COOK ISLANDS OFFSHORE FISHERIES

ANNUAL REPORT

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Offshore Division

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Abstract

This Report provides a broad overview of the major fisheries operating under Cook Islands jurisdiction and management within the Cook Islands Exclusive Economic Zone (EEZ) and beyond our fisheries waters. The Report highlights activities during the most recent calendar year (2016) and covers the most recent catch data estimates by gear and species. The Report includes information on work areas including the Observer Programme, Monitoring Control and Surveillance (MCS) activities, and flagged vessels operating in areas beyond national jurisdiction.

Cook Islands fisheries have expanded in recent years, and comprise longline, purse seine and artisanal fisheries. The main species caught in these fisheries are albacore tuna (*Thunnus alalunga*), skipjack tuna (*Katsuwonus pelamis*), yellowfin tuna (*Thunnus albacares*) and bigeye tuna (*Thunnus obsesus*). The Cook Islands also flags two High Seas trawl vessels that operate in the southern Indian Ocean, targeting alfonsino (*Beryx splendens*) and orange roughy (*Hoplostethus atlanticus*), and has more recently flagged bunker vessels to operate in the Pacific and Indian Oceans as permitted fishing vessels supplying services to the fishing industry

The total longline fishery catch in 2016 was 4684 metric tonnes, 60% of which was albacore tuna for canning and frozen export. The total purse seine fishery catch recorded was 7,880mt. Approximately 96% of the purse seine catch is skipjack tuna, also used in canning. Reported artisanal catches were at an all-time high at 324mt, 53% of which was yellowfin.

1. Introduction

In 2016, the Cook Islands offshore fishery consisted of flagged and foreign longline fishing vessels targeting tuna and tuna like species, foreign purse seine vessels operating under the US Multilateral Treaty and bilateral agreements, and Cook Islands trawlers operating in the southern Indian Ocean.

The majority of the longline fishing activity was concentrated in the Cook Islands Exclusive Economic Zone (EEZ) in the northern Cook Islands, in areas north of 15°S. Some longline fishing also took place in other areas of jurisdiction within the Western Central Pacific Fisheries Commission (WCPFC) Convention Area (Figure 1).

All purse seine fishing activity occurred within the EEZ. A significant artisanal fishery continues to operate out of each of the inhabited islands, mostly for subsistence, with some tourist operators present in Rarotonga and Aitutaki.

South Pacific albacore tuna is the main target species in the longline fishery. The longline vessels are mostly operated out of Pago Pago, American Samoa and Apia, Samoa. Catch is unloaded to fish canneries, or transhipped to a carrier or containers. Three locally based longliners operate out of Rarotonga catching albacore tuna and a range of species that cater mainly for the local market with some exports to Japan. These vessels are around 20m in length and operate typically within 100nm of Rarotonga.

The purse seine fishery operates in the northernmost waters of the EEZ targeting skipjack tuna on both free and FAD (fish aggregating devices) associated schools with catch unloaded at canneries in Pago Pago. The bulk of purse seine fishing was conducted in the CK EEZ by US flagged vessels. In 2016, the Cook Islands entered into purse seine bilateral agreements with Korea and Kiribati flagged companies. A Sustainable Fisheries Partnership Agreement with the European Union was signed in October 2016 for operationalization in 2017.

Since 2012 the entire Cook Islands EEZ is declared a shark sanctuary, prohibiting the targeting, capture and possession of any shark species.

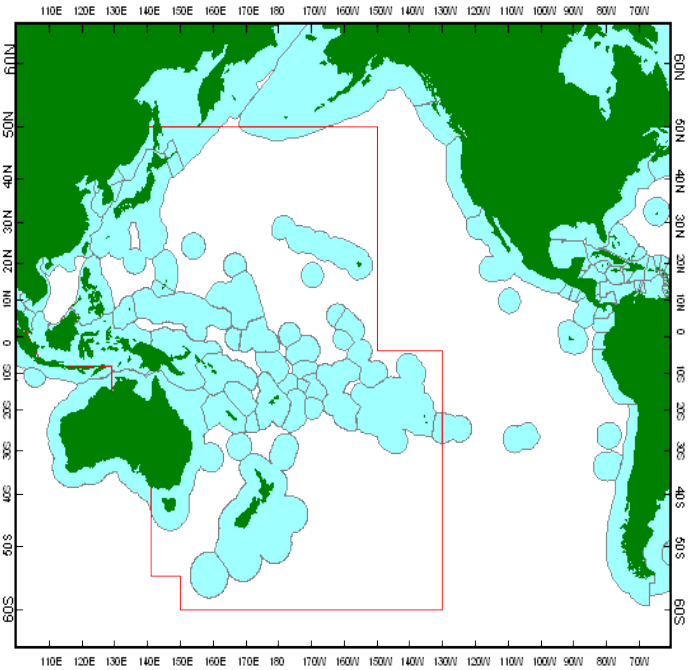

Figure 1. The red line above indicates the boundaries of the Western and Central Pacific Fisheries Tuna Commission

2. Licensing and Fleet Structure

i. Longline

In 2016, the Cook Islands longline fleet consisted of 14 Cook Island flagged longline vessels operating within the Western and Central Pacific Fisheries Commission - Convention Area (WCPFC-CA). Among these, three domestically based vessels were licenced to fish within national jurisdiction only. Eight vessels were authorised to fish both within the Cook Islands EEZ and the High Seas, but rarely fished beyond the waters of national jurisdiction, and 3 were licenced to fish on the High Seas only. A total of 33 foreign flagged vessels were licenced and authorised to operate within the Cook Islands EEZ under charter during 2016. Foreign flagged longline fishing in 2016 was undertaken by two Chinese companies, with Chinese flagged vessels operating out of Pago Pago (American Samoa), Suva (Fiji), Papeete (French Polynesia) and Kosrae (Federated States of Micronesia). All longline vessels licenced to fish in zone are prohibited to fish with 12 nautical miles (territorial seas) of all islands and 24nm of Rarotonga. In 2016 the Cook Islands had a maximum limit of 50 longline vessels able to be licensed to fish within the Cook Islands EEZ at any one time.

ii. Purse Seine

A total of 35 Purse seine vessels under the US Multilateral Treaty were authorised to fish in Cook Islands waters in 2016. Three key companies were authorised to fish with vessels flagged from Kiribati, Korea and Spain (see Table 1). All purse seine vessels are prohibited to fish within 24 nautical miles of each island and 48 nautical miles of Rarotonga.

iii. Other commercial vessels

The Cook Islands has two mid-water trawl vessels that target orange roughy (*Hoplostethus atlanticus*) and alfonsino (*Beryx splendens*). These vessels fish in the Southern Indian Ocean and offload their catches in Port Louis, Mauritius and Capetown, South Africa.

Seven bunker vessels which supply fishing vessels with fuel and provisions were also authorised to operate within the EEZ and beyond fisheries waters

Table 1. Breakdown of number of licenced vessels by gear, flag and authorised area of operation in 2016.

Gear	Area of Operation	Cook Islands	China	Kiribati	Korea	MI	USA	Total
Longline	CK EEZ	11	32	-	-	-	-	43
Purse Seine	CK EEZ	-	-	9	22	-	35	66
Trawl	Beyond EEZ	2	-	-	-	-	-	2
Bunker	CK EEZ	4	-	2	-	1	-	7

3. Longline Fishery

3.1 Longline Catch and Effort Trends

For the purposes of this report, catch estimates are generated using logsheet data. Reported catches for 2016 are raised using Vessel Monitoring System (VMS) data where logsheet coverage is less than 100%. In this instance, logsheet coverage for all trips undertaken in zone is 93% for Cook Island flagged vessels and 86% for foreign flagged vessels. The total longline tuna catch estimate for 2016 within the Cook Islands EEZ is 6,507mt, which is a 10% increase from 2015 and a 1,788mt less than the 2010-2015 average. Total fishing effort in the CK EEZ was approximately 8.8 million hooks (Figure 3), with 1,717,700 hooks of effort from Cook Islands flagged vessels attributed to effort within the WCPFC area. Albacore continues to dominate the overall catch totalling about 4,684mt and accounting for 72% of the total species catch composition. Yellowfin tuna comprised 19% of the longline catch (1,220mt), followed by bigeye tuna (603mt) at 9% (Figure 3). Other species make up the remaining 10% of catch, including species such as blue marlin (255mt), skipjack tuna (65mt), wahoo (121mt), swordfish (69mt), mahi mahi (29mt) and other non-commercial species (Figure 4).

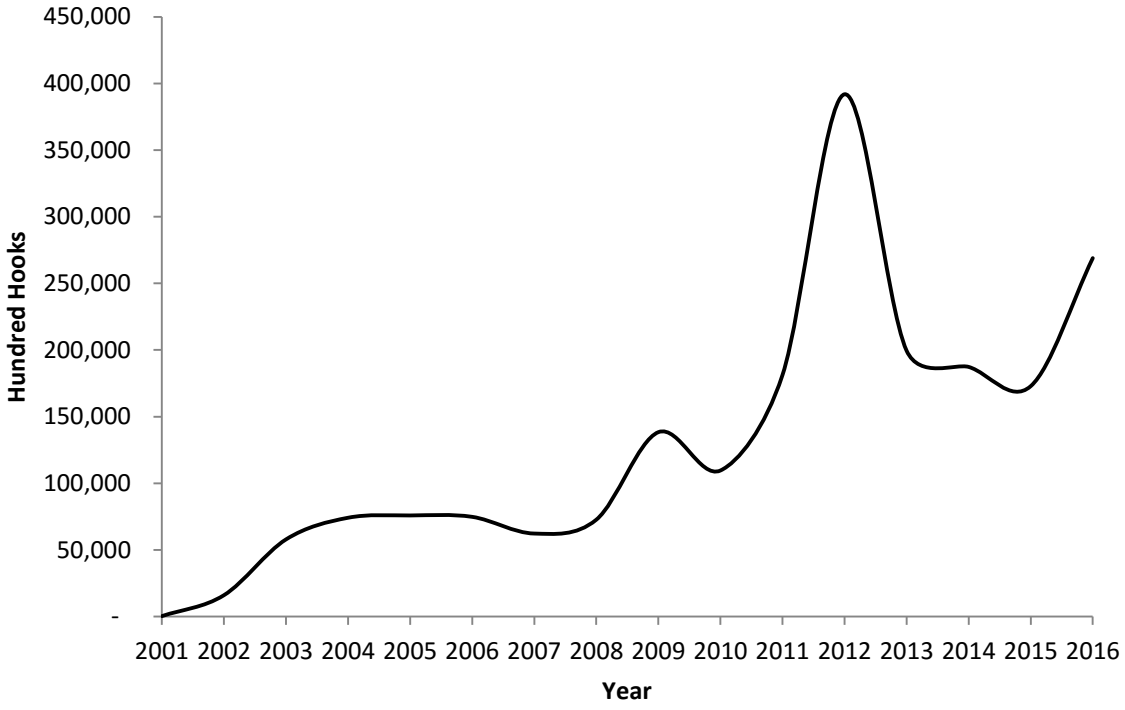

Figure 3. Total longline fishing effort (number of hooks) within the CK EEZ per year from 2001 – 2016.

