,432	826	21,571	78%	4,075	15%	1,888	7%	27,535	1,301	28,312	5,896	2,025	36,233
FM	2013	10	10	1,384	450	9,004	86%	1,287	12%	129	1%	10,420	539	12,437	71%	3,547	20%	1,480	9%	17,464	989	21,441	4,834	1,609	27,884
FM	2014	10	10	1,414	611	12,965	84%	2,165	14%	299	2%	15,429	614	16,265	72%	4,359	19%	2,022	9%	22,646	1,225	29,230	6,524	2,321	38,075
FM	2015	12	13	1,924	1,212	26,277	84%	4,731	15%	464	2%	31,473	641	18,493	76%	3,907	16%	1,870	8%	24,270	1,852	44,770	8,638	2,334	55,743
FM	2016	16	18	2,726	1,059	22,135	82%	4,498	17%	351	1%	26,983	1,142	34,677	78%	6,310	14%	3,740	8%	44,728	2,201	56,812	10,808	4,091	71,711
FM	2017	19	20	3,527	1,919	34,250	78%	9,202	21%	322	1%	43,774	1,374	31,263	75%	7,293	17%	3,278	8%	41,833	3,300	65,637	16,517	3,611	85,765
FM	2018	22	22	3,730	2,412	47,463	81%	10,367	18%	692	1%	58,522	1,432	49,988	83%	7,853	13%	2,641	4%	60,482	3,846	97,475	18,229	3,334	119,039
FM	2019	23	25	4,436	3,764	84,286	81%	17,563	17%	1,686	2%	103,534	1,322	43,431	78%	8,667	16%	3,466	6%	55,564	5,093	127,855	26,255	5,160	159,269
FM	2020	27	27	5,164	3,001	63,072	81%	14,120	18%	698	1%	77,891	2,146	74,825	75%	18,006	18%	7,179	7%	100,010	5,152	137,899	32,127	7,878	177,903
FM	2021	28	28	4,919	2,761	51,655	77%	14,478	22%	720	1%	66,853	1,818	60,279	72%	16,418	20%	6,769	8%	83,465	4,580	111,933	30,896	7,489	150,318
JP	2010	37	36	5,695	5,633	134,965	80%	31,196	19%	1,684	1%	167,845	833	25,439	70%	8,277	23%	2,618	7%	36,333	6,566	162,370	40,503	4,493	207,366
JP	2011	40	37	6,524	5,956	92,403	78%	26,011	22%	643	1%	119,057	1,320	39,062	76%	7,593	15%	4,593	9%	51,248	7,306	131,983	33,682	5,270	170,935
JP	2012	41	36	5,448	4,867	103,236	84%	18,109	15%	1,635	1%	122,980	1,619	58,498	80%	9,943	14%	4,982	7%	73,423	6,514	162,012	28,112	6,637	196,761
JP	2013	41	33	5,501	4,759	104,099	87%	14,435	12%	1,695	1%	120,228	1,038	41,899	78%	7,438	14%	4,076	8%	53,413	5,834	146,697	22,074	5,824	174,595
JP	2014	40	32	4,898	4,275	89,136	76%	25,638	22%	2,201	2%	116,975	1,027	37,904	79%	6,415	13%	3,670	8%	47,989	5,342	128,438	32,353	5,961	166,752
JP	2015	40	31	4,195	3,380	86,807	74%	26,711	23%	3,510	3%	117,028	663	19,330	68%	6,144	22%	3,131	11%	28,606	4,169	109,313	34,176	7,261	150,750
JP	2016	37	29	5,002	4,170	82,327	75%	25,261	23%	1,997	2%	109,584	887	24,375	69%	7,566	21%	3,608	10%	35,548	5,136	108,495	33,675	5,828	147,997
JP	2017	38	29	4,693	3,892	76,052	69%	31,438	29%	2,284	2%	109,774	635	19,710	74%	4,899	19%	1,879	7%	26,488	4,650	98,475	37,575	4,460	140,510
JP	2018	34	26	4,068	3,705	95,338	75%	28,049	22%	3,706	3%	127,093	560	20,871	73%	5,738	20%	1,963	7%	28,572	4,420	119,578	35,493	6,422	161,492
JP	2019	36	28	4,193	4,438	104,022	77%	29,651	22%	1,967	2%	135,641	297	10,129	76%	2,443	18%	775	6%	13,348	4,927	118,569	34,143	3,220	155,932
JP	2020	36	28	4,871	4,432	87,500	78%	24,243	22%	1,107	1%	112,851	626	18,210	68%	5,930	22%	2,729	10%	26,869	5,154	107,383	31,448	4,127	142,958
JP	2021	33	31	4,475	2,451	51,837	78%	14,177	21%	915	1%	66,929	907	23,075	67%	8,109	24%	3,211	9%	34,396	4,563	95,485	32,249	4,771	132,505
KI	2010	5	4	693	465	6,964	74%	2,368	25%	64	1%	9,396	245	10,973	70%	2,667	17%	2,050	13%	15,690	741	18,474	5,140	2,131	25,745
KI	2011	7	7	1,429	785	9,592	73%	3,610	27%	30	0%	13,232	554	23,969	72%	4,318	13%	4,904	15%	33,190	1,347	33,609	7,956	4,949	46,514
KI	2012	9	9	1,851	1,593	30,335	80%	7,656	20%	173	1%	38,164	492	19,510	81%	2,934	12%	1,598	7%	24,041	2,093	50,002	10,655	1,775	62,432
KI	2013	12	12	2,007	1,443	27,764	84%	5,248	16%	246	1%	33,259	669	30,220	78%	5,669	15%	3,093	8%	38,982	2,113	57,984	10,917	3,340	72,241
KI	2014	14	15	2,818	2,188	42,411	72%	16,149	27%	352	1%	58,912	830	40,321	80%	5,156	10%	4,786	10%	50,263	3,018	82,732	21,305	5,137	109,174
KI	2015	21	20	2,884	2,482	60,872	85%	9,867	14%	565	1%	71,304	1,082	56,767	87%	6,035	9%	2,592	4%	65,393	3,564	117,639	15,902	3,157	136,698
KI	2016	27	23	4,513	2,428	50,850	80%	11,961	19%	679	1%	63,490	1,871	80,523	79%	11,988	12%	8,978	9%	101,490	4,299	131,376	23,952	9,658	164,985
KI	2017	19	21	4,653	1,815	29,594	73%	10,924	27%	262	1%	40,780	2,554	92,825	82%	12,790	11%	7,209	6%	112,824	4,369	122,446	23,717	7,471	153,634
KI	2018	21	21	4,451	1,548	34,156	81%	7,966	19%	322	1%	42,444	3,004	119,024	81%	16,668	11%	11,143	8%	146,835	4,554	153,327	24,638	11,466	189,431
KI	2019	22	25	5,158	2,625	61,054	89%	7,204	11%	283	0%	68,541	3,036	133,247	84%	19,043	12%	6,758	4%	159,049	5,668	194,463	26,270	7,048	227,781
KI	2020	25	24	4,981	1,499	37,896	86%	5,593	13%	405	1%	43,893	2,792	123,157	79%	22,709	15%	10,616	7%	156,482	4,290	161,053	28,301	11,021	200,375
KI	2021	26	27	5,453	1,537	33,675	79%	8,754	21%	343	1%	42,773	3,186	106,401	77%	21,887	16%	10,099	7%	138,387	4,723	140,076	30,641	10,442	181,160

Table 4. (continued)

FLEET	YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
		YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
					SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
KR	2010	29	28	7,178	6,308	143,525	70%	59,058	29%	2,444	1%	205,027	1,117	54,548	76%	10,882	15%	6,776	9%	72,206	7,433	198,128	69,959	9,226	277,313
KR	2011	28	28	6,552	4,493	79,217	72%	29,313	27%	871	1%	109,401	2,128	73,914	75%	16,632	17%	7,560	8%	98,106	6,627	153,262	45,989	8,451	207,702
KR	2012	28	28	5,836	6,099	137,042	74%	47,432	26%	1,391	1%	185,865	1,433	63,477	83%	9,834	13%	3,015	4%	76,326	7,534	200,519	57,266	4,406	262,191
KR	2013	27	28	5,983	6,068	131,155	80%	29,806	18%	2,232	1%	163,192	1,171	47,440	76%	10,614	17%	4,385	7%	62,439	7,239	178,595	40,420	6,616	225,631
KR	2014	28	29	5,437	5,820	156,212	78%	42,833	21%	1,177	1%	200,221	1,097	59,244	85%	6,806	10%	3,777	5%	69,827	6,917	215,455	49,639	4,954	270,048
KR	2015	25	26	4,664	4,561	126,856	81%	28,672	18%	1,766	1%	157,294	1,534	97,740	88%	9,037	8%	4,176	4%	110,953	6,094	224,596	37,709	5,942	268,248
KR	2016	25	25	4,755	4,260	132,088	78%	35,514	21%	1,711	1%	169,313	1,590	93,393	86%	9,528	9%	6,218	6%	109,139	5,851	225,481	45,042	7,928	278,452
KR	2017	26	26	5,545	4,898	99,339	69%	44,857	31%	894	1%	145,090	1,881	84,805	83%	11,254	11%	5,681	6%	101,739	6,782	184,144	56,110	6,575	246,829
KR	2018	27	25	5,645	4,383	104,674	78%	27,685	21%	1,657	1%	134,016	2,395	114,534	86%	10,608	8%	8,391	6%	133,533	6,777	219,208	38,294	10,048	267,549
KR	2019	26	26	5,668	5,795	177,276	86%	28,158	14%	1,066	1%	206,500	1,811	96,573	89%	7,808	7%	3,939	4%	108,320	7,608	273,848	35,966	5,006	314,820
KR	2020	27	27	5,882	5,331	131,547	79%	33,612	20%	931	1%	166,091	1,500	70,340	82%	9,988	12%	5,896	7%	86,224	6,833	201,888	43,600	6,827	252,314
KR	2021	23	23	5,052	4,559	108,717	75%	35,805	25%	1,238	1%	145,760	1,720	65,102	77%	13,817	16%	5,574	7%	84,493	6,279	173,819	49,622	6,812	230,253
MH	2010	10	10	1,670	1,228	18,059	73%	6,143	25%	701	3%	24,903	636	25,252	75%	5,172	15%	3,293	10%	33,718	1,881	43,519	11,634	4,009	59,162
MH	2011	10	10	2,521	547	7,978	83%	1,508	16%	74	1%	9,561	1,550	58,977	73%	11,050	14%	10,595	13%	80,622	2,097	66,955	12,558	10,670	90,183
MH	2012	10	10	1,989	748	12,032	74%	4,246	26%	97	1%	16,375	1,394	45,227	79%	6,919	12%	5,075	9%	57,220	2,142	57,258	11,165	5,172	73,595
MH	2013	10	10	2,132	1,075	18,039	90%	1,987	10%	51	0%	20,078	1,167	42,409	74%	9,608	17%	5,478	10%	57,495	2,243	60,490	11,612	5,533	77,635
MH	2014	12	11	2,131	1,127	18,832	87%	2,622	12%	141	1%	21,596	1,219	43,326	80%	6,878	13%	4,096	8%	54,300	2,346	62,158	9,500	4,238	75,896
MH	2015	12	12	2,221	1,857	36,147	95%	1,782	5%	36	0%	37,965	1,061	41,465	85%	5,088	10%	2,352	5%	48,905	2,919	77,612	6,870	2,388	86,870
MH	2016	10	10	1,970	1,305	22,864	82%	5,041	18%	123	0%	28,027	671	26,428	80%	4,338	13%	2,180	7%	32,946	1,976	49,292	9,379	2,303	60,973
MH	2017	10	10	2,152	537	6,809	71%	2,663	28%	81	1%	9,553	1,319	41,573	75%	8,856	16%	4,801	9%	55,231	1,858	48,382	11,519	4,883	64,784
MH	2018	13	13	1,941	787	12,355	87%	1,907	13%	16	0%	14,278	1,228	47,952	81%	7,611	13%	3,530	6%	59,092	2,016	60,328	9,528	3,550	73,406
MH	2019	11	11	2,449	1,701	32,323	79%	8,713	21%	146	0%	41,182	1,108	44,475	82%	7,345	14%	2,563	5%	54,383	2,810	76,813	16,070	2,712	95,595
MH	2020	11	11	2,107	1,069	20,508	90%	2,245	10%	92	0%	22,845	1,053	48,548	80%	8,617	14%	3,686	6%	60,852	2,123	69,056	10,862	3,778	83,697
MH	2021	11	11	2,262	657	10,410	77%	3,072	23%	108	1%	13,589	1,559	60,988	79%	11,125	14%	5,324	7%	77,437	2,216	71,398	14,197	5,431	91,026
NR	2018	2	2	166	123	1,412	45%	1,716	55%	1	0%	3,130	90	5,236	91%	364	6%	151	3%	5,751	213	6,648	2,081	152	8,881
NR	2019	9	9	744	704	19,662	93%	1,443	7%	98	1%	21,203	258	10,247	86%	1,290	11%	323	3%	11,861	968	30,039	2,769	441	33,249
NR	2020	15	14	2,416	1,817	35,215	83%	7,265	17%	160	0%	42,640	1,079	37,392	73%	10,730	21%	3,283	6%	51,405	2,908	73,105	18,272	3,542	94,919
NR	2021	15	18	2,909	1,872	30,758	71%	12,218	28%	438	1%	43,414	1,603	51,875	68%	19,829	26%	4,974	7%	76,678	3,475	82,633	32,047	5,411	120,092
NZ	2010	4	4	652	425	8,637	97%	197	2%	61	1%	8,895	191	7,084	75%	1,793	19%	533	6%	9,410	617	15,721	1,990	594	18,304
NZ	2011	3	3	474	174	3,364	81%	729	18%	47	1%	4,140	197	5,614	73%	1,709	22%	368	5%	7,690	371	8,978	2,438	415	11,831
NZ	2012	4	4	488	288	5,040	83%	895	15%	112	2%	6,047	165	3,559	76%	783	17%	344	7%	4,685	453	8,599	1,678	456	10,732
NZ	2013	4	4	468	270	5,046	91%	455	8%	30	1%	5,531	134	4,395	73%	1,153	19%	439	7%	5,987	404	9,441	1,608	469	11,518
NZ	2014	5	5	533	304	3,833	78%	910	19%	168	3%	4,911	161	3,941	71%	1,006	18%	617	11%	5,563	465	7,773	1,916	785	10,474
NZ	2015	2	2	295	316	4,929	93%	264	5%	99	2%	5,291	43	1,831	82%	309	14%	105	5%	2,245	359	6,759	572	204	7,536
NZ	2016	2	2	218	265	3,939	96%	118	3%	49	1%	4,106	21	1,241	79%	283	18%	49	3%	1,573	286	5,180	401	98	5,679
NZ	2017	1	1	126	23	569	81%	134	19%	1	0%	704	75	2,791	85%	376	11%	134	4%	3,301	98	3,359	510	135	4,005
NZ	2018	1	1	119	61	247	20%	967	80%	2	0%	1,216	41	1,540	87%	110	6%	121	7%	1,772	102	1,787	1,077	124	2,987
NZ	2019	1	1	142	91	2,230	94%	132	6%	22	1%	2,384	38	1,423	76%	295	16%	161	9%	1,879	130	3,653	427	183	4,263
NZ	2020	1	1	63	22	1,015	95%	44	4%	8	1%	1,068	2	96	84%	12	10%	7	6%	115	24	1,111	56	16	1,183
NZ	2021	1	1	0	0	0	0%	0	0%	0	0%	0	0	0	0%	0	0%	0	0%	0	0	0	0	0	0

Table 4. (continued)

