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

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**WCPFC-SC19-AR/CCM-04**

**COOK ISLANDS**



Scientific Committee  
Eighteenth Regular  
Session

16<sup>th</sup> – 24<sup>th</sup> August 2023

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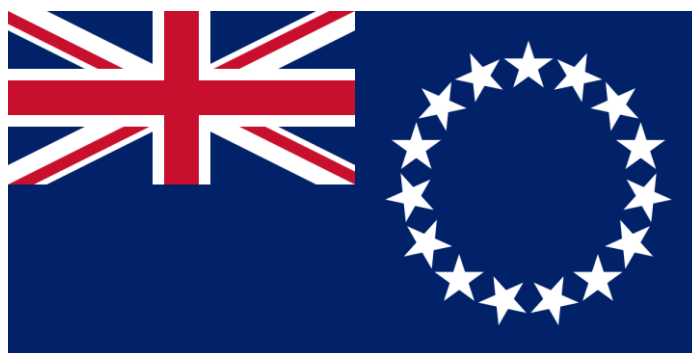
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COOK ISLANDS



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## Executive summary

In 2022, the Cook Islands national fleet consisted of 6 longline vessels, 5 bunker vessels, and 1 purse seine vessel operating in the Western and Central Pacific Fisheries Convention Area (WCPF-CA). Most of these vessels operated south of the equator. The total fishing effort of the national longline fleet, measured by the number of hooks used, decreased by 25%, from 5.9 million hooks in 2021 to 4.5 million hooks in 2022. However, the total catch of primary species increased by 3% compared to the previous year, reaching 1,258 t in 2022 from 1,216 t in 2021.

Within the Convention Area, the longline fleet primarily caught albacore, accounting for 73% (916 t) of the total longline catch. Yellowfin tuna contributed 16% (197 t), bigeye tuna accounted for 5% (68 t), and the remaining 6% (77 t) consisted of bycatch. It is worth noting that no vessels in the fleet targeted marlin or swordfish, and any catch of these species was considered as bycatch. Among the billfish species taken as bycatch, blue marlin was the highest at 44 t, followed by swordfish (9 t), black marlin (5 t), and striped marlin (5 t).

Artisanal fishers in the Cook Islands reported a catch of 115 t in 2022. This catch spanned across 11 of the 12 inhabited Cook Islands and was dominated by yellowfin tuna, making up 60% of the artisanal catch composition. The artisanal fishery primarily used trolling and hand lining techniques. The catch and effort data for the artisanal fishery are based on nominal catches for the months of January to December 2022.

The Cook Islands purse seine national fleet consisted of 1 vessel. Additionally, there were 70 foreign flagged vessels authorized to fish and conduct service activities in the Cook Islands Exclusive Economic Zone (EEZ). These foreign vessels included 59 longline vessels, 7 purse seine vessels, and 4 bunker vessels. The total catch of the national purse seine fleet in the WCPF-CA in 2022 was 4,648 t, representing a 20% increase from the 2021 catch levels of 3,770 t.

The main species caught by the national purse seine fleet in the WCPF-CA were skipjack tuna (3,571 t), yellowfin tuna (781 t), and bigeye tuna (277 t). The catch composition also included small amounts of albacore (10 t) and other species (9 t). Compared to the national fleet, the catch of licensed foreign vessels operating within the Cook Islands EEZ was 1,832 t, showing a 20% decrease from the 2020 catch levels of 2,469 t. The major catch for the foreign fleet was skipjack tuna (1,052 t), followed by yellowfin tuna (518 t), bigeye tuna (247 t), and albacore (4 t). Other species made

up the remaining 11 t of the foreign fleet's catch. Overall, the purse seine fishery experienced an increase in catch for both the national and foreign fleets in 2022.

# 1 Background

In 2022, the Cook Islands had a national fleet consisting of both longline and purse seine fishing vessels. These vessels primarily targeted tuna and tuna-like species. Additionally, there was an artisanal fishery operating across the twelve inhabited islands. To manage the large pelagic longline fishery, the Marine Resources Regulation implemented a Quota Management System (QMS) in December 2016.

In terms of catch, the Cook Islands national fleet caught 163 t of albacore in zone, which accounted for 2% of the purchased quota of 8,017 t. Additionally, they caught 7 t of bigeye tuna, representing 1% of the purchased quota of 1,339 t.

Most of the longline fishing activity occurs in the northern waters of the Cook Islands, specifically north of 15 degrees south latitude. Cook Islands vessels also engage in longline fishing beyond national jurisdiction, within the Convention Area. Historically, purse seine fishing in the Cook Islands EEZ was predominantly carried out by US Treaty vessels. However, since 2015, there has been an increase in overall effort due to growing interest from other foreign fleets under bilateral agreements. In 2022, the Cook Islands had one purse seine vessel operating in the Western and Central Pacific Ocean (WCPO).

The main target species for Cook Islands flagged longline vessels is albacore tuna, while skipjack tuna is the primary target for Cook Islands flagged purse seine vessels operating in the Convention Area. There is also a small locally-based fresh fish longline vessel operating out of Rarotonga, primarily targeting tuna and billfish for the local market. This vessel has a tonnage below 80 Gross Registered Tonnage (GRT) and typically operates within a range of 50 to 100 nautical miles from Rarotonga. Other Cook Islands flagged vessels operate out of foreign ports such as Suva, Pago Pago, and Apia, with unloading mostly taking place in Apia, Pago Pago, and Pape'ete.

## 2 FLAG STATE REPORTING

### *2.1 Catch and Effort Trends*

According to the data provided in Table 1 showcasing the catch and effort estimates in national waters and water beyond jurisdiction indicates several noteworthy patterns. The total effort of the national longline fleet in the Convention Area amounts to around 4.5 million hooks. Among these, approximately 0.5 million hooks are attributed to the Cook Islands' EEZ, while the remaining 4 million hooks are

utilized beyond national jurisdiction.

Figure 1 illustrates that the total catch of tuna and billfish within the convention area experienced a peak in 2018, amounting to 4,860 t. However, there was a significant decrease of 73% in 2022, resulting in a catch of 1,285 t (Figure 1). This decline can be attributed to multiple factors, including the absence of vessel charters in the Cook Islands compared to previous years, as well as climate variability associated with El Niño oscillations, which led to an increase in tuna catches in the western central Pacific.

In terms of distribution, a substantial portion of the longline effort and catch took place beyond national jurisdiction in 2022. Approximately 89% (40,769 hooks) of the total longline effort and 83% (1,045 t) of the total catch of primary species by the national fleet occurred in these areas (Table 1). Additionally, all purse seine effort and catch occurred outside national jurisdiction.

