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**ANNUAL REPORT TO THE COMMISSION
PART 1: INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS**

WCPFC-SC9-AR/CCM-04 (Rev 1)

COOK ISLANDS



Ministry of Marine Resources
GOVERNMENT OF THE COOK ISLANDS

WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

Ninth Regular Session of the Scientific Committee

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COOK ISLANDS
Annual Fisheries Report

Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the Commission by 30 April 2013.	YES
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ABSTRACT

In zone effort increased in 2012 in comparison to previous years, almost all fishing activity was carried out within the Western Central Pacific Fisheries Commission – Convention Area and south of the equator. Total catch within the WCPFC-CA was 16,800mt, with 1,376mt caught beyond national jurisdiction. Albacore accounts for 54.2% (9117.33mt) of total catches (National Fleet and Non-CK Flagged vessels) within the Convention Area. Bigeye tuna catches totalled 3,72mt (~20%) within the Convention Area followed by yellowfin with a total of 1,943mt (~12%). Wahoo is the most dominant catch of by-catch non-target species (81mt) followed by oilfish (17.9mt).

No vessels carried out marlin specific targeting, and all catches were taken as by-catch in the albacore fishery. Blue marlin, striped marlin, and black marlin catches totalled respectively.

Total shark catch was 77.8mt. In late 2012, the Cook Islands EEZ became a complete shark sanctuary prohibiting the retention of any sharks or shark parts on board. Noting this development, it is expected that retained shark catches will decrease in 2013. No bird or turtle interactions were reported and the only cetacean interactions recorded were depredation.

Overall, 70 fishing vessels were licenced by the Cook Islands in 2012, with seventeen Cook Island flagged vessels and seventeen Chinese flagged chartered vessels that comprised the National Fleet.

ANNUAL FISHERIES INFORMATION

Background

Cook Islands tuna fishery currently consists solely of longline fishing vessels targeting tuna and billfish, with some artisanal catches and historical troll catch. The majority of the activity is concentrated in the Northern Cook Islands waters, in the area north of 15°S latitude.

Albacore is the main target species for vessels operating out of Pago Pago, American Samoa. This catch is mostly unloaded for the canneries. These vessels may also unload some by-catch species in Apia, Western Samoa and in Rarotonga, Cook Islands for the domestic market, or export via local Cook Island agents.

Two small, locally based vessels operate domestically out of Rarotonga and target a range of species that caters mainly for the local demand. These vessels are all below 20m LOA and 50mt GRT.

In late 2011 and right through 2012, a bigeye and swordfish exploratory fishing program was introduced. These chartered distant water fishing vessels fished in the northern most part of the Cook Islands EEZ and in the WCPFC High Seas, making regular transshipments at sea. These vessels were chartered by the Cook Islands government and so all catch associated catch is attributed to the Cook Islands.

Catch and Effort Trends

Table 1a. Annual catch and effort estimates for the National Longline Fleet in the WCPFC Convention Area, for tuna and billfish species, 2012 – 2008. (2012 operational logsheet data was raised using unloading's and data for 2011 – 2008 is un-raised.)

Year	Effort (Hhks)	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO	TOTAL
2012	114,079	2757.0	1624.1	692.52	307.65	-	36.96	92.65	28.46	140.15	5679.6
2011	157,924	3,799.1	663.5	1,368.4	73.2	-	12.5	122.7	10.4	31.1	6,080.2
2010	133,095	4,213.7	384.2	636.0	68.0	0.2	83.1	10.8	15.6	38.7	5,504.1
2009	146,095	5,495.5	566.8	574.9	119.0	-	49.5	12.7	13.5	25.9	6,857.8
2008	84,533	2,878.1	374.0	300.3	65.8	-	36.5	11.4	18.9	22.6	3,707.2

The total National Fleet¹ catch of tuna and billfish species in the Convention Area decreased from 2011 levels, with only 2757mt of albacore; 1624mt of bigeye and approximately 700mt of yellowfin (Table 1a). Increased bigeye catches in 2012 may be attributed to the targeting of bigeye from chartered vessels. A breakdown of National Fleet catches within and beyond national jurisdiction is outlined below (Table 1b).