FLEET	YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
		YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
					SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
PG	2010	45	50	8,846	5,471	91,033	74%	31,477	26%	987	1%	123,496	2,620	55,431	68%	21,230	26%	4,844	6%	81,505	8,099	146,593	52,742	5,849	205,184
PG	2011	49	52	9,270	5,018	69,034	74%	23,074	25%	947	1%	93,055	3,145	56,496	68%	21,737	26%	4,647	6%	82,879	8,176	125,779	44,915	5,625	176,319
PG	2012	51	52	9,636	6,530	95,796	67%	45,825	32%	1,289	1%	142,910	2,978	62,547	68%	24,187	26%	5,786	6%	92,520	9,559	158,820	70,219	7,124	236,163
PG	2013	51	52	9,533	6,862	93,919	66%	45,780	32%	2,335	2%	142,034	2,453	49,789	65%	22,458	29%	4,955	6%	77,202	9,371	144,387	68,811	7,357	220,555
PG	2014	55	53	9,315	6,440	104,803	73%	36,807	26%	2,160	2%	143,770	2,307	67,371	74%	18,244	20%	4,931	5%	90,546	8,774	172,442	55,311	7,129	234,881
PG	2015	53	54	6,684	5,686	103,270	71%	39,983	28%	1,752	1%	145,005	1,602	50,108	72%	14,415	21%	4,955	7%	69,478	7,292	153,397	54,406	6,709	214,512
PG	2016	67	41	9,016	7,625	126,601	64%	66,385	34%	3,951	2%	196,937	2,221	76,350	74%	19,696	19%	7,047	7%	103,093	9,883	204,044	86,656	11,097	301,797
PG	2017	67	58	10,956	10,325	127,492	56%	96,646	42%	4,127	2%	228,266	2,147	51,524	69%	18,594	25%	4,797	6%	74,914	12,577	180,838	116,577	9,089	306,505
PG	2018	56	53	9,691	10,346	154,153	66%	75,323	32%	4,393	2%	233,869	1,974	57,004	74%	16,415	21%	3,444	5%	76,863	12,349	211,684	91,962	7,871	311,517
PG	2019	50	51	6,627	7,498	143,974	71%	56,826	28%	2,498	1%	203,298	1,201	49,064	82%	9,202	15%	1,675	3%	59,941	8,768	194,395	66,772	4,221	265,388
PG	2020	38	37	6,708	7,176	94,329	54%	77,426	45%	1,863	1%	173,618	566	15,091	65%	6,990	30%	982	4%	23,063	7,803	109,967	85,480	2,874	198,321
PG	2021	40	40	6,392	5,825	86,079	61%	53,946	38%	2,017	1%	142,043	805	14,537	54%	10,470	39%	1,827	7%	26,834	6,647	100,782	64,707	3,852	169,341
PH	2010	25	22	4,469	2,289	25,724	55%	20,161	43%	1,270	3%	47,155	795	16,508	65%	5,933	23%	2,880	11%	25,320	3,186	43,164	26,691	4,258	74,113
PH	2011	25	23	5,296	2,719	28,557	62%	17,188	37%	205	0%	45,950	1,381	22,791	68%	9,987	30%	968	3%	33,746	4,191	52,063	27,555	1,196	80,815
PH	2012	21	29	5,580	3,560	34,985	53%	29,156	44%	1,719	3%	65,860	1,649	27,329	62%	13,650	31%	2,795	6%	43,775	5,248	62,773	42,992	4,564	110,328
PH	2013	27	30	4,450	2,635	22,170	43%	28,017	55%	1,267	3%	51,454	1,440	21,167	57%	13,604	36%	2,676	7%	37,446	4,080	43,385	41,687	3,944	89,016
PH	2014	27	29	4,330	3,242	45,165	56%	32,466	41%	2,554	3%	80,184	995	14,667	55%	9,228	35%	2,567	10%	26,461	4,251	59,971	41,854	5,154	106,980
PH	2015	23	29	2,822	1,971	25,304	56%	18,695	42%	1,029	2%	45,028	812	16,493	56%	10,571	36%	2,487	8%	29,551	2,791	42,097	29,595	3,568	75,260
PH	2016	17	18	1,956	1,567	25,976	55%	20,296	43%	801	2%	47,073	521	13,963	63%	6,762	30%	1,499	7%	22,224	2,134	40,829	27,636	2,413	70,879
PH	2017	12	8	1,272	1,006	11,906	49%	12,014	49%	642	3%	24,562	155	2,716	59%	1,730	38%	171	4%	4,616	1,190	15,079	14,092	840	30,011
PH	2018	12	2	314	340	5,599	64%	3,095	35%	72	1%	8,766	73	1,363	57%	948	40%	70	3%	2,381	414	6,965	4,044	142	11,151
PH	2019	12	1	16	22	406	62%	243	37%	5	1%	653	0	0	0%	0	0%	0	0%	0	22	406	243	5	653
PH	2020	6	5	798	869	13,251	49%	13,423	50%	305	1%	26,980	23	724	61%	394	33%	65	6%	1,183	892	13,975	13,817	370	28,163
PH	2021	0	2	28	39	1,176	82%	246	17%	11	1%	1,433	3	186	68%	74	27%	15	6%	274	42	1,362	320	26	1,707
SB	2010	5	5	485	95	1,914	55%	1,543	44%	23	1%	3,480	353	5,712	59%	3,779	39%	246	3%	9,737	448	7,626	5,322	269	13,217
SB	2011	5	5	1,017	119	1,699	60%	1,129	40%	8	0%	2,836	742	12,977	57%	9,287	41%	461	2%	22,725	861	14,676	10,416	469	25,562
SB	2012	5	5	1,094	98	1,113	53%	975	47%	8	0%	2,096	833	14,047	58%	9,954	41%	404	2%	24,404	931	15,159	10,929	411	26,500
SB	2013	5	5	1,093	213	1,540	34%	2,943	65%	28	1%	4,511	664	11,228	55%	8,549	42%	482	2%	20,259	876	12,767	11,492	511	24,770
SB	2014	5	5	1,212	269	2,842	36%	5,000	64%	28	0%	7,869	786	11,118	49%	10,913	48%	523	2%	22,554	1,056	13,960	15,913	551	30,425
SB	2015	8	6	1,343	389	3,023	32%	6,302	67%	57	1%	9,382	787	10,322	53%	8,872	46%	215	1%	19,410	1,176	13,345	15,175	272	28,792
SB	2016	8	8	2,217	1,047	14,733	60%	9,429	39%	340	1%	24,501	1,072	18,368	59%	12,323	40%	499	2%	31,190	2,132	33,331	21,894	841	56,067
SB	2017	10	9	2,068	1,127	12,648	60%	8,330	40%	55	0%	21,034	873	14,632	59%	9,354	38%	688	3%	24,674	2,001	27,282	17,686	743	45,712
SB	2018	10	10	2,102	808	9,786	68%	4,616	32%	24	0%	14,426	1,169	24,554	64%	13,132	34%	767	2%	38,452	1,978	34,340	17,747	791	52,878
SB	2019	11	11	2,038	856	16,164	79%	4,272	21%	130	1%	20,566	1,110	24,191	67%	11,807	32%	403	1%	36,401	1,971	40,360	16,084	533	56,977
SB	2020	11	10	1,709	632	9,031	65%	4,875	35%	41	0%	13,947	857	11,148	57%	8,020	41%	268	1%	19,436	1,493	20,217	12,976	309	33,502
SB	2021	8	8	1,717	907	13,471	70%	5,819	30%	91	1%	19,381	788	13,411	58%	9,382	41%	178	1%	22,971	1,696	26,891	15,209	269	42,368

Table 4. (continued)

FLEET	YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
		YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
					SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
SV	2010	2	2	210	3	28	100%	0	0%	0	0%	28	136	4,643	63%	1,567	21%	1,133	15%	7,344	139	4,671	1,568	1,133	7,372
SV	2011	2	2	268	3	15	18%	69	81%	0	0%	85	185	8,245	68%	1,610	13%	2,286	19%	12,141	188	8,261	1,679	2,287	12,226
SV	2012	2	2	300	4	15	100%	0	0%	0	0%	15	213	8,262	61%	2,812	21%	2,557	19%	13,632	217	8,277	2,812	2,557	13,647
SV	2013	4	4	398	13	269	65%	142	35%	1	0%	412	296	11,591	69%	2,780	17%	2,434	15%	16,805	309	11,860	2,922	2,435	17,217
SV	2014	4	4	485	92	2,007	100%	11	1%	0	0%	2,018	303	10,087	65%	2,960	19%	2,414	16%	15,461	394	12,094	2,971	2,415	17,479
SV	2015	2	2	180	7	0	0%	0	0%	0	0%	0	177	11,045	72%	2,365	16%	1,891	12%	15,301	184	11,045	2,365	1,891	15,301
SV	2016	3	2	112	6	668	99%	9	1%	0	0%	677	95	4,892	74%	726	11%	1,009	15%	6,626	101	5,560	735	1,009	7,303
SV	2017	1	2	76	2	0	0%	31	100%	0	0%	31	73	2,920	68%	559	13%	808	19%	4,287	75	2,920	590	808	4,318
SV	2018	1	1	82	6	275	100%	0	0%	0	0%	275	82	3,294	75%	421	10%	700	16%	4,415	88	3,569	421	700	4,690
SV	2019	2	2	42	2	0	0%	0	0%	0	0%	0	50	2,190	75%	332	11%	417	14%	2,939	52	2,190	332	417	2,939
SV	2020	2	2	62	5	246	91%	23	9%	0	0%	270	58	2,622	64%	586	14%	912	22%	4,120	63	2,868	609	913	4,390
SV	2021	2	2	90	0	0	0%	0	0%	0	0%	0	88	3,178	58%	1,239	23%	1,091	20%	5,508	88	3,178	1,239	1,091	5,508
TV	2010	1	1	271	319	6,723	75%	2,234	25%	39	0%	8,997	40	1,008	65%	331	21%	218	14%	1,557	359	7,732	2,566	257	10,554
TV	2011	1	1	311	283	3,824	72%	1,512	28%	15	0%	5,350	58	1,645	80%	292	14%	130	6%	2,066	341	5,468	1,803	144	7,416
TV	2012	1	1	271	301	3,125	57%	2,340	43%	35	1%	5,500	92	4,436	80%	818	15%	300	5%	5,554	393	7,561	3,158	335	11,054
TV	2013	1	1	273	353	7,192	93%	436	6%	93	1%	7,721	79	2,928	79%	631	17%	136	4%	3,695	432	10,120	1,067	229	11,416
TV	2014	1	1	159	146	3,386	92%	253	7%	36	1%	3,675	49	1,943	86%	257	11%	68	3%	2,268	195	5,329	510	104	5,943
TV	2015	1	1	186	174	3,562	97%	127	3%	1	0%	3,690	36	1,656	93%	102	6%	22	1%	1,780	210	5,218	229	23	5,470
TV	2016	1	1	234	93	2,444	97%	75	3%	1	0%	2,520	59	2,659	74%	654	18%	277	8%	3,590	152	5,103	729	277	6,110
TV	2017	2	2	161	84	1,815	59%	1,180	39%	61	2%	3,056	59	1,745	68%	697	27%	144	6%	2,585	143	3,560	1,877	205	5,641
TV	2018	1	1	208	160	3,188	74%	1,070	25%	47	1%	4,305	108	5,468	80%	493	7%	870	13%	6,831	268	8,656	1,563	917	11,136
TV	2019	1	1	212	106	2,695	86%	420	13%	13	0%	3,127	83	3,381	93%	168	5%	100	3%	3,648	189	6,075	587	113	6,775
TV	2020	3	3	308	96	2,200	89%	256	10%	4	0%	2,460	119	6,306	84%	557	8%	612	8%	7,475	215	8,506	813	616	9,935
TV	2021	6	6	965	645	13,299	80%	3,299	20%	99	1%	16,696	329	10,062	78%	1,957	15%	921	7%	12,941	975	23,361	5,256	1,020	29,637
TW	2010	34	30	7,865	6,413	98,899	81%	22,922	19%	788	1%	122,609	1,709	54,427	71%	15,383	20%	6,431	8%	76,241	8,122	153,326	38,305	7,218	198,850
TW	2011	34	31	8,801	4,763	56,208	81%	12,224	18%	606	1%	69,037	2,955	78,625	74%	19,156	18%	9,115	9%	106,897	7,718	134,833	31,380	9,722	175,935
TW	2012	34	33	7,146	4,660	60,795	71%	24,350	28%	928	1%	86,073	2,940	88,950	78%	17,030	15%	8,598	8%	114,578	7,600	149,746	41,379	9,526	200,651
TW	2013	34	34	7,706	6,171	83,301	83%	16,134	16%	1,127	1%	100,562	2,638	80,214	72%	21,531	19%	10,174	9%	111,919	8,809	163,515	37,665	11,301	212,481
TW	2014	34	36	6,845	5,749	103,785	88%	12,997	11%	1,422	1%	118,205	2,654	89,743	75%	20,291	17%	8,917	8%	118,952	8,404	193,529	33,288	10,340	237,157
TW	2015	34	34	5,141	4,639	79,143	76%	24,160	23%	1,448	1%	104,751	1,785	71,049	79%	12,273	14%	6,177	7%	89,498	6,424	150,191	36,433	7,625	194,249
TW	2016	34	31	5,273	4,785	80,549	70%	32,396	28%	1,400	1%	114,345	1,511	54,379	73%	12,913	17%	6,750	9%	74,043	6,298	134,928	45,310	8,151	188,388
TW	2017	31	30	5,461	5,167	63,886	67%	31,036	32%	1,027	1%	95,949	1,904	55,708	76%	12,787	18%	4,473	6%	72,968	7,072	119,632	43,826	5,501	168,958
TW	2018	27	29	5,185	4,634	82,476	85%	13,761	14%	728	1%	96,966	2,292	77,659	78%	15,866	16%	5,946	6%	99,470	6,927	160,135	29,627	6,674	196,436
TW	2019	30	30	5,231	5,659	119,508	82%	24,622	17%	1,049	1%	145,179	2,042	76,534	80%	14,115	15%	4,759	5%	95,408	7,708	196,109	38,745	5,812	240,665
TW	2020	29	28	4,501	4,100	75,952	84%	14,411	16%	572	1%	90,935	1,878	58,532	68%	18,761	22%	8,290	10%	85,584	5,978	134,485	33,172	8,862	176,519
TW	2021	29	29	5,078	4,479	79,647	73%	28,296	26%	1,117	1%	109,059	2,187	75,798	71%	22,208	21%	8,614	8%	106,620	6,666	155,445	50,504	9,730	215,680

Table 4. (continued)

