SCIENTIFIC COMMITTEE

SIXTEENTH REGULAR SESSION

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

WCPFC-SC16-AR/CCM-04

COOK ISLANDS

Ministry *of* Marine Resources

GOVERNMENT OF THE COOK ISLANDS

WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

Sixteenth Regular Session of the Scientific Committee

COOK ISLANDS

Annual Fisheries Report - 2020

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 2020.	**YES**

CONTENTS

1. Abstract

The 2019 Cook Islands national fleet consisted of 17 longline vessels, 11 bunker vessels and 1 purse seine vessel operating within the Western and Central Pacific Fisheries Convention Area (WCPF-CA). Most vessels operate south of the equator. The national longline fleet total fishing effort in number of hooks decreased 29% from 15.4 million hooks in 2018 to 10.8 million hooks in 2019. The total catch of primary species[1] 3,128t decreased by 33% compared with 2018 catch levels (4,663t). Albacore accounted for 71% (2,235t) of the total longline catch within the Convention Area, followed by yellowfin tuna at 12% (395t), bigeye at 3% (120t) and the remaining 14% as bycatch. National longline fleet estimates are based on raised catch and effort data and national purse seine fleet estimates are based on nominal catch and effort data. Longline logsheet coverage was 99% and purse seine logsheet coverage was 100% in 2019.

No vessels targeted marlin or swordfish. All marlin catch were taken as bycatch. Of the billfish catch, blue marlin was the highest (61t), followed by black marlin (23t) and then swordfish (23t).

Artisanal fishers reported catch of 117t, spanning across 11 of the 12 inhabited Cook Islands. Yellowfin tuna is the dominant catch, caught predominantly by trolling and hand lining. The artisanal fishery catch and effort data is based on nominal catches for the months January - December 2019.

The Cook Islands purse seine national fleet consisted of 1 vessel. In addition to the national fleet, there were 50 foreign flagged vessels authorised to fish in the Cook Islands EEZ, consisting of 24 Korean, 9 Kiribati, 5 Vanuatu, 2 Spanish, 5 Ecuadorian, 2 El Salvadorian, 1 Tuvalu and 2 Nauruan flagged purse seine vessels. Total purse seine national fleet catch in the WCPF-CA was 2,169t. Total purse seine catch in the Cook Islands EEZ was 28,478t. The Cook Islands has a purse seine effort limit of 1,250 days.

The retention of any shark or shark parts by fishing vessels within the Cook Islands EEZ is prohibited.

[1] Primary species for longline gear is albacore, yellowfin, bigeye and skipjack tuna, black marlin, blue marlin, striped marlin and swordfish

2. Background

In 2019, the Cook Islands national fleet consisted of longline and purse seine fishing vessels targeting tuna and tuna-like species. Additionally, there is an artisanal fishery operating out of twelve inhabited islands. In December 2016 the Marine Resources (Large Pelagic Longline Fishery and Quota Management System) Regulation (QMS) was enacted for catches of albacore and bigeye tuna within the Cook Islands EEZ. Under the QMS, purchased quota is reported on a weekly basis, with daily reporting when 80% of purchased quota is reached. A Total Allowable Commercial Catch (TACC) of 9,698t albacore tuna and 2,500t bigeye tuna has been set for longline vessels fishing within the Cook Islands EEZ. In 2019, the Cook Islands sold 9,200t of albacore longline quota and 1,275t of bigeye longline quota.

The majority of longline fishing activity is concentrated in the northern Cook Islands waters, delineated north of 15 degrees south latitude. Some longline fishing by Cook Islands vessels also takes place in areas beyond national jurisdiction, within the Convention Area. Historically purse seine fishing has been conducted in the Cook Islands EEZ by US Treaty vessels; however in 2015 there effort increased with growing interest from other foreign fleets under bilateral agreements. In 2019 the Cook Islands had one flagged purse seine vessel operating in the Western and Central Pacific Ocean (WCPO).

Albacore tuna is the main target species for Cook Islands flagged longline vessels and skipjack tuna is the main target species for the Cook Islands flagged purse seine vessels, fishing in the Convention Area.

Three small locally based fresh fish longline vessels operated out of Rarotonga in 2019, targeting tuna and billfish for the local market. These vessels are below 80 Gross Registered Tonnage (GRT) and typically operate between 50nm and 100nm from Rarotonga.

The other Cook Islands flagged vessels are based out of the foreign ports of Suva, Pago Pago and Apia with most of the unloading taking place in Apia, Samoa.