Overall vessel in-zone effort increased in 2012 in comparison to previous years. Almost all fishing activity was carried out within the WCPFC-Convention Area, south of the equator, with only a small proportion of catch from the chartered vessels in the north pacific high seas. Approximately 39.2 million hooks were deployed within the Cook Islands EEZ with a total catch of 15,242mt in zone and 1,376mt caught beyond national jurisdiction; a total of 16,800mt within the WCPFC-CA.

¹ National Fleet is defined as all CK Flagged vessels and charter vessels

Total catch (National Fleet and Non-CK Flagged vessels) of albacore within the entire WCPFC-CA is 9117.33mt with 8833.3mt of this from the CK EEZ (Table 1c). Albacore accounts for 54.2% of total catches within the Convention Area. Bigeye tuna catches totalled 3,724mt (~20%) within the Convention Area followed by yellowfin with a total of 1,943mt (~12%) (Figure 2), which follows an opposite trend to that of 2011. Wahoo is the most dominant catch of by-catch non-target species (81mt) followed by oilfish (17.9mt).

Four of the chartered exploratory vessels were licenced to specifically target swordfish within the CK EEZ and WCPO high seas. Significantly higher swordfish catches in 2012 (140.2mt) by the National Fleet may be attributed to this. No vessels carried out marlin specific targeting, and all catches were taken as by-catch in the albacore fishery. Blue marlin, striped marlin and black marlin catches totalled 140mt, 21.5mt and 56mt, respectively (Table 2).

Catch and Effort Estimates

Table 1b. Annual catch estimates for the National Longline Fleet within and beyond national jurisdiction, for tuna and billfish species in 2012. Operational logsheet data was raised using unloading's data.

Area	Effort (Hhks)	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO	TOTAL
CK EEZ	114,080	2490.33	1128.72	563.44	294.23	-	31.80	74.35	21.42	67.87	4672.16
Beyond CK EEZ	34,722	266.74	495.47	129.08	13.43	-	5.15	18.30	7.04	72.28	1007.48

Table 1c. Annual catch estimates for all licenced vessels licenced to fish within the Cook Islands EEZ, for tuna and billfish species in 2012. Operational logsheet data was raised using unloading's data.

Vessels	Effort (Hhks)	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO	TOTAL
All	391,921	8833.30	2767.88	1805.18	770.00	-	49.03	486.37	58.39	204.53	14,974.7

Table 2. Annual un-raised catch estimates for the National Longline Fleet in the WCPFC Convention Area for non-target and by-catch species (including sharks) for 2012.

2012	SSP	SFA	DOL	LAG	OIL	WAH	BSH	FAL	OCS	MAK	THR	SHK	OTH
	1.69	3.02	6.13	6.82	6.15	62.81	24.20	0.824	0.175	3.305	0.716	48.64	362.7