Analyzing the catch composition within the Convention Area, it can be observed that albacore was the primary target species for the national fleet in 2022, accounting for 71% (916 t) of the total catch. This proportion remained relatively consistent with the catch composition in 2018-19. Yellowfin tuna constituted 15% (197 t) of the 2022 catches, experiencing a decrease compared to 2020 levels, while bigeye tuna increased to 5% (68 t) of the total catch compared to 2021. Bycatch species accounted for the remaining 9% of the catch.

The artisanal fishery operates from each inhabited island and primarily targets yellowfin tuna. In 2022, a total of 69 t of yellowfin tuna were caught by artisanal fishers (Table 3). The most common fishing methods employed by artisanal fishers are trolling and hand lining. It is worth noting that catch reporting in the artisanal fishery is not regulated; however, a fuel subsidy program was introduced by the Ministry of Marine Resources (MMR) in June 2017 to incentivize fishers to voluntarily submit catch and effort data to MMR.

The Cook Islands Government and the European Union have established a Sustainable Fisheries Partnership Agreement (SPA) that includes a subsidised fuel program. This program has played a significant role in improving the data collection efforts of the Cook Islands' artisanal fishery since 2017. One notable achievement has been the increased reporting of artisanal fishery data, which can be attributed to the implementation of the Tails application developed by the Pacific Community's Oceanic Fisheries Program (SPC-OFP). This application utilizes mobile devices as a practical technological solution for data collection from remote islands.

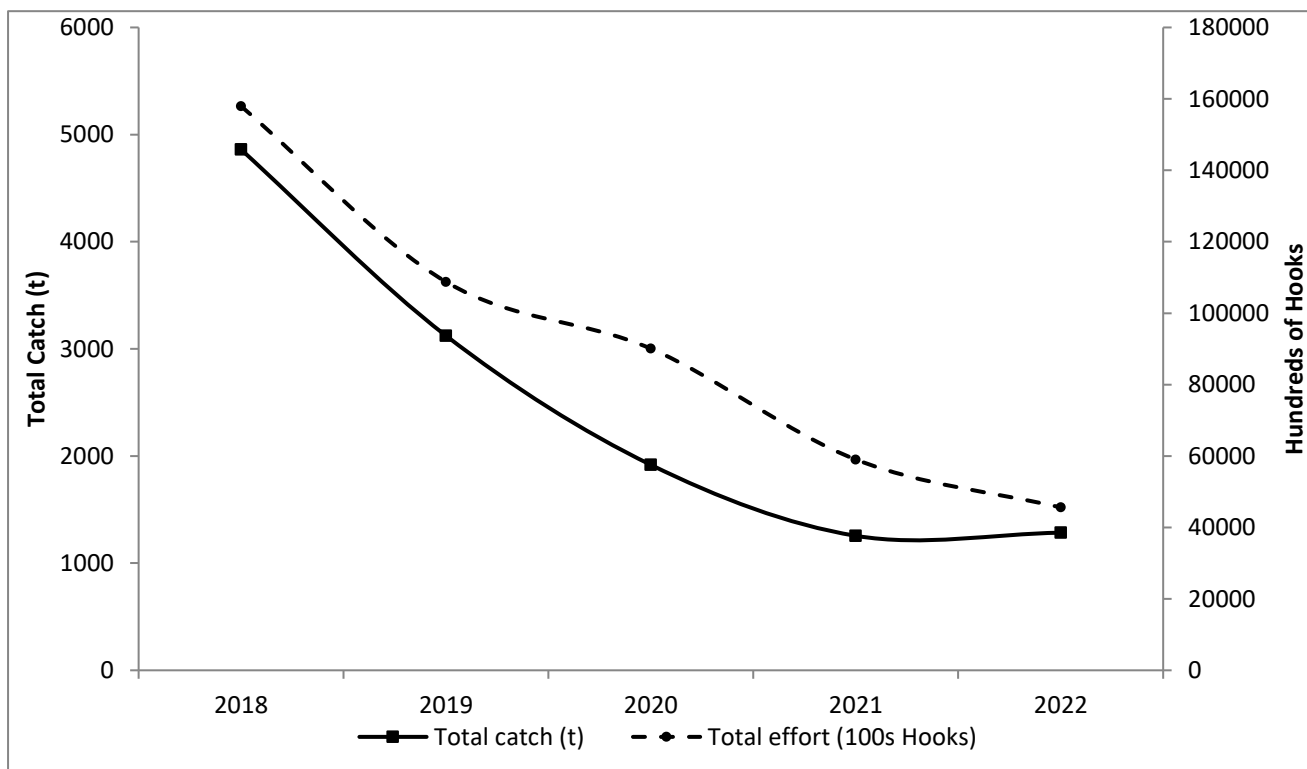
While the adoption of Tails has largely replaced the need for hard copy catch data, there are still certain islands facing challenges related to internet connectivity and limited computer literacy. As a result, these islands continue to submit paper

logsheets to MMR. However, efforts to address these issues through training and remote support are ongoing.

It is worth noting that since 2021, there has been a steady increase in the accuracy and comprehensiveness of artisanal catch and effort data. This positive trend can be attributed to the continuous efforts in enhancing data collection in the artisanal fishery sector.

**Table 1: Annual catch and effort estimates for the national fleet, by gear and primary species within and beyond national jurisdiction in 2022.**

Area	Gear	Effort	ALB	BET	YFT	SK J	PBF	BL M	BU M	MLS	SWO	TOTAL
CK EEZ	LL	4,841 Hhooks	163	7	25	4	0	5	1	5	3	213
	PS	0	0	0	0	0	0	0	0	0	0	0
Beyond CK EEZ	LL	40,769 Hhooks	753	61	172	10	0	0	43	0	6	1045
	PS	303 days	0	275	47	432 5	0	0	0	0	0	4647



**Figure 1: Historical total annual catch estimates for National Longline Fleet within the WCPFC Convention Area, 2018– 2022**



**Table 2: Historical annual catch estimates in t for the national longline fleet, by primary species in the Convention Area from 2018- 2022**