3. FLAG STATE REPORTING

3.1 Catch and Effort Trends

Total national longline fleet effort within the Convention Area is approximately 10.8 million hooks, with approximately 4.3 million hooks attributed to the Cook Islands EEZ (Table 1a). Total catch of tuna and billfish within the Convention Area gradually increased between 2015-2018, then decreased significantly in 2019 by 35% (3,128t) (Figure 1). One of the reasons for this reduction in catch is because the Cook Islands did not notify any charter vessels compared to previous years. In 2019, 59% (64,625 hks) of the total effort and 58% (1,818t) of the total catch by the national fleet was conducted in areas beyond national jurisdiction (Table 1a).

Albacore remained the primary target species for the national fleet within the Convention Area, comprising of 71% (2,234t) of the total 2019 catch, relatively consistent with 2018 catch levels.

Yellowfin accounted for 13% (395t) of 2019 catches similar to 2018, while bigeye catch decreased to 3% (120t) of the total catch compared to 2018 levels. The remaining 13% was bycatch species.

The artisanal fishery operates out of each inhabited island. Yellowfin tuna is the main target species with 65t caught in 2019 (Table 1b). Trolling and hand lining are the most common fishing methods used by artisanal fishers. Artisanal catch reporting is not regulated; however in June 2017 the Ministry of Marine Resources (MMR) established a fuel subsidy program as an incentive for fishers to voluntarily submit catch and effort data to MMR. The subsidised fuel is funded under the Sustainable Fisheries Partnership Agreement (SFPA) between the Cook Islands Government and the European Union. This subsidy was a major factor to improving the Cook Islands artisanal data collection programme, which has seen an increase in reporting of artisanal fishery data since 2017. The TAILS application developed by the Pacific Community's Oceanic Fisheries Programme (SPC-OFP) provides a workable technological solution for data collection from remote islands, using mobile devices. While hard copy catch data has been replaced by TAILS there are still some islands that submit paper logsheets to MMR including inter alia poor computer literacy and internet connectivity issues. Training and remote support is ongoing.

Table 1a. Annual raised catch and effort estimates for the national fleet, by gear and primary species[2] within and beyond national jurisdiction in 2019

Area	Gear	Effort	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO
CK EEZ	LL	43,910 hhks	963	50	140	19	0	12	35	17	14
	PS	1 day	0	0	0	1	0	0	0	0	0
Beyond CK EEZ	LL	64,625 hhks	1,272	70	255	96	0	11	26	1	9
	PS	93 days	0	158	1	2,009	0	0	0	0	0

[2] See Appendix 2 Table list of species codes

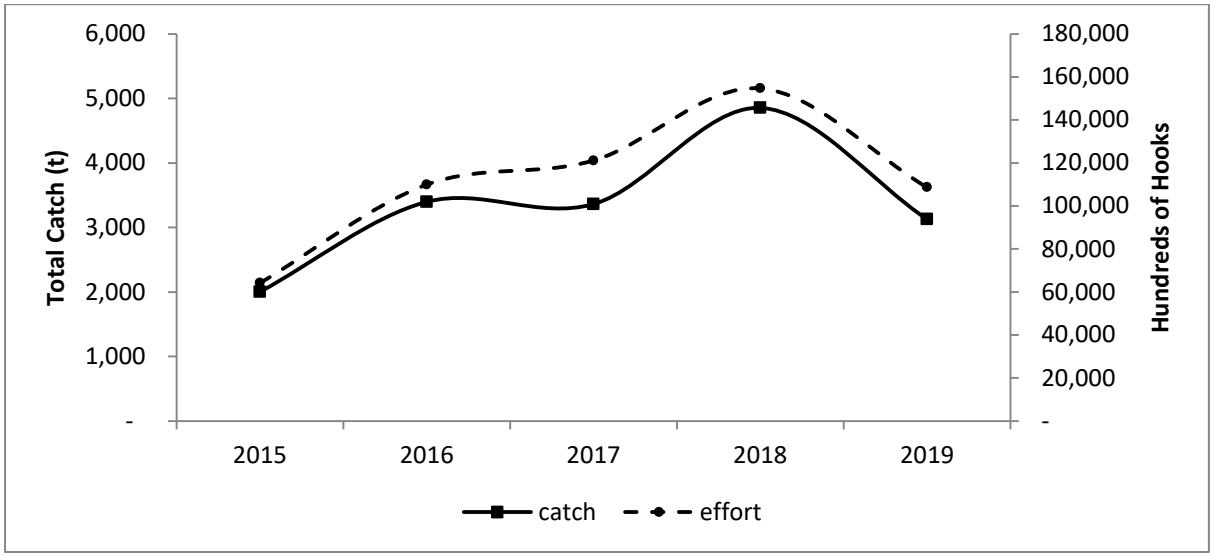

Figure 1. Historical annual raised catch for the national longline fleet, by primary species, for the Convention Area from 2015-2019 presented as a line graph.