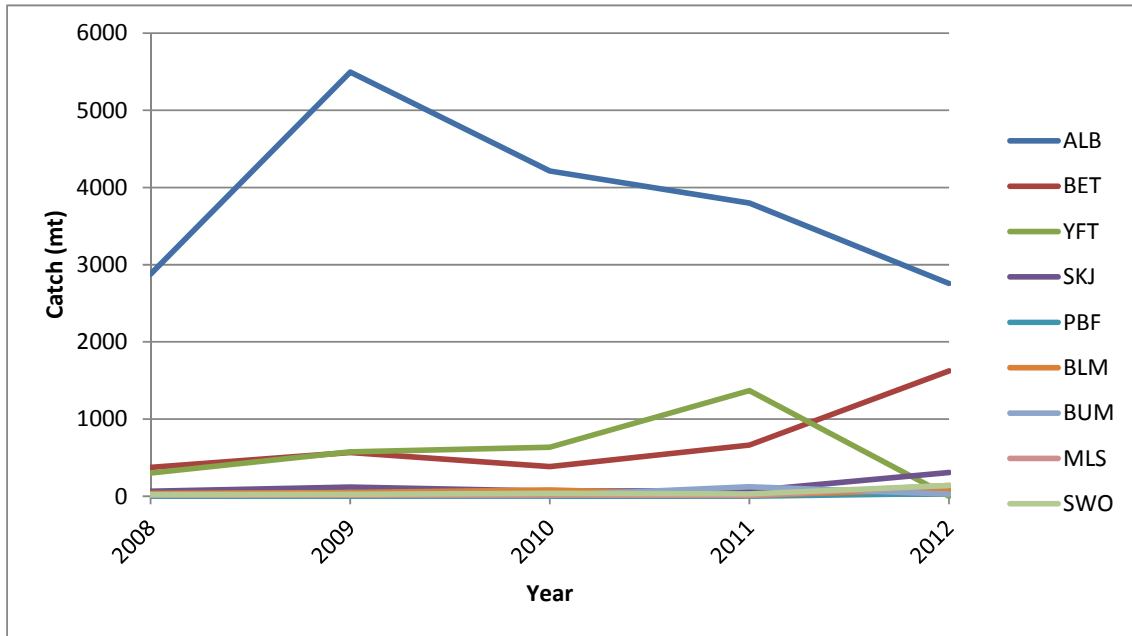


Figure 1. Historical annual catch estimates for the National longline fleet for primary species within the WCPFC Convention Area in 2012

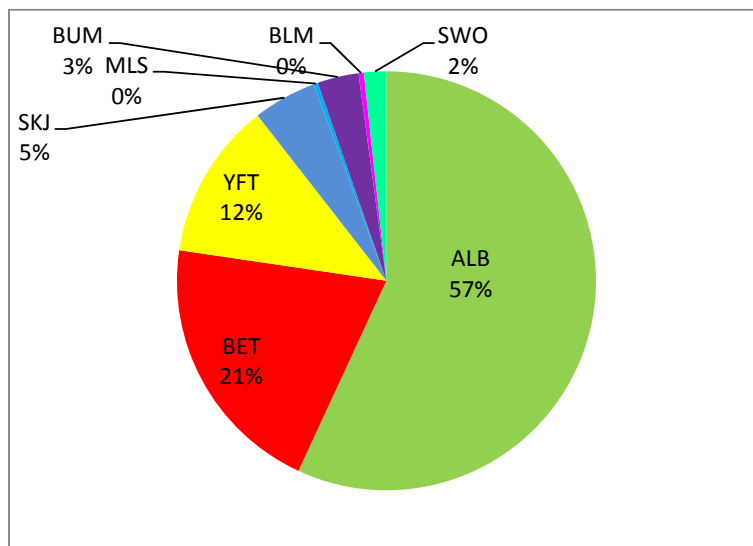


Figure 2. Total catch composition of the National Fleet within the WCPFC-CA in 2012.

Following the implementation of new (SPC/FFA) logsheets with species specific shark records, the total un-raised shark catch for the National longline fleet (obtained from logsheets only) within the WCPFC-CA was 77.8mt, with 48.6mt of this catch being unidentified shark species (Table 2).

No bird and turtle interactions were reported for 2012 and aside from records of marine mammal depredation no other interactions with cetaceans were recorded. In zone catch distributions in recent years demonstrate an increase in catch taken from the north-west quadrant of the CK EEZ (Figure 2b). The introductory of the bigeye and swordfish exploratory program in 2012 saw a movement of National Fleet effort into the north east quadrant with significant bigeye tuna catches evident around the island of Penrhyn. A slight increase in catch and effort was also evident above 15°S latitude with catches recorded further south than past years (Figure 2a). This may be because of the strong, extended La Nina phase that was evident throughout 2011.

Effort from the domestic fleet based out of Rarotonga decreased significantly after 2007, and was reduced to only two vessels in late 2012 due to the wreck of FV Ana.