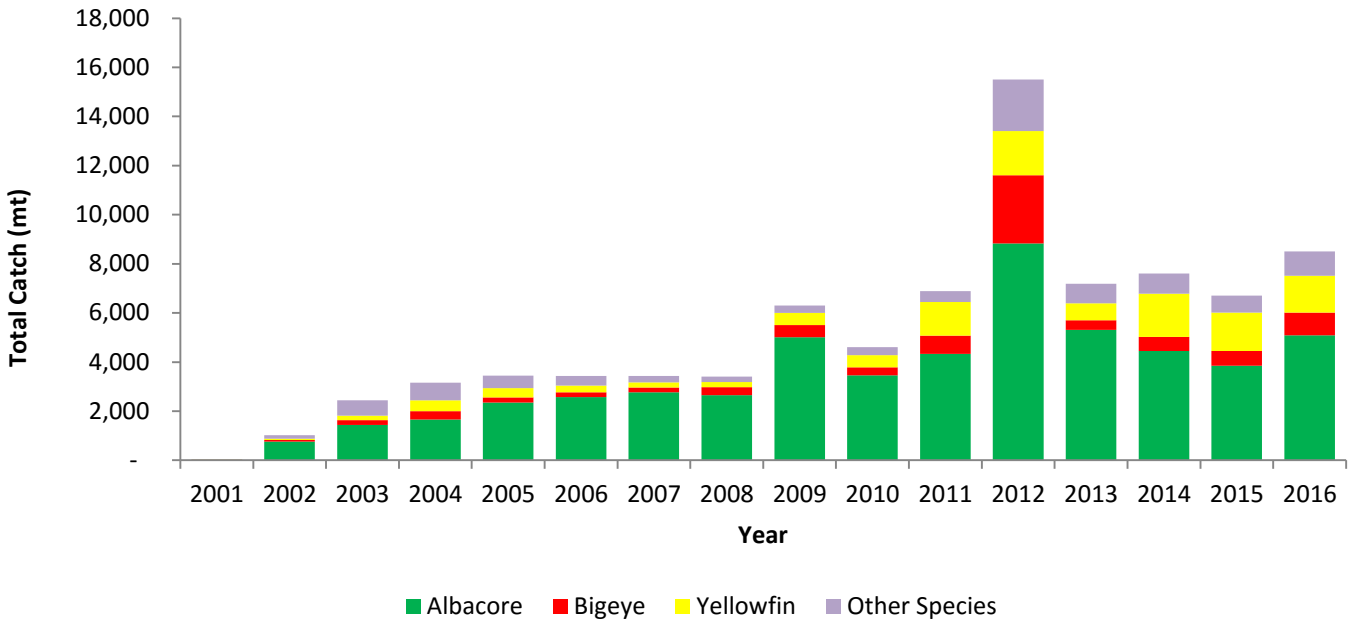

Figure 4. Time series of longline catch by key species within the CK EEZ from 2001 – 2016.

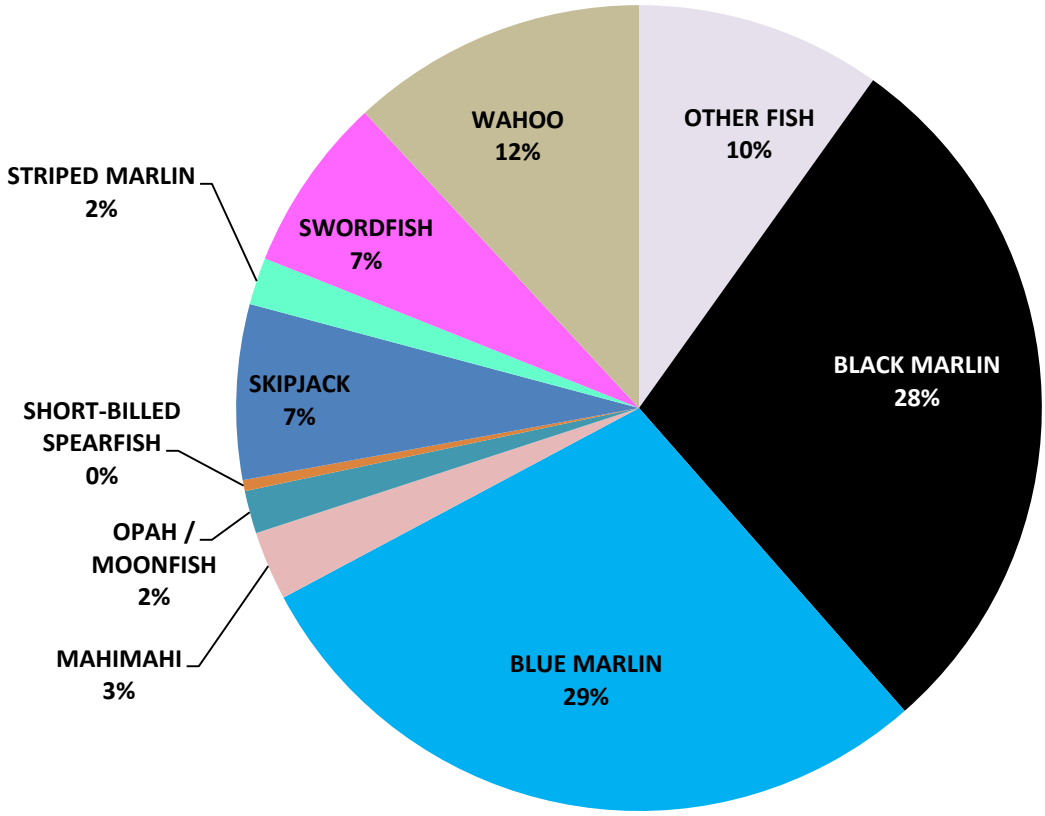

Figure 5. Species catch composition of "other species" in 2016.

Catch rates of albacore measured in in kilograms per 100 hooks, have steadily declined since 2007 from around 44kg/Hhks (per hundred hooks) to 22k/Hhks. Catch per unit effort (CPUE), for both bigeye and yellowfin tuna have fluctuated around 4kg/Hhks. In 2014 yellowfin CPUE more than doubled and remained at that rate through 2015 (Figure 7). Low albacore catch rates earlier in the time series indicate an un-fished or lightly fished fishery.

There is a strong seasonal trend evident in relation to the calendar fishing year. In general, first and fourth quarter catch rates and total catch are low, with this period referred to as the off-season. Second and third quarter catches are the peak of the fishing season with CPUE of albacore ranging between 35 and 67 kg per hundred hooks. Yellowfin tuna had high catch rates from March to June in both 2015 and 2014, with a second peak of increased CPUE (22kg/Hhks) around August. Catch rates of all three key tuna species steadily declined from September onwards, signalling the end of the fishing season (Figure 8).

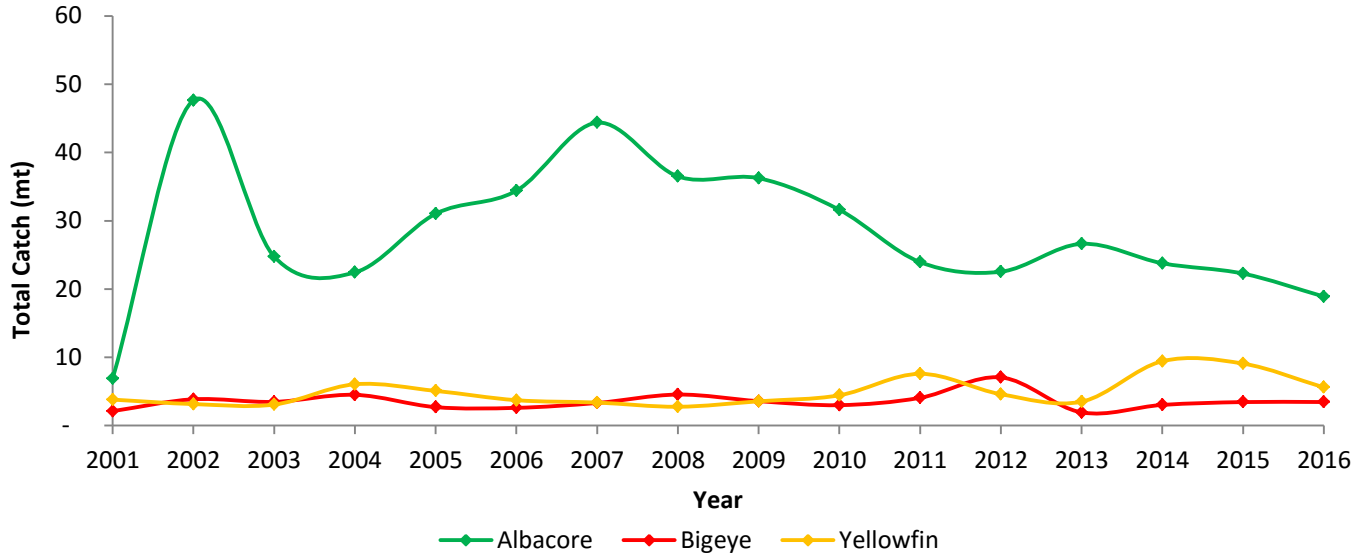

Figure 6. Annual average catch per unit effort (kgper 100 hooks) of key tuna species from 2001-2016.

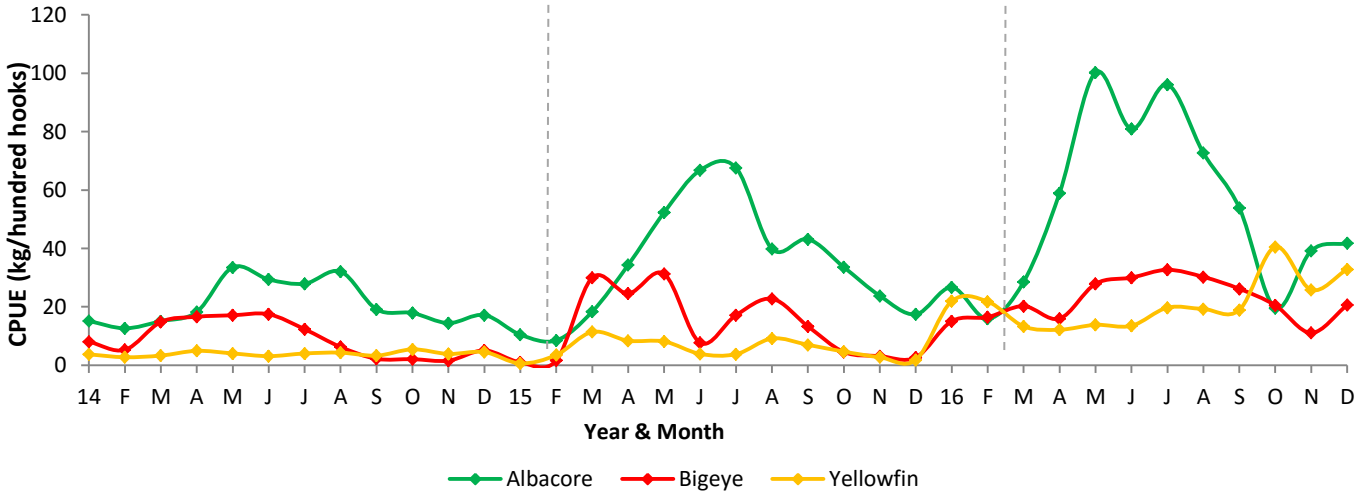

Figure 7. Monthly CPUE for albacore (green), yellowfin (yellow) and bigeye tuna (red) from 2014-2016 of all vessels fishing within the CK EEZ. The dashed lines indicate a new year.