Area	Year	ALB	BET	YFT	SKJ	PBF	BUM	BLM	MLS	SWO
WCPFC-CA										
	2018	3,363	265	629	81	0	16	127	9	44
	2019	2,235	120	395	115	0	23	61	18	23
	2020	1,162	99	388	64	0	47	21	10	21
	2021	714	82	303	27	0	37	9	9	8
	2022	921	68	198	14	0	43	5	5	9
WCPFC-CA (Sth of equator)										
	2018	3,074	179	521	75	0	105	16	9	40
	2019	2,235	120	395	115	0	23	61	18	23
	2020	1,162	99	388	64	0	47	21	10	21
	2021	714	82	303	27	0	37	9	9	8
	2022	921	68	19	14	0	4	5	5	9
WCPFC-CA (Nth of equator)										
	2018	2	16	10	0	0	2	0	0	0
	2019	0	0	0	0	0	0	0	0	0
	2020	0	0	0	0	0	0	0	0	0
	2021	0	0	0	0	0	0	0	0	0
	2022	0	0	0	0	0	0	0	0	0
WCPO Area										
	2018	3,075	195	531	75	0	108	16	9	41
	2019	2,235	120	395	115	0	23	61	18	23
	2020	1,162	99	388	64	0	47	21	10	21
	2021	714	82	303	27	0	37	9	9	8
	2022	92	68	198	14	0	43	5	5	9
North Pacific Ocean										
	2018	2	16	10	0	0	2	0	0	0
	2019	0	0	0	0	0	0	0	0	0
	2020	0	0	0	0	0	0	0	0	0
	2021	0	0	0	0	0	0	0	0	0
	2022	1	0	0	0	0	0	0	0	0
South Pacific Ocean										
	2018	3,073	179	521	75	0	105	16	9	40
	2019	2,235	120	395	115	0	23	61	18	23
	2020	1,162	99	388	64	0	47	21	10	21
	2021	741	82	303	27	0	37	9	9	8
	2022	919	67	197	14	0	43	5	4	9

**Table 3: Historical catch in t and effort estimates for the national fleet by gear and primary species in the Convention Area, 2018-2022.**

Year	Gear	Effort	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO
2018	LL	154,699 hhks	3,363	265	629	81	0	16	127	9	44
	ART	17,651 hrs	1	1	87	5	0	1	2	0	0
2019	LL	108,626 hhks	2,235	120	395	115	0	23	61	18	23
	PS	94 days	0	158	4	2010	0	0	0	0	0
	ART	13,642 hrs	3	1	64	7	0	1	2	1	0
2020	LL	90,060 hhks	1,162	99	388	64	0	47	21	10	21
	PS	36 days	0	14	16	298	0	0	0	0	0
	ART	10,890 hrs	0	0	69	5	0	2	2	0	0
2021	LL	58,193 Hhks	741	82	303	27	0	37	9	9	8
	PS	185 Days	0	152	171	3447	0	0	0	0	0
	ART	13,295 hrs	0	0	44	3	0	0	1	0	0
2022	LL	45,610 Hhks	916	67	196	14	0	5	43	5	9
	PS	303 days	0	275	47	4325	0	0	0	0	0
	ART	16821 hrs	1	0	68	3	0	0	4	0	0

**Table 4: Annual catch estimates in t for the national fleet by gear in the Convention Area for non-target and bycatch species (including key shark species) for 2022. No shark species were retained.**

Gear	SSP	DOL	LAG	OIL	WAH
LL	2	2	0	2	8
PS	0	0	0	0	0
ART	0	4	0	0	7

## ***2.2 Catch and Effort Spatial Distribution***

Under the Marae Moana Act 2017, the Cook Islands implemented a commercial fishing exclusion zone of 50 nautical miles (nm) around all its islands. This act serves as the primary legislation governing the ocean and establishes Marae Moana as a zoned, multi-use marine park. The objective of Marae Moana is to protect and responsibly utilize our ocean, while upholding high environmental and conservation principles.

In 2022, there was a noticeable increase in catch and effort beyond national jurisdiction by the national fleet compared to previous years. This can be observed in the annual catch and effort distribution (Figure 4). Within this distribution, albacore remained the dominant species caught by the longline fleet, with yellowfin and bigeye tuna serving as important secondary target species.

In August 2019, the Cook Islands registered its first and only purse seine vessel. The purse seine catch from this vessel was primarily obtained in the high seas above the Cook Islands' EEZ, specifically in the vicinity west of the Kiribati Line Islands. In 2022, the entirety of the catch from the purse seine vessel also took place in that same area, specifically between 10°N to 10°S (Figure 5, Figure 6). No catches were recorded within national jurisdiction. Skipjack tuna was the dominant species caught using purse seine, with bigeye tuna being a secondary target in 2021 (Figure 5), while yellowfin catch was less evident in 2022 (Figure 6.)

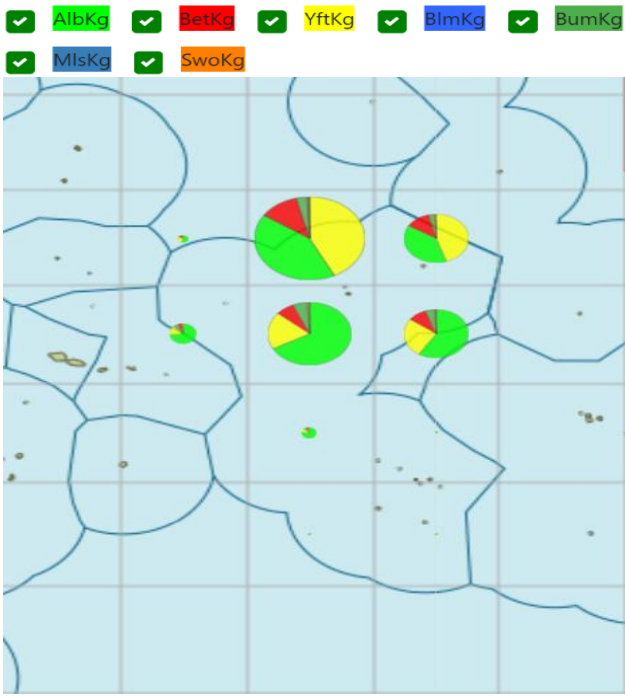


Figure 3: Catch distribution (5 x 5) of key tuna species for the National Longline Fleet within the WCPFC-CA 2021.