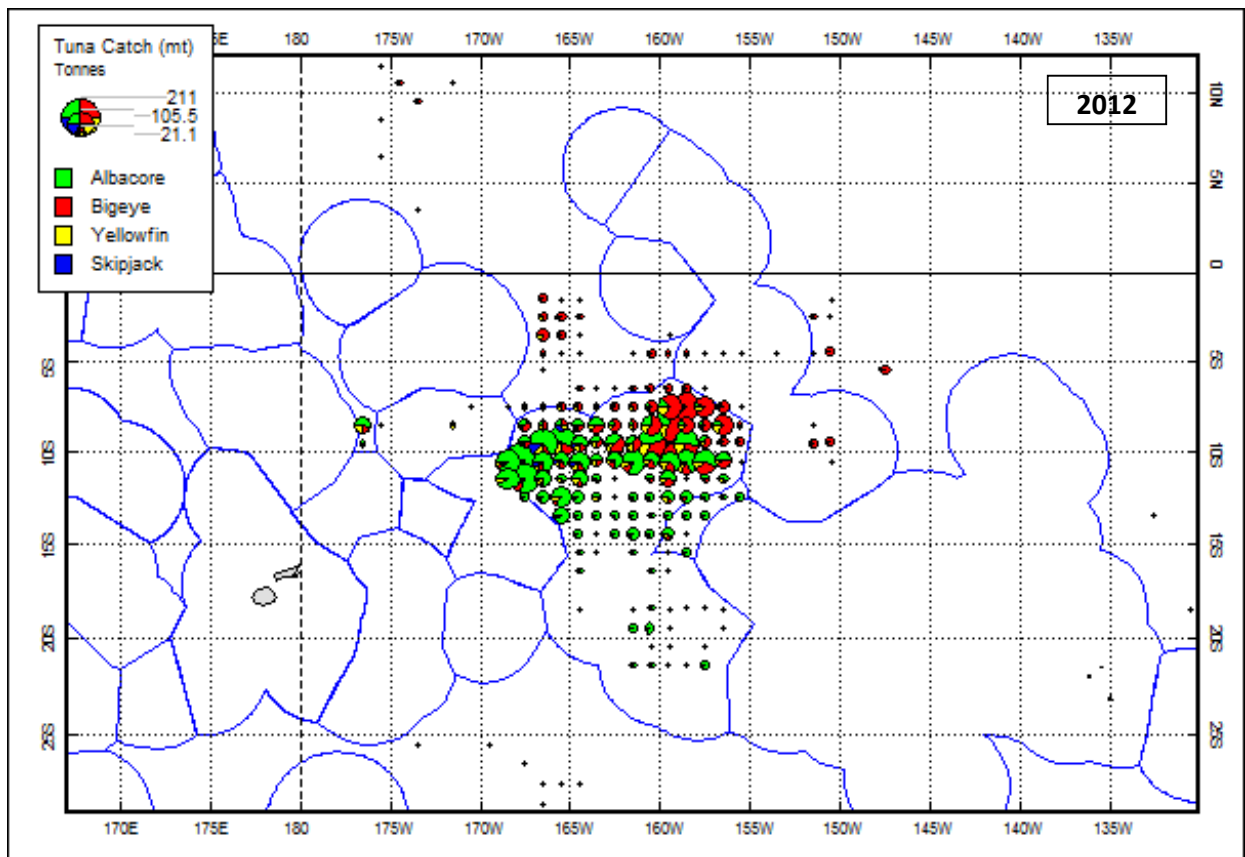


Figure 2a. Tuna catch distribution (1° x 1°) for the National Longline Fleet within the WCPFC Convention Area in 2012.