3.2 Longline catch and effort beyond National Jurisdiction

The majority of Cook Islands flagged longline fishing vessels issued with EEZ licenses are issued authorizations to fish on the High Seas and areas beyond national jurisdiction within the WCPFC Convention Area, with the exception of one domestic vessel. A total of 11 longline fishing trips were undertaken in areas beyond the CK EEZ with a total catch of 813mt.

3.3 Longline catch distribution

Figure 8 demonstrates 5 degree by 5 degree aggregated distribution of key tuna species catch for 2016. The longline fishery is typically delineated around 15°S however longline fishing effort and catch continues to extend further south than in previous years. In 2016, 36% of key tuna species were caught below 15°S latitude. Bigeye tuna is mostly taken in the northernmost part of the EEZ, north of Penrhyn, closer to the equatorial belt. Similarly, there are higher catches of yellowfin tuna in the same tropical band (north of 10°S). Large concentrations of albacore were taken on the western border of the EEZ, south of Pukapuka and around Suwarrow, likely because these fishing grounds are close to Pago Pago where a number of vessels unload to. The concentration of fishing effort around Rarotonga is indicative of the three domestic fresh-fish longliners operating out of Avatiu.

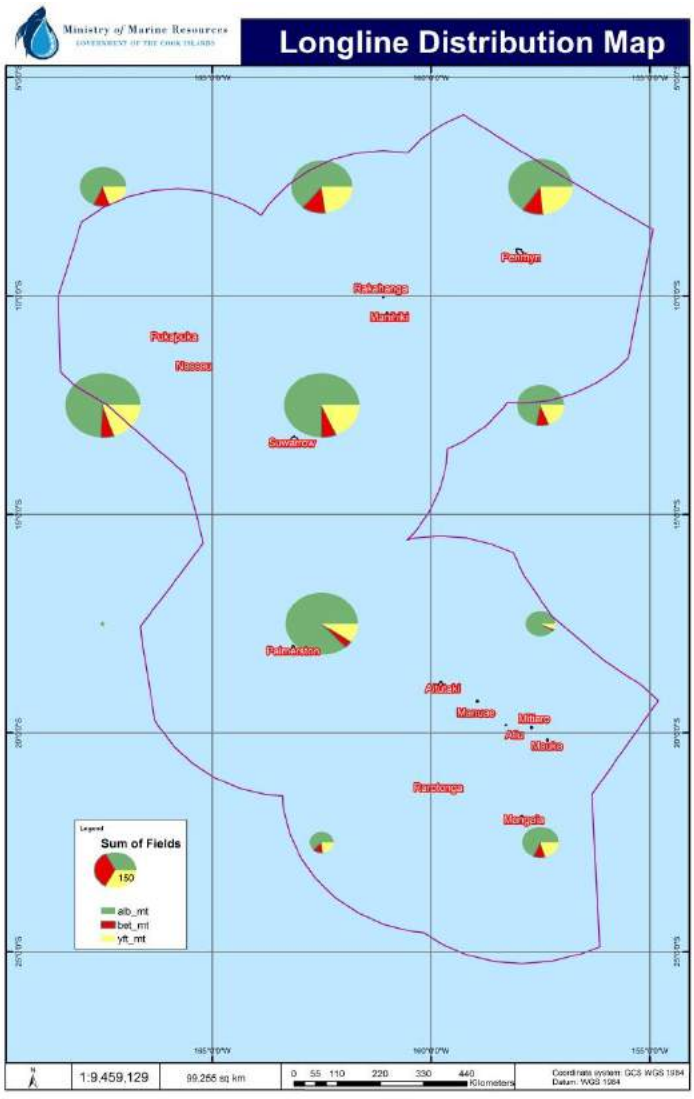

Figure 8. Longline fishing distribution of catch in metric tonnes of key tuna species within the CK EEZ, 2016.

3.4 Regional Perspective

The provisional total Western Central Pacific – Convention Area (WCP-CA) tuna catch for 2016 was estimated at 2,717,850 mt, the second highest in record at nearly 120,000 mt below the previous record catch in 2014 (2,851,087 mt). 8.5% of this catch (231,860mt) was taken by longline fisheries, which was lower than the past five years. Albacore tuna was 31% of WCP-CA longline catch (71,171mt), the lowest since 2000 with a recorded catch of 30,000mt. Yellowfin tuna was 39% of the longline catch (90,539mt), and bigeye tuna was 28% (64,131mt) (Williams & Terawasi, 2016). Annual catches in the longline fishery since 2000 have been high compared to historical catch figures (Figure 11). In comparison, the

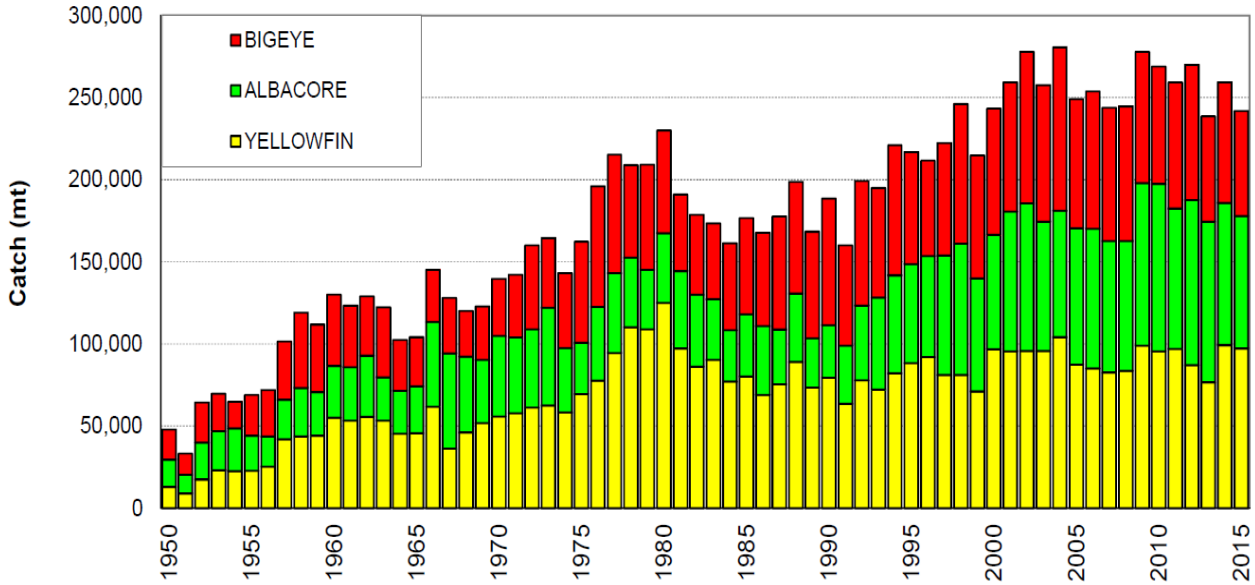

Figure 9. Longline catch (mt) of target tuna species in the WCPFC-CA from 1950 - 2015.
Source: WCPFC SC13/2017-GN-WP-01 Rev 1

total albacore tuna catch in the Cook Islands EEZ comprises only 6.5% of the total longline WCP-CA albacore catch.

4. Purse Seine Fishery

4.1 Purse Seine Catch and Effort Trends

The purse seine fishery is a surface fishery targeting schooling skipjack tuna in the tropical waters of the Western and Central Pacific Ocean (WCPO). The purse seine fishery operates in the northernmost waters of the EEZ targeting tuna on both free and FAD associated schools. Associated schools include sets on drifting logs and drifting rafts known as Fish Aggregating Devices (FADs). This catch is unloaded in Pago Pago. 2016 was the second year the Cook Islands entered into bilateral negotiations to license foreign flagged purse seine vessels in addition to vessels under the US Multilateral Treaty. An additional 31 vessels from Korea and Kiribati were licenced to fish in the Cook Islands EEZ.

The purse seine fishery is controlled by fishing effort using the Vessel Day Scheme (VDS), which monitors the days fished in zone. A fishing day is defined as either a set (deploying the purse net) or when the vessel is actively searching for a school, or deploying a (FAD). In

2016, the Cook Islands had 350 days available to be fished by the US vessels, of which 134 days were actually used. 900 days were available to be fished by any other purse seiners, of which 31 days were used (Figure 12). Fishing effort is validated through the vessel monitoring system (VMS) and submitted catch logsheets.

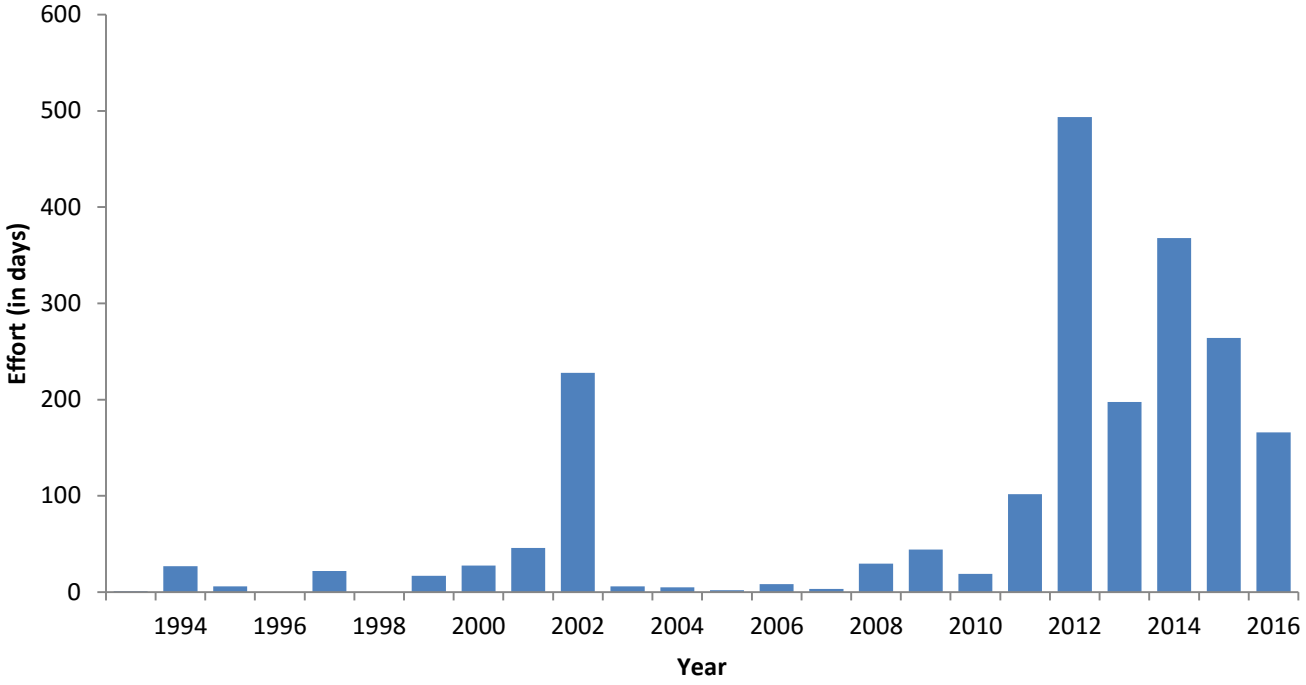

Figure 10. Total effort (in days) for the purse seine fishery within the CK EEZ from 1994 - 2016

In the purse seine fishery catches in 2016 were approximately 7,880mt representing a 44% decrease from 2015. 90% of the total catch was skipjack tuna, with 8% of yellowfin and 2% of bigeye tuna (Figure 13). 98% of the total catch in 2016 was taken from FAD associated sets and 2% from free school sets. Since 2012, an average of 79% of the total purse seine catch has been from associated sets, with 21% from unassociated sets, indicating the reliance on FAD sets for the viability of the fishery in Cook Islands waters.