FLEET	YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
		YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
					SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
US	2010	37	37	8,220	6,331	109,802	83%	21,943	17%	1,064	1%	132,809	2,397	90,287	80%	15,053	13%	6,996	6%	112,336	8,738	200,338	37,096	8,090	245,524
US	2011	37	36	8,048	3,008	48,929	82%	10,886	18%	128	0%	59,943	3,401	110,991	78%	19,859	14%	12,446	9%	143,297	6,409	159,920	30,745	12,575	203,240
US	2012	39	40	8,789	5,622	98,430	80%	24,100	20%	1,260	1%	123,790	3,464	108,522	80%	17,928	13%	9,462	7%	135,911	9,088	206,996	42,037	10,726	259,759
US	2013	40	42	8,380	5,028	96,976	91%	8,250	8%	860	1%	106,085	3,152	112,461	76%	23,290	16%	12,321	8%	148,072	8,183	209,531	31,546	13,194	254,270
US	2014	40	40	9,069	6,268	117,212	84%	22,231	16%	454	0%	139,896	3,717	146,259	85%	17,260	10%	9,590	6%	173,109	9,987	263,470	39,491	10,044	313,005
US	2015	39	39	6,988	5,904	111,929	89%	13,261	11%	664	1%	125,853	2,052	95,529	85%	11,030	10%	5,667	5%	112,226	7,956	207,458	24,291	6,330	238,079
US	2016	37	34	5,571	3,333	75,604	87%	10,492	12%	419	1%	86,515	2,177	87,851	77%	17,280	15%	9,491	8%	114,622	5,511	163,464	27,776	9,912	201,152
US	2017	34	34	5,623	2,652	43,753	74%	15,257	26%	318	1%	59,328	2,442	83,303	78%	15,874	15%	7,944	7%	107,121	5,095	127,057	31,131	8,262	166,449
US	2018	34	35	5,758	2,828	54,025	78%	15,072	22%	228	0%	69,326	2,910	100,722	79%	16,094	13%	11,310	9%	128,126	5,738	154,747	31,166	11,538	197,451
US	2019	31	30	4,323	3,119	69,162	85%	12,345	15%	320	0%	81,827	1,894	68,898	81%	10,326	12%	5,472	7%	84,696	5,015	138,095	22,683	5,802	166,580
US	2020	23	23	3,699	1,578	38,142	95%	1,830	5%	219	1%	40,192	1,727	72,968	75%	12,983	13%	11,063	11%	97,014	3,305	111,110	14,813	11,283	137,205
US	2021	21	17	1,431	81	1,826	93%	124	6%	6	0%	1,957	1,220	33,744	70%	8,526	18%	6,244	13%	48,515	1,301	35,571	8,650	6,250	50,471
VU	2010	5	5	872	469	10,466	79%	2,724	21%	86	1%	13,276	198	8,490	81%	1,346	13%	604	6%	10,440	668	18,958	4,072	690	23,719
VU	2011	6	4	1,142	287	5,839	87%	834	13%	22	0%	6,695	391	13,927	84%	2,313	14%	448	3%	16,688	678	19,765	3,147	470	23,382
VU	2012	6	3	775	472	9,067	61%	5,529	37%	231	2%	14,827	268	9,704	80%	1,534	13%	937	8%	12,175	740	18,771	7,063	1,169	27,002
VU	2013	6	4	974	607	11,330	84%	2,107	16%	53	0%	13,490	263	10,202	80%	1,790	14%	720	6%	12,712	870	21,532	3,897	773	26,202
VU	2014	3	3	685	362	8,479	86%	1,384	14%	43	0%	9,906	230	8,994	83%	1,183	11%	678	6%	10,855	592	17,473	2,567	721	20,761
VU	2015	3	3	286	105	1,643	95%	77	5%	1	0%	1,722	125	5,905	89%	559	8%	159	2%	6,623	230	7,548	636	160	8,345
VU	2016	3	3	165	40	1,250	90%	121	9%	11	1%	1,382	37	2,558	85%	69	2%	385	13%	3,012	78	3,807	190	396	4,394
VU	2017	3	3	249	119	1,447	65%	788	35%	7	0%	2,242	122	2,923	64%	647	14%	1,033	22%	4,603	241	4,370	1,434	1,041	6,845
VU	2018	2	2	313	337	6,388	81%	1,470	19%	54	1%	7,912	96	3,910	85%	410	9%	293	6%	4,613	433	10,298	1,880	347	12,525
VU	2019	5	6	573	739	22,912	89%	2,583	10%	345	1%	25,840	138	7,148	84%	627	7%	783	9%	8,558	878	30,060	3,210	1,128	34,398
VU	2020	6	6	915	965	23,136	81%	5,097	18%	252	1%	28,485	334	13,458	73%	2,685	15%	2,257	12%	18,400	1,299	36,594	7,782	2,509	46,885
VU	2021	7	7	967	917	19,144	76%	5,792	23%	189	1%	25,125	410	14,791	74%	3,756	19%	1,574	8%	20,121	1,327	33,935	9,547	1,763	45,245

Table 4. (continued)

YEAR	VESSELS		DAYS	UNASSOCIATED SCHOOLS								ASSOCIATED SCHOOLS								TOTAL				
	YB	LOG			SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKIPJACK		YELLOWFIN		BIGEYE		TOTAL		SKJ	YFT	BET	TOTAL
				SETS	MT	%	MT	%	MT	%	MT	SETS	MT	%	MT	%	MT	%	MT	SETS	MT	MT	MT	MT
2010	276	262	52,253	38,203	686,699	76%	212,387	23%	9,500	1%	908,587	12,978	412,665	72%	109,219	19%	48,354	8%	570,237	51,459	1,103,515	323,893	58,240	1,485,648
2011	278	267	58,622	30,105	424,493	75%	135,042	24%	3,972	1%	563,506	21,755	608,098	72%	152,016	18%	78,688	9%	838,800	52,012	1,034,258	287,693	82,787	1,404,739
2012	285	284	54,373	36,086	611,060	73%	216,000	26%	9,119	1%	836,178	20,414	595,211	75%	135,388	17%	62,400	8%	792,997	56,639	1,207,892	351,955	71,664	1,631,512
2013	297	293	55,214	38,402	643,796	79%	160,592	20%	10,592	1%	814,979	17,929	556,029	72%	152,840	20%	68,134	9%	777,002	56,436	1,201,592	314,384	78,892	1,594,868
2014	308	306	53,572	38,390	732,215	77%	204,622	22%	11,306	1%	948,142	18,209	632,367	77%	128,586	16%	63,220	8%	824,172	56,683	1,366,387	333,928	74,688	1,775,003
2015	306	303	42,512	33,609	682,289	78%	179,131	21%	11,626	1%	873,046	13,632	549,735	79%	101,794	15%	43,655	6%	695,182	47,379	1,235,519	282,582	55,954	1,574,055
2016	293	278	44,404	32,385	648,299	73%	223,594	25%	11,845	1%	883,734	14,159	533,212	76%	112,563	16%	54,605	8%	700,380	46,727	1,185,592	338,341	66,891	1,590,824
2017	282	279	47,770	33,652	510,076	65%	264,566	34%	10,129	1%	784,774	16,501	515,111	76%	111,415	16%	50,800	8%	677,322	50,426	1,030,371	378,932	61,433	1,470,736
2018	272	269	45,088	32,830	616,527	75%	193,836	24%	12,003	1%	822,369	18,287	664,247	79%	116,546	14%	58,267	7%	839,059	51,308	1,284,863	312,337	71,065	1,668,265
2019	281	274	42,539	37,151	856,388	81%	194,575	18%	9,704	1%	1,060,666	14,934	598,975	82%	97,215	13%	36,860	5%	733,052	52,385	1,461,687	294,704	47,143	1,803,533
2020	267	257	44,756	32,598	633,088	75%	204,463	24%	6,658	1%	844,215	15,250	570,207	75%	130,686	17%	62,553	8%	763,446	48,028	1,206,055	337,847	69,631	1,613,533
2021	259	257	42,510	26,778	503,146	72%	186,314	27%	7,307	1%	696,768	17,247	551,818	72%	154,451	20%	63,961	8%	770,231	45,249	1,075,715	351,025	71,918	1,498,658

Notes:

1. Estimates are based on aggregate data and raised logsheet data with species composition adjusted using observer sampling with grab sample bias correction. Note that these estimates may differ from the annual catch estimates provided by CCMs.

2. Tropical WCPFC Area (20°N–20°S). Estimates exclude domestic purse seine catch/effort in Philippines, Indonesia and Vietnam. [we hope to include estimates of domestic-based Philippines catch/effort in their home EEZ and HSP #1 in future versions of this table].

3. Two sources of estimates of vessel numbers are provided (i) those provided by CCMs with their annual catch estimates (and therefore appear in the WCPFC Yearbook) and (ii) estimates of vessel numbers from unraised operational data available to SPC.

4. The estimate of Japanese purse seine vessels fishing in the tropical fishery (20°N-20°S) has been determined by only considering vessel numbers in the categories >200 GRT.

5. There are several instances where vessel numbers from unraised logbook data are higher than the vessel numbers provided by the CCM. The reasons for these occurrences include: (i) situations where one vessel became inactive during the calendar year and was replaced by a new vessel – the vessel number from the operational data is based on a count of the total distinct vessels fishing throughout the year; (ii) instances where there are inconsistencies in the charter/flag assignment between the vessel numbers provided by CCMs and the operational logsheet data (e.g. Philippine-flagged vessels chartered to PNG – this will require follow-up and clarification with relevant CCMs).

6. ASSOCIATED covers sets on Drifting FAD, Log and Anchored FAD. Catch/effort for sets on ANIMALS is not shown separately but are included in the TOTAL.

7. Includes Catch and Effort in Archipelagic Waters.

8. Total Associated sets may differ from values provided in Table 3. The reasons for the differences include, (i) sets in archipelagic waters are included in this table but not in Table 3, (ii) the raising process in Table 3 is undertaken at the EEZ/AW level while the raising in this Table is undertaken at the WCPFC Area level; this will be an issue in cases where logbook coverage is not 100%. Future versions of Tables 3 and 7 will be reconciled.

Fleet Codes

CK	- Cook Islands	CN	- China	ES	- EU-Spain	FM	- FSM
JP	- Japan	KI	- Kiribati	KR	- Republic of Korea		
MH	- Marshall Islands	NZ	- New Zealand	PG	- PNG		
PH	- Philippines (DW)	SB	- Solomon Is.	SV	- El Salvador	NR	- Nauru
TV	- Tuvalu	TW	- Chinese Taipei	US	- USA	VU	- Vanuatu

Table 5. Annual high seas FAD sets, by fleet, 2015–2021.

CCM	2015	2016	2017	2018	2019	2020	2021	Notes
CHINA	0	3	1	2	0	0	0	
COOK ISLANDS	0	0	0	0	42	14	63	4, 5
ECUADOR	0	0	0	0	0	0	0	4, 5
EL SALVADOR	50	22	10	29	8	30	28	4
EU-SPAIN	149	64	128	110	101	151	238	4
FSM	59	164	48	135	196	182	230	
JAPAN	1	3	0	0	1	11	2	
KIRIBATI	209	374	417	471	463	334	317	7
MARSHALL ISLANDS	168	65	423	143	265	277	281	4
NAURU	0	0	0	51	55	211	55	4
NEW ZEALAND	31	5	75	40	36	2	0	4
PAPUA NEW GUINEA	139	14	0	0	0	0	0	
PHILIPPINES	1	0	0	3	29	0	0	6
REPUBLIC OF KOREA	51	103	3	114	87	74	76	
SOLOMON ISLANDS	0	0	22	16	15	2	0	4
CHINESE TAIPEI	23	55	0	6	23	17	26	
TUVALU	4	34	41	27	19	77	113	4
USA	526	296	0	480	425	710	579	
VANUATU	0	37	100	24	17	90	101	3

Notes

1. This table has been prepared considering the language of CMM 2016-01 paragraph 18 footnote 5 that states "The high seas FAD closure in paragraph 18 does not apply in 2017 to a CCM that has achieved a verifiable reduction in bigeye catches by its purse seine vessels to 55% from current levels (2010-2012), to be reviewed on the basis of the advice of the Scientific Committee. A CCM that has qualified for the above mentioned exemption shall maintain a verifiable reduction in bigeye catches by its purse seine vessels to 55% from the reference levels (2010-2012) also in the course of 2017."
2. High seas FAD sets are sourced from operational logbook data noting that some data are provisional at this stage.
3. The sets presented in this Table exclude effort in the overlap area because it takes into account the WCPFC9 decision on the application of measures in the part of the WCPF Convention Area that overlaps with the IATTC Convention Area (WCPFC9 Summary Report paragraph 80). European Union is a WCPFC member who is also an IATTC member, notified WCPFC in April 2013, of their choice of IATTC measures in the overlap area. Given that Ecuador and El Salvador are members of IATTC, the rules of the RFMO of which it is a member apply in the overlap area between WCPFC and IATTC, even if the CCM is a cooperating non-member of the other RFMO.
4. At WCPFC13, the discussions confirmed that paragraph 18 measures would be implemented in 2017 and that the following fleets would have qualified for and would apply footnote 5 of CMM 2016-01: El Salvador, Ecuador, European Union, Republic of Marshall Islands, New Zealand, Solomon Islands, Tuvalu and Vanuatu.
5. Despite Note 4, WCPFC13 determined Ecuador's participatory rights were zero days in the high seas of the Convention Area in 2017.
6. The measures that the Philippines will take are in Attachment C of CMM 2016-01. In 2017, the Philippines expended 2,696 days in the HSP1 during 2017 and no reported purse seine effort in any other high seas areas. These values do not include fishing in the HSP #1.
7. In addition to the FAD measures 2015 and 2016, except for those Kiribati flagged vessels fishing in the adjacent high seas, it shall be prohibited to set on FADs in the high seas, unless the Commission decides on other alternative measures at its 2014 or 2015 or 2016 annual meeting.

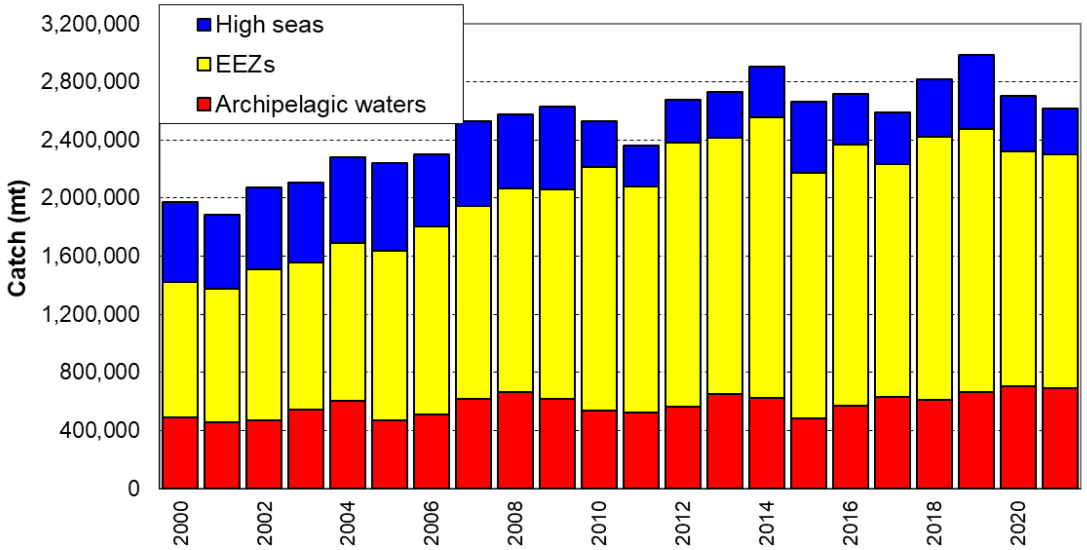

Figure 1. Tuna catch estimates (mt) in the WCP–CA, by broad area, all gear types.
Tuna species are (albacore, bigeye, skipjack and yellowfin. Areas are: Archipelagic waters (AWs), national waters (EEZs, excluded AWs) and the high seas for all gear types combined.