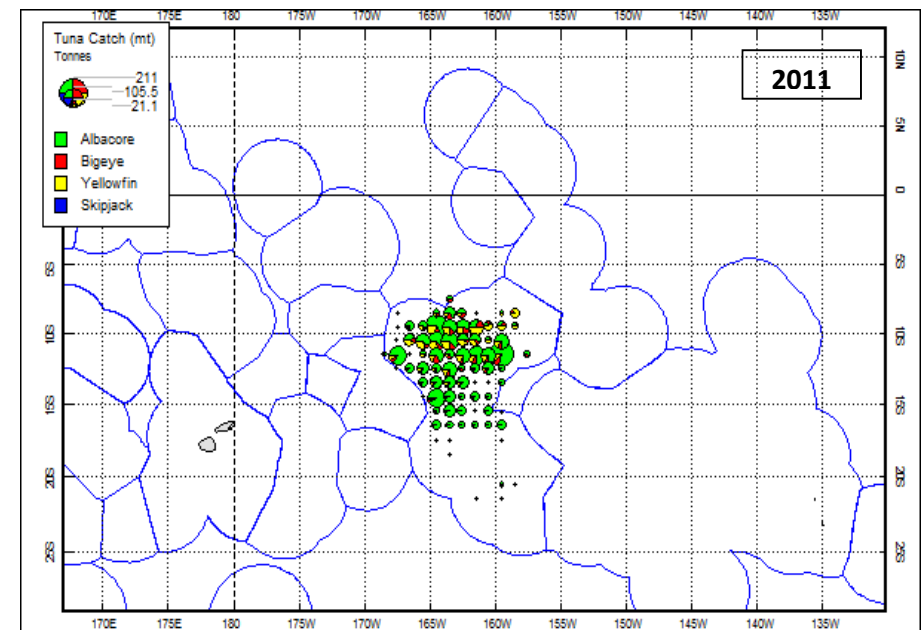
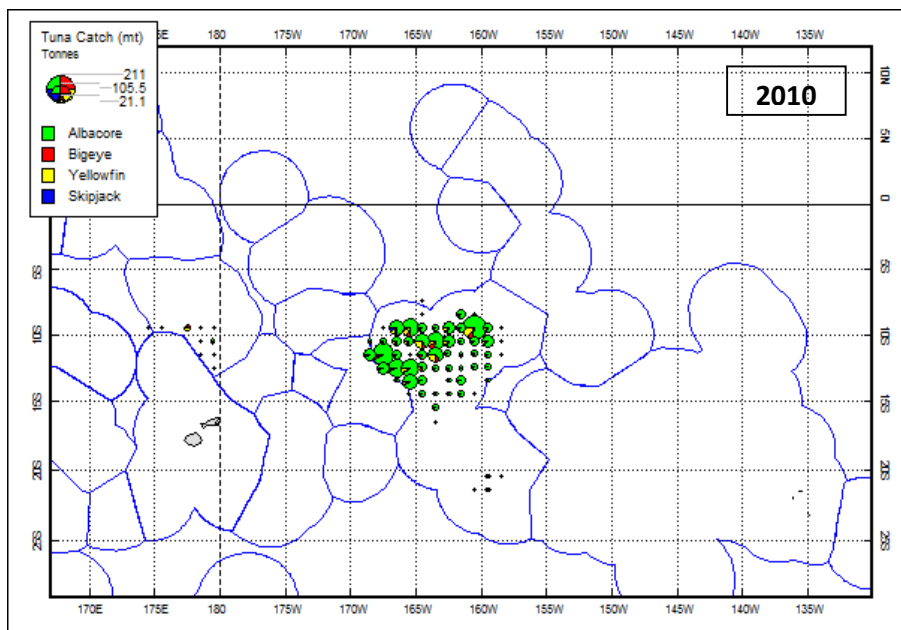