Table 1b. Historical catch in tonnes and effort estimates for the national fleet by gear and primary species in the Convention Area, 2015-2019.[3]

Year	Gear	Effort	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO
2015	LL	61,826 hhks	1167	151	339	86	0	15	36	19	18
	Artisanal	18,713 hrs	1	0	92	11	0	0	1	0	0
2016	LL	54,382 hhks	2,041	330	572	45	4	15	111	18	42
	Artisanal	14, 965 hrs	7	0	77	7	0	0	0	0	0
2017	LL	43,605 hhks	2567	298	608	67	2	41	89	24	56
	Artisanal	17,302 hrs	0	0	92	4	0	0	3	1	0
2018	LL	154,699 hhks	3363	265	629	81	0	16	127	9	44
	Artisanal	17,651 hrs	1	1	87	5	0	1	2	0	0
2019	LL	108,626 hhks	2235	120	395	115	0	23	61	18	23
	PS	94 days	0	158	4	2010	0	0	0	0	0
	Artisanal	13,642 hrs	3	1	64	7	0	1	2	1	0

[3]2019 longline catch estimates are raised using vessel monitoring system (VMS) data. Artisanal and purse seine nominal catches are unraised catch estimates for 2019.

Table 1c. Historical annual raised catch estimates in tonnes for the national longline fleet, by primary species in the Convention Area from 2015- 2019.

Area	Year	ALB	BET	YFT	SKJ	PBF	BUM	BLM	MLS	SWO
1. WCPF Convention Area										
	2015	1,167	151	339	86	0	15	36	19	18
	2016	2, 041	330	572	45	4	111	15	18	42
	2017	2,567	298	608	67	2	41	89	24	56
	2018	3,363	265	629	81	0	16	127	9	44
	2019	2,235	120	395	115	0	23	61	18	23
2. WCPF Convention Area (Sth of Equator)										
	2015	1,167	151	339	86	0	15	36	19	18
	2016	2,039	282	544	45	4	100	15	18	40
	2017	1,868	156	439	50	1	58	28	16	34
	2018	3,074	179	521	75	0	105	16	9	40
	2019	2,235	120	395	115	0	23	61	18	23
3. WCPF Convention Area (Nth of Equator)										
	2015	-	-	-	-	-	-	-	-	-
	2016	1	48	28	1	0	11	0	0	1
	2017	3	22	13	1	0	3	0	0	0
	2018	2	16	10	0	0	2	0	0	0
	2019	-	-	-	-	-	-	-	-	-
4. WCPO Area										
	2015	1,167	151	339	86	0	15	36	19	18
	2016	2, 041	330	572	45	4	111	15	18	42
	2017	1,807	173	449	50	1	61	28	16	33
	2018	3,075	195	531	75	0	108	16	9	41
	2019	2,235	120	395	115	0	23	61	18	23
5. North Pacific Ocean										
	2015	-	-	-	-	-	-	-	-	-
	2016	1	48	28	1	0	11	0	0	1
	2017	4	22	13	1	0	4	0	0	0
	2018	2	16	10	0	0	2	0	0	0
	2019	-	-	-	-	-	-	-	-	-
6. South Pacific Ocean										
	2015	1,167	151	339	86	0	15	36	19	18
	2016	2,039	282	544	45	4	100	15	18	40
	2017	2,276	178	453	55	2	58	33	18	39
	2018	3,073	179	521	75	0	105	16	9	40
	2019	2,235	120	395	115	0	23	61	18	23

Table 2. Raised annual catch estimates in tonnes for the national fleet by gear in the Convention Area for non-target and bycatch species (including key shark species[4]) for 2019. No key shark species were retained.

Gear	SSP	SFA	DOL	LAG	OIL	WAH
LL	19	2	23	4	22	53
PS	0	0	0	0	0	0
Artisanal	0	0	4	0	0	13

3.2 Catch and Effort Spatial Distribution

In 2019, 59% of all Cook Islands national longline fishing effort took place in areas beyond national jurisdiction. This indicates a decrease of in zone effort of 58% when compared to 2018 effort (104,693 hhks). In zone effort is distinct between the northern and southern fisheries, delineated at 15°S. There is a prominent band of fishing effort in the north-west and central northern regions of the EEZ, with high yellowfin and albacore catch west of Pukapuka Island. This pattern is typically attributed to the fact that the prominent fishing ground is located in the northern fishery. Cook Islands flagged vessels operate out of Pago Pago, American Samoa, Suva, Fiji and Apia, Samoa. The relatively small amount of effort around Rarotonga is attributed to the small domestic longline fleet operating from the port of Avatiu (Figure 3a). 42% of the total national longline in zone catch was caught in the central northern sector of the EEZ. 6% of national longline fleet catch was taken in the high seas.