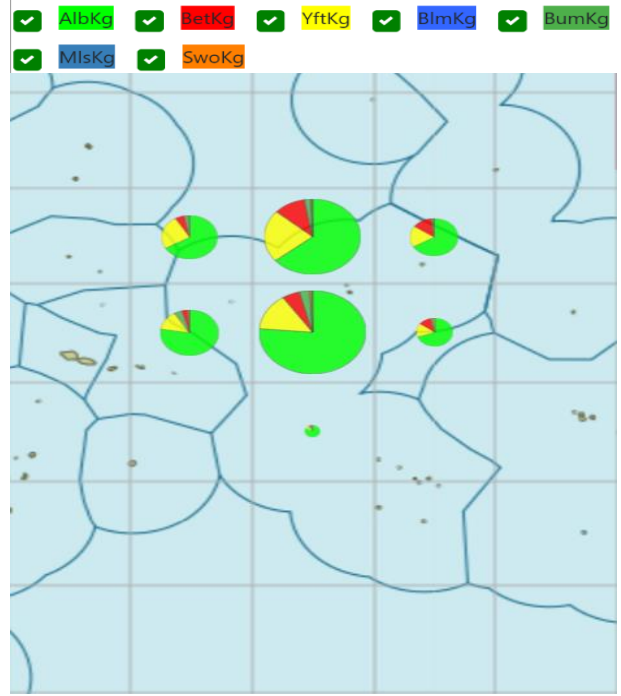


Figure 4: Catch distribution (5 x 5) of key tuna species for the National Longline Fleet within the WCPFC-CA 2022.

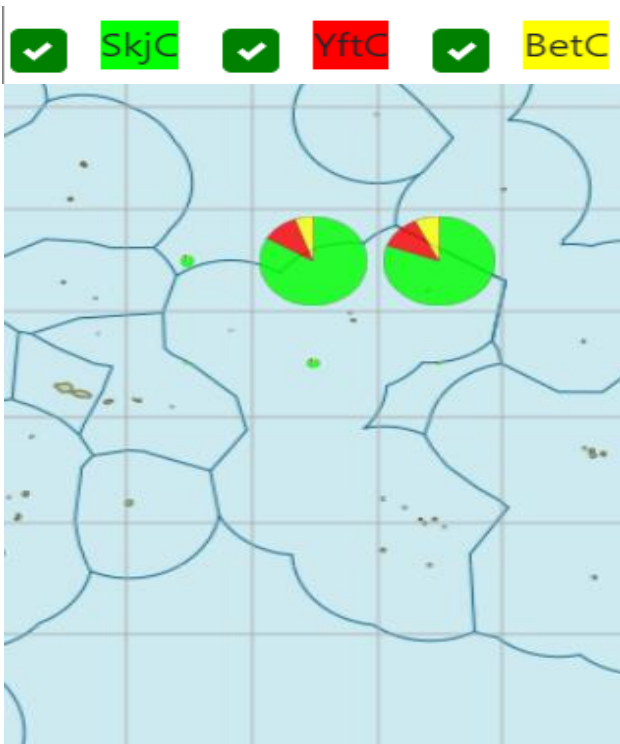


Figure 5: Catch distribution (5 x 5) of key tuna species for the National Purse Seine Fleet within the WCPFC-CA 2021.

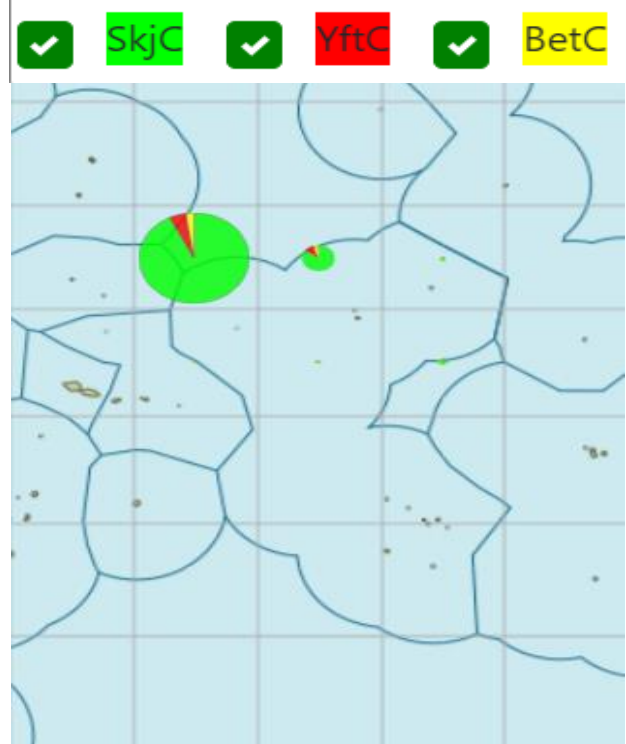


Figure 6: Catch distribution (5 x 5) of key tuna species for the National Purse Seine Fleet within the WCPFC-CA 2022.

### 2.3 Licensing and Fleet Structure

Since January 2017, the Cook Islands' commercial longline fishery in the in-zone area has been effectively managed through the implementation of the Quota Management System (QMS), which replaced the previous vessel limits. As of 2022, the national fleet of the Cook Islands consisted of 12 longline vessels, one purse seine vessel, and five bunker vessels operating within the Convention Area. It is important to note that all catches attributed to the Cook Islands originate from vessels that are flagged and licensed to fish within the in-zone area, as there were no chartered vessels in 2022. The Cook Islands last chartered vessels in 2019.

Within the national fleet, there were six longline vessels, one purse seine vessel, and five bunker vessels. On the other hand, the foreign fleet had 59 longline vessels, seven purse seine vessels, and four bunker vessels authorized to fish or operate within the Cook Islands' EEZ.

Regarding the licensed commercial longline vessels, nine of them were between 51 and 200 GRT, 46 were between 200 and 500 GRT, and four vessels had a tonnage exceeding 500 GRT. All purse seine and bunker vessels had a tonnage greater than 500 GRT (Table 5). It is worth mentioning that vessels licensed to fish within the in-zone area were strictly forbidden from fishing within a 50nm radius around any island in accordance with the Marae Moana Act 2017. In 2022, there were 216 active artisanal vessels reporting catch and effort data, with fishing activities predominantly taking place within the territorial waters.

**Table 5: Number of national fleet vessels by gear and size, active within the Convention Area 2018-2022.**

Year	00-50 GRT		51-200 GRT		201-500 GRT		500 GRT			Total
	LL	Artisanal	LL	PS	LL	PS	LL	PS	Bunker	Total
2018	-	304	22	-	11	-	-	-	8	345
2019	-	236	16	-	1	-	-	1	11	265
2020	-	171	13	-	1	-	-	1	9	195
2021	-	188	12	-	1	-	-	1	7	209
2022	-	216	5	-	1	-	-	1	5	228

### 3 Coastal State Reporting

#### 3.1 Catch and Effort Trends

Within the Cook Islands' EEZ, foreign flagged longline vessels accounted for a significant portion of the catch, amounting to 9,275 t according to Table 6. This foreign catch represented approximately 97% of the total longline catch obtained within the in-zone area. The composition of the foreign longline fleet consisted of 80% Chinese flagged vessels, 18% Federated States of Micronesia flagged vessels, and 2% Taiwanese flagged vessels.