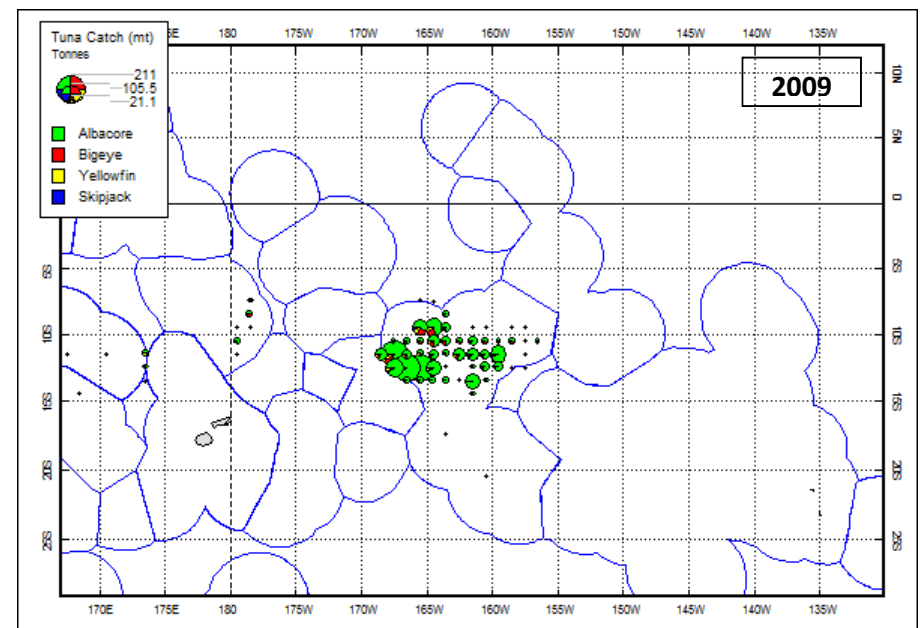
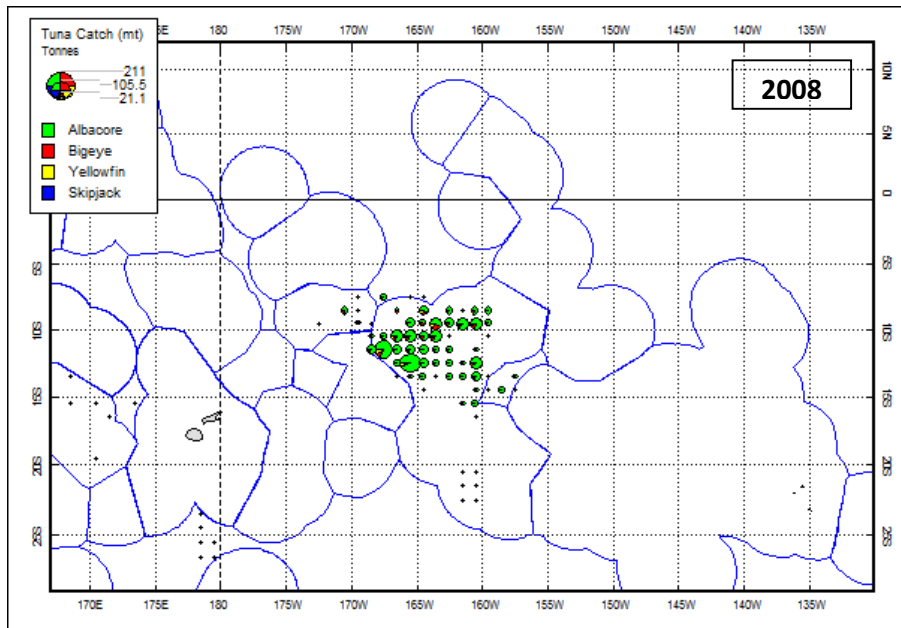