In August 2019, the Cook Islands flagged its first and only purse seine vessel. 99.6% of the catch was taken on the high seas above the Cook Islands EEZ, west of the Kiribati Line Islands. The remaining 0.04% of catch was taken in zone (Figure 3b). This catch was taken between 10°N to 10°S.

The Marae Moana Act 2017 set a 50 nautical mile (nm) commercial fishing exclusion zone around all islands in the Cook Islands. The Marae Moana Act 2017 is the overarching legislation for the ocean. Marae Moana is a zoned, multi-use marine park, which promotes the protection and use of our ocean, and upholds high environmental and conservation principles.

In 2019, annual catch and effort distribution (Figure 3a) reflects a decrease of in zone effort by the national fleet compared to previous years, with effort increases occurring within other EEZs. Albacore continues to dominate longline catches, with yellowfin and bigeye tuna being important secondary target species.

[4] Key species include BSH, FAL, OCS, MAK, THR, SPZ, and RHN. Shark species are recorded by catch numbers See Appendix 2 Table list of species codes

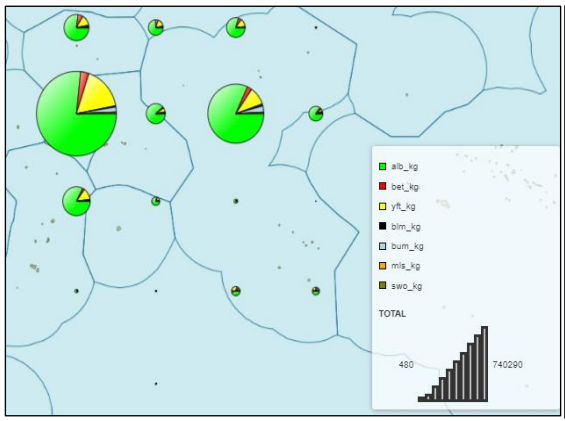

Figure 3a. Catch distribution (5 x 5) of key tuna species for the National Longline Fleet within the WCPF-CA 2019.

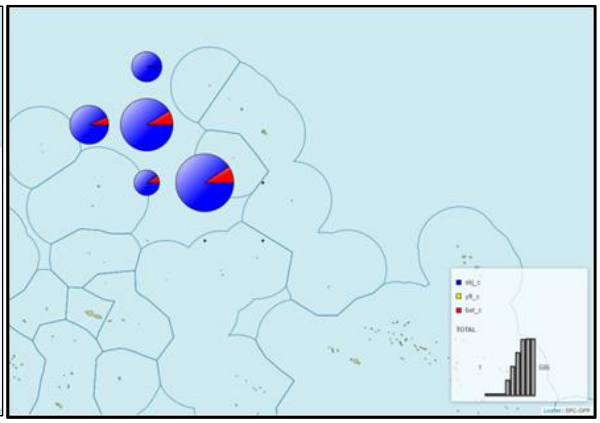

Figure 3b. Catch distribution (5 x 5) of key tuna species for the National Purse Seine Fleet within the WCPF-CA 2019.

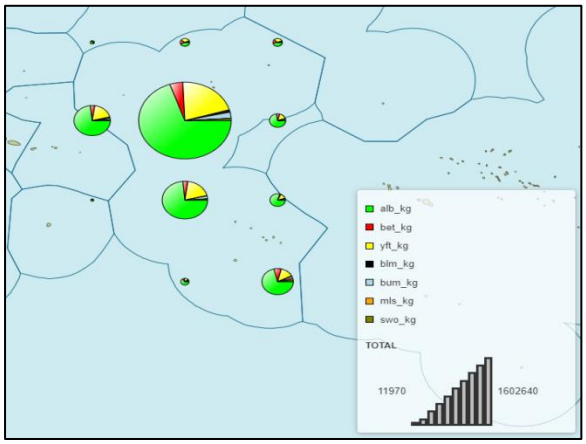

Figure 3c. Catch distribution(5 x 5) of key tuna species for the National Longline Fleet within the WCPFC-CA 2018.

