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SOUTH PACIFIC ALBACORE FISHERY

WCPFC-TCC9-2013-IP08

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**Paper prepared by the Secretariat and SPC-OFP
Previously submitted to SC9: WCPFC-SC9-2013/ GN-IP-04**



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Introduction

This paper was first prepared by the Secretariat for WCPFC8 in March 2012 following a request by Te Vaka Moana at TCC7.

TCC7 Summary Report Para 20: Several CCMs associated with the Te Vaka Moana (TVM) group expressed concern about the expansion of the South Pacific ALB fishery which is vital to the economic development of some members. These CCMs highlighted limits contained in CMM 2009-03 on the number of vessels fishing for albacore south of 20 degrees and noted that as of 2011 CCMs are required to report target and bycatch catch figures for this fishery. These CCMs considered that further strengthening of the CMM may be required. The Secretariat was requested to prepare a paper for WCPFC8 containing all available catch and transshipment data by flag and by zone for South Pacific ALB and highlighting trends since the year 2000 in this fishery.

In September 2012, TCC8 recommended sufficient priority be accorded to the development of a revised CMM on south Pacific albacore at WCPFC9, and FFA members requested that this paper be updated.

TCC8 Draft Summary Report Para 379: FFA members requested that SPC update its analysis which was presented to WCPFC8, for WCPFC9 and then annually for TCC and Commission meetings. Ideally, this paper would include finer scale spatial and temporal information and the inclusion of additional fleets such as the troll fishery.

At WCPFC9, in December 2012, further requests were made in relation to this document:

WCPFC 9 Summary Report Para 328: One CCM asked that the paper prepared by the Secretariat (WCPFC9-2012-IP/07) be updated for SC9, TCC9 and WCPFC10 to show i)

by fleet the number of longline vessels actively fishing south of the equator separated as follows 0-10, 10-20, 20-30, 30+, annually from 2000 to 2012; ii) the tuna species proportions for each longline fleet in these areas; and iii) the seasonal distribution of the longline effort for each fleet south of the equator using Commission VMS data.

Update

The text and descriptions of SPA fishery trends that follow are largely unchanged since the previous papers (latterly WCPFC9-2012-IP-07, 16 November 2012). However, the time series are longer and currently available longline catch estimate data for SPA has been used to update tables and figures, and are reflected within the text. The tables and figures in this paper are based on information available to SPC as of 9th July 2013. Note that the distribution of catch amongst areas may change as more data become available.

Estimated catch of SPA by troll fisheries from 2000 to 2012 is now also included. Incomplete catch data received for the current year are not included in this report.

Transshipment data are much improved and cover the period from the inception of transshipment reporting (July 2010) to date, noting however that transshipment is not fully reported for the most recent months.

Additional information by latitudinal zone, requested at WCPFC9, is complex, and may be interpreted in a variety of ways, hence for the members convenience, the data are posted as excel files annexed to this paper (**GN-IP-04a and GN-IP-04b**).

The 3rd request at WCPFC9 for additional analysis of VMS data can be met, but is time consuming and given the current deadlines, may appear in this document as a revision before SC9, or provided in an updated paper for TCC9.

Data Presented

All data are for the WCPFC Convention Area south of the equator.

Tables 1 and 2 detail longline catch estimates of SPA from 2000 to 2012 by EEZ/High Seas and by flag respectively (data provided by SPC-OFP). Note that minor differences in the total annual catches between the two tables result from rounding errors.

Table 3 details longline catch estimates by EEZ/High Seas and flag combined from 2000 to 2012 (data provided by SPC-OFP).

Tables 4a and 4b detail estimated troll catches of SPA from 2000 to 2012 by EEZ/High Seas and by flag respectively (data provided by SPC-OFP).

Table 5 presents notification of high seas transshipments by month from July 2010 to current (data was provided by the Secretariat (WCPFC Transshipment Events Database)).

Attachment: 1 Examination of the time series of longliner VMS information in the South Pacific (SPC-OFP).

Discussion

Longline

The 2012 annual catch estimate of SPA within the Convention Area is 71,900mt. The average over the period 2000 to 2012 is 57,552 mt, ranging from a low of 33,406 mt in 2000, to a recent high of 75,330 mt in 2010.

High seas catch estimates represent around a third to a half (29%-50%) of the total SPA annual catch, and range from 12,604 mt in 2000, to 28,050 mt in 2002, and 26,664 mt in 2012 (Table 1).

By flag, China and Chinese Taipei have the highest catch estimates of SPA in 2012 (24,811 mt and 11,723 mt respectively) (Table 2).

The Chinese catch is more than double last year's and is the highest annual catch by flag over the reporting period. Most of this increase is due to fishing on the high seas, where the 2012 estimated catch is 17,121 mt compared to 8,334 mt in 2011.

Chinese Taipei SPA catch estimate has dropped somewhat from 2011 12,483 mt to 11,723 mt in 2012. High seas catch estimates for Chinese Taipei dropped from 2011 4,403 mt to 2,548 mt in 2012, indicating that higher proportion of their catch of SPA is taken within EEZs. Notably in 2012, we see the first report (within the reporting period) for Chinese Taipei in the Tonga EEZ with an estimated catch of 1345 mt.