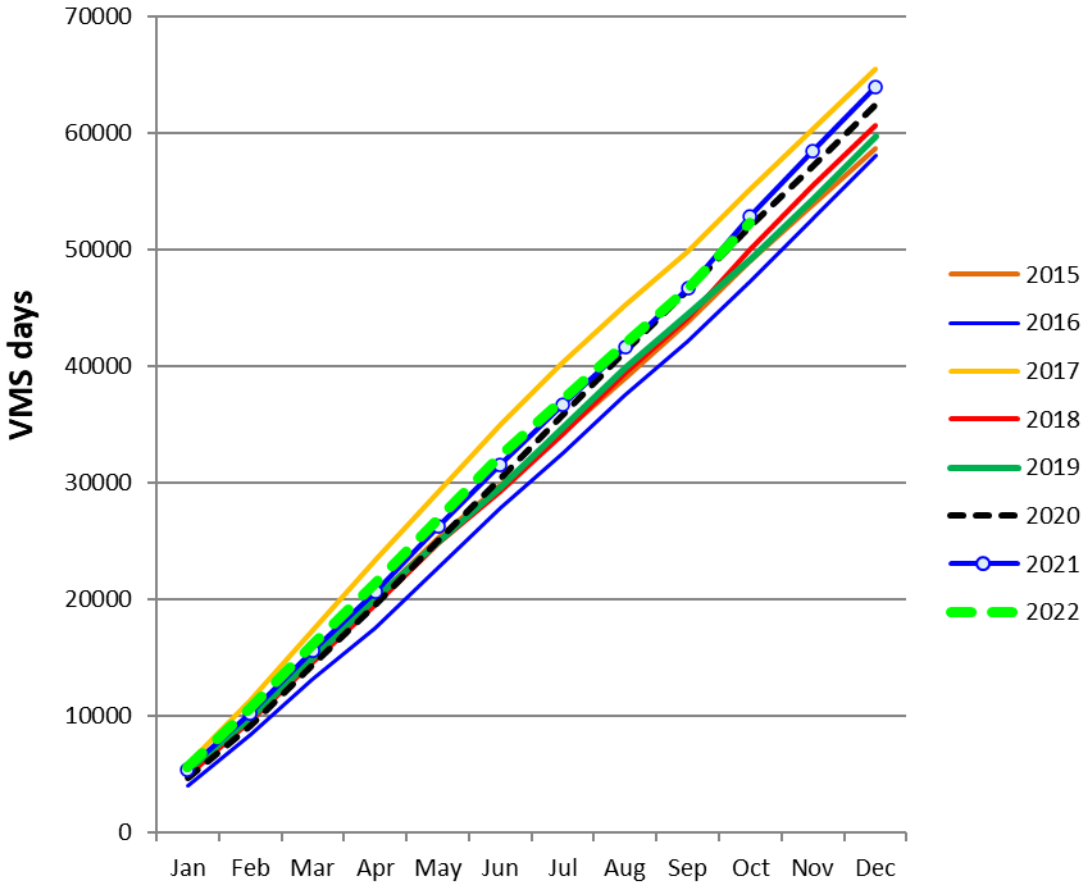

Figure 2. Cumulative tropical purse seine effort by month, 2009-2022, as measured by VMS
(excludes days in port and an estimation of days in transit)

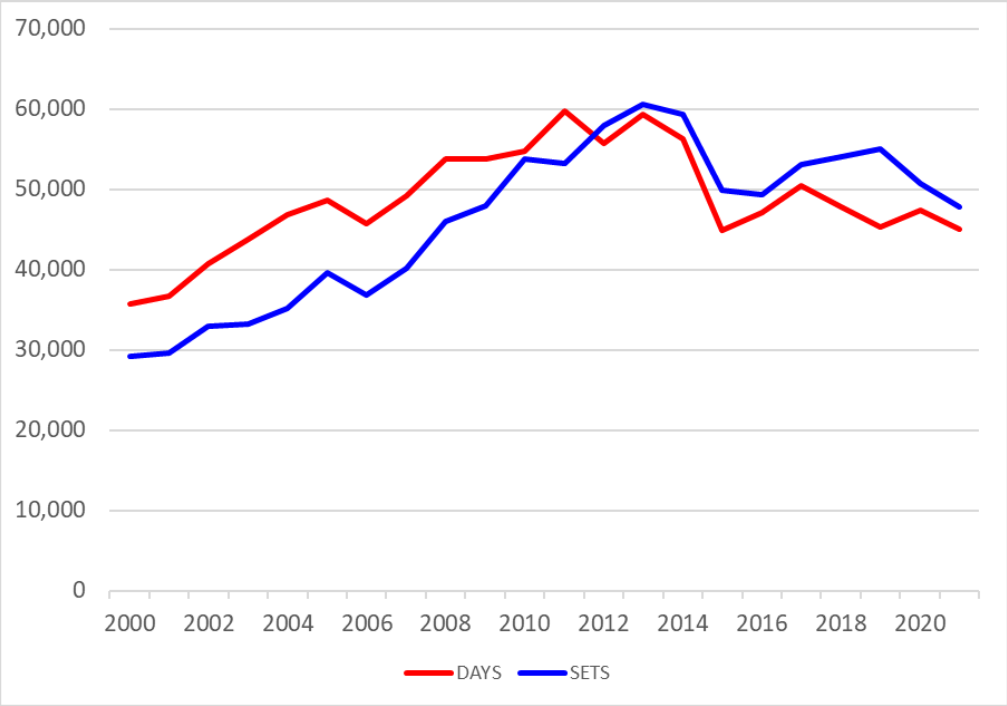

Figure 3. Annual trends in purse seine effort in the WCPFC Convention Area between 20°N and 20°S.
"DAYS" – days fishing and searching. Excludes domestic purse seine effort in Philippines and Indonesia, but includes Philippine domestic-based effort in HSP#1. Estimates are based on raised logsheet data.

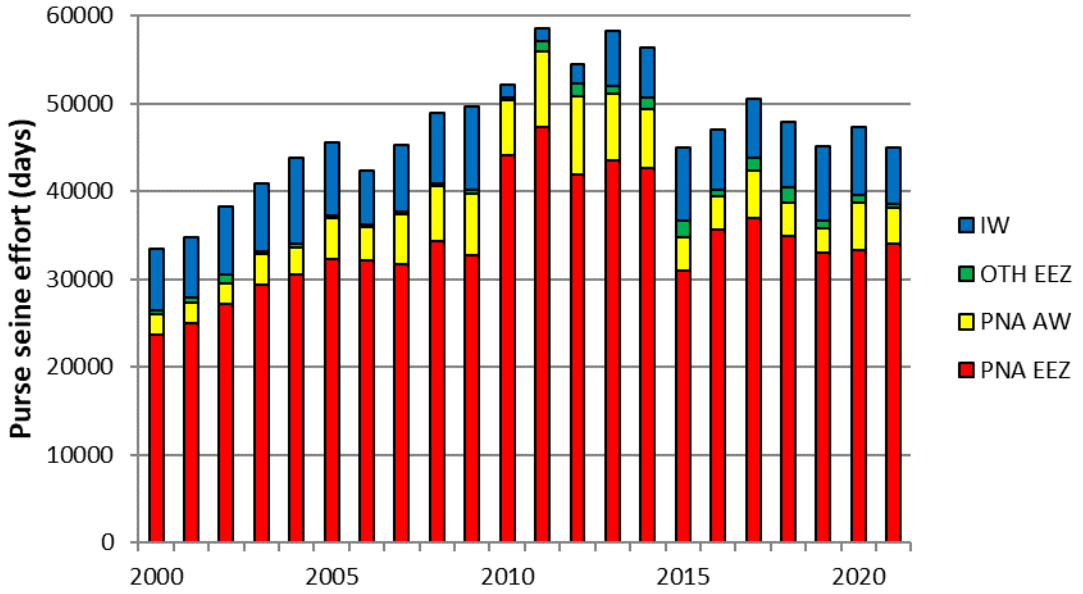

Figure 4. Purse seine effort (days fishing and searching) in the WCPFC Convention Area between 20°N and 20°S. Excludes domestic purse seine effort in Philippines and Indonesia. Estimates are based on raised logsheet data.

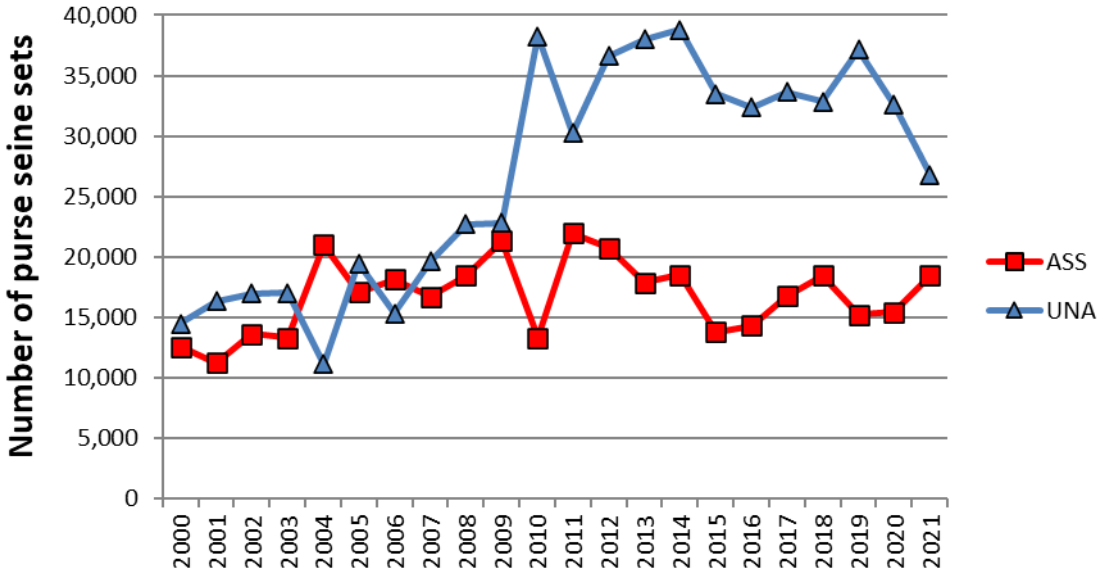

Figure 5. Sets by set type made in the WCPO tropical purse seine fishery, 2000 – 2021**.** Associated (ASS) and Unassociated (UNA) sets. Activities in the domestic purse seine fisheries of Indonesia and Philippines are excluded. Associated sets include animal-associated sets.

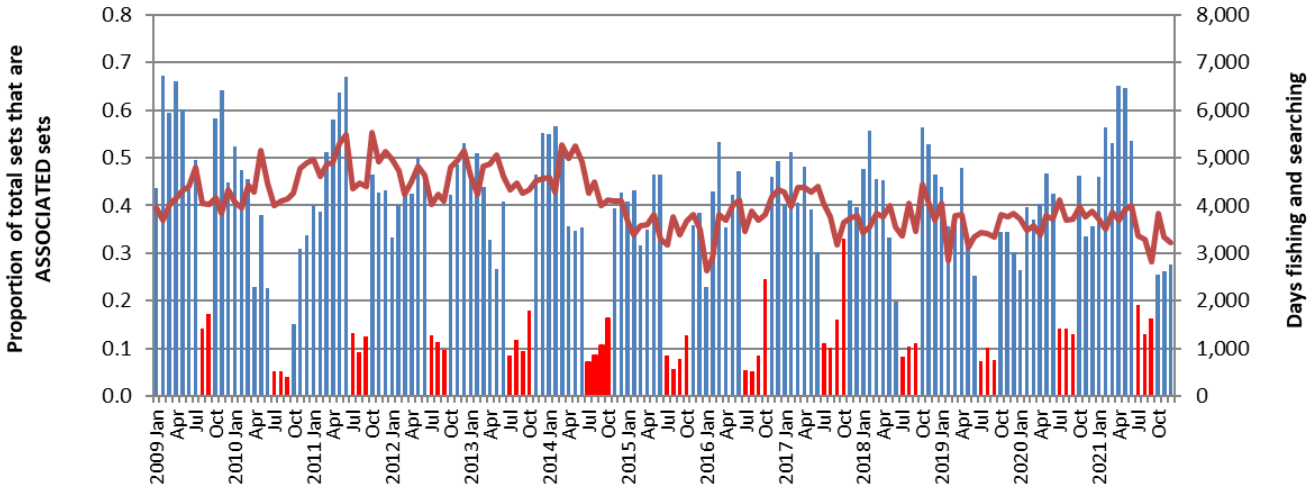

Figure 6. Proportion of the total purse seine fishing activity comprising associated sets.
As indicated by logsheet data.
Red bars indicate the FAD closure months. Total effort in days is shown by the plotted line. Activities in the domestic purse seine fisheries of Indonesia and Philippines are excluded.

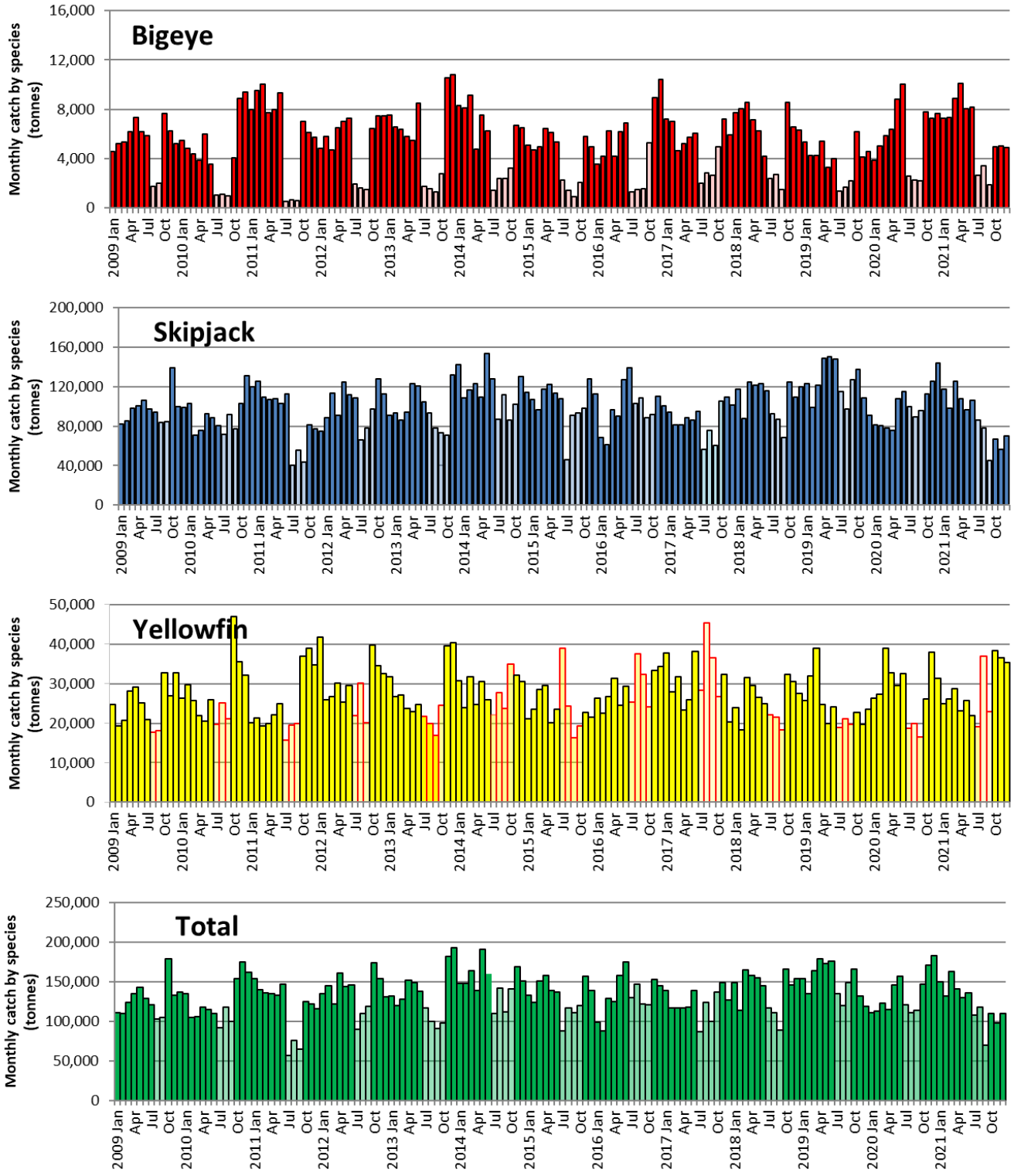

Figure 7. Monthly purse seine catch by species (raised logsheet data with species composition adjusted using observer sampling with grab sample bias correction). FAD closure months are shaded in lighter colour. Data excludes the domestic fisheries of Indonesia and Philippines.