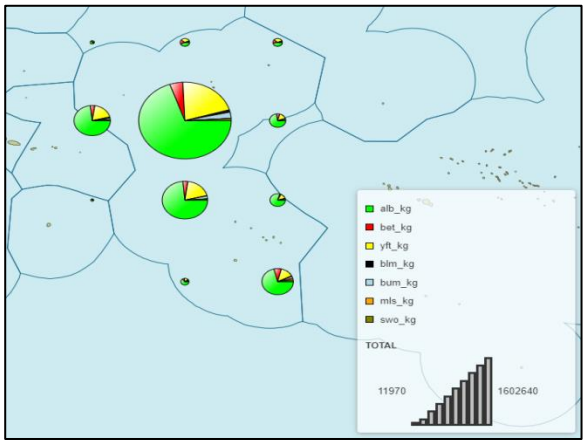

Figure 3d. Catch distribution(5 x 5) of key tuna species for the National Longline Fleet within the WCPFC-CA 2017.

3.3 Licencing and Fleet Structure

Since January 2017 the Cook Islands in zone commercial longline fishery has been managed by the QMS, which removed the vessel limits previously in place. In 2019, the Cook Islands national fleet consisted of seventeen longline vessels, one purse seine vessel and eleven bunker vessels operating within the Convention Area. No vessels were chartered to the Cook Islands for 2019.

Seven longline vessels were authorised to fish in the Cook Islands EEZ and on the High Seas. An additional seven vessels were authorised to fish on the high seas only; and three vessels were authorised to fish within the Cook Islands EEZ only. Eleven bunker vessels were authorised in the Convention Area.

Sixteen licensed commercial longline vessels were between 51 and 200 GRT; one longline vessel between 200 and 500 GRT; and all purse seine and bunker vessels were over 500 GRT (Table 3). Vessels licenced to fish in zone were prohibited from fishing within 50nm commercial fishing exclusion zone of any island in accordance with the Marae Moana Act 2017.

In 2019, 236 artisanal vessels reported catch and effort data, with fishing activities occurring mostly within the territorial waters.

Table 3. Number of national fleet vessels by gear, size and authorised area, active within the Convention Area 2015-2019.

Year	00-50 GRT		51-200 GRT		201-500 GRT	500+ GRT			Total
	LL	Artisanal	LL	Troll	LL	LL	PS	Bunker	
2015	0	315	10	0	1	1	-	3	15
2016	0	292	10	0	1	0	-	4	15
2017	0	265	17	0	21	0	-	6	46
2018	0	304	22	0	11	0	-	8	41
2019	0	236	16	0	1	0	1	11	29

4. COASTAL STATE REPORTING

4.1 Catch and Effort Trends

Foreign flagged longline vessels caught within the Cook Islands EEZ totalled 9,286t (Table 4), or 88% of the total longline catch. The remaining 12% was caught by Cook Islands flagged vessels (Figure 4a). Albacore comprised 65% of the total longline catch composition, followed by yellowfin tuna at 15%, bigeye tuna at 8% and 7% other species (Figure 4b).

The Cook Islands purse seine fishery has an effort limit of 1,250 vessel days. The Korean fleet caught 41% of the total purse seine catch, followed by US vessels 30% and Kiribati 13% (Figure 4c). Foreign flagged purse seine vessel catch totalled 28, 477t (Table 4). Catch composition comprised of 95% skipjack tuna (Figure 4d).

Table 4. Annual raised catch estimates in metric tonnes for all licensed foreign vessels by gear within the Cook Islands EEZ, for tuna and billfish species in 2019. Operational logsheet data was raised using VMS data, with 96% coverage for longline vessels and 98% logsheet coverage for purse seine vessels.

Foreign Vessels	Gear	Effort	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO	Total (inc OTH)
CK EEZ	LL	184,761 hhks	6,864	842	1,583	587	0	9	194	4	47	9,286
	PS	755 days	0	327	1,032	27,202	0	1	1	0	0	28, 477