As noted in earlier reports, the trends in the SPA annual catch estimates for China and Chinese Taipei vessels over the past decade may be influenced by changes in targeting from bigeye tuna to albacore tuna, and vice-a-versa.

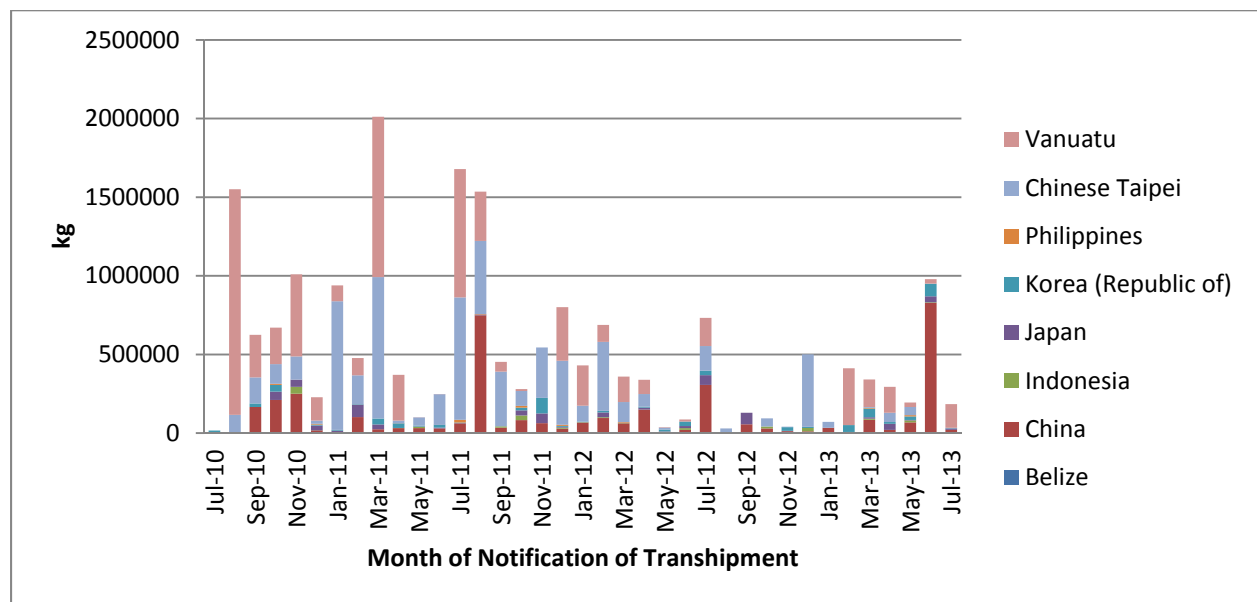
The catch estimate for SPA in the Cook Islands EEZ has increased steadily over the reporting period, with a large increase from 2011 to 2012 from 6,577 mt to 10,775 mt. This is the highest catch in an EEZ for 2012, closely followed by the Solomon Islands EEZ catch estimate of 10,230 mt. The Solomon's Islands EEZ catch has been declining in recent years, from 20,876 and 15,333 mt in 2012 and 2011, respectively. The estimated catches in these two EEZs represent around 30% of the total annual estimated catch of SPA in 2012. At the time of this analysis there is no report of Solomon Islands flag catches of SPA in the Solomon's EEZ in 2012.

The transshipment data cover the period July 2010 to date and in general represents high seas transshipments only – however ambiguity in the regulations has resulted in some in-zone transshipment being reported to the Commission. Fluctuation in reported transshipments may

reflect logistical/operational factors rather than fishing activity. It is noted that historically SPA would have been offloaded directly to canneries (e.g. Pago Pago, American Samoa, or Levuka, Fiji) rather than being transshipped. Although Figure 1 below appears to indicate a decline in transshipment notifications, perhaps attributed to an increase in transshipments within EEZs, there is a notable spike for June 2012 of 979 mt, due to high reported transshipments by China of 827 mt.

Over the past decade, SPA annual catch estimates have increased for some Pacific Island fleets through domestication/joint ventures (e.g. Tuvalu flagged vessels reported catches of SPA for the first time in 2011, and Kiribati flagged vessels reported their first catches of SPA in 2010 and 2011), but continue to decline for others (e.g. Samoa)

Figure 1: Reported transshipment by flag and month (July 2010 to date)



Source: WCPFC Transshipment Events Database (9 July 2013)

Trolling

Two flag states report trolling throughout the period 2000 to 2012, namely the USA and New Zealand. Since 2005 this activity has been reported only in the New Zealand EEZ and on the high seas (Table 4a). Average catch estimates for the period 2005 to 2012 for the high seas and the New Zealand EEZ are 382 mt and 2,391 mt respectively, and the latest catch estimates (2012) are 198 mt for the high seas and 2,727 mt for the New Zealand EEZ.