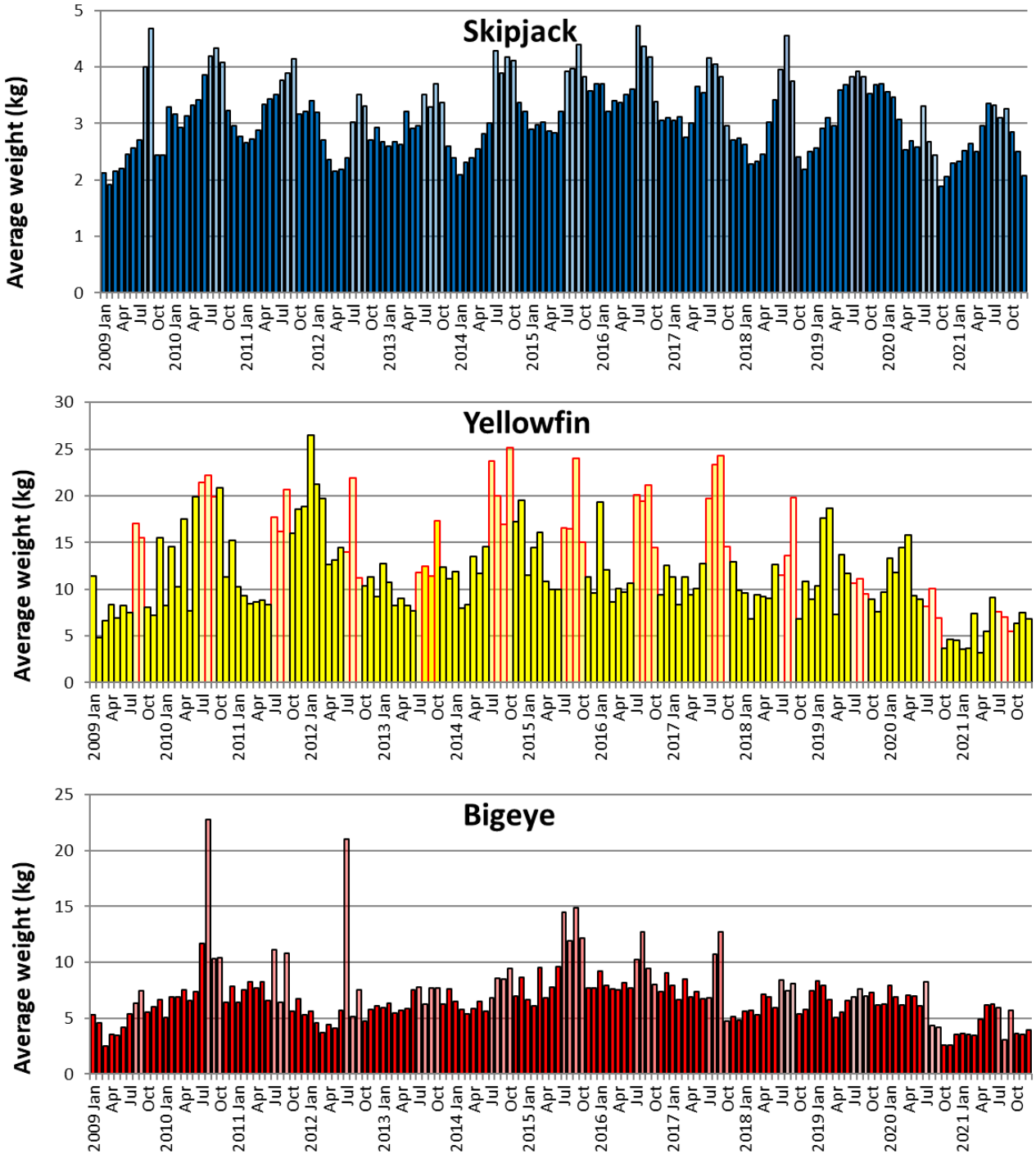

Figure 8. Monthly average weight of bigeye, skipjack and yellowfin tuna.
Estimated from observer sampling data, 2009-2021. FAD closure months are shaded in lighter colour. Data excludes the domestic fisheries of Indonesia and Philippines. Coverage of observer data in 2021 was only 50% due to the impacts of COVID-19 and biased to certain fleets only.

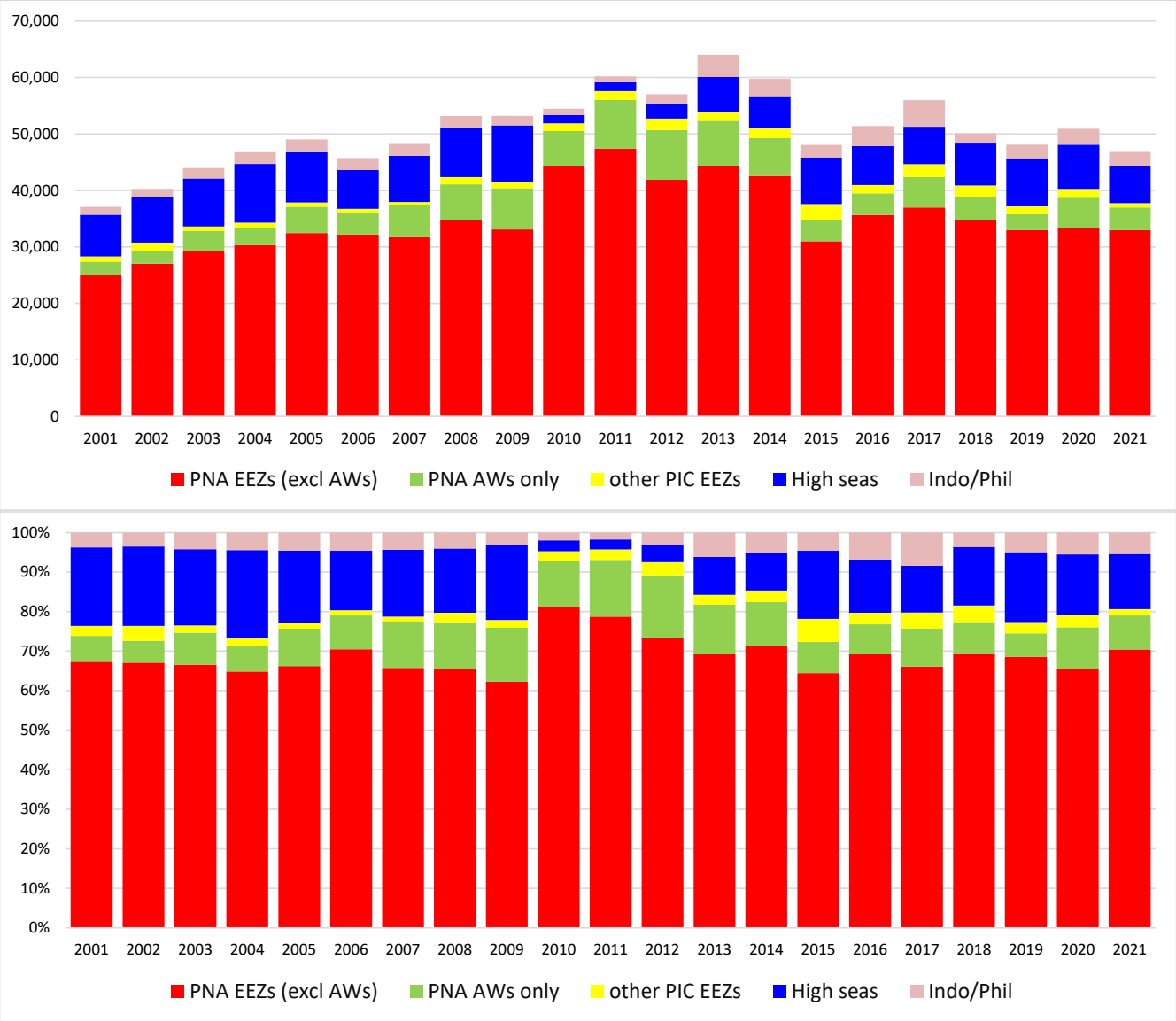

Figure 9. Purse seine effort in waters under national jurisdiction (EEZs and AWs) and in high seas (20°N-20°S)
(days fished–top and percentage days fished–bottom)
(Refer to NOTES under TABLE 1 above)

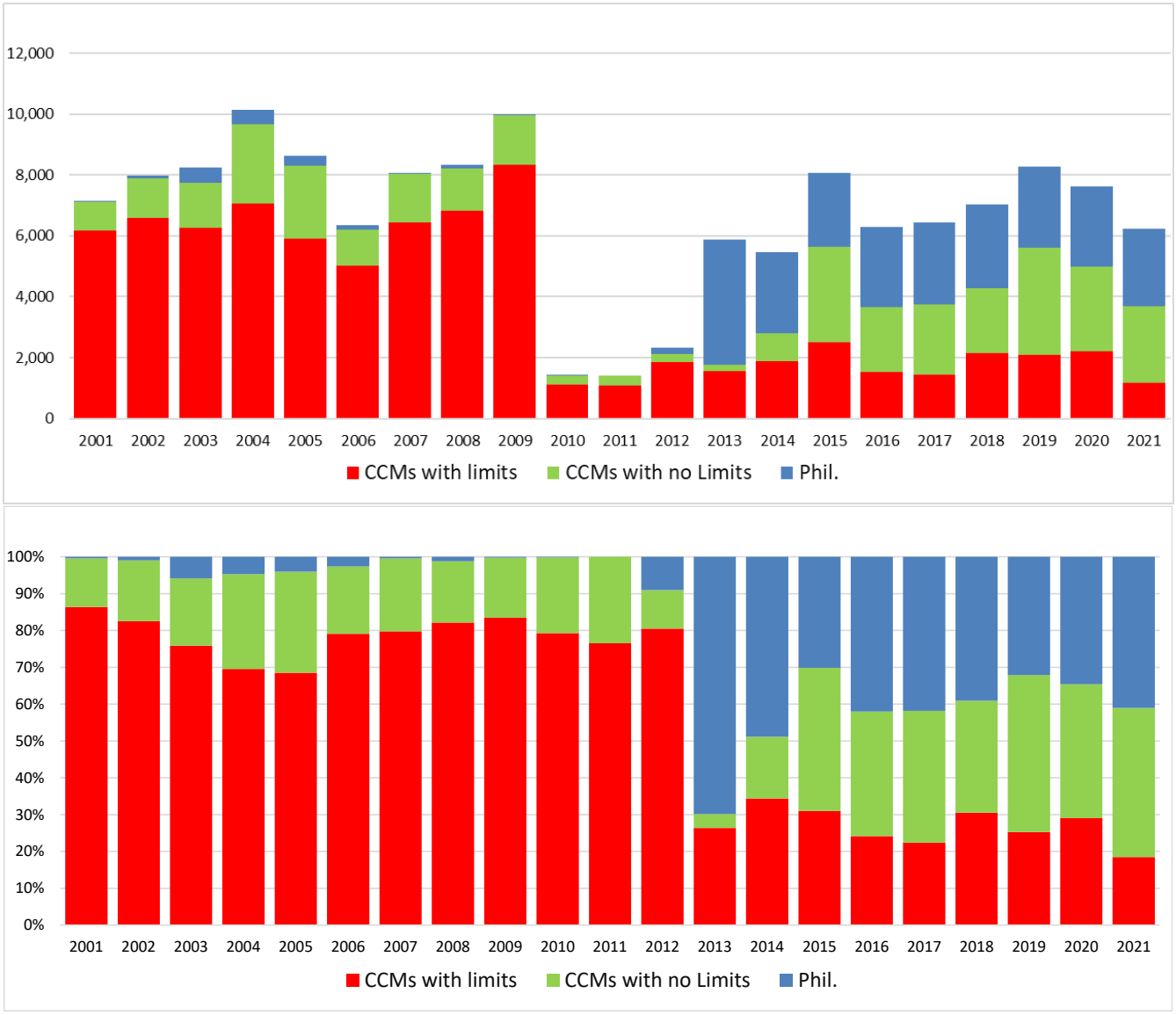

Figure 10. Purse seine effort in high seas (20°N–20°S), by fleet category.

(days fished–top and percentage days fished–bottom)

(Refer to NOTES under TABLE 2 above

"CCMs with no limits" are Pacific Island fleets fishing in high seas adjacent to their home waters;

Philippines effort data prior to 2013 are not available or underreported)

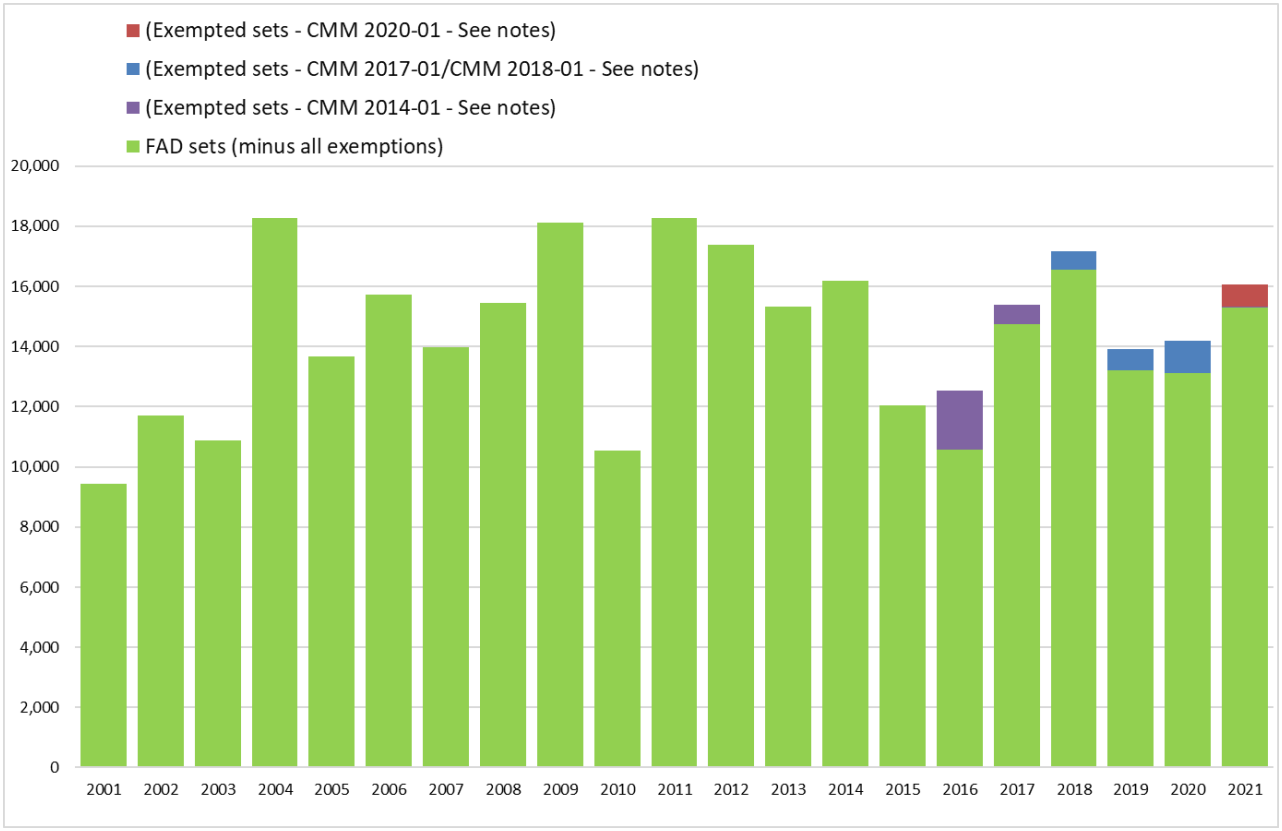

Figure 11. Estimated FAD sets undertaken in the tropical purse seine fishery (20°N-20°S), by fleet category.

(Refer to NOTES under TABLE 3 above

"Exempted Sets" refers to the footnote 3 exemption of CMM 2014-01; refer to Notes 11, 12, 13 and 14, and CMM 2017-01 (footnote 2) and CMM 2018-01 and CMM 2020-01 (footnote 1) refer to Notes 15 of Table 3)

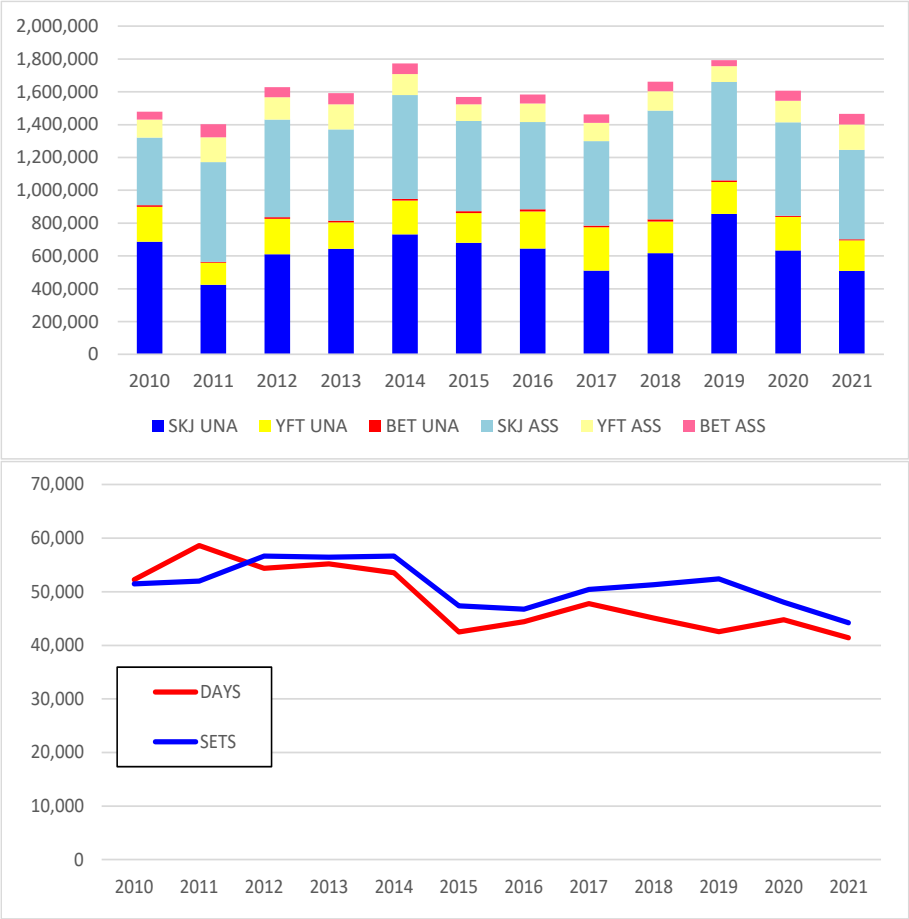

Figure 12. Purse seine tuna catch (top) and effort (bottom) by set type and species

WCPFC Convention Area between 20°N and 20°S, 2010–2021, excluding domestic purse seine catch/effort in Philippines, Indonesia and Vietnam. Includes domestic-based Philippines catch/effort in the HSP#1.