Figure 2b. Tuna catch distribution ($1^{\circ} \times 1^{\circ}$) for the National Longline Fleet within the WCPFC Convention Area from 2008 to 2011

Table 3. Annual un-raised catch estimates for all Cook Island licenced longline vessels*, for tuna and billfish by broad ocean area for 2012-2008.

*(*this includes all vessels licenced to fish within CK EEZ and WCPO High Seas)*

Area	Year	ALB	BET	YFT	SKJ	PBF	BUM	BLM	MLS	SWO
1. WCPFC Convention Area	2008	2879.9	374.6	300.9	66.0	0.0	36.5	18.9	11.4	22.6
	2009	5941.5	599.7	613.7	122.9	0.0	53.2	14.7	12.8	27.2
	2010	4574.7	440.1	710.4	79.8	0.2	93.2	17.8	12.1	40.5
	2011	4289.8	745.4	1416.0	75.6	0.0	153.4	19.0	13.2	40.3
	2012	11075.4	3632.1	2343.6	688.5	2.3	650.6	80.2	65.8	259.4
2. WCPFC Convention Area (south of the Equator)	2008	2879.9	369.5	298.0	66.0	0.0	35.6	18.9	11.3	22.5
	2009	5941.5	599.7	613.7	122.9	0.0	53.2	14.7	12.8	27.2
	2010	4574.7	440.1	710.4	79.8	0.2	93.2	17.8	12.1	40.5
	2011	4289.8	745.4	1416.0	75.6	0.0	153.4	19.0	13.2	40.3
	2012	11074.1	3530.5	2335.7	688.5	2.2	645.4	80.2	64.9	248.2
3. WCPFC Convention Area (north of the Equator)	2008	0.0	5.1	2.9	0.0	0.0	0.9	0.0	0.1	0.1
	2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2012	1.3	101.6	7.9	0.0	0.0	5.2	0.0	0.9	11.2
4. WCPO Area	2008	2879.9	374.6	300.9	66.0	0.0	36.5	18.9	11.4	22.6
	2009	5941.5	599.7	613.7	122.9	0.0	53.2	14.7	12.8	27.2
	2010	4574.7	440.1	710.4	79.8	0.2	93.2	17.8	12.1	40.5
	2011	4289.8	745.4	1416.0	75.6	0.0	153.4	19.0	13.2	40.3
	2012	10986.2	3569.7	2331.2	686.9	2.2	643.6	80.2	64.4	252.3
5. WCPO (south of the Equator)	2008	2879.9	369.5	298.0	66.0	0.0	35.6	18.9	11.3	22.5
	2009	5941.5	599.7	613.7	122.9	0.0	53.2	14.7	12.8	27.2
	2010	4574.7	440.1	710.4	79.8	0.2	93.2	17.8	12.1	40.5
	2011	4289.8	745.4	1416.0	75.6	0.0	153.4	19.0	13.2	40.3
	2012	10984.9	3468.1	2323.3	686.9	2.2	638.4	80.2	63.5	241.2
6. WCPO (north of the Equator)	2008	0.0	5.1	2.9	0.0	0.0	0.9	0.0	0.1	0.1
	2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2012	1.3	101.6	7.9	0.0	0.0	5.2	0.0	0.9	11.2
7. North Pacific Ocean	2008	0.0	5.1	2.9	0.0	0.0	0.9	0.0	0.1	0.1
	2011	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	2012	1.3	101.6	7.9	0.0	0.0	5.2	0.0	0.9	11.2
8. South Pacific Ocean	2008	2879.9	369.5	298.0	66.0	0.0	35.6	18.9	11.3	22.5
	2009	5941.5	599.7	613.7	122.9	0.0	53.2	14.7	12.8	27.2
	2010	4574.7	440.1	710.4	79.8	0.2	93.2	17.8	12.1	40.5
	2011	4289.8	745.4	1416.0	75.6	0.0	153.4	19.0	13.2	40.3
	2012	11241.7	3650.1	2354.0	692.5	2.8	651.8	80.3	69.6	281.8

Licencing and Fleet Structure

In 2012, the Cook Islands National fleet consisted of only longline vessels that operated within the WCPF-CA. Seventeen Cook Islands flagged vessels were active and authorised to fish within the Convention Area in 2012. Among these, two domestically based vessels were authorised to fish within the Cook Islands area of national jurisdiction and the remaining fifteen vessels were licenced to fish both within the Cook Islands EEZ and the High Seas, though rarely fished beyond the waters of national jurisdiction. Three vessels based in foreign ports were authorised for the High Seas only. In addition, seventeen Chinese flagged Chartered vessels were licenced to fish within the Cook Islands EEZ and the WCPO High Seas (Table 4).

Table 4. Number of active Cook Island and charter flagged longline vessels by size and authorised area, within the WCPFC Convention Area in 2012.