In terms of the catch composition for the longline fishery, albacore made up 67% of the overall catch, followed by yellowfin tuna at 16%.

Moving on to the Cook Islands' purse seine fishery, there was a restriction imposed where the fishing effort was limited to 1,250 days in any consecutive 4 quarter period. The majority of the purse seine catch, approximately 98%, was taken by the US fleet, while Ecuador accounted for the remaining 2% (as shown in Figure 9). Foreign flagged purse seine vessel catch reached a total of 1,832 t, with skipjack tuna constituting 90% of the total catch, followed by yellowfin tuna at 6% and bigeye tuna at 4% (as illustrated in Figure 10).

In summary, foreign flagged vessels played a prominent role in both the longline and purse seine fisheries within the Cook Islands' EEZ, with significant catches being attributed to these vessels.

**Table 6: Annual catch estimates in t for all licensed foreign vessels by gear within the Cook Islands EEZ, for tuna and billfish species in 2022.**

Gear	Effort	ALB	BET	YFT	SKJ	PBF	BLM	BUM	MLS	SWO	OTH	TOTAL
LL	4,592.17 Hhks	6260	708	1579	141	2	7	243	16	39	27	9275
PS	92 days	0	76	115	1638	0	0	0	0	0	2	1832

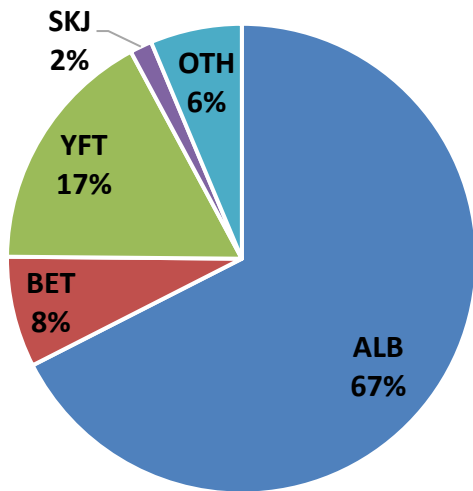


Figure 7: 2022 Foreign Longline fleet catch composition in CK EEZ

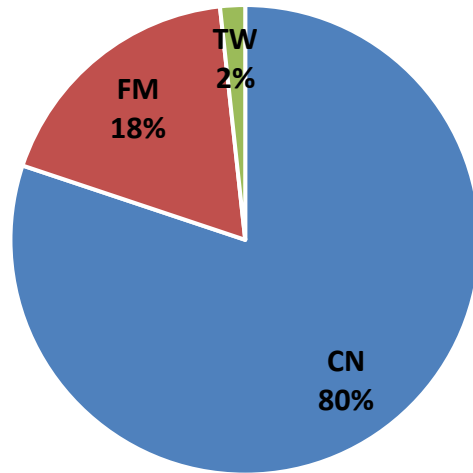


Figure 8: 2022 Foreign longline catch composition in CK EEZ by flag

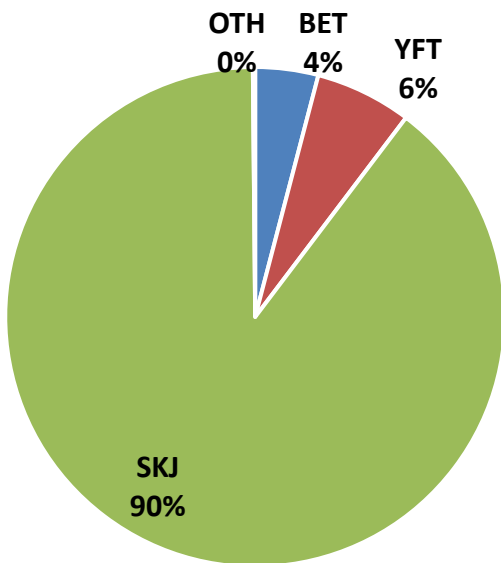


Figure 9: 2022 Foreign Purse Seine fleet catch composition in CK EEZ

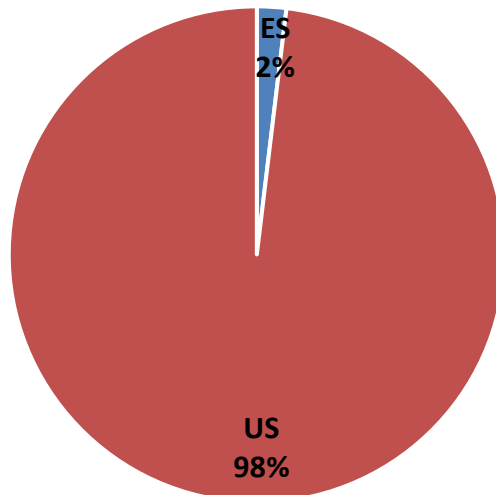


Figure 10: 2022 Foreign Purse Seine catch composition in CK EEZ by flag

**Table 7: Number of active foreign flagged vessels by gear authorised to operate within the Cook Islands EEZ by size in 2022**

<b>GRT Range</b>	<b>Longline</b>	<b>Bunker</b>	<b>Purse Seine</b>	<b>Total</b>
0-10				
10-50				
50-200	9			9
200-500	46			46
500+	4	4	7	15
<b>Total</b>	<b>59</b>	<b>4</b>	<b>7</b>	<b>70</b>

## **4 Socio-economic Factors**

The growth of the domestic fishing industry in the Cook Islands has been impeded by the high operating costs associated with port activities. Despite this, there was one small-scale domestic fresh fish vessel operating out of Rarotonga in 2022, which unloaded its catch at the Port of Avatiu. This operation provides various economic benefits to the local economy, such as the purchase of fuel, temporary labor for assistance with unloadings, procurement of provisions, and payment of associated port fees. Additionally, these vessels are granted permission to sell fresh by-catch to local businesses during specific seasons.

To ensure compliance with regulations and maintain quality control, the MMR conducts regular inspections and port sampling of catches. Under the QMS, MMR allocates 50 t of bigeye and 50 t of albacore quota to all domestically based vessels. The Large Pelagic Longlining Fishery and Quota Management System Regulation 2016 stipulates a minimum mix of 20 t of bigeye and 25 t of albacore tuna.

As a result of rising fuel costs, the domestic vessel has been forced to reduce its fishing days per trip, typically returning to port after five days at sea. These limitations have had significant socio-economic impacts, particularly on the local population who are now experiencing difficulties accessing pelagic fish compared to pre-COVID measures. The decreased availability of fresh fish affects not only the livelihoods of local fishermen but also the wider community, as pelagic fish is a valuable source of sustenance and income in the Cook Islands. Effective measures to mitigate the high operating costs and support the domestic fishing industry are crucial to restore access to this vital resource.