(Refer to NOTES under TABLE 4 above)

2. Longline fishery information

Table 6. Reported longline catches metric tonnes of bigeye tuna in the WCPFC-CA, by flag.

Table 6. Reported longline catches metric tonnes of bigeye tuna in the WCPFC-CA, by flag.

CCM	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	CMM limits for 2020	CMM limits for 2021	See Notes
AMERICAN SAMOA	75	196	242	227	134	181	218	132	249	487	1,263	1,502	389	318	557	658	1,409	851	1,545	1,586	428			4
AUSTRALIA	1,307	1,002	1,024	892	791	499	1,008	1,027	726	458	379	553	489	490	785	825	418	325	258	290	361			7
BELIZE	1,322	812	782	297	425	254	158	89	43	89	102	132	217	0	0	0	0	0	0	0	0			8
CHINA	2,227	2,312	8,965	11,748	7,520	13,378	10,535	10,798	15,289	13,924	11,139	11,324	10,671	9,370	8,210	8,195	7,023	8,695	8,644	7,403	5,493	8,724	8,724	10,11,16
COOK ISLANDS	1	56	204	394	220	166	238	292	217	319	925	1,624	208	184	151	183	298	197	124	97	83			4
EU-PORTUGAL	0	0	0	0	0	0	0	0	0	0	3	17	106	71	17	10	0	0	0	0	0			
EU-SPAIN	0	0	0	42	17	62	62	77	46	15	10	23	23	65	53	53	21	39	30	40	105			7
FSM	651	759	656	542	182	172	1,395	970	1,395	1,113	1,500	1,700	1,270	2,488	2,296	1,869	2,134	3,107	3,559	2,158	1,606			4
FIJI	662	853	889	1,254	721	771	556	671	768	539	1,718	1,588	1,018	1,698	1,184	1,396	1,108	891	1,182	736	482			4
FRENCH POLYNESIA	745	649	439	502	606	498	478	490	587	436	607	654	787	741	813	563	896	1,063	954	874	1,045			4
GUAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	831	932	0	0	0	0	0			
INDONESIA	*942*	*1,470*	*2,168*	*2,192*	*2,285*	*2,750*	*2,155*	*3,395*	*4,067*	*1,937*	*2,325*	*3,399*	*2,118*	*3,380*	*3,606*	*8*	*0*	*1,255*	*2,190*	*1,129*	*1,243*	5,889	5,889	12
JAPAN	27,466	29,574	26,110	29,248	23,021	25,685	26,076	20,942	17,653	16,619	17,722	16,917	12,991	15,564	14,316	11,467	11,471	12,005	11,514	9,388	4,276	17,765	17,765	16
KIRIBATI	0	0	1	0	0	0	0	44	0	3	155	800	582	268	556	603	287	423	1,292	1,570	625			4
MARSHALL ISLANDS	0	0	0	1	0	0	3	375	381	257	259	335	80	0	0	700	1,229	1,146	1,458	764	928			4
NAURU	6	3	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			4
NEW CALEDONIA	128	189	142	90	76	35	53	63	51	44	41	49	51	58	63	74	48	46	40	51	59			4
NEW ZEALAND	481	201	204	177	175	177	213	133	253	132	174	154	109	122	122	177	97	135	50	67	85			7
NIUE	0	0	0	0	10	22	35	51	10	4	0	0	0	0	0	0	0	0	0	0	0			4
NORTHERN MARIANAS	0	0	0	0	0	0	0	0	0	0	0	0	492	1,000	1,000	879	999	993	999	926	1,500			4
PALAU	21	1	1	7	0	0	0	0	0	0	0	0	0	0	0	0	1,106	1,011	855	1	0			4
PAPUA NEW GUINEA	240	318	390	399	237	216	111	201	128	39	59	119	32	52	15	86	47	87	162	17	0			4
PHILIPPINES	59	59	59	59	59	59	59	59	59	59	777	248	167	63	0	0	0	0	0	0	0			6,7
REPUBLIC OF KOREA	22,172	28,533	17,151	17,941	15,622	12,489	10,054	17,001	15,231	13,914	15,282	18,823	12,818	12,779	10,689	11,018	10,220	13,828	13,711	13,011	13,685	13,942	13,942	
SAMOA	185	137	110	104	64	128	101	106	117	108	71	54	36	48	48	62	150	62	161	156	108			4
SENEGAL	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
SOLOMON ISLANDS	187	401	385	294	3	0	0	0	0	806	213	0	0	3,054	4,390	384	0	1,235	1,398	623	635			4,11
TONGA	191	215	94	40	125	117	129	81	38	24	18	10	7	22	25	27	24	34	16	10	15			4
TUVALU	0	0	0	0	0	0	0	0	0	0	105	1,408	120	76	187	103	111	64	53	9	23			4
CHINESE TAIPEI	12,435	16,645	14,429	20,992	15,498	14,295	14,760	15,229	13,319	11,874	11,275	10,994	10,600	10,018	9,434	9,488	9,672	9,069	8,876	7,152	7,330	10,481	10,481	11
USA	2,418	4,396	3,618	4,181	4,462	4,381	5,381	4,649	3,741	3,577	3,565	3,660	3,612	3,823	3,427	3,747	2,968	3,393	3,460	3,550	3,750	3,554	3,554	13, 15
VANUATU	37	396	841	2,045	2,045	1,815	1,885	1,143	1,398	2,060	2,061	2,151	1,989	3,518	7,366	3,509	3,940	3,132	2,241	2,216	3,039			4
WALLIS AND FUTUNA	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0			4
Total	73,958	89,177	78,914	93,668	74,298	78,153	75,665	78,018	75,766	68,837	71,754	78,238	60,982	69,270	70,141	57,016	55,676	63,086	64,772	53,824	46,904	60,355	60,355	
VIETNAM	1,450	614	2,129	2,781	3,527	3,538	3,648	3,358	2,992	2,441	3,424	3,761	2,260	2,350	3,100	1,115	1,004	902	1,554	2,678	2,275			9

Notes:

1. Source: WCPFC Annual catch estimates as at 2nd July 2021.
2. Catch estimates in **red** have been carried over from previous years.
3. Indonesia and Philippines have recently revised their estimates in recent years. (see the respective Annual Catch Estimate Workshop reports at (http://www.wcpfc.int/west-pacific-east-asia-oceanic-fisheries-management-project)
4. The limits in the columns labelled "CMM limits for 2017" and "CMM limits for 2018" do not apply to small island developing State members and participating Territories according to paragraph 7 of CMM 2014-01 and CMM 2015-01 (or its replacement CMM).
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 2012-01 and paragraph 5 CMM 2013-01 using the best information available to SPC-OFP. However, in several cases, catches have not yet been 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. Estimates include archipelagic water catches which for some countries cannot be separated at this stage.
7. The catch limits established at 2,000t prior to 2010, remain at the level of 2,000t for relevant WCPFC members. (according to CMM 2008-01 Para. 32, CMM 2012-01 para 26 and CMM 2013-01 para 41 and its replacement CMM, including CMM 2017-01). Note although EU fleets are reported here separately by flag, it is understood that as per the relevant CMM the 2000 Mt limit applies to the combined EU-longline fleet.
8. Subject to CNM on participatory rights, in accordance with paragraph 6 of CMM 2014-01 and CMM 2015-01 (or its replacement CMM) for years from 2015 onwards.
9. The Vietnam longline fleet are understood to fish outside the WCPFC Convention Area (South China Sea).
10. Catches by the Chinese longline fleet in the Kiribati EEZ are included in the estimates.
11. Catches by chartered Chinese, Fijian and Chinese-Taipei flagged longline vessels licensed to fish in Solomon Islands waters have been attributed to the Solomon Islands according to the respective WCPFC Charter notifications.
12. Indonesia bigeye tuna catch excludes catches in Archipelagic waters.
13. USA revised limit for 2015 was 3504 t., to take into account the overage in bigeye catch from 2014
14. "CMM limits for 2017" is according to ATTACHMENT F in CMM 2016-01, and refer to catch limits for 2017 only, and "CMM limits for 2018" is according to Table 3 in CMM 2017-01 or its replacement measure.
15. USA advised by letter to the WCPFC Secretariat that they reduced their 2017 bigeye catch limit (of 3,345 Mt in Att F of CMM 2016-01) to 3,138Mt to offset the overage in 2016.
16. CMM 2017-01 Table 3 and CMM 2018-01, includes this note: Japan will make an annual one-off transfer of 500 metric tonnes of its bigeye tuna catch limit to China.

Table 7. Reported longline catches (metric tonnes) of yellowfin tuna in the WCPFC-CA, by flag.

Table 7. Reported longline catches (metric tonnes) of yellowfin tuna in the WCPFC-CA, by flag.

CCM	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Av. 2001-2004	See Notes
AMERICAN SAMOA	188	485	497	888	526	513	640	333	398	473	699	620	422	454	360	561	871	470	409	383	521	515	(4)
AUSTRALIA	2,819	3,531	3,681	2,356	1,499	1,830	1,390	1,650	1,387	1,359	1,858	1,259	1,341	1,685	2,177	1,734	1,666	1,312	1,951	1,749	1,449	3,097	
BELIZE	957	720	943	208	298	106	273	129	121	28	13	30	21	0	0	0	0	0	0	0	0	707	(6)
CHINA	1,919	1,844	3,358	4,048	2,446	4,055	2,768	5,007	7,958	2,576	4,598	6,004	4,638	5,949	6,226	6,559	8,526	9,031	10,010	10,115	9,530	2,792	(9),(10)
COOK ISLANDS	1	42	178	506	413	262	290	247	197	192	394	693	346	504	339	315	610	532	403	362	309	182	(4)
EU-PORTUGAL	0	0	0	0	0	0	0	0	0	0	0	0	2	22	4	6	0	0	0	0	0	0	(13)
EU-SPAIN	0	0	0	23	1	127	127	10	7	3	0	2	2	11	10	28	7	13	20	33	40	6	(13)
FSM	338	164	276	185	99	270	548	328	583	515	750	750	850	1,639	1,691	1,771	1,416	2,395	4,692	2,010	1,729	241	(4)
FIJI	2,082	2,027	2,482	4,164	2,591	2,231	1,721	2,763	3,440	2,602	4,051	3,188	2,203	4,343	3,647	4,701	4,986	2,738	3,833	4,564	2,662	2,689	(4)
FRENCH POLYNESIA	967	507	621	1,066	793	690	527	447	716	418	491	758	615	783	1,093	968	1,434	1,314	1,364	1,135	2,350	790	(4)
GUAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(4)
INDONESIA	*4,001*	*6,243*	*9,209*	*9,313*	*10,679*	*9,743*	*10,209*	*12,873*	*18,154*	*13,325*	*13,124*	*11,938*	*9,012*	*13,353*	*18,604*	*5,632*	*120*	*7,707*	*4,382*	*427*	*682*	*7,192*	(12)
JAPAN	18,096	15,810	16,803	15,209	14,792	13,462	13,725	12,365	14,039	17,466	11,427	10,621	8,268	6,494	8,683	10,166	10,099	10,109	11,918	6,503	6,612	16,480	
KIRIBATI	2	0	2	0	0	0	0	7	0	4	140	300	175	108	405	610	359	220	862	1,279	904	1	(4)
MARSHALL ISLANDS	0	0	0	3	0	0	2	91	120	117	99	113	47	0	0	578	948	707	1,175	743	634	1	(4)
NAURU	5	2	6	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	(4)
NEW CALEDONIA	570	572	754	631	448	414	393	424	487	505	585	573	531	741	852	482	559	467	678	512	624	632	(4)
NEW ZEALAND	131	27	39	36	36	3	25	11	3	6	3	1	1	2	2	55	10	20	5	10	22	58	
NIUE	0	0	0	0	34	42	43	40	20	8	0	0	0	0	0	0	0	0	0	0	0	0	(4)
NORTHERN MARIANAS	0	0	0	0	0	0	0	0	0	0	0	0	93	0	0	0	0	0	0	0	0	0	(4)
PALAU	41	3	19	28	0	0	0	0	0	0	0	0	0	0	0	0	1,352	1,887	1,644	0	0	23	(4)
PAPUA NEW GUINEA	1,812	1,738	1,747	2,318	1,222	2,139	1,539	2,259	2,714	2,147	2,303	2,961	1,041	1,568	891	728	1,249	2,070	1,479	116	0	1,904	(4)
PHILIPPINES	484	484	484	484	484	484	484	484	484	484	146	61	27	153	0	0	0	0	0	0	0	484	(5)
REPUBLIC OF KOREA	13,768	15,497	12,134	10,058	13,329	9,529	8,817	7,846	10,032	7,644	7,881	7,832	5,716	8,371	9,352	8,054	7,008	6,519	13,847	10,948	10,340	12,864	
SAMOA	470	369	293	444	199	264	305	317	412	386	395	234	330	231	252	244	644	401	547	642	384	394	(4)
SENEGAL	0	0	0	0	6	3	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(7)
SOLOMON ISLANDS	159	401	258	440	6	0	0	0	0	5,159	643	0	0	12,536	15,923	2,130	0	4,451	5,094	2,732	3,288	315	(4),(10)
TONGA	259	263	263	163	219	227	341	291	109	47	171	140	126	195	297	325	373	201	186	156	208	237	(4)
TUVALU	0	0	0	0	0	0	0	0	0	0	286	453	114	41	166	124	164	106	76	16	9	0	(4)
CHINESE TAIPEI	22,326	21,993	22,149	22,975	19,571	18,654	16,668	16,411	19,693	22,225	21,320	16,948	14,999	12,257	14,118	17,816	22,956	16,050	17,724	10,212	11,306	22,361	(10)
USA	1,016	572	809	694	698	937	833	836	429	462	738	576	546	567	681	1,093	1,750	1,868	1,556	1,197	2,029	773	
VANUATU	78	778	1,315	1,762	1,147	1,368	1,049	878	817	939	1,601	2,230	1,768	1,695	2,700	1,740	1,437	1,269	1,325	849	901	983	(4)
WALLIS AND FUTUNA	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	(4)
Total	72,489	74,072	78,320	78,003	71,536	67,353	62,721	66,047	82,320	79,090	73,720	68,285	53,234	73,702	88,473	66,420	68,544	71,857	85,180	56,693	56,533	75,721	
VIETNAM	8,292	9,756	8,179	11,122	10,895	10,930	11,270	10,375	9,244	9,513	10,576	12,456	13,917	11,603	15,097	16,423	15,677	16,500	14,653	14,118	13,822		(8)

Notes:

1. Source: WCPFC Annual catch estimates as at 2nd July 2022.
2. Catch estimates in **red** have been carried over from previous years.
3. Indonesia and Philippines have recently revised their estimates (see the respective Annual Catch Estimate Workshop reports at http://www.wcpfc.int/west-pacific-east-asia-oceanic-fisheries-management-project)
4. 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 (paragraph 5 of CMM 2012-01, paragraph 5 of CMM 2013-01 or its replacement CMM) using the best information available to SPC-OFP. However, in several cases, catches have not yet been 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).
5. Estimates include archipelagic water catches which for some countries cannot be separated at this stage.
6. Subject to CNM on participatory rights, in accordance with paragraph 6 of CMM 2014-01 (or its replacement CMM) for years from 2015 onwards. Belize is not presently a CNM.
7. Senegal committed to limiting its fishing activities in the WCPF Convention Area to one longline vessel - WCPFC5 Report (Para. 44). Senegal is not presently a CNM.
8. The Vietnam longline fleet are understood to fish outside the WCPFC Convention Area (South China Sea).
9. Catches by the Chinese longline fleet in the Kiribati EEZ are included in the estimates.
10. Catches by chartered Chinese and Chinese-Taipei flagged longline vessels licensed to fish in Solomon Islands waters have been attributed to the Solomon Islands according to the respective WCPFC Charter notifications.
11. Does not yet cover development of new fisheries in the waters of small-island developing states (e.g. Tokelau)
12. Indonesia yellowfin tuna catch excludes catches in Archipelagic waters.
13. Note although EU fleets are reported here separately by flag, it is understood that as per the relevant CMM the 2000 Mt limit applies to the combined EU-longline fleet.