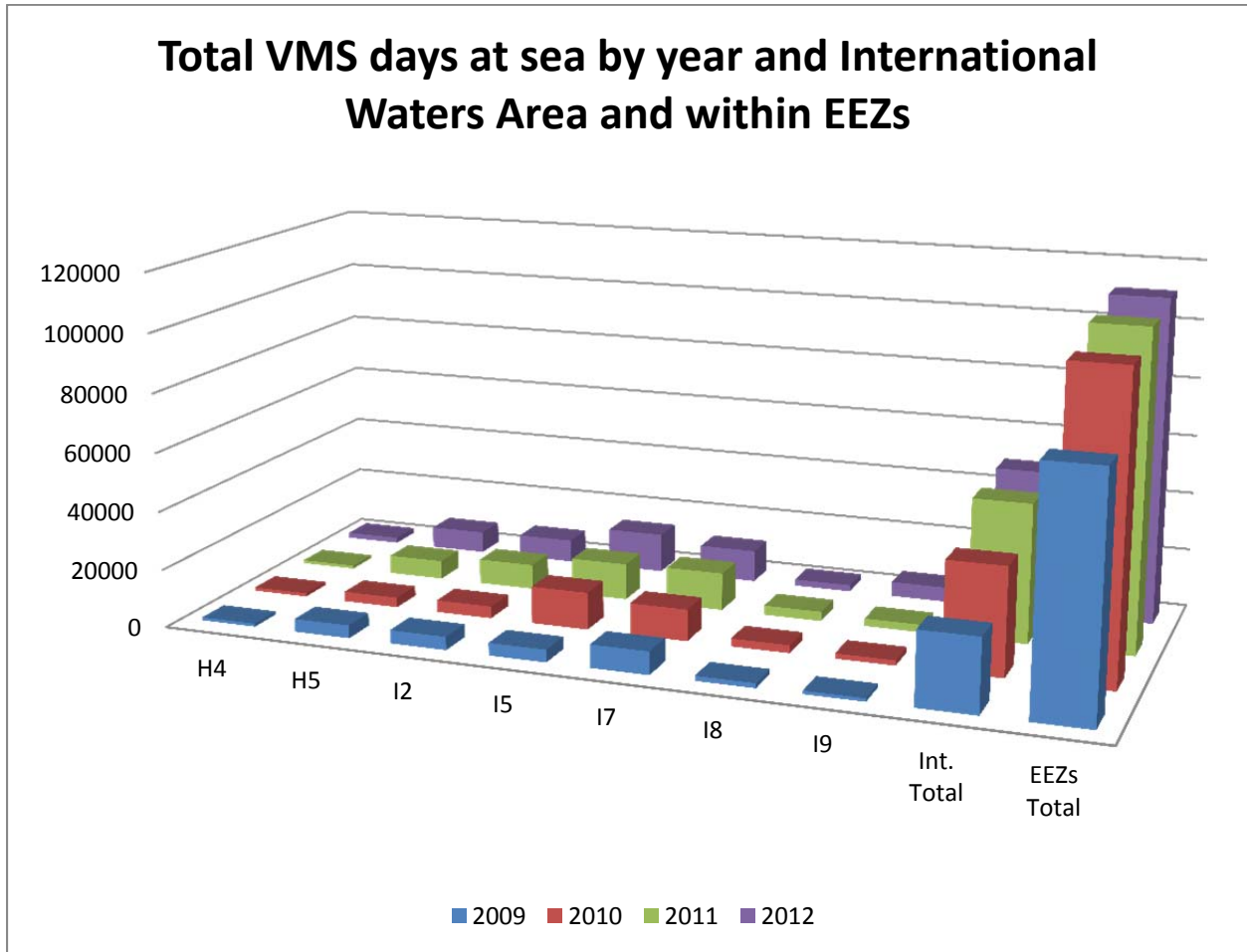
VMS

Longline VMS data analysed by SPC (Attachment 1) shows a clear increase in longliner activity within EEZs and on the high seas from 2009 - 2012. As indicated in the explanatory text, the data and analysis is subject to a number of caveats. For example the large increase of longline VMS activity within EEZs from 2009-2012 is partly attributable to longline activity in the tropical areas of EEZs that is not targeted at South Pacific albacore.

Table A1 of Attachment 1 shows an increase in longliner VMS days both in EEZs and in international waters, with a greater rate of increase in international waters. The proportion of longliner VMS days in international waters versus EEZs increased from 25.0% in 2009 to 30.7% in 2011, and remains at 30.7% in 2012.

Figure 2 below visualizes the data for international waters presented in Table A2 of Attachment 1. It presents increases in the number of longliner VMS days at sea by international waters area and for comparative purposes the total VMS days at sea by year and within EEZs is included. Reduced activity in 2012, compared to 2011, is seen in areas I2, I7 and I8, all other areas and international waters show an increase in activity, with the greatest activity shown in area I5 (see Fig A2 Attachment 1 for a map of the international waters areas).

Figure 2: Total VMS days at sea by year and International Waters Area and within EEZs



Source: Attachment 1, Tables A1 and A2 (provided by SPC-OPF)

Table 1: Annual south Pacific ALBACORE longline catch estimates by EEZ and High Seas, 2000–2012

Notes: Available operational and aggregate logsheet data raised to annual catch estimates. “EEZ” are approximate 200-mile boundaries; “High seas” is the high seas in the WCPFC Convention Area, south of the equator. Allocation of FLAG catch to EEZ may be approximate due to the lack of operational logsheet data in some cases.