## **5 New Fishery Developments**

In 2019, the MMR of the Cook Islands initiated trials between the industry electronic reporting application called 'HiFish' and the TUFMAN2 database. The aim was to streamline the collection and transmission of catch and effort data from vessels using the HiFish application into the TUFMAN2 database. This electronic reporting (ER) application served as a complement to the existing 'Onboard' app from SPC (Secretariat of the Pacific Community) for other licensed vessels in the longline fishery. While some technical issues were identified during the trials, ongoing work has been carried out since 2021 in collaboration with SPC-OFP, vessel operators, and the developer of the HiFish application to address and resolve these issues.

MMR has recognized several benefits associated with electronic reporting, including improved efficiency in data management, access, and utilization. These improvements ultimately support better information for fisheries management purposes. As a result, MMR has identified the Onboard application as the primary ER solution for longline vessels and plans to extend its implementation to all longline vessels operating within the Cook Islands' Exclusive EEZ. Furthermore, MMR has taken the opportunity to collaborate with other South Pacific countries to facilitate capacity building in ER, and training programs are scheduled to commence in 2023.

In terms of artisanal fisheries, MMR has experienced a significant increase in coverage through the introduction of the SPC 'Tails' application in 2017. This mobile application allows for the direct population of artisanal catch data into the Cook Islands' catch and effort databases. One notable benefit of this technology is its ability to operate with limited internet connectivity, which addresses the challenges posed by geographic isolation on many islands. The Tails application has provided a practical solution for collecting and managing artisanal fisheries data, contributing to improved understanding and management of this sector.

## **6 Research and Statistics**

### ***6.1 Log sheet data collection and verification***

In 2022, the MMR of the Cook Islands achieved 100% logsheet coverage for the commercial longline fleet. The majority of logsheets were obtained as original copies through postal submission after the completion of a fishing trip. Alternatively, some logsheets were received electronically via email, either on a weekly basis or after the trip, in scanned form. Additionally, unloading forms were collected from all foreign-flagged vessels. These efforts have laid the foundation for achieving 100% ER by

2023.

To accomplish this goal, MMR has introduced resources such as the 'on-board' application, which is designed to facilitate electronic reporting. The aim is to transition from the current system of receiving logsheets and forms in physical or scanned formats to a fully electronic system. By implementing ER, MMR expects to align with the reporting standards of the Western and Central Pacific Fisheries Commission (WCPFC) and ensure compatibility with the Cook Islands' catch and effort database, TUFMAN 2.

MMR recognizes the importance of engaging with the fishing industry and aims to conduct annual consultations with operators who are active in Cook Islands waters. These consultations provide a valuable opportunity to gather feedback from industry stakeholders and ensure that the development of ER applications meets their needs effectively.

For locally based commercial vessels that undertake shorter trips lasting less than a week, MMR can provide regular feedback and updates on the implementation of ER. This allows for timely communication and adaptation as necessary. However, vessels operating out of Pago Pago, which spend longer periods at sea, pose challenges in terms of providing timely feedback. To address this, MMR will be trialing a newly developed observer data application called OLLO on the domestic fleet. This application aims to capture important information while at sea, despite the extended time spent away from shore.

Overall, the efforts of MMR and the introduction of ER applications are intended to enhance fisheries data collection, streamline reporting processes, and ensure compliance with international standards. These developments mark significant progress in achieving more efficient and effective fisheries management in the Cook Islands.

## *6.2 Observer Program*

In 2022, the Cook Islands National Observer Program faced significant challenges, resulting in a shortage of active observers. At that time, only five observers remained employed by the program. To compensate for this shortage, the MMR relied on contracted observers from other Pacific Islands national observer programs. However, due to Covid-19 restrictions, no sea days were observed by the Cook Islands National Observer Program in 2022. As a result, the national fleet longline coverage for that year was 0%.

Despite these challenges, the Cook Islands remains committed to improving its

observer program. The goal is for 100% of observer data and reports to be debriefed by a certified Pacific Islands Regional Fisheries Observer (PIRFO) debriefer before being submitted to SPC for data entry. This debriefing process ensures the accuracy and reliability of the collected data.

To address the shortage of observers and improve coverage, there are plans to conduct observer recruitment training in mid-2023. This training will serve as a boost to the program, allowing for the increased deployment of observers. By increasing the number of active observers, the Cook Islands can enhance its data collection efforts and improve its understanding of the state of fisheries in its waters.

Overall, while facing challenges in 2022, the Cook Islands remains committed to developing its observer program and strengthening its capacity for collecting accurate and reliable fisheries data. The upcoming observer recruitment training will play a crucial role in achieving this goal and improving observer coverage in the Cook Islands.

**Table 8: Estimated annual coverage of operational catch and effort, port sampling and observer data for the National Fleet, active in the WCPF Convention area for 2018 - 2022.**

Year	Operational Catch & Effort	Port Sampling	Observer Data (Days at Sea)
2018	100%	10%	10.7%
2019	99%	9.7%	12.4%
2020	100%	6.9%	0%
2021	100%	18.3%	5.9%
2022	100%	6.4%	0%

### **6.3 Port Sampling Program**

In 2022, most port sampling activities in the Cook Islands took place in Rarotonga. These port sampling activities primarily targeted locally based fresh fish longliners, which typically recorded an average catch of 2-3 t per trip.

Despite efforts to expand port sampling coverage, the overall coverage of the domestic fleet was relatively low at 6.4% in 2022, as indicated in Table 8.

Port sampling plays a crucial role in obtaining valuable information about the catch

composition, fishing effort, and other key variables in the fisheries sector.

Enhancing the coverage of port sampling is vital to improve our understanding of the fisheries resources and their sustainability. By increasing the coverage, MMR can collect a more comprehensive and representative sample of data from the domestic fleet. This will enable better management decisions, ensure compliance with fishing regulations, and promote the conservation of fish stocks in the Cook Islands' waters.

To address the relatively low coverage of port sampling, MMR may consider implementing strategies to increase the participation of domestic vessels in the sampling process. This could involve outreach and education campaigns to highlight the importance of port sampling, providing incentives for vessels to participate, or streamlining the sampling procedures to make it more convenient for vessel operators.

Overall, improving the coverage of port sampling activities for the domestic fleet in the Cook Islands is crucial for effective fisheries management. By collecting accurate and comprehensive data, MMR can make informed decisions to ensure the long-term sustainability of fish stocks and the livelihoods of those involved in the fisheries sector.

