

SCIENTIFIC COMMITTEE NINETEENTH REGULAR SESSION

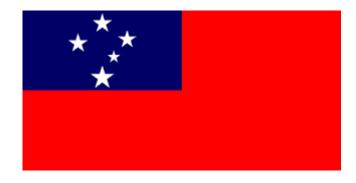
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ANNUAL REPORT TO THE COMMISSION PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

WCPFC-SC19-AR/CCM-21

SAMOA

INDEPENDENT STATE OF SAMOA



ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

July 2023

FISHERIES DIVISION

MINISTRY OF AGRICULTURE AND FISHERIES

GOVERNMENT OF SAMOA

Scientific Data was provided to the Commission in	YES
accordance with the decision relating to the	
provision of scientific data to the Commission by	
30 th April, 2023	

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1. ABSTRACT

The tuna fishery in Samoa consisted of domestic and foreign longline fleet. The total estimated catch of tuna and tuna-like species for both domestic and foreign longline fleets in 2022 was 1,257mt and has increase by 19% from 1,606mt in 2021. In 2022, the Samoa domestic fleet consists of 7 longline fishing vessels with a total estimated catch of 365mt compared to 361mt in 2021. The foreign fleets consist of 10 license longline vessels with a total estimated catch of 892mt compared to 699mt in 2021

The fisheries operations mainly target South Pacific Albacore (*Thunnus alalunga*), Bigeye Tuna (*Thunnus obesus*), Yellowfin Tuna (*Thunnus albacares*) and Skipjack Tuna (*Katsuwonus pelamis*). The national longline fleet total fishing effort in number of hooks within the Convention Area has increased by 3% from 6.8 million hooks in 2021 to 7 million hooks in 2022.

The fishing vessels operating in Samoa's EEZ size ranges from nine meter to over twenty meters in length. These fishing vessels are required to submit catch documents to the Fisheries Division that are used for management, economic and scientific purposes. The catch from both domestic and foreign fleets is predominantly South Pacific Albacore (*Thunnus alalunga*) which accounts for 76% of the total annual catch. Prior to COVID, other tuna species such as Yellowfin (*Thunnusalbacares*) and Bigeye tuna (*Thunnusabesus*) played an important role in Fresh Fish Markets and now also play a role for periods when low catch trend is observed.

The foreign fleet was introduced to Samoa in 2015 which accounted for a steady increase in catches over the following years within Samoa's EEZ. Samoa has no purse seine fisheries but purse seiners are only coming into our port for transshipment purposes.

The logsheets from fishing vessels and port sampling data continues to be the primary source of estimates based on raised catch and effort data, along with the Vessel Monitoring System (VMS) for verification.

The export in 2022, which accounted for 2,720 metric tons, increased by 24% compared to the export in 2021, which was 2,069 metric tons. This notable increase in export can be attributed to the reopening of borders in June and the subsequent resumption of normal operations following the lifting of SOE restrictions due to the COVID-19 pandemic. Consequently, foreign fishing vessels that were previously licensed in Samoa were able to obtain licenses again, playing a significant role in driving the overall increase in export.

2. BACKGROUND

Trolling and longline are the two main primary methods employed by fishing vessels to target tuna species in Samoa. These fishing vessels encompass a range from small alia catamarans to larger commercial fishing vessels. The alia catamarans, which measure between 8 to 11 meters in length primarily targets Skipjack tuna (*Katsuwonus pelamis*). They operate a few miles offshore targeting free school or Fish Aggregating Devices (FAD) associated pelagic species. The catches from these operations are primarily sold locally at fish markets, restaurants and various hotels. In contrast, larger commercial vessels utilize longline gear for targeting tuna species while also encountering by-catch.

The tuna longline vessels in Samoa are ranged from 12.5 meters and over in length which targets South Pacific Albacore (*Thunnusalalunga*), Yellowfin (*Thunnusalbacares*) and Bigeye (*Thunnusobesus*) tuna species. South Pacific Albacore is predominantly exported frozen to canneries. Bigeye Tuna and Yellowfin Tuna are important components of the tuna longline industry with the majority being exported fresh chilled to various overseas markets.

Purse Seine fishing activities within Samoa's EEZ are limited to vessels operating under the agreement between the United States of America and Pacific Island States (US Treaty). Samoa has declared a limit of 150 days for Purse Seine fishing in its EEZ in accordance with the requirement outlined in CMM 2015 – 01¹.

Samoa, a small Pacific Island with the smallest Exclusive Economic Zone (EEZ) in the Pacific, is dedicated to the ongoing development and establishment of sustainable fisheries. This commitment entails making informed management decisions that will ensure the long-term benefits for the people of Samoa, both in the present and in the future.

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¹Para 23 of CMM 2015-01

3. FLAG STATE REPORTING

• CATCH AND EFFORT TRENDS

In 2022, the total effort of Samoa national longline fleet within the Convention Area is approximately 7 million hooks with approximately 4.4 million hooks attributed to Samoa's EEZ and 2.6 million hooks were deployed beyond national jurisdiction (Figure 1). The overall catches peaked in 2019 with 3,456mt recorded before it declines significantly in 2021 by 53% (1,608mt) (Table 1). This decline in catch and effort by the national longline fleet can be attributed to various challenges faced by fisheries operators including the COVID19 pandemic and related border restrictions imposed by the Government of Samoa.