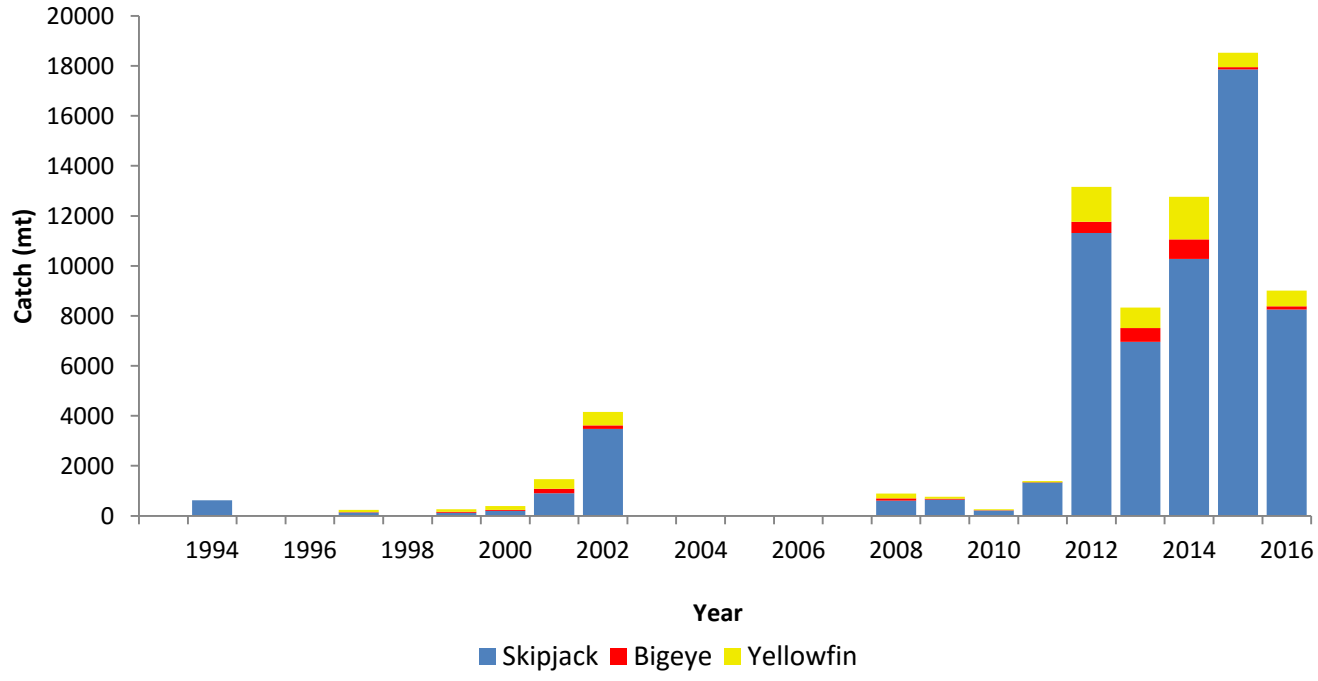

Figure 11. Catch (mt) of key tuna species in the purse seine fishery, within the CK EEZ from 1994 – 2016.

There is a strong seasonal trend in the purse seine fishery, with the fourth and first quarter of the year the peak season of the fishery. This is opposite to the longline fishery which operates largely through the winter months. The purse seine fishery is subject to a three month FAD closure from July to September which prohibits the setting of nets on FADs. Only 156mt of catch (Figure 13) from unassociated sets was taken during the FAD closure with no catch in July to September (Figure 14).

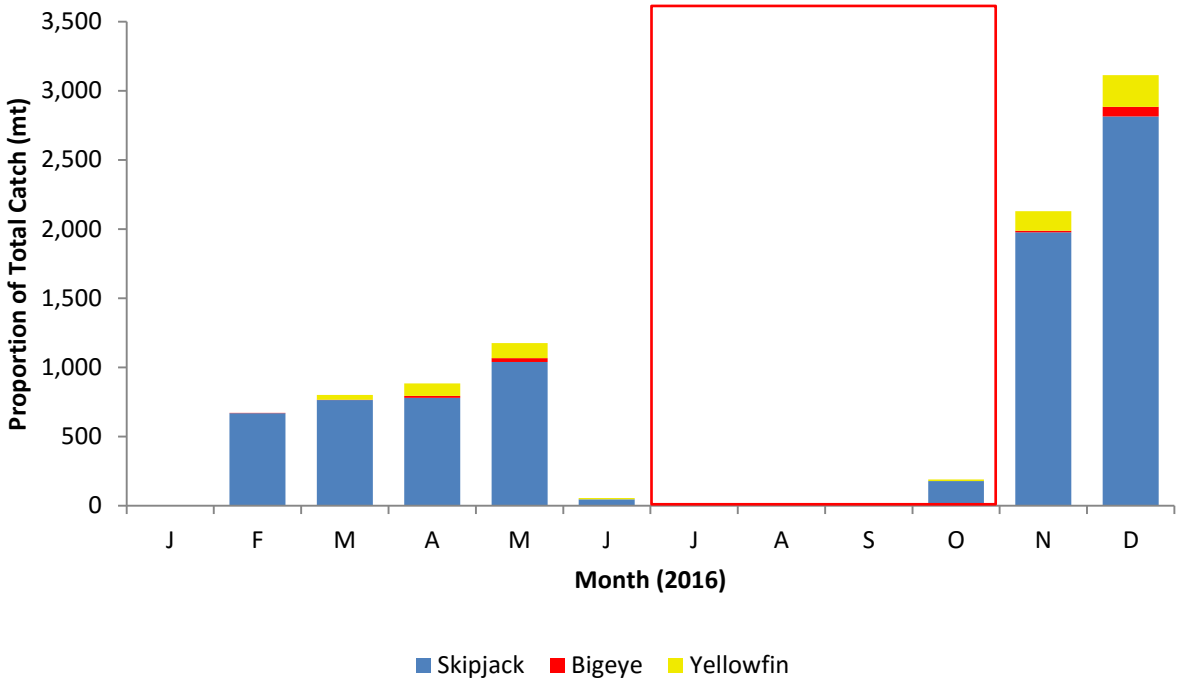

Figure 13. Purse seine logsheet catch estimates (metric tonnes) of key tuna species in by month in 2016. The red shaded area depicts the four month FAD closure.

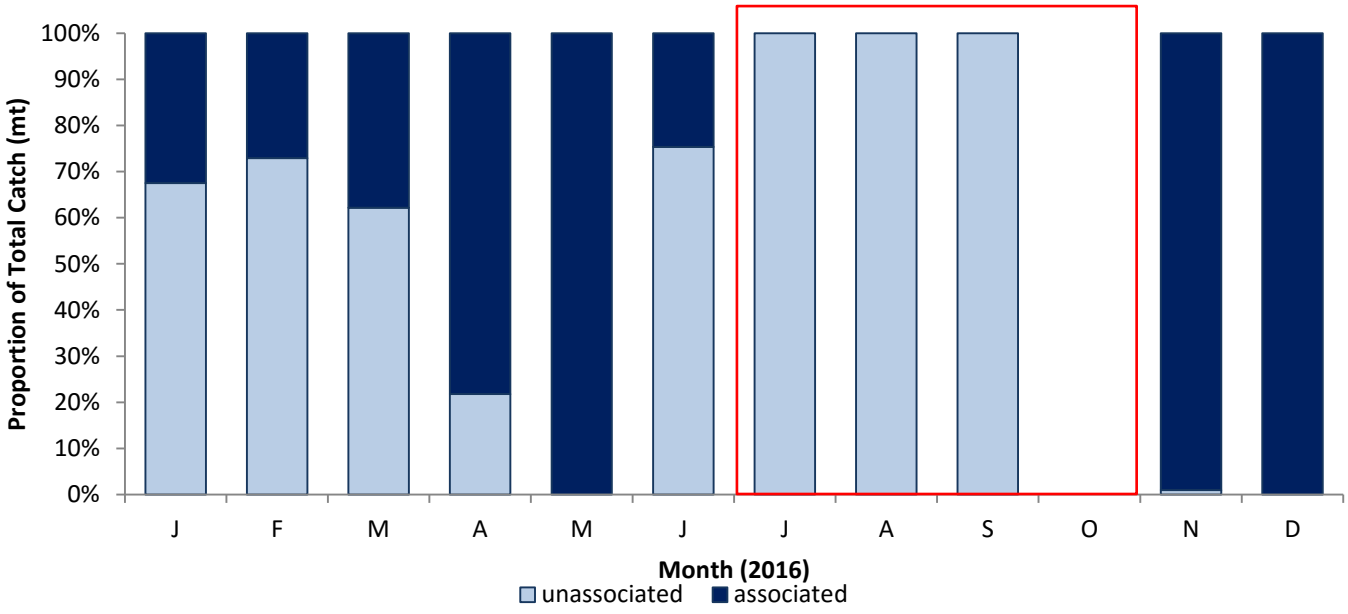

Figure 14. Proportion of catch taken in associated and unassociated sets by month in 2016. The red shaded area depicts the four month FAD closure.

4.2 Purse seine by-catch

The composition of bycatch in the purse seine fishery available from observer data coverage on 2016purse seine sets indicates that rainbow runners comprise the largest component of bycatch, followed by blue marlin and silky sharks (Figure 15). Purse seine by-catch in this context does not include yellowfin and bigeye tuna.