#### ***6.4 Research Activities***

No major research activities were carried out during 2022.

### **7 Addendum**



## ADDENDUM TO ANNUAL REPORT PART 1

23 March 2023<sup>1</sup>

### SECTION A: SPECIFIC INFORMATION TO BE PROVIDED IN ANNUAL REPORT PART 1 AS REQUIRED BY CMMS AND OTHER DECISIONS OF THE COMMISSION.

<p><b>CMM 2009-03 [Swordfish], Para 8</b></p>	<p>CCMs shall report to the Commission the total number of vessels that fished for swordfish and the total catch of swordfish for the following:</p> <ul style="list-style-type: none"> <li>a. vessels flying their flag anywhere in the Convention Area south of 20°S other than vessels operating under charter, lease or other similar mechanism as part of the domestic fishery of another CCM;</li> <li>b. vessels operating under charter, lease or other similar mechanism as part of their domestic fishery south of 20°S; and</li> <li>c. any other vessels fishing within their waters south of 20°S.</li> </ul> <p>This information shall be provided in Part 1 of each CCM's annual report. Initially, this information will be provided in the template provided at Annex 2 for the period 2000-2009 and then updated annually.</p> <p><i>*Note: WCPFC11 confirmed a common understanding that "total catch" in this reporting requirement refers to both targeted and bycatch catches of swordfish.</i></p> <p style="color: red;">In 2022 a total of two vessels fished 2.6t of SWO</p>																																										
<p><b>Observer coverage (WCPFC 11 decision – para 484(b))</b></p>	<p>CCMs are to compile and include in Annual Report Part 1 to be submitted from 2015 onwards, observer coverage for their longline fleet activity in the previous calendar year, noting that revisions can be provided at the annual TCC meeting.</p> <p>A sample report format is provided as guidance to assist CCMs with reporting (WCPFC11 Summary Report Attachment L Table 4)</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">CCM Fleet</th> <th rowspan="2">Fishery</th> <th colspan="3">No. of Hooks</th> <th colspan="3">Days Fished</th> <th colspan="3">Days at Sea</th> <th colspan="3">No. of Trips</th> <th rowspan="2">See NOTES</th> </tr> <tr> <th>Total estimated</th> <th>Observer</th> <th>%</th> <th>Total estimated</th> <th>Observer</th> <th>%</th> <th>Total estimated</th> <th>Observer</th> <th>%</th> <th>Total estimated</th> <th>Observer</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>REPUBLIC OF KOREA</td> <td>Distant-water</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>23,632</td> <td>1,575</td> <td>6.6%</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table> <p style="color: red;">The Cook Islands do not have any observer coverage for the year 2022.</p>	CCM Fleet	Fishery	No. of Hooks			Days Fished			Days at Sea			No. of Trips			See NOTES	Total estimated	Observer	%	Total estimated	Observer	%	Total estimated	Observer	%	Total estimated	Observer	%	REPUBLIC OF KOREA	Distant-water							23,632	1,575	6.6%				
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<sup>1</sup> Reporting requirements requested by CMMs and decisions of the Commission, as of WCPFC19 (Dec 2022). First issued on 23 March 2023. Changes made from Addendum for 2021, include including the new CMM 2022-02 for North Pacific Swordfish and **WCPFC19 Agreed Audit Points**.

CCMs shall report on all transshipment activities covered by this Measure (including transshipment activities that occur in ports or EEZs) as part of their Annual Report in accordance with the guidelines at Annex II. In doing so, CCMs shall take all reasonable steps to validate and where possible, correct information received from vessels undertaking transshipment using all available information such as catch and effort data, position data, observer reports and port monitoring data.

WCPFC15 Outcome document para 48: The Commission agreed to the TCC14 recommendation that the template provided in TCC14-2018-RP03 Annex 3 be used by all applicable CCMs for their future reporting in Annual Report Part 1, as per CMM 2009-06 paragraph 11 (Attachment O of WCPFC15).

**Annex 3 of RP03: Transshipment information to be provided annually by CCMs as required by CMM 2009-06 paragraph 11 in accordance with the guidelines in Annex II of the measure.**

Each CCM shall include in Part 1 of its Annual Report to the Commission:

(1) the **total quantities, by weight**, of highly migratory fish stocks covered by this measure that were transhipped by fishing vessels the CCM is responsible for reporting against, with those quantities broken down by:

a) offloaded and received;	b) transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction	c) transhipped inside the Convention Area and transhipped outside the Convention Area;	d) caught inside the Convention Area and caught outside the Convention Area;	e) Species	f) Product Form	g) Fishing gear
offloaded						
received						

(2) the **number of transshipments** involving highly migratory fish stocks covered by this measure by fishing vessels that is responsible for reporting against, broken down by:

a) offloaded and received	b) transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction	c) transhipped inside the Convention Area and transhipped outside the Convention Area	d) caught inside the Convention Area and caught outside the Convention Area	e) fishing gear
offloaded				
received				

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

<p><b>CMM 2009-06 [Transshipment], Para 11 (ANNEX II)</b></p>	<p>Each CCM shall include in Part 1 of its Annual Report to the Commission:</p> <ol style="list-style-type: none"> <li>(1) the total quantities, by weight, of highly migratory fish stocks covered by this measure that were transhipped by fishing vessels the CCM is responsible for reporting against, with those quantities broken down by: <ol style="list-style-type: none"> <li>a. offloaded and received;</li> <li>b. transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction;</li> <li>c. transhipped inside the Convention Area and transhipped outside the Convention Area;</li> <li>d. caught inside the Convention Area and caught outside the Convention Area;</li> <li>e. species;</li> <li>f. product form; and</li> <li>g. fishing gear used</li> </ol> </li> <li>(2) the number of transhipments involving highly migratory fish stocks covered by this measure by fishing vessels that is responsible for reporting against, broken down by: <ol style="list-style-type: none"> <li>a. offloaded and received;</li> <li>b. transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction;</li> <li>c. transhipped inside the Convention Area and transhipped outside the Convention Area;</li> <li>d. caught inside the Convention Area and caught outside the Convention Area; and</li> <li>e. fishing gear.</li> </ol> </li> </ol> <p><b>The Cook Islands vessels did not undergo and transshipment activities in 2022</b></p>
<p><b>CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5</b></p>	<p>CCMs shall include in their Part 1 Annual Report any instances in which cetaceans have been encircled by the purse seine nets of their flagged vessels, reported under paragraph 2(b).</p> <p><b>There were no interactions with Cetaceans for the CK PS vessel.</b></p>

<b>CMM 2018-03</b> <b>[Seabirds] Para</b> <b>13</b>	<p>CCMs shall annually provide to the Commission, in Part 1 of their annual reports, all available information on interactions with seabirds reported or collected by observers to enable the estimation of seabird mortality in all fisheries to which the Convention applies. (see below for Part 1 reporting template guideline). These reports shall include information on:</p> <ol style="list-style-type: none"> <li>1. the proportion of observed effort with specific mitigation measures used; and</li> <li>2. observed and reported species specific seabird bycatch rates and numbers or statistically rigorous estimates of species- specific seabird interaction rates (for longline, interactions per 1,000 hooks) and total numbers.</li> </ol> <p style="color: red;">There were no interactions with Seabirds and 100% coverage of hooks (4561085 Hooks)</p>
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**CMM 2018-03: [Seabirds] Annex 2. Guidelines for reporting templates for Part 1 report**

The following tables should be included in the annual Part 1 country reports, summarising the most recent five years.