EEZ/ High Seas	ANNUAL SOUTH PACIFIC ALBACORE LONGLINE CATCH ESTIMATES BY EEZ AND HIGH SEAS												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
American Samoa	625	3191	5175	3113	1905	2864	4101	4432	2827	3167	2901	1959	2488
Australia	358	553	503	389	579	616	2525	1866	1256	1471	706	627	529
Cook Islands	NA	9	1090	1828	2156	2280	2006	3629	2607	5694	5902	6577	10775
Fiji	5390	8037	6964	4579	6466	5995	6061	3829	4876	6009	4259	3799	4854
High Seas	12778	22189	28071	25722	23989	22712	18405	15263	20865	27837	23996	18295	26664
Jarvis (USA)	NA	NA	NA	51	NA	NA	NA	NA	NA	NA	NA	NA	0
Kiribati	268	741	758	644	833	241	303	776	254	710	971	533	1057
Non-attributed non-high seas area	4	4	1	19	11	13	4	5	2	24	6	4	9
New Caledonia	885	1015	1160	1087	1367	1579	1348	1312	1484	1611	1923	1732	1700
Norfolk Island	2	1	1	3	8	6	1	0	NA	0	0	NA	NA
Niue	0	3	40	9	7	55	259	217	337	238	220	NA	NA
New Zealand	1334	2593	2522	2937	1246	602	496	277	382	422	460	418	267
French Polynesia	3463	4261	4555	3813	2210	2255	2849	3924	3064	3560	3482	3223	3590
Papua New Guinea	159	124	142	857	1681	2256	1860	1961	535	964	898	370	811
Solomon Islands	339	170	1073	931	2228	2999	6906	4885	8426	11634	20876	15333	10230
Tokelau	NA	18	190	98	128	31	NA	252	144	26	35	121	124
Tonga	858	1074	846	319	197	256	405	354	221	124	57	41	1393
Tuvalu	224	117	186	52	237	299	8	317	159	312	186	343	737
Vanuatu	2524	2766	2635	2799	3682	6913	8303	5663	6416	6160	5279	7704	4630
Wallis et Futuna	NA	1	NA	NA	NA	34	NA	NA	NA	2	NA	3	3
Western Samoa	4068	4824	4207	2278	1235	1263	2113	3126	2345	2823	2536	1420	2039
Totals	33279	51691	60119	51528	50165	53269	57953	52088	56200	72788	74693	62502	71900

Table 2: Annual south Pacific ALBACORE longline catch estimates by Vessel Nation, 2000–2012

Notes: Available operational and aggregate logsheet data raised to annual catch estimates.

By Flag	ANNUAL SOUTH PACIFIC ALBACORE LONGLINE CATCH ESTIMATES BY FLAG												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Australia	381	591	553	490	667	743	2591	1925	1277	1523	745	653	572
Belize	194	4050	1472	885	353	7	0	164	7	26	10	105	32
Cook Islands	0	2	490	1358	1869	2371	2223	2644	2224	1551	2423	2182	2614
China	2030	2495	2704	6003	5828	4026	7117	5424	15061	20115	12951	11874	24811
Spain	0	0	0	0	2	2	0	0	33	35	6	3	2
Fiji	6065	7971	8026	6881	11290	11504	11802	7145	9613	12515	9247	8166	10200
Federated States of Micronesia	0	0	0	0	0	0	0	0	0	0	1	1	42
Japan	2254	3358	2637	3147	4010	4652	3371	2806	2435	2880	2464	2136	2194
Kiribati	0	0	0	0	0	0	0	0	0	0	66	177	43
Korea	591	1728	2850	1394	743	2167	787	1035	1136	1142	907	443	830
New Caledonia	895	1020	1165	1111	1468	1590	1358	1324	1506	1649	1939	1736	1715
Niue	0	0	0	0	0	55	213	216	337	154	97	0	0
New Zealand	1344	2614	2545	2971	1248	602	496	357	382	422	460	418	266
French Polynesia	3473	4261	4557	3846	2218	2426	2918	3957	3068	3560	3483	3225	3594
Papua New Guinea	159	124	142	857	1681	2256	1811	1598	463	906	883	305	811
Portugal	0	0	0	0	0	0	0	0	0	0	0	4	1
Solomon Islands	224	54	121	95	207	0	0	0	0	0	9391	9391	0
Tonga	862	1268	1189	611	182	283	414	390	220	124	57	34	20
Tuvalu	0	0	0	0	0	0	0	0	0	0	0	168	168
Chinese Taipei	9670	12809	16063	12190	8313	8616	8593	8599	7580	11477	13751	12684	11723
United States of America	1070	3872	6104	4258	2614	3058	4146	5298	3690	3937	4081	2752	3469
Vanuatu	0	655	5279	3181	6239	7648	8001	6091	4825	7957	9201	4629	6751
Wallis et Futuna	0	0	0	0	0	0	0	0	0	0	0	3	3
Western Samoa	4067	4820	4223	2253	1233	1263	2113	3113	2342	2816	2529	1415	2038
Totals	33279	51692	60120	51531	50165	53269	57954	52086	56199	72789	74692	62504	71899

Table 3. Annual south Pacific ALBACORE longline catch estimates by EEZ and Vessel Nation, 2000–2012

Notes: Available operational and aggregate logsheet data raised to annual catch estimates. “EEZ” are approximate 200-mile boundaries; “High seas” is the high seas in the WCPFC Convention Area, south of the equator. Allocation of FLAG catch to EEZ may be approximate due to the lack of operational logsheet data in some cases.