Table 8. Longline effort (100s of hooks) in the tropical WCPFC LONGLINE fishery (20°N-10°S), by fleet.

FLEET	LONGLINE EFFORT (100s of Hooks)											
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
CK	13,422	16,809	32,818	16,880	10,880	11,761	25,750	20,672	21,581	19,474	18,852	14,270
CN	558,006	741,473	838,710	653,128	554,203	856,023	643,894	490,233	808,126	594,763	550,941	489,006
FJ	27,971	91,025	167,297	135,836	128,960	83,827	85,898	45,608	30,099	73,637	43,301	17,925
FM	84,884	94,564	110,591	85,598	123,995	149,576	165,600	167,500	361,852	327,119	247,747	179,989
JP	591,056	544,105	513,557	453,786	393,618	347,416	279,927	286,586	306,207	303,051	187,791	54,386
KI	0	19,487	50,227	27,577	23,868	38,218	55,215	45,625	40,604	73,402	110,146	61,812
KR	728,939	803,720	771,103	626,874	603,157	506,797	586,401	473,107	567,738	591,151	547,351	542,088
MH	16,828	16,763	20,679	6,286	0	585	63,220	138,797	104,151	95,894	79,962	72,424
PF	0	242	147	246	437	18	1,138	13,321	5,179	3,656	1,456	11,407
PG	24,589	51,692	40,188	14,849	19,232	7,883	4,492	2,789	35,323	30,864	2,473	0
PW	0	0	0	0	0	0	626	86,598	107,145	92,140	57	0
SB	65,235	12,757	5,497	3,942	421,448	370,855	24,030	18,036	209,644	204,151	90,786	109,601
TV	3,436	26,925	69,189	16,219	16,809	18,844	12,927	15,818	12,376	8,007	1,305	1,692
TW	1,116,368	1,542,611	1,710,738	1,237,662	1,031,881	1,207,708	1,291,770	1,385,543	1,054,992	1,111,503	755,975	884,948
US	127,121	135,232	152,740	128,813	147,964	181,519	240,469	217,903	165,374	323,727	285,557	373,439
VU	78,908	92,148	134,225	196,387	138,961	313,642	213,255	138,818	120,477	112,208	75,431	44,630
	3,436,764	4,189,554	4,617,707	3,604,082	3,615,413	4,094,672	3,694,610	3,546,955	3,950,867	3,964,745	2,999,132	2,857,615

Notes:

1. Estimates are based on available aggregate data for the WCPFC Area, 20°N-10°S.

2. Estimates exclude domestic longline effort for Philippines, Indonesia and Vietnam fleets.

3. Excluding vessels targeting South Pacific Albacore is not possible at this stage for a number of reasons – the main reason being the lack of operational data. In the absence of complete operational data (which would include targeting information), the area 20°N-10°S has been selected as the area which best minimises both South and North Pacific albacore targeting.

Fleet Codes

CK - Cook Islands
CN - China
FJ - Fiji
FM - FSM
JP - Japan
KI - Kiribati
KR - Korea
MH - Marshall Is.
PF - French Polynesia
PG - PNG
PW - Palau
SB - Solomon Is.
TV - Tuvalu
TW - Chinese Taipei
US - USA
VU - Vanuatu

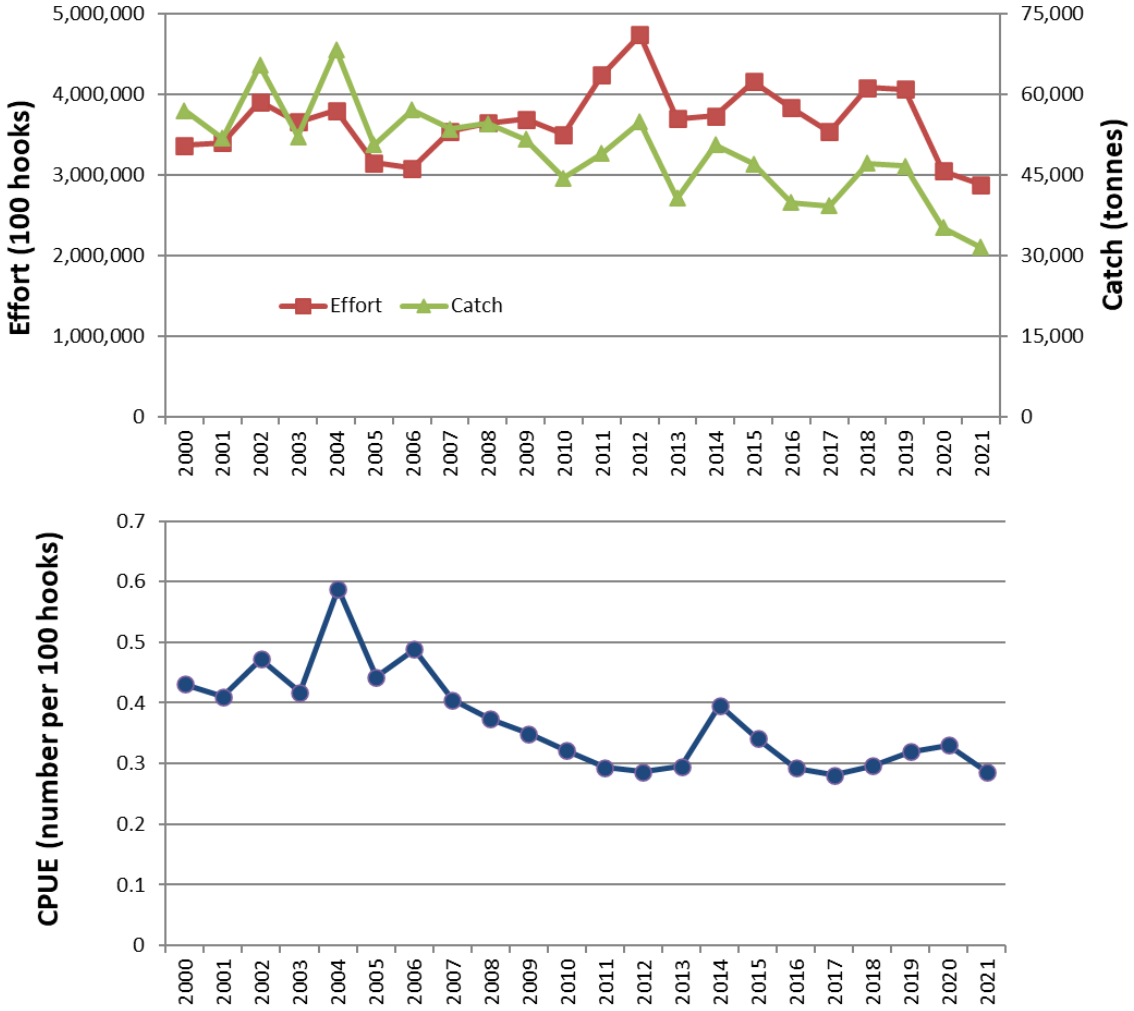

Figure 13. Estimates of effort, bigeye catch and nominal CPUE for the CORE tropical WCPFC longline fishery

CORE Area is (130°E - 150°W, 20°N - 10°S).
2021 data are provisional.

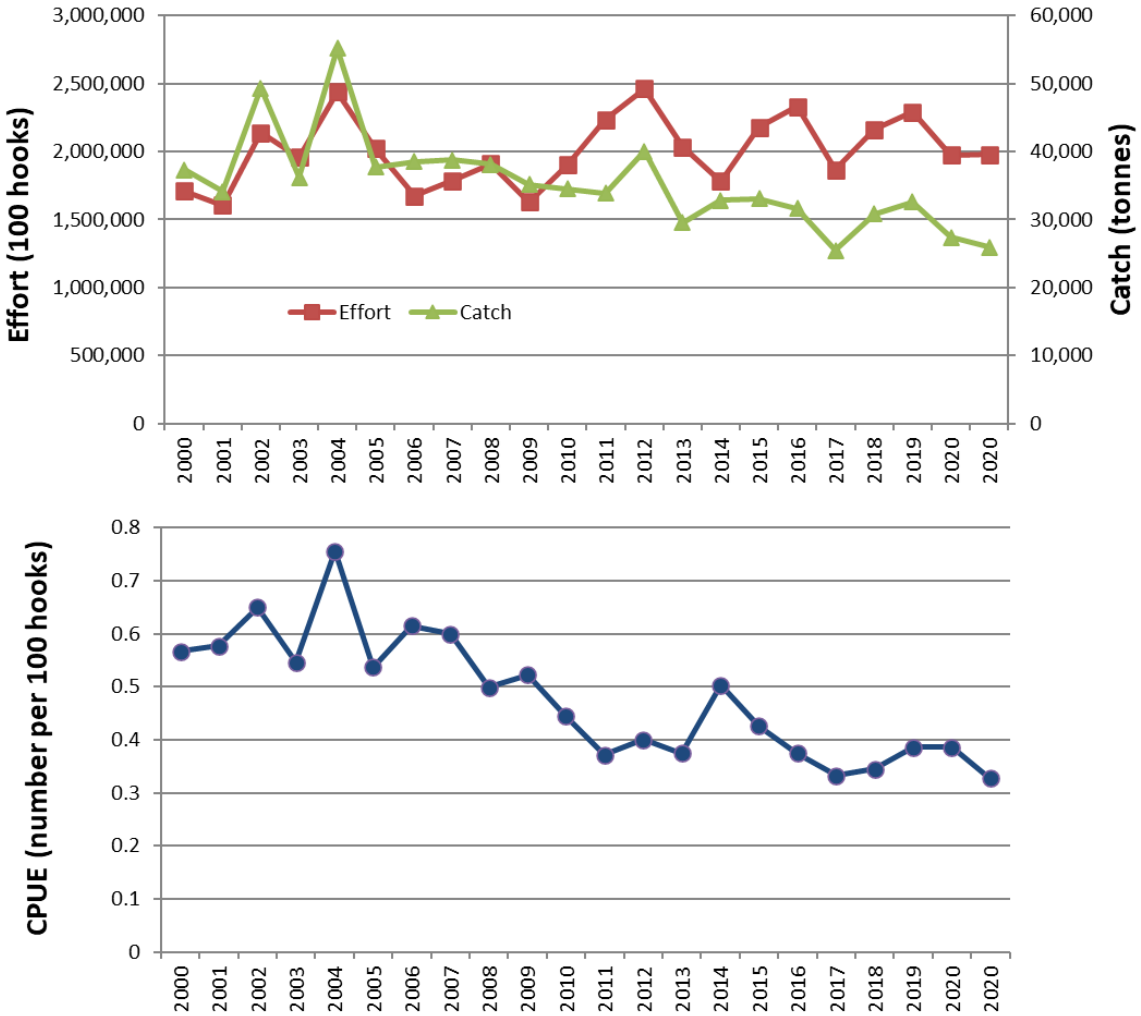

Figure 14. Estimates of effort, bigeye catch and nominal CPUE for the EASTERN tropical WCPFC longline fishery

Eastern Area is (170°E - 150°W, 20°N - 10°S).
2021 data are provisional.

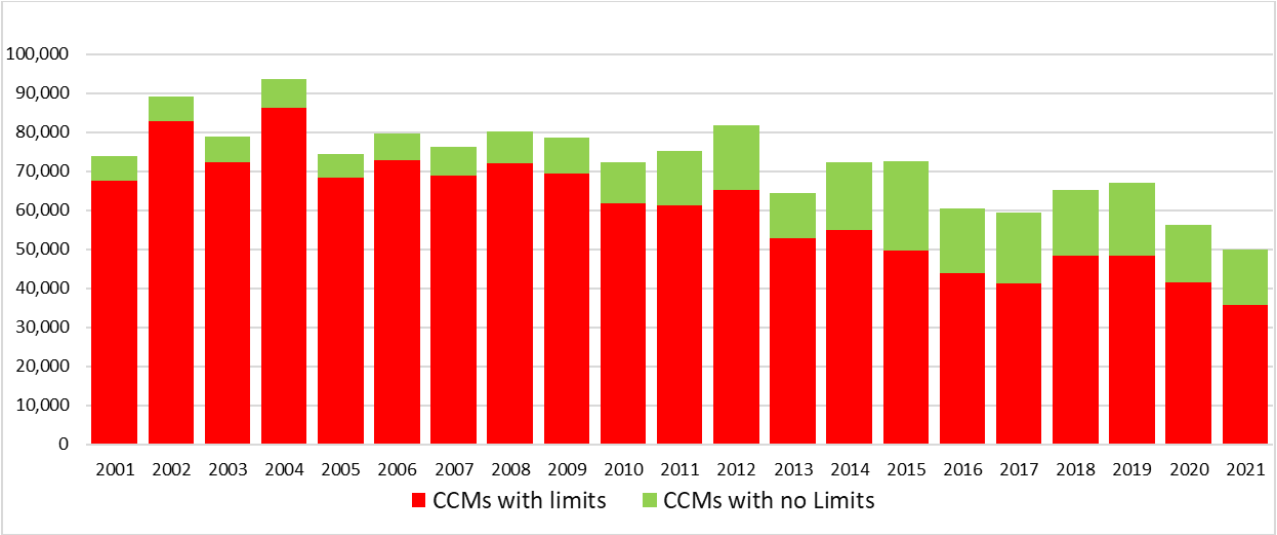

Figure 15. Reported longline catches (metric tonnes) of bigeye tuna in the WCPFC-CA, by fleet category.

(Refer to NOTES under TABLE 6 above;
Vietnam catch is included in "CCMs with no limits")

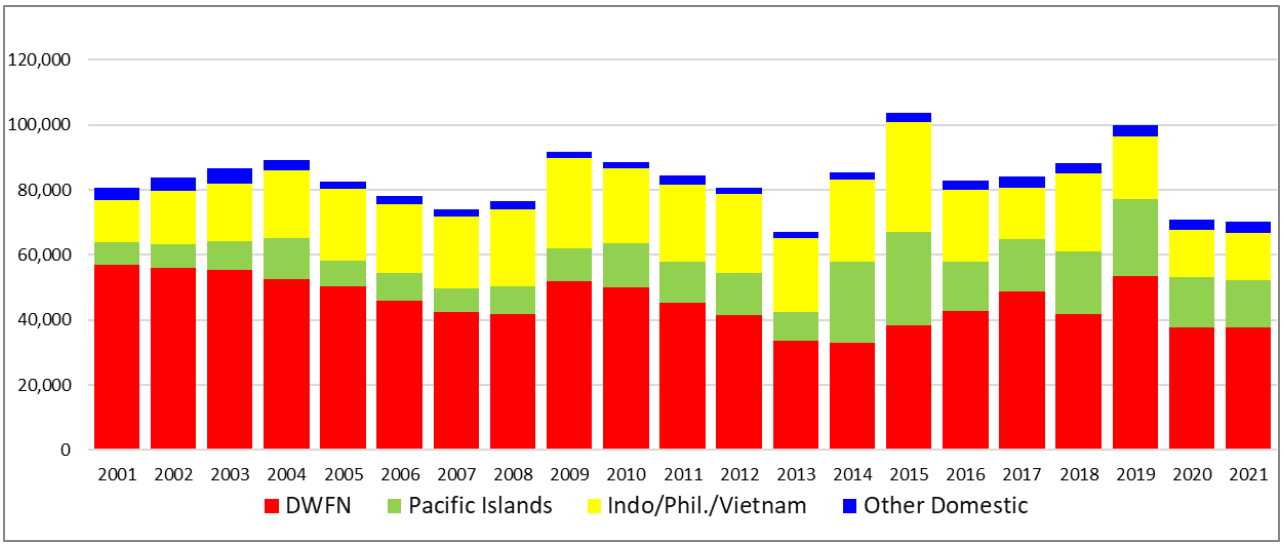

Figure 16. Reported longline catches (metric tonnes) of yellowfin tuna in the WCPFC-CA, by fleet category.