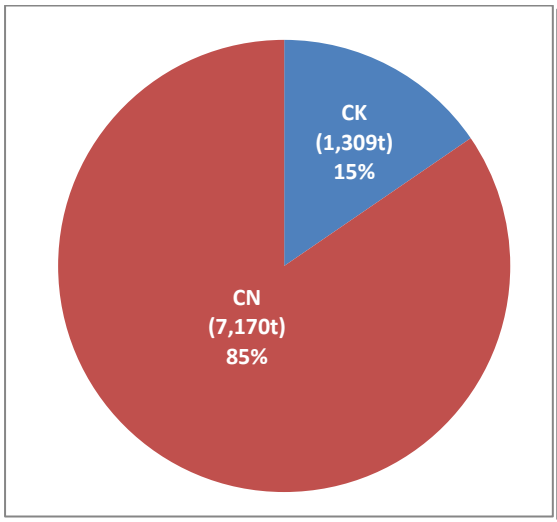

Figure 4a: Longline catch by flag within the CK EEZ

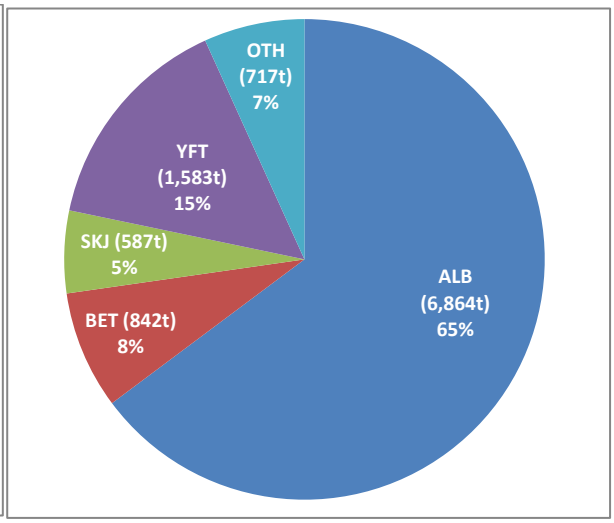

Figure 4b: Longline catch composition for all vessels within the CK EEZ

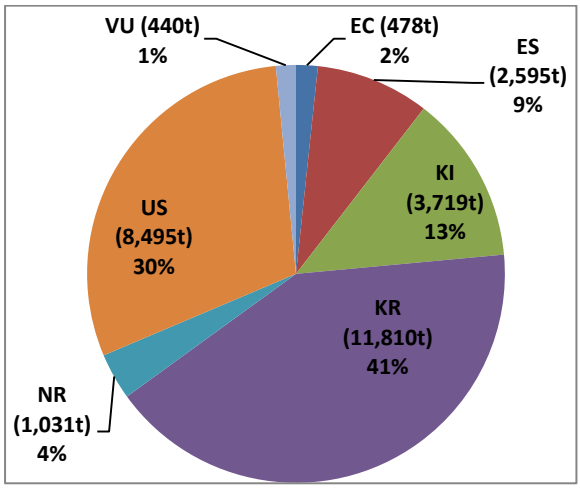

Figure 4c: Purse seines catch composition by flag state in the CK EEZ, based on logsheet data.

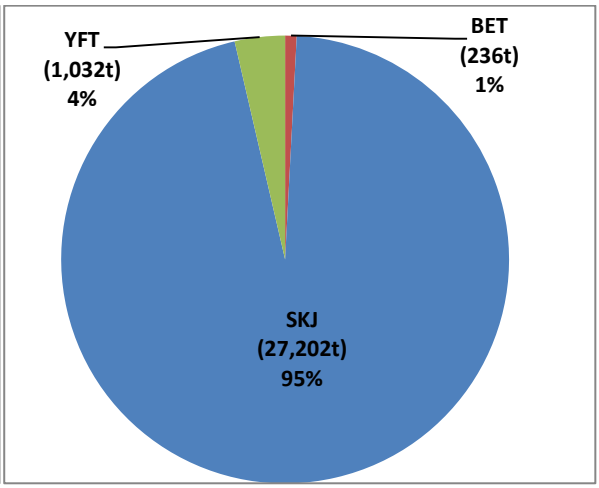

Figure 4d: Purse seine catch composition in the CK EEZ by main species, based on logsheet data.

In 2019, a total of 103 foreign flagged vessels were licenced to operate within the Cook Islands EEZ, 47 longliners, 2 transhipment carriers, 4 bunker vessels and 50 purse seiners (Table 5).

5. Socio-economic Factors

High operating costs out of Cook Islands ports and relative low catch rates continue to hinder domestic industry growth. In 2019 only two small scale domestic longline fresh fish vessels operated out of Rarotonga, unloading to the Port of Avatiu. The local economic benefits from the purchase of fuel, labour for with the onshore processing facility, purchase of provisions and associated port fees, however these vessels have been negatively impacted by the introduction of the Marae Moana 50nm commercial fishing exclusion zone increasing operating costs and reducing fishing days/effort due to increased transiting time to and from fishing grounds and associated costs. MMR conducts routine port inspections and port sampling of catches.

Table 5. Number of active foreign flagged vessels by gear authorised to operate within the Cook Islands EEZ by size in 2018

GRT Range	Longline	Carrier	Bunker	Purse seine	Total
0-10	-	-	-	-	-
10-50	-	-	-	-	-
50-200	-	-	-	-	-
200-500	47	-	-	-	47
500+	-	2	4	50	56
Total	**47**	**2**	**4**	**50**	**103**

6. New Fishery Developments

In 2019, MMR implemented trials between 'HiFish', which is an industry electronic reporting application and TUFMAN2. This process is expected to streamline the collection and transmission of catch and effort data from vessels using the HiFish application into the TUFMAN2 database. It is the second electronic reporting (ER) application for longline vessels alongside the SPC app 'Onboard' for the remaining licensed vessels. A number of technical issues have been identified, with ongoing work to resolve these. This work is undertaken in collaboration with SPC-OFP, vessel operators and the developer of the Hi-Fish application.