EEZ/high seas	Flag	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
American Samoa	CK			1	11		1	23	5		2	2		
	TW						13							
	US	625	3191	5173	3102	1905	2849	4078	4428	2827	3159	2890	1959	2488
	VU										6	9		
Australia	AU	358	553	503	389	579	616	2525	1866	1256	1471	706	627	529
Cook Islands	BZ				70									
	CK		2	488	1333	1866	2265	2006	2376	1918	1361	2205	2178	2612
	CN												147	2957
	FJ											105	307	309
	FM													41
	KI												147	38
	CT			6	0	0		0	966	205	1784	791	1079	786
	US		7	578	397	280	16		288	484	585	871	549	554
VU				15	9					1964	1930	2170	3478	
Fiji	CK						15							
	CN			77	10	92	108	38	78	152	385	108	300	392
	FJ	4980	7317	6243	4356	6301	5869	6018	3662	4709	5616	4139	3374	4461
	KR											11	69	
	NZ								80					
	CT	409	532	335	93	39	2	1	9	13	8	0	5	
	US						1							
VU		187	309	120	33	1	6		2		1	51	1	
High Seas	AU	22	37	48	99	80	121	65	58	21	52	39	26	43
	BZ	31	2800	1472	805	2	7	0	19	0	2			
	CK			0	14	3	6	82	157	180	30	61	4	2
	CN	2029	2413	2509	5652	5365	2582	5176	4468	12450	15062	9722	8334	17121
	ES					2	2	0	0	33	35	6	3	2
	FJ	363	221	721	1287	2186	2263	2135	1042	1348	2126	1611	1882	2650
	FM	0	0		0	0	0	0	0	0	0	1	1	0
	JP	2069	3170	2466	2911	3983	4531	2086	1764	1455	1648	951	1673	1380
	KI												17	1
	KR	284	1070	1837	1095	444	1787	308	452	419	580	531	246	477
	NC	8	1	4	23	94	10	8	12	22	38	16	4	14
	NU							2						
	NZ	10	21	23	35	2	0	0	0	0	0	0		
	PF	36		2	20	8	138	69	33	4		1	2	4
	TO	4	194	344	293	3	27	9	36					
CT	7479	11339	14433	11355	6723	5337	3214	2565	1437	3043	4198	4403	2548	
US	444	648	153	573	291	161	68	317	263	157	278	192	402	
VU		276	4058	1563	4803	5740	5183	4339	3233	5062	6581	1504	2018	
WS														1
Jarvis	US				51									
Kiribati	BZ					351								32
	CN	1	82		48	9	0	0	0	1	93	134	190	249
	FJ												15	47
	JP	42	83	44	40	27	11	2			10	1	13	17
	KI	0	0		0					0		66	13	4
	KR	224	576	692	262	234	134	131	186	124	144	248	97	232
	CT	1	0	22	64	116	28	14	354	48	56	12	153	402
	US					1								2
VU				230	96	69	156	236	82	408	511	52	73	

Table 4a. Annual south Pacific ALBACORE troll catch estimates by EEZ, 2000–2012

Notes: Available operational and aggregate logsheet data raised to annual catch estimates. “EEZ” are approximate 200-mile boundaries; “High seas” is the high seas in the WCPFC Convention Area, south of the equator.

By EEZ	ANNUAL SOUTH PACIFIC ALBACORE TROLL CATCH ESTIMATES BY EEZ AND HIGH SEAS												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
High Seas	2768	2309	1503	2262	1336	665	708	325	151	237	307	471	198
New Zealand	3336	2736	3012	3721	3212	2855	2043	1736	3352	1794	1832	2787	2727
Total	6104	5047	4517	5984	4551	3520	2751	2061	3503	2031	2139	3258	2925

Table 4b. Annual south Pacific ALBACORE troll catch estimates by Flag, 2000–2012

By flag	ANNUAL SOUTH PACIFIC ALBACORE TROLL CATCH ESTIMATES BY FLAG												
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
AU	0	2	2	1	3								
CK	335	202	166	688	376	89	121	53					
NZ	3336	2736	3012	3721	3212	2855	2043	1736	3352	1794	1832	2787	2727
US	2433	2107	1337	1574	960	576	587	272	151	237	307	471	198
Total	6104	5047	4517	5984	4551	3520	2751	2061	3503	2031	2139	3258	2925

Table 5. High Seas transshipment data for SPA, by flag and month from July 2010

Notes:

1. The requirement to report (within 15 days of transshipment) high seas transshipment commenced in July 2010,
2. The data refer to high seas transshipments, but a proportion of the catches will likely have been caught within EEZs.
3. Weights are in kg.