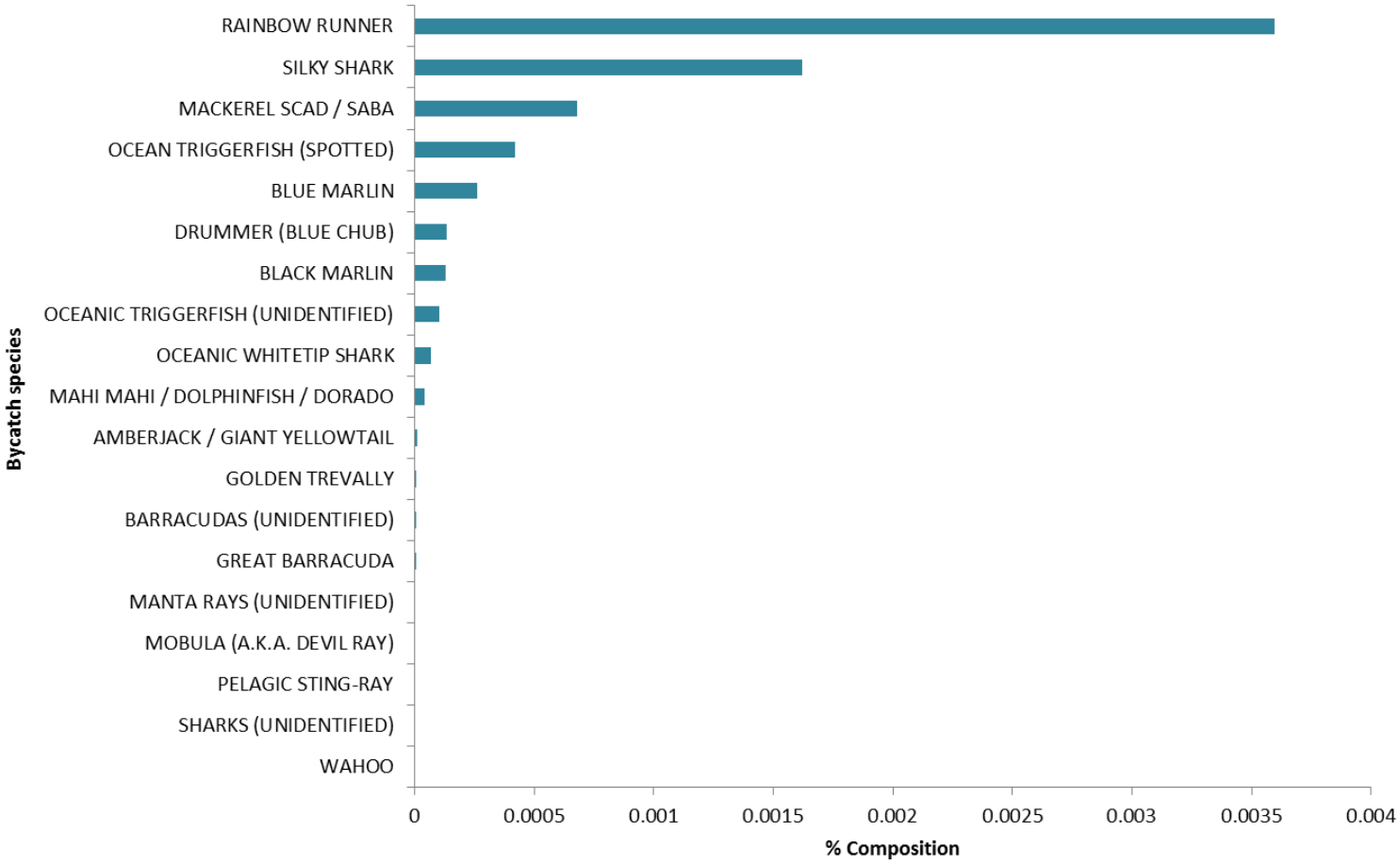

Figure 15. Purse seine by-catch composition in 2016 based on observer data.

4.3 Purse seine catch distribution

The spatial distribution of purse seine catches is exclusive to the northern most parts of the EEZ, north of 13°S latitude (Figure 16). 2015 was a strong El Nino year (Figure 18) and resulted in the expansion of purse seine activity into the eastern tropical areas. El Nino conditions continued into the first half of 2016 but then abruptly moved to a neutral start by the middle of the year. As such, the Cook Islands experienced increased purse seine fishing activity, particularly in the first quarter of the year (Figure 14).

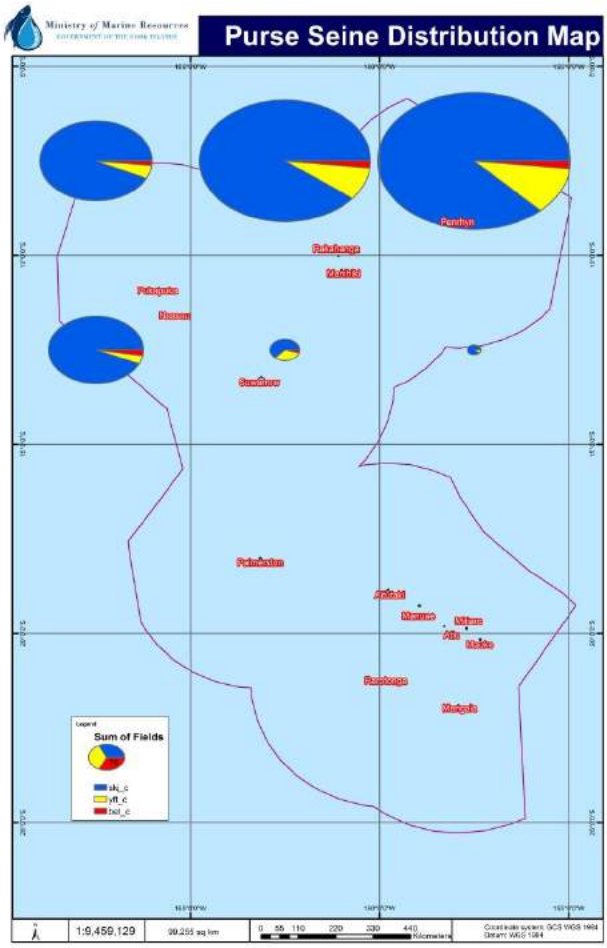

Figure 16. Purse seine catch (mt) distribution of key tuna species within the CK EEZ 2016.

4.4 Regional Perspective

The provisional purse seine catch in the WCP-CA in 2016 was 1,858,198 mt, the third highest on record; of which 75% was skipjack tuna (1,408,110mt), 21% yellowfin tuna (394,756 mt), and 61,304mt of bigeye tuna. (Williams & Terawasi, 2017) (Figure 17). Total fishing effort (vessel days) has tracked quite closely with the total purse seine catch since the early 1970's. Higher catches with lower effort in 2014 shows increased catch rates over both 2013 and 2015 (Figure 17).

The Cook Islands purse seine catch (7,880mt) constituted just 0.42% of the total WCP-CA purse seine catch in 2016. The regional purse seine catch and effort distribution is strongly influenced by El Nino – Southern Oscillation Index (ENSO) events. Fishing activity in 2014 and 2015 extended further to the central and eastern area of the WCPO, driven by a very strong El Nino event that continued through into 2015 and the first half of 2016. Purse seine effort was more pronounced to the east of 160°E during 2014 and 2015. In the previous 6 years effort was concentrated to the west in areas around Papua New Guinea, the Federated States of Micronesia and the Solomon Islands (Figure 18). It was predicted that the El Nino conditions would weaken in 2016 with more effort in the western tropical area expected to result (Williams & Terawasi, 2017).

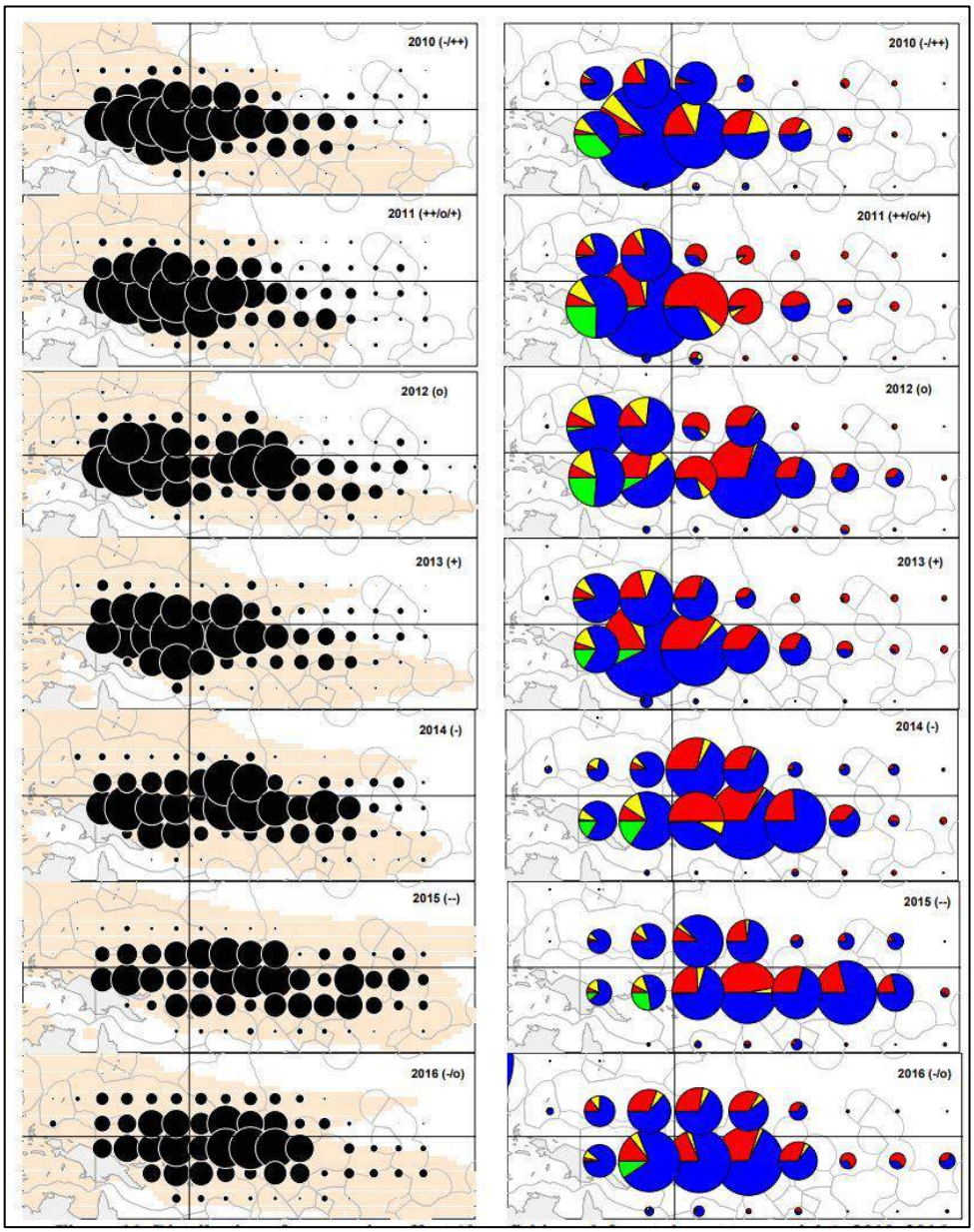

Figure 17. Regional distribution of purse seine fishing effort (LEFT: days fishing; RIGHT: sets by set type (blue – unassociated; yellow – log; red – drifting FAD; green – anchored FAD)) from 2011 – 2016. Faded orange colour indicates distribution of water with a sea-surface temperature of >28.5°C. The (-) minus sign indicates an El Nino year, (+): La Nina and "o": Transitional period. ***Source: WCPFC SC13/2016-GN-WP-01 Rev 1***