(Refer to NOTES under TABLE 7 above;
Vietnam catch is included)

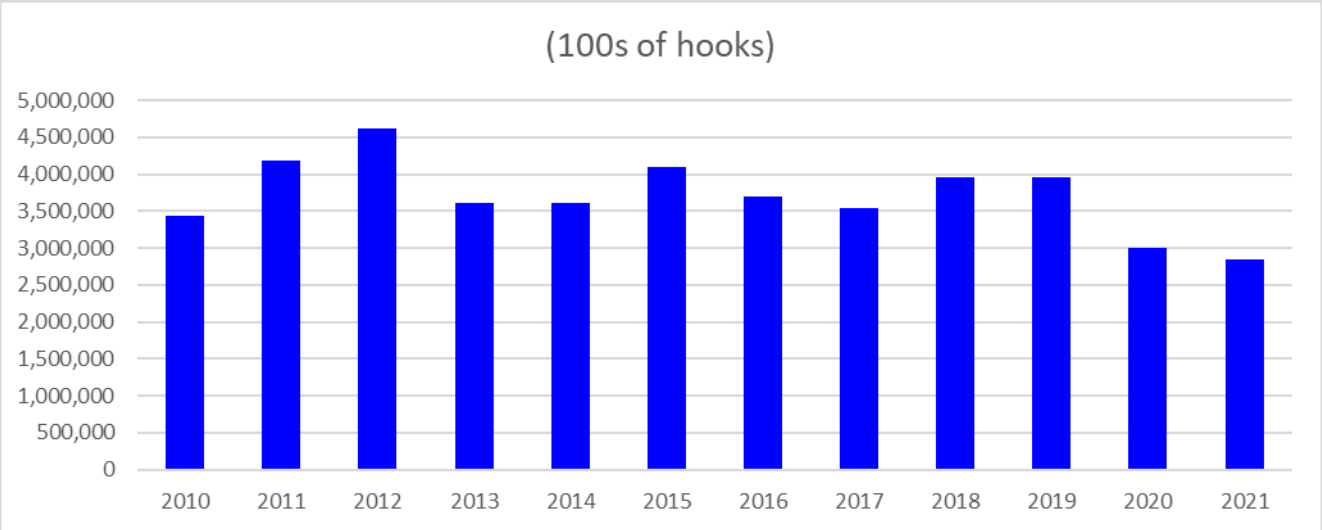

Figure 17. Longline effort (100s of hooks) in the tropical WCPFC LONGLINE fishery (20°N-10°S), 2010-2021.

(Refer to NOTES under TABLE 8 above)

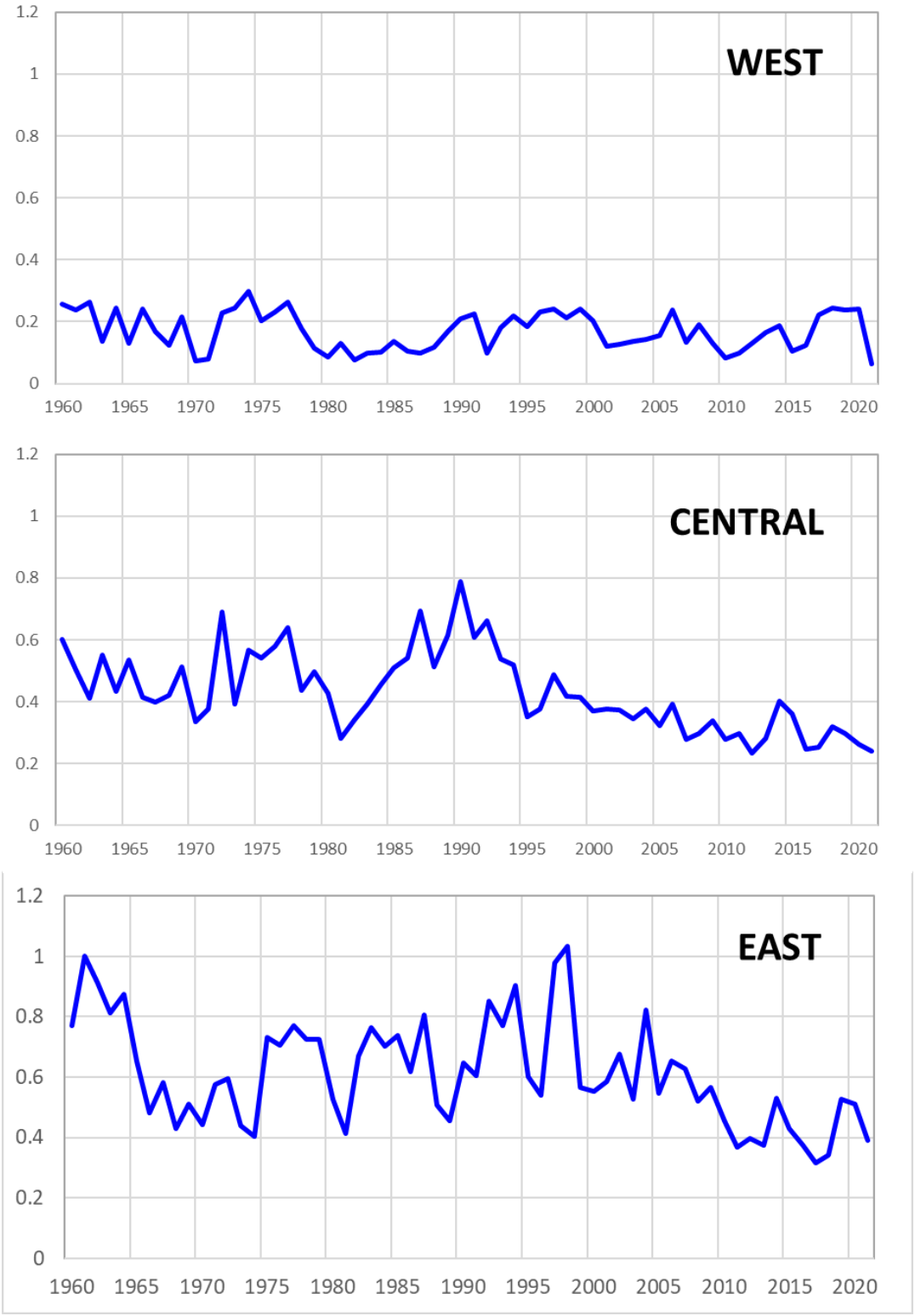

Figure 18. Annual trends in nominal bigeye tuna CPUE in the tropical WCPFC LONGLINE fishery (20°N-10°S)

CPUE in number per 100 hooks
By assessment region

"WEST" – Assessment Region 7: 10°S–20°N, 110°–140°E
"CENTRAL" – Assessment Region 3: 10°S–10°N, 130°–170°E
"EAST" – Assessment Region 4: 10°S–10°N, 170°E–150°W

3. Other Commercial fisheries information

Table 9. Tropical tuna catch estimates for OTHER FISHERIES relevant to the tropical tuna measure

Table 9. Total tropical tuna catch estimates for OTHER COMMERCIAL FISHERIES (excl. Purse seine and Longline) in the WCPFC Statistical Area, relevant to CMM 2018-01.

GEAR	FLAG	Total Catch (MT)			Area Note	Availability of EFFORT data	See NOTE
		CMM 2020-01 limit	2021	Evaluation			
HANDLINE	INDONESIA	...	...	...	*Within EEZ only, excluding AWs*	NO	5
HANDLINE (LARGE-FISH)	PHILIPPINES	*13,343*	*2,893*	**Within Limit**	*Within EEZ only, excluding AWs*	NO	6
POLE-AND-LINE	INDONESIA	41,025	8,125	**Within Limit**	*Within EEZ only, excluding AWs*	NO	
POLE-AND-LINE	JAPAN	114,573	71,772	**Within Limit**		YES	2, 4

Notes:

1. Source: Annual catch estimates; Philippines National Stock Assessment Project (NSAP data); Aggregate logsheet data. 2021 data are provisional.

2. The column labeled “CMM 2020-01" is the maximum value of either (i) the average total skipjack, yellowfin and bigeye tuna catch for 2001-2004, or (ii) 2004.

3. The definition for "Commercial" fisheries, at this stage, includes all fisheries other than purse seine and longline fisheries, until otherwise advised. (Refer to Table 6b.).

4. Advice from Japan -- “Paragraph 9 of CMM 2012-01 provides that this measure applies to all areas of high seas and EEZs in the Convention Area. Therefore this paragraph does not apply to troll fishery, which operate within territorial sea.

- Regarding pole-and-line fishery and purse seine north of 20N fishery JFA ensure that the total effort and capacity of these tuna fisheries shall not exceed the average level for the period 2001-2004 or 2004 under its licensing system.
- Therefore JFA consider fulfilling this requirement.
- JFA submits following information of pole-and-line fishery and purse seine north of 20N fishery as attached. On the other hand JFA does not agree with the Secretariat view to consider non provision of these data as a potential compliance issue because it is not required under this paragraph.
  Effort data (2001-2004 average, 2004 and 2013)
  Catch data (2001-2004 average, 2004 and 2013)”

5. Indonesia has advised that HANDLINE (hook-and-line) vessels that target small-fish at the surface should not be considered in the "Commercial" category since they are artisanal/subsistence fisheries. However, Indonesia can only provide a catch estimate for the combined small-fish (artisanal) and large fish handline fishery and it is not yet possible to differentiate the large-fish handline catch estimate from this combined total. Also, it is not yet possible to separate out the catches of what might be considered the 'commercial component' of the Handline fishery that are relevant to the tropical tuna measure - that is Indonesian waters outside Archipelagic waters (AWs) and Territorial Seas (TS).

6. The large-fish handline catch for the Philippines outside of archipelagic waters and territorial seas has been determined from the proportion of annual tuna catch outside AWs/TS from data collected from Philippines National Stock Assessment Project (NSAP data : 1997-2021), and specifically based on landings by Philippines Fisheries Management Area (FMAs) and Fishing Ground. There is often considerable inter-annual variation in the activity of this fleet inside and outside archipelagic waters, mainly depending on weather and sea conditions.

Table 10. Tropical tuna catch estimates for OTHER FISHERIES deemed exempt from the tropical tuna measure

(excl. Purse seine and Longline) in the WCPFC Statistical Area)

Table 10. Total tropical tuna catch estimates for OTHER FISHERIES (excl. Purse seine and Longline) in the WCPFC Statistical Area, which are exempt from CMM 2018-01 OTHER COMMERCIAL FISHERIES.

GEAR	FLAG	Tuna catch (MT)		Reason for exemption
		2021	Average 2016-2021	
GILLNET	JAPAN	101	101	Less than 2,000 t.
GILLNET	VIETNAM	18,059	32,787	Outside of the WCPFC Convention Area
HANDLINE (LARGE-FISH)	UNITED STATES OF AMERICA	403	453	Less than 2,000 t.
HOOK-AND-LINE (SMALL-FISH)	PHILIPPINES	0	0	Within territorial seas and/or archipelagic waters only
POLE-AND-LINE	AUSTRALIA	0	0	Less than 2,000 t.
POLE-AND-LINE	FIJI	0	0	Less than 2,000 t.
POLE-AND-LINE	FRENCH POLYNESIA	199	251	Less than 2,000 t.
POLE-AND-LINE	KIRIBATI	0	0	Less than 2,000 t.
POLE-AND-LINE	NEW ZEALAND	0	0	Less than 2,000 t.
POLE-AND-LINE	SOLOMON ISLANDS	51	61	Less than 2,000 t.
POLE-AND-LINE	UNITED STATES OF AMERICA	0	0	Less than 2,000 t.
Small scale/artisanal/recreati	AUSTRALIA	0	0	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	FRENCH POLYNESIA	1,065	1,116	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	INDONESIA	37,991	41,977	Within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	JAPAN	1,455	1,351	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	KIRIBATI	4,359	4,359	Within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	NEW ZEALAND	0	0	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	NIUE	3	1	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
Small scale/artisanal/recreati	PHILIPPINES	0	0	Within territorial seas and/or archipelagic waters only
TROLL	AUSTRALIA	0	0	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	CANADA	0	0	Less than 2,000 t.
TROLL	COOK ISLANDS	157	123	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	FIJI	0	0	Less than 2,000 t.
TROLL	JAPAN	3,567	3,446	Within territorial seas and/or archipelagic waters only
TROLL	NAURU	20	15	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	NEW ZEALAND	3	7	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	TOKELAU	51	78	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	TUVALU	348	348	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	UNITED STATES OF AMERICA	912	936	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	VANUATU	115	63	Less than 2,000 t. and within territorial seas and/or archipelagic waters only
TROLL	WALLIS AND FUTUNA	13	11	Less than 2,000 t. and within territorial seas and/or archipelagic waters only

Notes:

1. Source: Annual Catch estimates. 2021 data are provisional.
2. Fisheries with average catches less than 2,000 t of bigeye, yellowfin and skipjack tuna, have been excluded as per CMM 2018-01 and CMM 2020-01 para 51.
3. The definition for "Commercial" fisheries, at this stage, includes all fisheries other than purse seine and longline fisheries, until otherwise advised.
4. Indonesia has advised a range of their small scale/Artisanal fisheries (e.g. troll, small-fish hook-and-line, gillnet) should not be considered in the category "Commercial" Fisheries.
5. The Philippines has advised a range of their small scale/Artisanal fisheries (e.g. troll, small-fish hook-and-line, gillnet, beach seine) operate wholly in their archipelagic waters and/or territorial seas and should not be considered in the category "Commercial" Fisheries.
6. The Indonesia and Philippines catch estimates exclude catches in archipelagic waters. Catches for some other fleets listed here are acknowledged to be in their archipelagic waters and/or territorial seas and will be confirmed with respective member countries (e.g. Kiribati).

4. ANNEX

Table A1. Notes on major recent changes to tables/figures

No.	Table Caption	Notes on major revisions between WCPFC18 and SC18	Notes on major revisions between SC18 and WCPFC19
	ALL TABLES		
Table 1	PURSE SEINE days fished in waters under national jurisdiction and in International waters in the WCPFC-CA.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data
Table 2	PURSE SEINE days fished in international waters in the WCPFC-CA between 20°N and 20°S, by flag, based on available operational data.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data
Table 3	Estimated PURSE SEINE FAD sets undertaken in the tropical fishery of the WCPFC Convention Area (20°N-20°S), by flag, 2001-2016	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data
Table 4	Purse seine tuna catch and effort by set type and species in the WCPFC Convention Area between 20°N and 20°S, excluding domestic purse seine effort in Philippines, Indonesia and Vietnam.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data
Table 5	Annual high seas FAD sets, by fleet, 2015–2021		– Added table to the WCPFC19 paper
Table 6	Reported LONGLINE catches (metric tonnes) of bigeye tuna in the WCPFC-CA, by flag.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data – Table number change
Table 7	Reported LONGLINE catches (metric tonnes) of yellowfin tuna in the WCPFC-CA, by flag.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data – Table number change
Table 8	Longline effort (100s of hooks) in the tropical WCPFC LONGLINE fishery.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data – Table number change
Table 9	Total tropical tuna catch estimates for OTHER COMMERCIAL FISHERIES (excl. Purse seine and Longline) in the WCPFC Statistical Area, relevant to CMM 2018-01.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data – Table number change
Table 10	Total tropical tuna catch estimates for OTHER FISHERIES (excl. Purse seine and Longline) in the WCPFC Statistical Area, which are exempt from CMM 2018-01 OTHER COMMERCIAL FISHERIES.	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data – Table number change
FIGURES	[Figures corresponding to relevant tables above	– Updated to include provisional 2021 data	– Updated to include final version of 2021 data