**Table x: Effort, observed and estimated seabird captures by fishing year for [CCM] [South of 30°S; 25°S-30°S; North of 23°N; or 23°N – 25°S<sup>1</sup>]. For each year, the table gives the total number of hooks; the number of observed hooks; observer coverage (the percentage of hooks that were observed); the number of observed captures (both dead and alive); and the capture rate (captures per thousand hooks).**

Year	Fishing effort				Observed seabird captures	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate <sup>2</sup>
[year]						
[year]						
[year]						
[previous year e.g. 2017]						
[current year e.g. 2018]						

1 Insert 'North of 23oN', 'South of 30oS', '25oS-30oS' or '23oN – 25oS'. For CCMs fishing in all areas, provide separate tables for each area.

2 Provide data as captures per one thousand hooks.

**Table y: Proportion of mitigation types<sup>1</sup> used by the fleet in [year].**

	Combination of Mitigation Measures	Proportion of observed effort using mitigation measures				
		South of 30°S	25°S-30°S	25°S to 23°N	North of 23°N	
	No mitigation measures					
Options required south of 25°S	TL + NS					
	TL + WB					
	NS + WB					
	TL + WB + NS					
	HS					



Other options 25°S-30°S	WB						
	TL						
Other options north of 23°N	SS/BC/WB/DSL						
	SS/BC/WB/(MOD or BDB)						
Provide any other combination of mitigation measures here							
	Totals (must equal 100%)						

<sup>1</sup> TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

**Table z: Number of observed seabird captures in [CCM] longline fisheries, 2012, by species and area.**

Species	South of 30°S	25°S-30°S	North of 23°N	23°N –25°S	Total
E.g. Antipodean albatross					
[species name]					
[species name]					
[species name]					
[species name]					
[species name]					
[species name]					
<b>Total</b>					

There were no Observer trips on the CK vessels during the year 2022 therefore the Cook Islands cannot answer the Observer relaxed addendum questions.

**SECTION B: ADDITIONAL ANNUAL REPORTING REQUIREMENTS THAT COULD BE INCLUDED IN ANNUAL REPORT PART 1, IF NOT OTHERWISE REPORTED ANNUALLY TO WCPFC**

<p><b>CMM 2006-04 [South West striped Marlin], Para 4</b></p>	<p>In accordance with paragraph 1, CCMs shall provide information to the Commission, by 1 July 2007, on the number of their vessels that have fished for striped marlin in the Convention area south of 15°S, during the period 2000 – 2004, and in doing so, nominate the maximum number of vessels that shall continue to be permitted to fish for striped marlin in the area south of 15°S. CCMs shall report annually to the Commission the catch levels of their fishing vessels that have taken striped marlin as a bycatch as well as the number and catch levels of vessels fishing for striped marlin in the Convention Area south of 15°S.</p> <p><i>In 2022 five CK vessels caught 95 MLS weighing at a total of 4.8t</i></p>																																																									
<p><b>CMM 2015-02 [South Pacific Albacore] Para 4</b></p>	<p>CCMs shall report annually to the Commission the annual catch levels taken by each of their fishing vessels that has taken South Pacific albacore, as well as the number of vessels actively fishing for South Pacific albacore, in the Convention area south of 20°S. Catch by vessel shall be reported according to the following species groups: albacore tuna, bigeye tuna, yellowfin tuna, swordfish, other billfish, and sharks. Initially this information will be provided for the period 2006-2014 and then updated annually. CCMs are encouraged to provide data from periods prior to these dates.</p> <p><i>Addressed through the regular provision of operational catch/effort logsheet data to SPC, who automatically include these data in the WCPFC databases, as per our authorisation.</i></p>																																																									
<p><b>CMM 2019-03 [North Pacific Albacore], Para 3</b></p>	<p>All CCMs shall report annually to the WCPFC Commission all catches of albacore north of the equator and all fishing effort north of the equator in fisheries directed at albacore. The reports for both catch and fishing effort shall be made by gear type. Catches shall be reported in terms of weight. Fishing effort shall be reported in terms of the most relevant measures for a given gear type, including at a minimum for all gear types, the number of vessel-days fished using the template provided in Annex 1.</p> <p>Annex 1:  <small>Annex I: Average annual fishing effort for 2002-2004 and annual fishing effort for subsequent years for fisheries directed at North Pacific albacore in the North Pacific Ocean</small></p> <table border="1" data-bbox="406 1568 1380 1680"> <thead> <tr> <th rowspan="2">CCM</th> <th rowspan="2">Area<sup>1</sup></th> <th rowspan="2">Fishery</th> <th colspan="2">2002-04 Average</th> <th colspan="2">Year</th> <th colspan="2">Year</th> <th colspan="2">Year</th> <th colspan="2">Year</th> <th colspan="2">Year</th> </tr> <tr> <th>No. of vessels</th> <th>Vessel days</th> <th>No. of vessels</th> <th>Vessel days</th> <th>No. of vessels</th> <th>Vessel days</th> <th>No. of vessels</th> <th>Vessel days</th> <th>No. of vessels</th> <th>Vessel days</th> <th>No. of vessels</th> <th>Vessel days</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table> <p><i>* Note: WCPFC10 clarified that this reporting responsibility lies with the flag State</i>  <i>In 2022 one CK vessel caught 58 North Pacific Albacore weighing a total of 1.2t</i></p>	CCM	Area <sup>1</sup>	Fishery	2002-04 Average		Year		Year		Year		Year		Year		No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days																														
CCM	Area <sup>1</sup>				Fishery	2002-04 Average		Year		Year		Year		Year		Year																																										
		No. of vessels	Vessel days	No. of vessels		Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days																																												