MMR has noted several benefits with ER, including improved efficiencies in data management, access and use, which in turn support improved information for fisheries management purposes.

7. Research and Statistics

7.1 Status of Tuna Fishery Data Collection Systems

a) Log sheet data collection and verification

In 2019, 99%[5] logsheet coverage was achieved for the Cook Islands flagged commercial longline fleet and 100% for the purse seine fleet. All longline and purse seine logsheet data are verified against the VMS data, port sampling where possible, observer reports and unloading forms. After the trip completion, hard copies are received and used to verify the ER entries captured in databases.

In 2019, MMR received data via electronic reporting and paper logsheets. Locally based commercial vessels undertake short trips (< 1 week), allowing MMR to provide feedback on any issues regarding data submitted. Vessels operating out of Pago Pago, Apia and Suva spend two – three months at sea and consequently take longer to follow up with any data issues.

b) Observer Programme.

In 2019, only 5 active Observers remained employed by the Cook Islands National Observer Programme. MMR continues to use contracted observers from other Pacific Islands national observer programmes. The Cook Islands National Observer Programme observed a total of 428 sea days achieving a longline coverage of 12.4% in 2019. 100% observer coverage was achieved for the flagged purse seine vessel, fishing within the Convention Area (Table 6).

The Cook Islands continues to aim for 100% of its observer data and reports to be debriefed by a certified Pacific Islands Regional Fisheries Observer (PIRFO) debriefer prior to the data being submitted to SPC for data entry.

Twenty six placements were organised for 2019; fourteen trips on longline and twelve trips on purse seiners. Purse Seine trips by US flagged vessels fishing into the Cook Islands EEZ were placed with observers from the FFA Sub-Regional Observer Program to fulfil 100% coverage requirement on purse seine vessels.

Table 6. Estimated annual coverage of operational catch and effort, port sampling and observer data for the longline national fleet, active in the Convention area for 2015– 2019.

Year	Operational Catch & Effort	Port Sampling	Observer Data (Days at Sea)
2015	100%	35%	12.8%
2016	100%	18%	7.7%
2017	88%	10%	7.6%
2018	100%	9.6%	10.7%
2019	99%	10.7%	12.4%

[5] 1% unable to be recovered as one vessel lost all its catch and effort data in an accident in 2019.

c) Port Sampling Programme

Port sampling is undertaken in port Avatiu from locally based longliners, with an average catch of 2-3t per trip. Port sampling coverage in 2019 was 10.7% (Table 6).

7.2 Research Activities

No major research activities were carried out during 2019.

Appendix 1

CMM Reporting 2019

CMM 2019-03 [North Pacific Albacore], Para 3

CCM	Area	Fishery	2002-2004		2017		2018		2019	
			No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days
Cook Islands	N Pacific	ALB troll	4	183	0	0	0	0	0	0
	N Pacific	LL	1	2	0	0	0	0	0	0

CMM 2006-04 [South West striped Marlin], Para 4

Striped marlin is not targeted by flagged vessels, but it is retained as bycatch.

In 2019, 15 flagged longline vessels caught 252 MLS totaling 41.36t in the Convention Area south of 15˚S.

In 2019, flagged purse seine vessels caught no striped marlin in the Convention Area South of 15°S.

CMM 2009-03 [Swordfish], Para 8

The Cook Islands have no vessels targeting swordfish, but it is retained as bycatch.
In 2019, 7 flagged longline vessels caught 111 Swordfish weighing 7.8t in total in the Convention Area South of 20°S.
In 2019, flagged purse seine vessels caught no swordfish in the Convention Area South of 20°S.

CMM 2009-06 [Transshipment], Para 11 (ANNEX II)

NOT APPLICABLE. The Cook Islands had no flagged transshipment vessels operating in the Convention Area in 2019.

CMM 2010-07 [Sharks], Para 4

Shark retention by any vessel in the Cook Islands EEZ is prohibited. The following table lists the observed sharks caught as bycatch and released by flagged vessels in 2019.

Species	Number caught	Number discarded	Catch retained (t)
Blue shark	48	48	0
Oceanic Whitetip shark	16	16	0
Shortfin mako shark	1	1	0
Silky shark	86	86	0

CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5

According to observer data there were no observed instances in which cetaceans had been encircled by purse seine nets of flagged purse seine vessel.