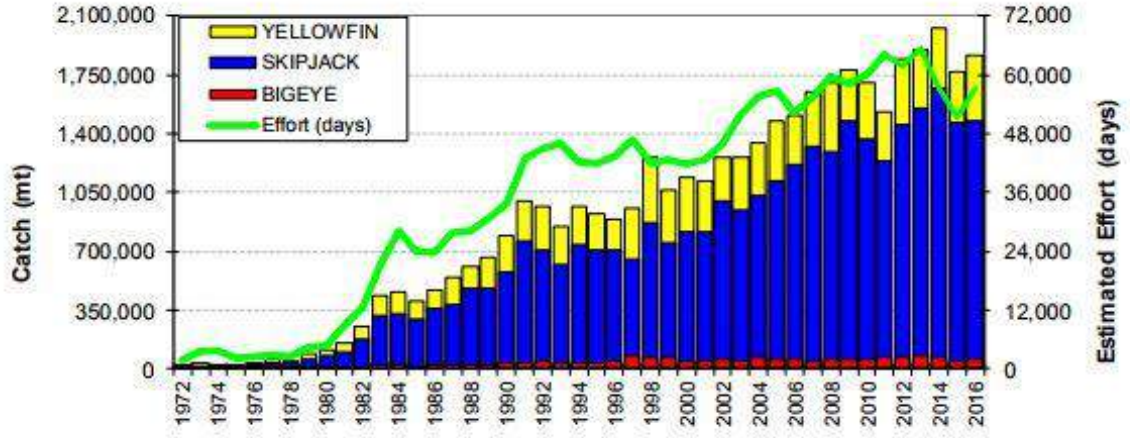

Figure 18. Purse seine catch (mt) of bigeye, skipjack and yellowfin and estimated fishing effort (days fishing and searching) in the WCP-CA from 1972 - 2016. ***Source: WCPFC SC13/2016-GN-WP-01 Rev 1***

5. Artisanal Fishery

The Cook Islands artisanal fishery occurs from all inhabited islands, primarily targeting tuna and pelagic species. In 2016 there were 313 active artisanal vessels being reported on the artisanal database. 96% were small powered boats with outboard motors, 3% were sport or recreational vessels, and the 1% were unpowered canoes.

The small aluminium, fibreglass or wood constructed powered vessels are generally 2-4 metres in length crewed by 1-3 people fishing for subsistence purposes. It is common for artisanal fishers with powered vessels to troll around the coast of the islands, while unpowered canoes tend to fish at fishing aggregating devices (FADs) using handlining methods. Fishing areas vary between the two island groups. Most islands within the Northern Group do not have deployed FADs and fishing in the north takes place within deep lagoons, and along the coast of islets (motus), resulting in a variety of reef and pelagic species being caught. It is very common for artisanal fishers in the outer islands (north and south) to use multiple fishing methods at one particular spot due to fuel being limited and expensive. Fishing trips can take up to 6 hours.

Unlike small powered vessels which fish for subsistence, recreational/sports fishing boats aim at selling fishing charters and tours to tourists. There are currently 13 game charter vessels in the Cook Islands. These are high powered outboard and in board motorboats and are approximately 8-12 metres in length. Trolling is the main fishing method used to target billfish, tuna, and other pelagic game species.

5.1 In-Zone Catch and Effort

Artisanal catch data was recorded from the islands of Aitutaki, Atiu, Mangaia, Manihiki, Mitiaro, Mauke, Nassau, Palmerston, Penrhyn, Pukapuka, Rakahanga, and Rarotonga. Artisanal catch estimates totalled 324 mt in 2016.

Rarotonga saw the highest catches for 2016 with an estimated total of 183mt, followed by Aitutaki 51mt, Rakahanga 21mt, Mangaia 15mt and Mauke 13.5mt (figure 18).

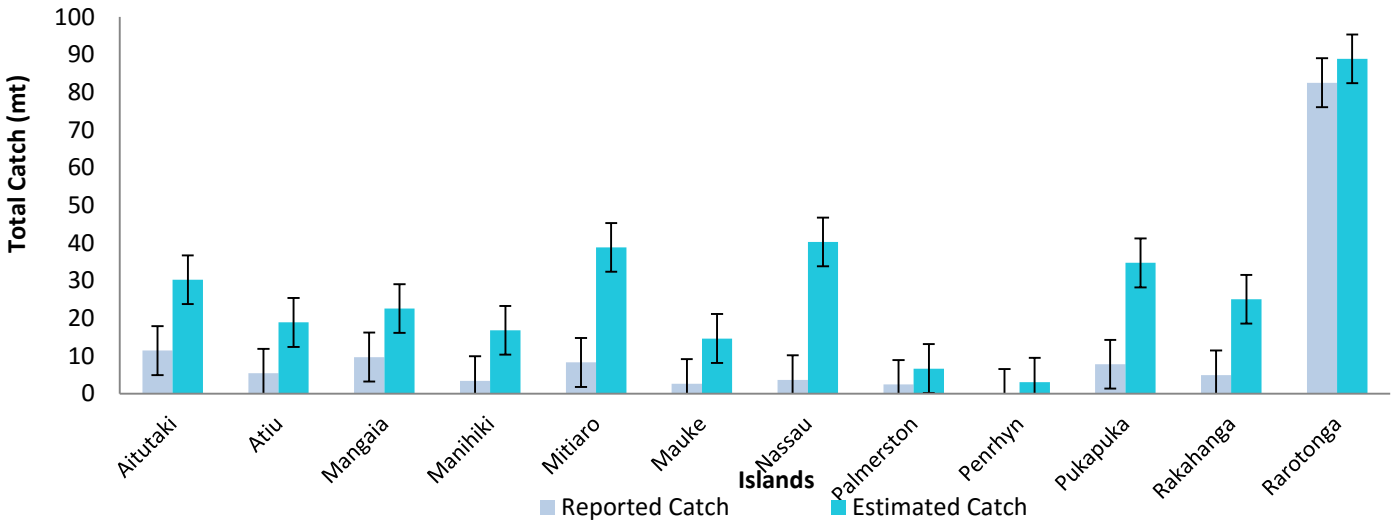

Figure 18. Artisanal reported and estimated catch totals (metric tonnes) per island for 2016.

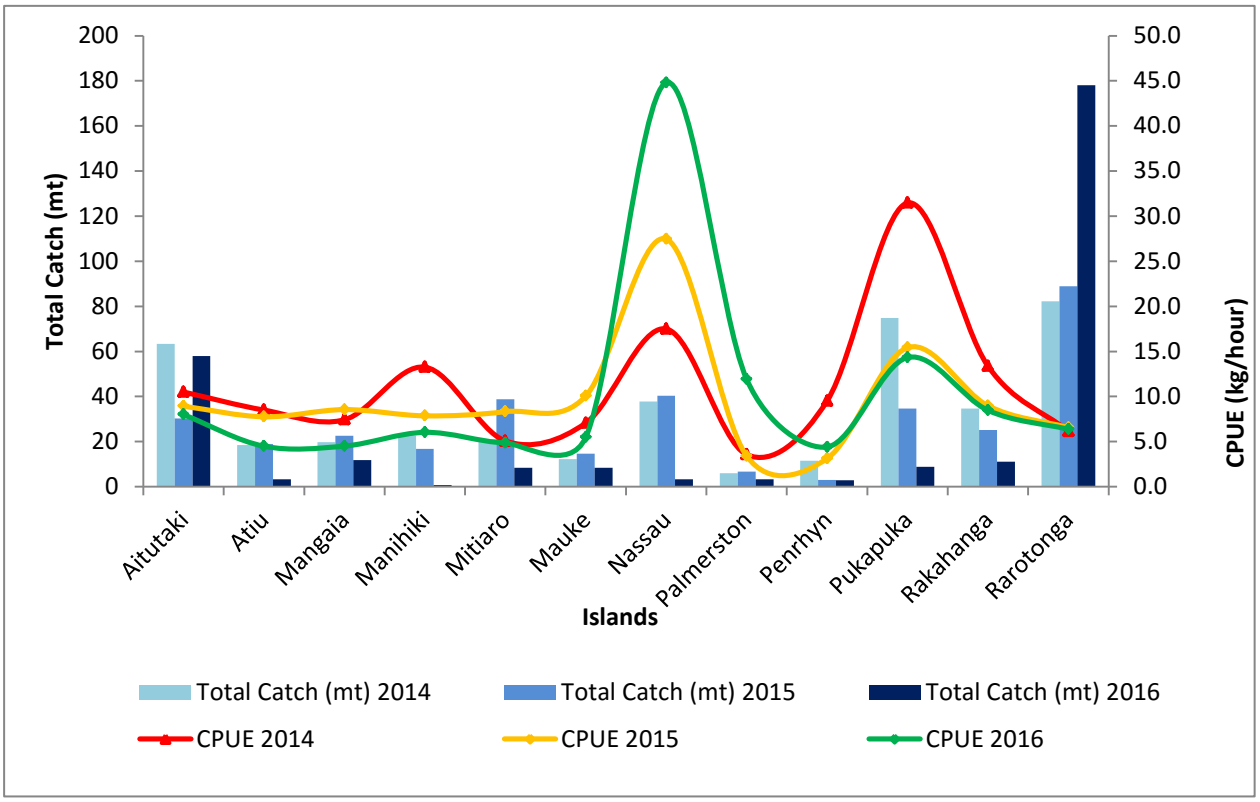

Figure 19. Total artisanal catch (metric tonnes) and catch per unit effort (kilograms of fish caught per hour) per island over years 2014, 2015 and 2016.

Although Nassau saw a decline in total catches from 2013 to 2014, the CPUE (kilograms of fish caught per hour) over all three years, an average of 36.8kg/hour, was the highest amongst all other islands. This indicated that there was very little effort used to catch high

quantities of fish. While the CPUE varied by island, the trend each year was similar. Artisanal catch totals from the year 2013 to 2015 were relatively similar for the islands of Atiu, Mangaia, Manihiki, Palmerston and Rarotonga. While Mitiaro saw an increase of total catches in 2015 of over 50% from 2014, Aitutaki's catches increase from 30mt to 51mt for 2016. Mauke catches has decreased over the years totalling at 13mt in 2016, while Rakahanga catches decreased from 50mt in 2013 to 25mt in 2015 (figure 19). Figure 20 shows a decrease in fishing hours for each island, which may indicate declining fishing activity, possibly attributable to declining island populations.