Flag	2010					
	Jul	Aug	Sep	Oct	Nov	Dec
Belize					2,837	
China			166,000	210,668	247,192	17,091
Indonesia					44,170	869
Japan		900		53,543	45,937	30,000
Korea (Republic of)	16,984		22,303	41,890		6,389
Philippines				7,500		4,848
Chinese Taipei		115,000	165,552	125,298	147,809	20,582
Vanuatu		1,435,000	270,600	232,293	521,630	148,835
Total	16,984	1,550,900	624,455	671,192	1,009,575	228,614

Flag	2011											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Belize							710					
China	5,073	101,989	24,854	31,588	31,987	29,524	61,905	748,608	34,656	82,198	63,458	28,013
Indonesia				794	8,277				8,322	29,668		7,220
Japan	10,850	79,731	30,354		1,850	5,777	822	5,800		32,364	62,036	4,687
Korea (Republic of)	4,660	3,017	38,109	29,416	5,622	16,595	3,678		1,225	18,124	98,599	6,276
Philippines				400		500	17,303	2,284		10,346		6,723
Chinese Taipei	818,356	182,858	898,650	17,416	52,060	194,711	778,188	465,695	346,645	94,959	320,851	406,940
Vanuatu	100,000	110,000	1,020,165	290,970	597	700	816,794	313,038	62,000	12,857		341,175
Total	938,939	477,595	2,012,132	370,584	100,393	247,807	1,679,400	1,535,425	452,848	280,516	544,944	801,034

Flag	2012											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Belize							841					
China	67,701	95,807	61,927	149,477	8,602	20,149	305,884		56,467	29,221	12,940	11,276
Indonesia	1,894	4,820	1,900			11,505				13,000		21,770
Japan		31,016	1,774	12,999	1,575	13,449	61,858	2,000	72,544		1,771	
Korea (Republic of)	3,777	9,539	496	5,454	12,710	28,564	27,994				23,146	6,723
Philippines			4,684									
Chinese Taipei	101,051	438,492	127,178	80,921	12,089		156,644	27,721		52,045	3,131	461,336
Vanuatu	256,233	108,000	161,242	90,280	3,063	13,000	179,900					
Total	430,656	687,674	359,201	339,131	38,039	86,667	733,121	29,721	129,011	94,266	40,988	501,105

Flag	2013						
	Jan	Feb	Mar	Apr	May	Jun	Jul
China	33,297	7,376	84,850	20,242	68,622	827,151	20,457
Indonesia			6,891	286	12,201	4,300	
Japan			9,481	38,422	3,100	39,089	9,424
Korea (Republic of)		43,385	54,721	10,978	22,026	78,852	2,000
Philippines			4,959		7,982		
Chinese Taipei	37,723		5,000	59,423	52,168	1,500	2,000
Vanuatu		361,951	175,489	165,000	28,228	28,496	150,000
Total	71,020	412,712	341,391	294,351	194,327	979,388	183,881