CMM 2011-04 [Oceanic whitetip sharks], Para 3

According to observer data, 15 oceanic whitetip shark interactions were observed with longline gear in 2019, but all were released. 13 were observed to have been alive upon release and the remaining 2 were dead.

<table>
<tr><td></td><td>According to observer data, 1 Oceanic whitetip shark interaction was observed to have occurred with purse seine gear in 2019. The shark had also been observed to be alive upon release.</td></tr>
<tr><td>CMM 2012-04 [Whale sharks], Para 06</td><td>According to observer data there were no instances in which whale sharks had been encircled by purse seine nets of national flagged purse seine vessels.</td></tr>
<tr><td>CMM 2013-08 [Silky sharks], Para 3</td><td>According to observer data 32 silky sharks were observed to have interacted with flagged longline vessels in 2019, none were retained. 20 were observed to have been caught, and were alive upon release. 6 had been observed to be dead upon release. The status of the remaining 6 upon release is unknown.
According to observer data 54 silky sharks were observed to have interacted with flagged purse seine vessels in 2019, none were retained. 5 were observed to have been caught and were alive upon release. 5 had been observed to be dead upon release. The status of the remaining 48 upon release is unknown.</td></tr>
<tr><td>Observer coverage (WCPFC 11 decision – para 484(b)</td><td>Observer coverage is measured using ‘at sea days’. Based on an estimated 3,527 VMS days, and 509 observed days in 2019, the Cook Islands observer coverage of the national fleet in the WCPF-CA for 2019 was 12.4% for longline and 100% for purse seine.
<table>
<tr><th rowspan="2">CCM</th><th rowspan="2">Fishery</th><th colspan="3">No. of Hooks</th><th colspan="3">Day Fished</th><th colspan="3">Days at Sea</th><th colspan="3">No. of Trips</th></tr>
<tr><th>Total Estimated</th><th>Observed</th><th>%</th><th>Total Estimated</th><th>Observed</th><th>%</th><th>Total Estimated</th><th>Observed</th><th>%</th><th>Total Estimated</th><th>Observed</th><th>%</th></tr>
<tr><td rowspan="2">Cook Islands</td><td>Longline</td><td>10,862,600</td><td>213,940</td><td>2</td><td>-</td><td>-</td><td>-</td><td>3446</td><td>428</td><td>12.4</td><td>132</td><td>8</td><td>6</td></tr>
<tr><td>Purse Seine</td><td>-</td><td>-</td><td>-</td><td>4.2</td><td>4.2</td><td>100</td><td>81</td><td>81</td><td>100</td><td>3</td><td>3</td><td>100</td></tr>
</table></td></tr>
<tr><td>CMM 2015-02 [South Pacific Albacore] Para 4</td><td>Addressed through the regular provision of operational catch and effort logsheet data to SPC-OFP, who automatically include these data in the WCPFC databases, as per our authorisation.</td></tr>
<tr><td>CMM 2018-03 [Seabirds] Para 13</td><td>
<table>
<tr><th rowspan="2">Year</th><th colspan="4">Fishing effort</th><th colspan="2">Observed seabird captures</th></tr>
<tr><th>Number of vessels</th><th>Number of hooks</th><th>Observed hooks</th><th>% hooks observed</th><th>Number</th><th>Rate [2]</th></tr>
<tr><td>2015</td><td>8</td><td>6,218,449</td><td>422,068</td><td>6.8</td><td>0</td><td>0</td></tr>
<tr><td>2016</td><td>2</td><td>14,177,626</td><td>189,572</td><td>1.3</td><td>0</td><td>0</td></tr>
<tr><td>2017</td><td>5</td><td>25,935,995</td><td>660,529</td><td>2.5</td><td>0</td><td>0</td></tr>
<tr><td>2018</td><td>5</td><td>16,382,515</td><td>468,345</td><td>2.9</td><td>0</td><td>0</td></tr>
<tr><td>2019</td><td>9</td><td>10,862,600</td><td>213,940</td><td>2.0</td><td>0</td><td>0</td></tr>
</table></td></tr>
</table>

Appendix 2

Table list of species codes

FAO code	Species
ALB	Albacore tuna
BET	Bigeye tuna
YFT	Yellowfin tuna
SKJ	Skipjack tuna
PBF	Pacific Bluefin tuna
BUM	Blue marlin
BLM	Black marlin
MLS	Striped marlin
SWO	Swordfish
SSP	Shortbill spearfish
SFA	Indopacific sailfish
DOL	Common dolphinfish
LAG	Opah
OIL	Oilfish
WAH	Wahoo
BSH	Blue shark
FAL	Silky shark
OCS	Oceanic Whitetip
MAK	Mako shark
THR	Thresher shark
SPZ	Smooth hammerhead shark
RHN	Whale shark