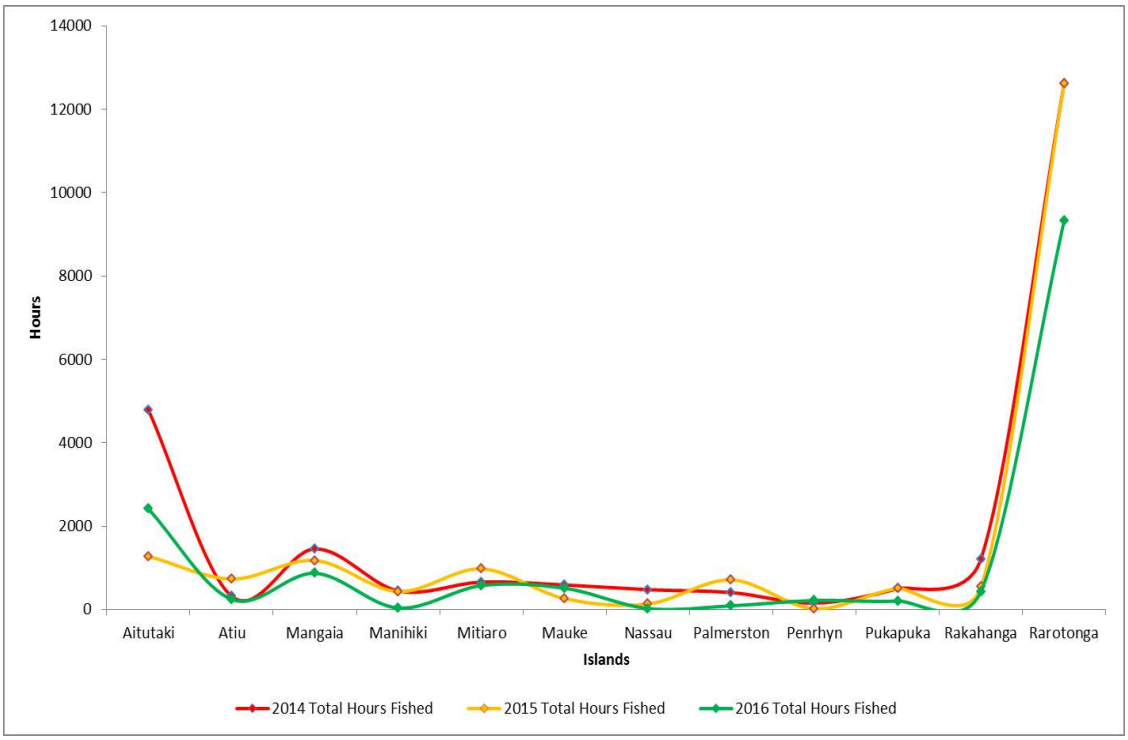

Figure 20. Fishing effort (total number of hours fished) per island over years 2014, 2015 and 2016.

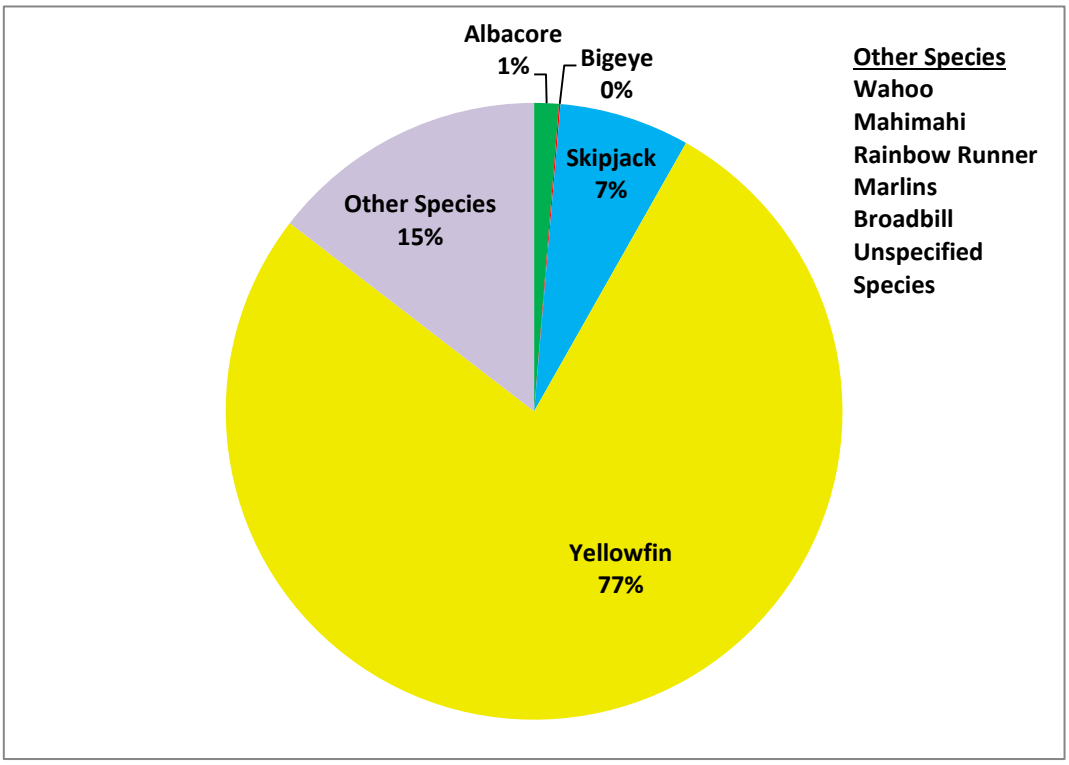

Figure 21. Total catch (metric tonnes) of key species for the years 2013, 2014 and 2015.

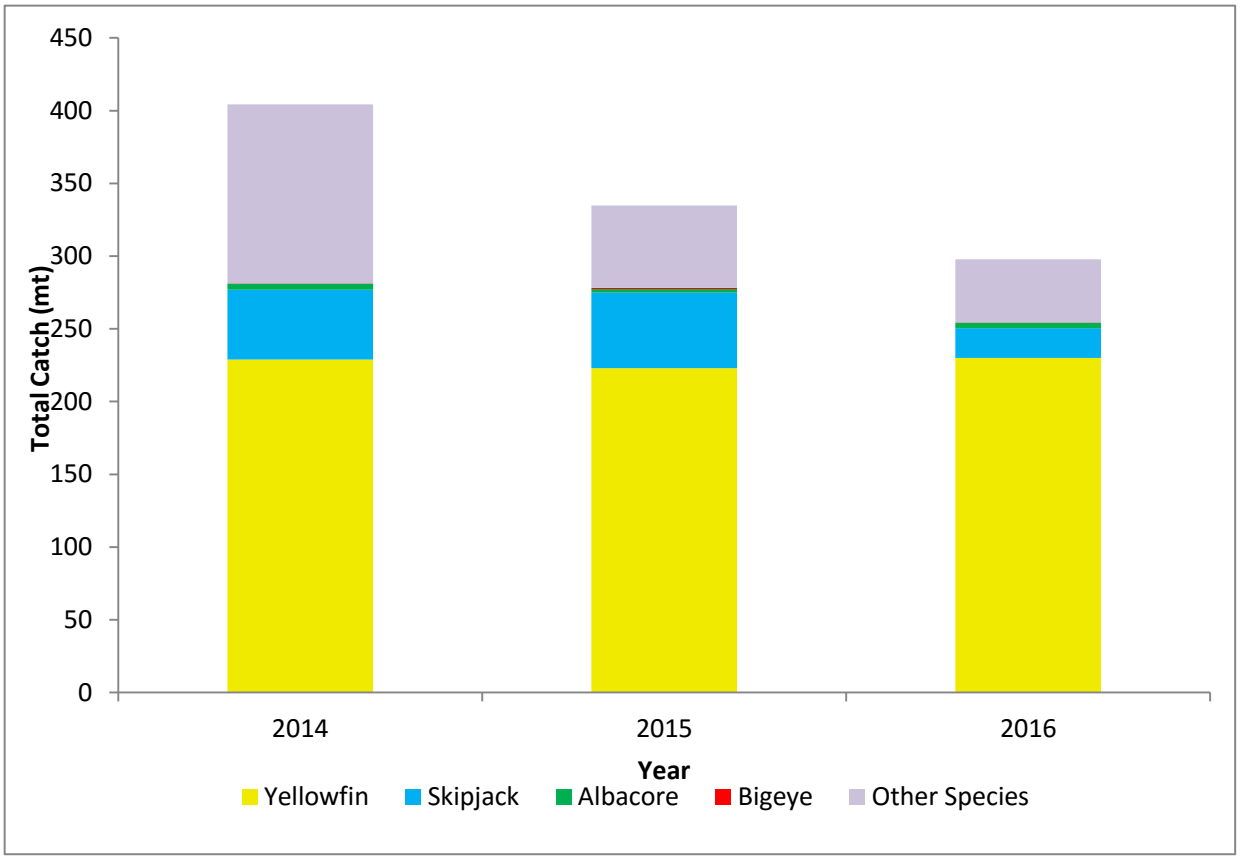

Figure 22. Total artisanal catch composition including 'other species' for year 2016.

Catch rates of yellowfin tuna and other pelagic species measured in kilograms per hook have fluctuated since 2013 to 2016. There appears to be some seasonal trends in the artisanal fishery. In general when yellowfin tuna catches decline (during the third quarter of every year), the catch rates of other pelagic species tend to increase. In each year, from the end of the second quarter (July to September) catches of yellowfin tuna decline by 57% (59mt accumulative total) (Figure 23).