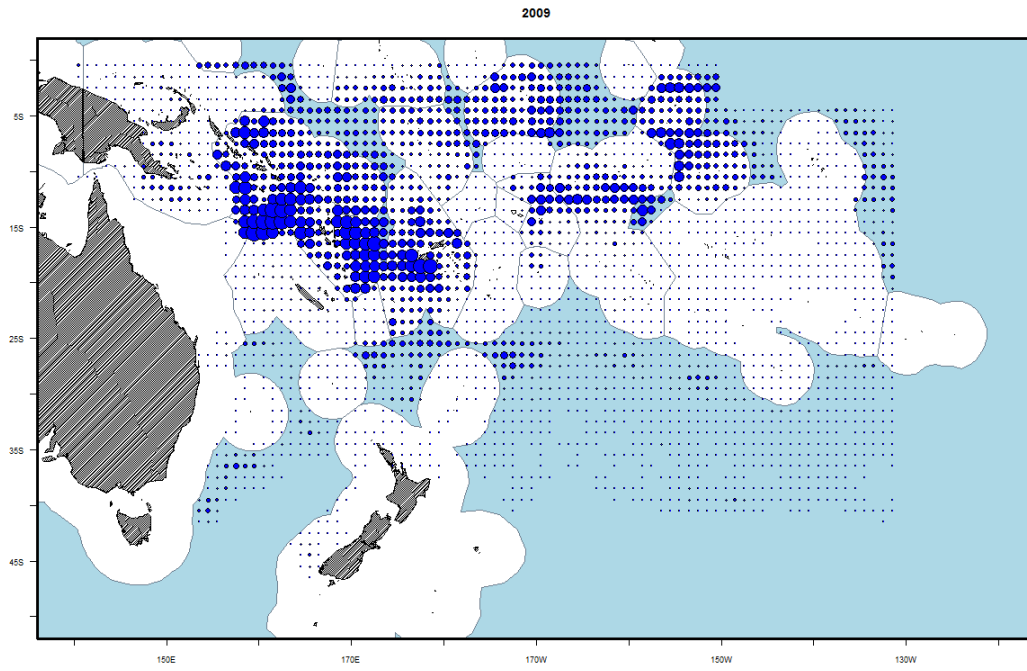
Attachment 1

Examination of the time series of longliner VMS information in the South Pacific

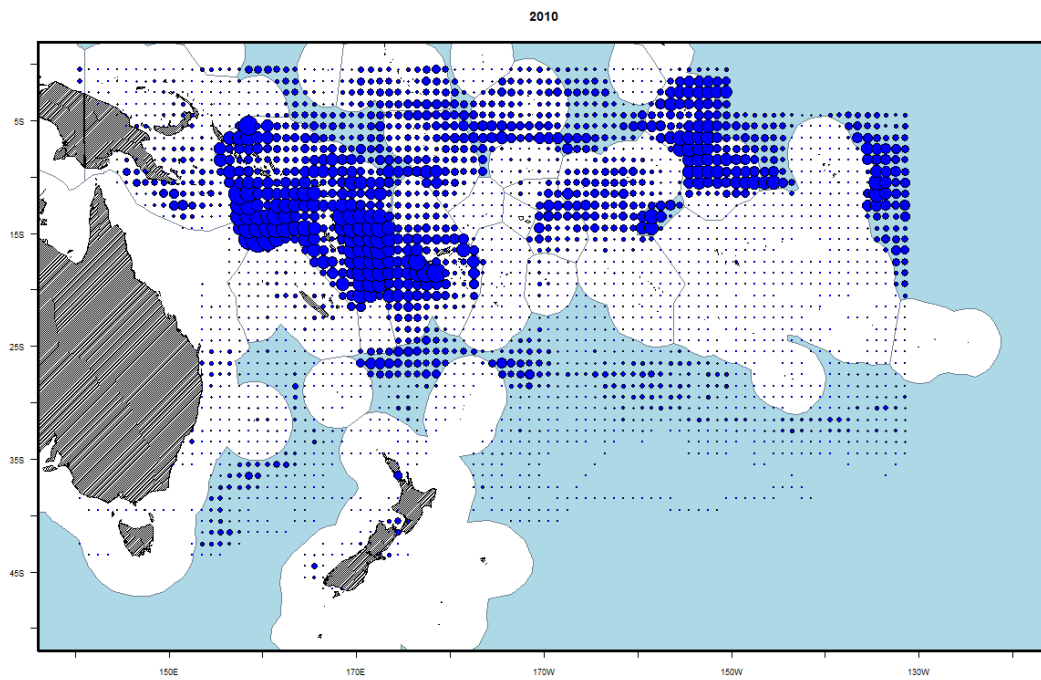
This analysis summarises the longline VMS information available to SPC through the FFA and WCPFC over the period 2009-2012, by geographic region of the South Pacific. Effort in that database corresponds to days at sea (i.e. includes fishing and transiting). Please note:

- This analysis uses annual VMS data available up to and including December 2012;
- Effort represents total longline effort, not just that targeted at South Pacific albacore;
- VMS effort presented for EEZs includes that in archipelagic waters;
- Effort data for some countries (e.g. those with domestic longliners not on FFA VMS) will not be included within EEZ patterns;
- Effort for some countries (e.g. New Caledonia; French Polynesia) may be incomplete;
- Some trends may result from improved VMS coverage of vessels over time;
- EEZ effort excludes the Indonesian EEZ;
- High seas areas for the South Pacific areas are (Figure A2):
 - H4 = International waters between Tuvalu, Phoenix and Tokelau
 - H5 = International waters between Phoenix and Line groups
 - I2 = Doughnut hole between FSM, Solomon Islands, Kiribati, RMI, Nauru and Tuvalu
 - I5 = International waters between Phoenix and Line groups
 - I7 = high seas area to the east of Australia and New Zealand
 - I8 = high seas pocket between Fiji and Vanuatu
 - I9 = high seas pocket between the Cook Islands and French Polynesia