GRT Range	CK EEZ only		CK EEZ and WCPO HS		WCPO HS only		Total
	CK	Charter	CK	Charter	CK	Charter	
0-10							0
10-50	2		12	6	3		23
50-200				11			11
200-500							0
500+							0
Total	2		29		3		34

A total of thirty-six non-Cook Island flagged vessels were licenced and authorised to operate within the Cook Islands EEZ during 2012 (Table 5a). No troll licences have been issued by the Cook Islands since 2008 (Table 5b) and only purse seine licences issued under the US Multi-lateral Treaty were authorised in 2012.

Table 5a. Number of active Non-Cook Island flagged longline, carrier and bunker vessels authorised to operate within the Cook Islands EEZ by size in 2012.

GRT Range	Longline	Carrier	Bunker	Total
0-10				0
10-50	27	1	1	29
50-200	2	1	2	4
200-500	3			3
500+				0
Total	32	2	2	36

Table 5b. Number of active Cook Island flagged troll vessels by size from 2008-2012.

GRT Range	2008	2009	2010	2011	2012
0-10	-	-	-	-	-
10-50	-	-	-	-	-
50-200	-	-	-	-	-
200-500	1	-	-	-	-
500+	-	-	-	-	-
Total	1	1	0	0	0

Observer Data/Data Coverage

2012 observer data has been provided to, and is being processed by SPC. Approximately 8-10% observer coverage was reached during 2012.

337 fishing trips occurred within the CK EEZ and a total of 423 fishing trips were carried out within the WCPFC-CA by Cook Islands Licenced vessels. Approximately 99% logsheet coverage was achieved for all trips within the WCPFC-CA in 2012.

Appendix 1.

CMM Reporting requirements in WCPFC Part 1 Report related to data

CMM 05-03	North Pacific Albacore para 4	NOT APPLICABLE This is not a target species of the Cook Islands longline fishery.
CMM 06-04	South West striped Marlin, para 4	No vessels specifically targeted striped marlin and all catch was taken as by-catch. A total of 40.29mt was caught as by-catch below 15°S.
CMM 07-04	Seabirds para 9	No interactions with seabirds were recorded from either logsheet information or observer reports.
CMM 09-03	Swordfish para 8	A total of 117mt of swordfish was taken in zone below 20°S. Four chartered vessels were licenced to specifically target swordfish however only 3.54mt were taken by these vessels from below 20°S. 11.2mt was taken by Cook Island flagged vessels as by-catch.
CMM 09-06	Transshipment para 11 (annex II)	NOT APPLICABLE No Cook Islands Flagged vessels transhipped either in port or at sea including in-zone and/or high seas.
CMM 10-05	South Pacific Albacore para 4	39 vessels were licenced to target albacore within the Cook Islands EEZ caught a total of 7790mt of albacore was taken in zone below 20°S. Only 672.5mt of albacore was taken as bycatch from the chartered exploratory vessels licenced that target bigeye tuna and swordfish.
CMM 10-07	Sharks para 4	Retained shark species catch estimates based on observer data calculated by SPC, below 20°S totalled approximately 782mt within the Convention Area. Shark catches comprised of Blue sharks (216mt), silky sharks (48.0mt), mako sharks (384mt), Oceanic Whitetips (75.9), porbeagle sharks (0mt), hammerhead sharks (58.1) and thresher sharks (0mt). Un-raised and unidentified shark species estimates from logsheets totalled 48mt. In late 2012, the Cook Islands EEZ became a complete shark sanctuary prohibiting the retention of any sharks or shark parts on board. Noting this development, it is expected that retained shark catches will decrease in 2013.
CMM 11-03	Cetaceans and Purse Seine fisheries, para 5	NOT APPLICABLE There is no purse seine vessels authorised to fish within the Cook Islands EEZ apart from those associated with the US Multilateral Treaty.
CMM 11-04	Oceanic whitetip Sharks, para 3	Based on observer data calculated by SPC, oceanic whitetip shark catches were approximately 76mt during 2012.