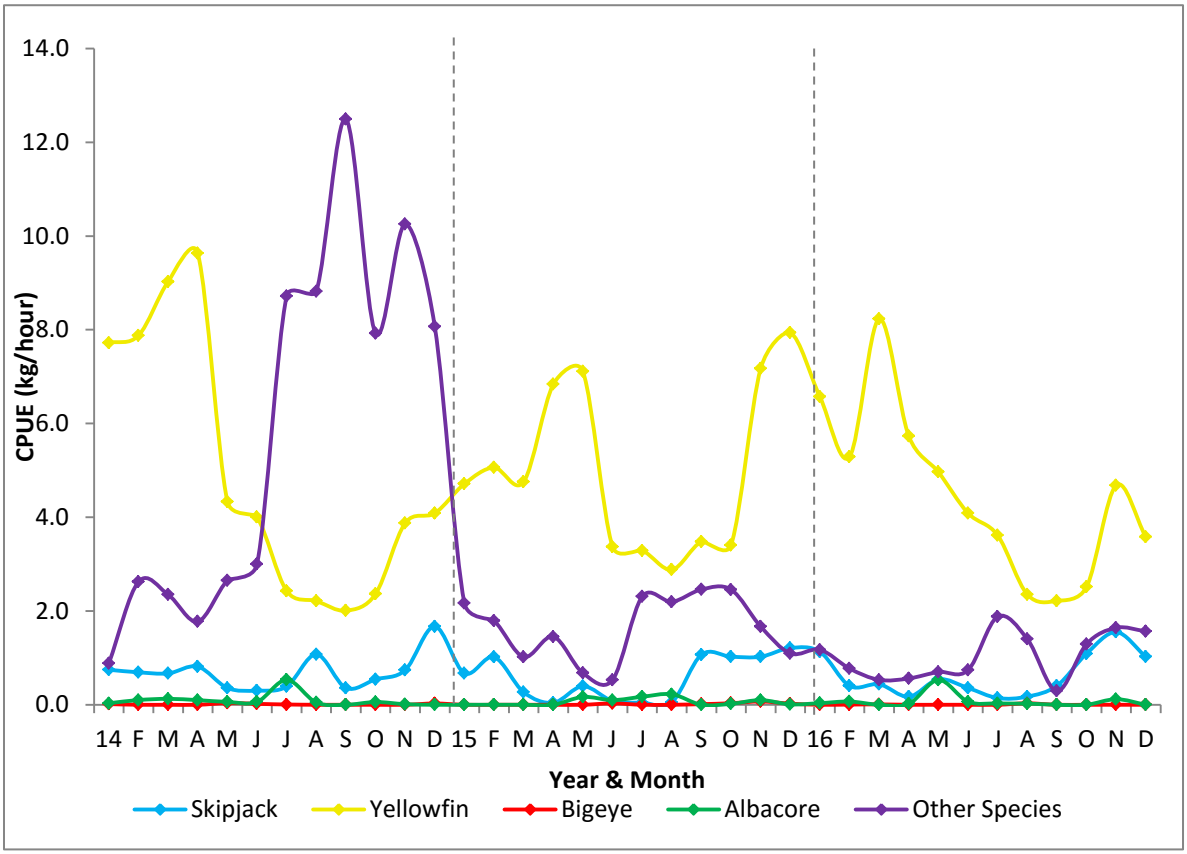

Figure 23. Monthly catch per unit effort of key tuna species and other pelagic species for years 2014, 2015 and 2016. The dashed line indicates a new year.

In 2016 other pelagic species CPUE more than doubled during the months of June through to December (Figure 23). The low bigeye and albacore catch rates indicate an unfished or lightly fished fishery. The species with the highest CPUE (kg/hour) per island for 2015 was yellowfin tuna, followed by other species.

5.2 Artisanal Fishery Developments

The Cook Islands artisanal fisheries data collection programme has been in place since 2011. The Cook Islands is now one of the leading nations in the Pacific in terms of artisanal fisheries programme development.

In collaboration with the Secretariat of the Pacific Community (SPC), the Ministry of Marine Resources intention is to support the continuous collection of good quality tuna data in the Cook Islands. A key component to the success of this will be awareness, through conducting an 'Artisanal Tuna Data Collection Workshop' on each inhabited island.

The long term purpose of the Artisanal Tuna Data Collection Workshop is to improve the quality of artisanal fisheries data for the Cook Islands. Therefore the programme ensures that through direct interaction fisheries officers as well as artisanal fishers will;

a) Be trained how to accurately complete the updated SPC regional data forms,
b) Be educated on the importance of collecting good quality data,
c) Get feedback from data received in past years,
d) Provide feedback of issues and concerns, and
e) Register all active fishing vessels

6. Observer Programme

The Cook Islands National Observer Programme achieved a total of 718 observed sea days in 2016 for an overall longline coverage of 7.7%, purse seine coverage at 100% and trawlers at 16%. Longline percentages, though lower than recent years, were achieved in the midst of a major restrucuture of the Observer Programme that commenced in 2016. 4 Observers were contracted to the Cook Islands, 2 of whom were based out of Apia, 1 in Rarotonga and 1 in New Zealand. However, an MOU was signed in June 2016 between MMR and the Fisheries Department of the Kingdom of Tonga to deploy their Observers on the Cook Islands programme, which significantly increased the pool of available Observers. The submission of one Observer report in June 2016 was not completed due to operational complications involving an Observer who breached the code of conduct with the data subsequently missing. The Observer involved was terminated from the programme and the missing data from this trip would have pushed observed longline coverage over 10%, which was the target for 2016.

Eleven placements were organized for 2016; eight trips on longliners (533 days), two trips on purse seiners (101 days) and one trip on a trawl vessel (84 days). Purse seine trips by US vessels fishing into the Cook Islands EEZ were usually placed with Observers from the Forum Fisheries Agency (FFA) Sub-Regional Observer Programme to fill the WCPFC 100% coverage requisite on Purse Seine vessels.

Table 2. Estimated annual coverage of operational catch and effort, port sampling and observer data for the national longline fleet, active in the WCPF Convention area for 2012 – 2016.

Year	Operational Catch & Effort	Port Sampling	Observer Data (days at sea)
2012	82.5%	10.4%	5.7%
2013	97%	16%	8.9%
2014	97%	23%	9.8%
2015	100%	35%	12.8%
2016	100%	20%	7.7%

7. Monitoring, Control and Surveillance and Enforcement

i. Boarding and Inspections

In 2016, a total of 73 boardings and inspections were conducted. 5 vessels were inspected in the port of Avatiu, 63 boardings and inspections in the Cook Islands EEZ and 5 High Seas boardings and inspections at sea were undertaken by the Police Patrol Boat Te Kukupa.

Table 3. Summary of port side and at-sea boarding's and inspections conducted in 2016.

Year	Port Inspection in Avatiu		At Sea Boardings				
	CK Flag	Foreign Flag	Licensed		Non Licensed		Joint Operation
			CK EEZ	High Seas	CK EEZ	High Seas	WS EEZ
2016	5		63				5

ii. Patrols and Joint Operations

The Cook Islands participated in five regional operations in 2016.

Operation Name	Countries Involved
Raiteka 16	Cook Islands, French Polynesia and Kiribati
Ikamoana 16	Tonga, Samoa, Niue, Cook Islands
Tuimoana 16	French Polynesia, America, New Zealand, Australia, Cook Islands, Solomon Islands, Papua New Guinea, Samoa, Tonga
Kurukuru 16	All 17 FFA members plus QUAD Nations (USA, Australia, NZ, France)

iii. Illegal, Unreported and Unregulated Fishing

In 2016 the Cook Islands MCS and Enforcement team, consisting of Offshore Fisheries Officers and Maritime Police, continued to work together to detect illegal, unreported and unregulated (IUU) fishing activity within our zone. Surface patrols on the Cook Islands Patrol Boat Te Kukupa and HMNZS Otago and monitoring via a satellite based VMS detected nine major breaches of Cook Islands Regulations.

8. Cook Islands Fisheries Field Office (CIFFO)

In 2008 the United States and the Cook Islands signed a Memorandum of Understanding (MOU) to cooperate in fisheries management and conservation. The MOU provides for broad cooperation and identifies the following specific areas for cooperation:

- Information exchange, including operational data and MCS;

- Observer placement;
- Fisheries enforcement;
- Boarding and inspection; and
- Fisheries research.

CIFFO was established in 2014 to enable more effective monitoring of licensed and flagged vessels and to facilitate development opportunities with industry partners in American Samoa. In 2016, Observer management and compliance related duties were conducted from CIFFO in Pago Pago.

Funding from the Cook Islands Government, Te Vaka Moana, FFA and SPC enabled the Office to operate and carry out assigned duties for MMR and Sub-regional Observer programmes. A restructure of the Office was commenced in November 2016 to be completed by end 2017, aimed at turning CIFFO into a self-funding service provider not dependent on donor funding for core functions.

9. Monitoring and Research Programmes

i. Unloading

Four Chinese flagged longliners transhipped in the port of Avatiu, Rarotonga, unloading frozen albacore, bigeye and yellowfin tunas to freezer containers, which were then shipped to Pago Pago. 25% of transhipments in Rarotonga were fully monitored by MMR staff. None of the catch was sold on the local market.

ii. Port Sampling

All port sampling for 2016 was conducted by Fisheries Officers on long liners unloading in Rarotonga. Port sampling coverage in 2016 was 20%. No port sampling was conducted in overseas ports.

iii. Logsheet data collection and verification

92% logsheet coverage was achieved for the national longline fleet in 2016, while foreign flagged vessel logsheet coverage was 74% at the time of writing. Most logsheets are received as original copies via the post after the completion of a trip or received in electronic format via email either weekly, or after the completion of a trip, as a scanned copy.

Six Cook Islands National Fleet vessels participated in electronic logsheet reporting trials using the SPC eTUNAlog software in 2016. The trial worked well for the two domestic vessels using the programme in Rarotonga as these vessels undertake short trips (< 1 week). MMR was then able to provide regular feedback and training. The three trial vessels operating out of Pago Pago spend longer at sea and were consequently more difficult to provide timely feedback.

SPC's Oceanic Fishery Programme also rolled out the implementation of the TUFMAN2 regional database. This has greatly improved the data reception, checking and regional sharing capacity of the Cook Islands. TUFMAN2 has also supported the electronic logsheet

reporting trials by allowing the e-reported data to be automatically imported into the database, thus reducing data entry time.

10. Socio-economic Trends

High operating costs out of Rarotonga continue to hinder domestic industry growth. Only three domestic fresh fish vessels operated out of Rarotonga in 2016, unloading to local markets with some export to Japan. The local economy in Rarotonga benefitted from the purchase of fuel, temporary labour to assist with the unloadings, the purchase of provisions, and port fees. The Ministry of Marine Resources conducted routine port side boarding inspections and port sampling of catches.

11. Future Developments

The Cook Islands commercial longline fishery is limited by a cap on the number of longline vessels authorised to fish within the EEZ (50). In January 2017 the Ministry of Marine Resources is introducing a quota management system (QMS) for albacore tuna and bigeye tuna in the longline fishery within the Cook Islands EEZ. Pending legislative changes include a new Marine Resources Bill and the Marae Moana Bill.

By 2018 100 per cent electronic reporting is expected to be achieved across all licenced longline vessels in order to monitor catches in near real time. The Ministry also hopes to implement electronic monitoring by 2019.

The EU Sustainable Fisheries Partnership Agreement was signed in October 2016, bringing with it the potential to fund projects across the full spectrum fisheries related activities for the benefit of all Cook Islanders and will be operationalised from January 2017.

In December 2016 the Cook Islands and China successfully co-sponsored the introduction of a Conservation and Management Measure (CMM) at WCPFC to ban transshipments in the Eastern High Seas Pocket adjacent to the Cook Islands by 2019.

In 2016 MMR initiated a scoping study of Penrhyn Atoll to investigate the feasibility of port development for commercial operators and upgrading the patrol base facilities there.

Relationships at a regional and international level are also emerging in other new Regional Fisheries Management Organizations (RFMOs) such as SIOFA (the Southern Indian Ocean Fisheries Agreement), SPRFMO (The South Pacific RFMO) which have the potential to attract revenue for the Cook Islands under access agreements, licencing, and the development of sustainable High Seas fisheries.

Reference

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