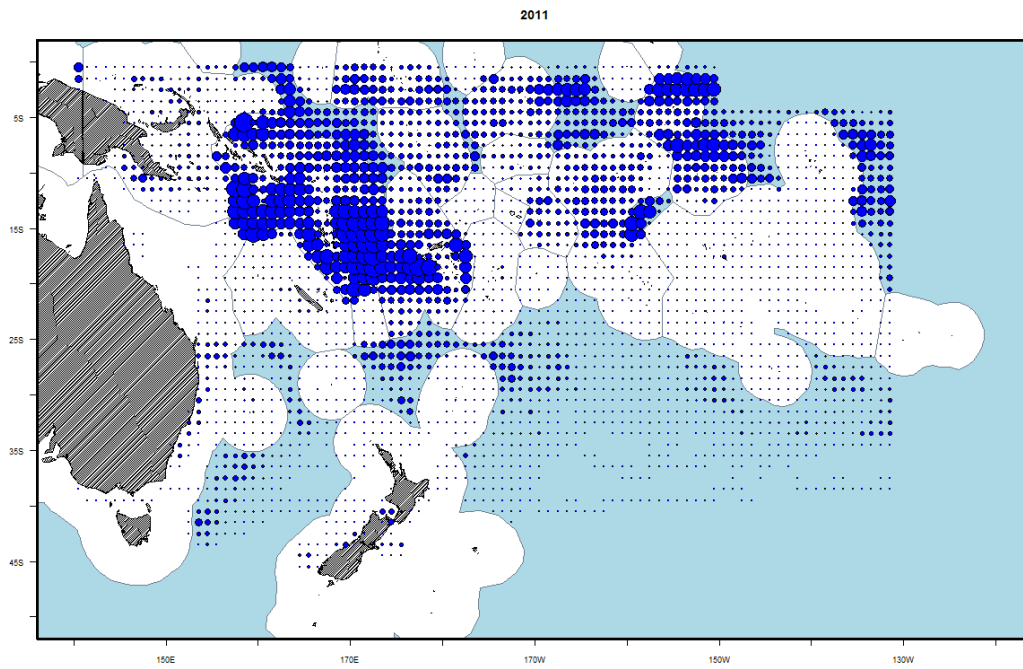
2009



2010



2011



2012

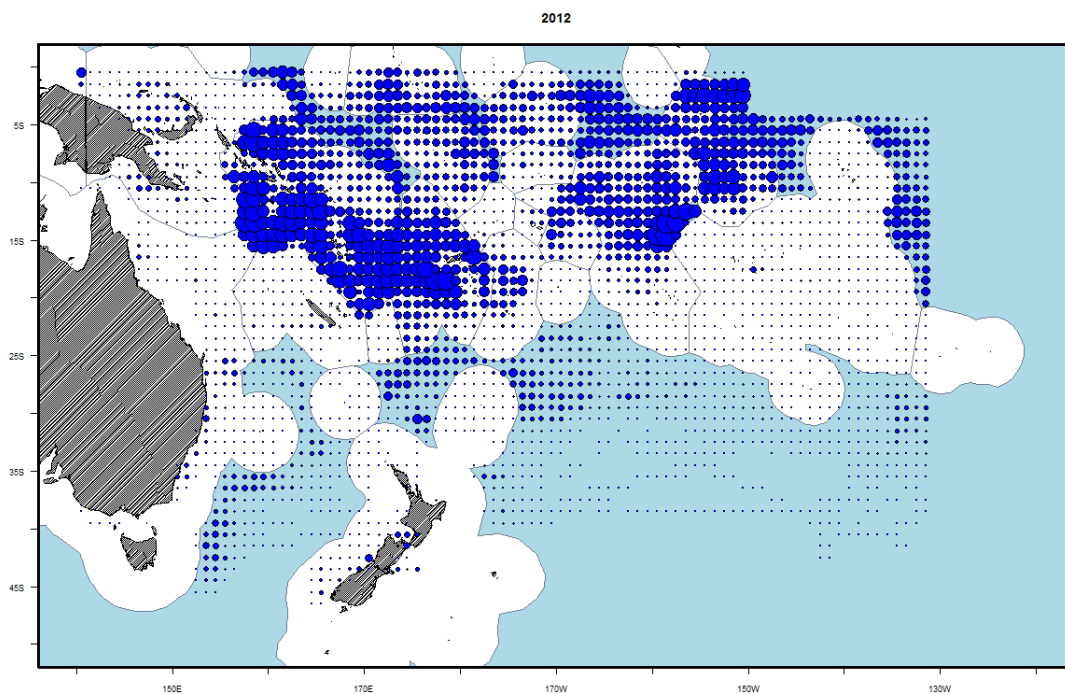


Figure A1. Distribution of longline VMS days at sea in south Pacific EEZs and International Waters at 1°x1°. Max circle size = 1,266 days.

Table A1. Total VMS days at sea by year and geographic area

	2009	2010	2011	2012
EEZ	80658	102984	108033	110950
International waters	25012	36837	47655	49107
Total	105670	139820	155688	160057
% EEZ	76.3	73.7	69.4	69.3
%IW	23.7	26.3	30.6	30.7

Table A2. Total VMS days at sea by year and International Waters area (see Figure A2 for details)

International Waters Code	2009	2010	2011	2012
H4	1055	1172	1109	1901
H5	4432	3392	6438	7486
I2	4550	4123	8641	7896
I5	4281	12798	12583	13567
I7	7886	10873	13007	11012
I8	1654	2700	3273	2215
I9	1154	1778	2604	5030
TOTAL	36837	47655	49107	50300

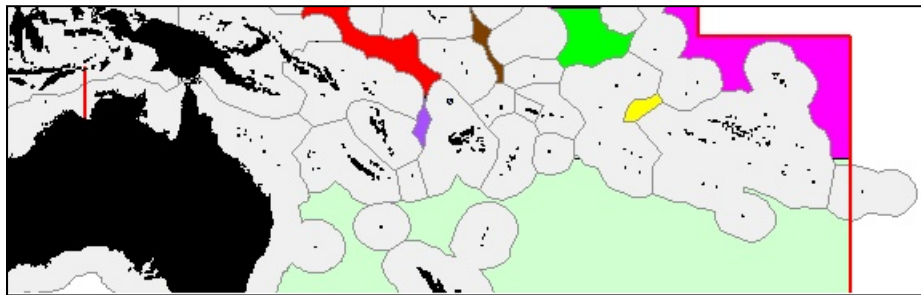


Figure A2. Map of International Waters in the southerly WCPFC-CA

Key:

Code	Area	Colour
H4	International waters between Tuvalu, Phoenix and Tokelau	Brown
H5	International waters between Phoenix and Line groups	Bright green
I2	Doughnut hole between FSM, Solomon Islands, Kiribati, RMI, Nauru and Tuvalu	Red
I5	International waters between Phoenix and Line groups and east of Line group	Pink
I7	High seas area to the east of Australia and New Zealand	Light green
I8	High seas pocket between Fiji and Vanuatu	Purple
I9	High seas pocket between the Cook Islands and French Polynesia	Yellow