Fortunately, catch and effort within and beyond national jurisdiction have significantly increased smoothly in 2022 by 21% (333mt). The national longline fleet targets South Pacific Albacore which accounts for 71% (1,378mt) of the overall catch estimates. This represents a 39% increase in catch estimates in 2022 compared to 2021 (990mt). Bigeye tuna also increased by 12mt (11%), from 107mt in 2021 to 119mt in 2022 contributing to 6% of the overall catch statistics. Yellowfin tuna declines by 10% at a total volume of 343mt compared to 381mt in 2021, also followed by a reduction of 22% (29mt) of bycatch which accounted for the remaining 101mt of the catch.

YEARS	EFFORT (100s of Hooks)	ALB	BET	YFT	SKJ	BUM	BLM	MLS	SWO	TOTAL
2018	104,661	1,684	60	401	44	33	3	2	10	2,237
2019	127,524	2,515	151	511	203	54	3	3	16	3,456
2020	109,968	1,408	154	613	122	73	3	2	16	2,391
2021	68,494	990	107	381	76	41	2	2	9	1,608
2022	70,693	1,378	119	343	35	37	1	2	13	1,928

Table 1: Annual Catch and Effort Estimates in metric tons by Samoa's national fleet within the Convention Area; 2018 - 2022

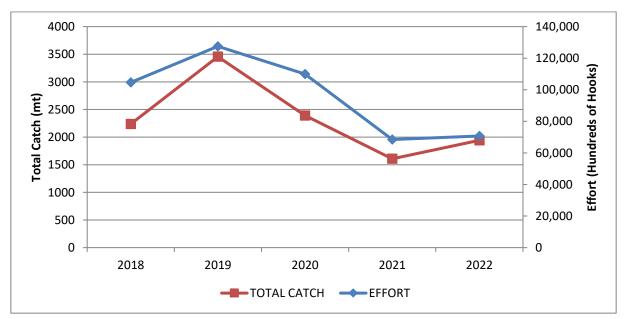


Figure 1: Annual Catch and Effort Estimates by Samoa's national fleet within the Convention Area; 2018-2022

Within Samoa's national jurisdiction, the total annual catch estimates of tuna and bycatch in 2022 have increased compared to 2021 catch levels. One of the contributing factors to this increase is the rise in fishing effort. Samoa's domestic and foreign fishing fleet in 2021 consisted of 17 longline fishing vessels which increased to 20 longline fishing vessels in 2022. With more vessels operating in Samoa's EEZ along with the easing of COVID restrictions, accounted for a higher level of fishing effort.

The total catch of primary species in 2022, is 1,257 metric tons which increased by 19% compared to 2021 catch level which is 1,060 metric tons. South Pacific Albacore remains the dominant catch, accounting for 76% (955mt) of the total longline catches, followed by Yellowfin tuna comprises 15% (182mt), and Bigeye tuna contributes 3% (38mt) and the remaining 6% as bycatch (82mt). In comparison with 2021 annual catch estimates, South Pacific Albacore increased by 48%, while the catch of other species declined. Yellowfin tuna decrease by 36% (105mt) followed by Bigeye tuna at 2% (1mt) and bycatch estimate level at a volume of 7mt (7%) (Table 2)

SPECIES	2018	2019	2020	2021	2022
South Pacific Albacore	1,684	2,408	1,516	645	955
Bigeye Tuna	62	145	166	39	38
Yellowfin Tuna	401	486	648	287	182
Skipjack Tuna	44	188	132	26	17
Blue Marlin	33	51	79	32	32
Black Marlin	3	2	3	0.4	0.1
Striped Marlin	2	2	2	1	0.5
Broadbill Swordfish	11	15	17	5	7
TOTAL	2,240	3,297	2,533	1,035	1,232

Table 2: Annual Catch Estimates in metric tons within Samoa's EEZ; 2018 – 2022

• NON-TARGET SPECIES

Regarding non-target species, as reported in 2022, wahoo fish remains the highest with 9mt. These non-target species are either sold locally or exported to overseas markets. For all vessels that were boarded and inspected, there were no sharks retained on board (Table 3).

SPECIES NAME(EN)	CODE	2018	2019	2020	2021	2022
Common Dolphinfish	DOL	10	6	8	2	7
Escolar	ESC	0	0	0	0.4	0.1
Great Barracuda	GBA	0.1	2	3	1	2
Sailfish	SFA	2	0	5	0.4	0.1
Shortbill Spearfish	SSP	7	14	4	1	1
Longbill Spearfish	SPF	0	0	0	0.04	0
Marlins, Sailfish etcnei	BIL	0	0	0	0.1	0
Oilfish	OIL	1	10	7	2	4
Moonfish	LAG	3	5	2	1	1
Pelagic fishes nei	PEL	0	0	0	3	0.2
Sickle Pomfret	TST	0	0	0	1	0.2

Tunas nei	TUN	0	4	0	0	0
Wahoo	WAH	30	40	24	13	9
TOTAL		53.1	81	53	25	25

Table 3: Annual Catch Estimates in metric tons of non-target species (including key shark species) within Samoa's EEZ; 2018-2022. No key shark species were retained.

• SPECIES OF SPECIAL INTEREST - SSI

There were no reported species of special interest for 2022 in regards to turtles, sea birds and dolphins apart from the common shark species. These information were reported from logsheets as either discarded or released with their fate being unknown (Table 4).

SHARK SPECIES	DISCARDED NUMBER	DISCARDED WEIGHT	STATUS ON DISCARD
Oceanic Whitetip	61	0	Unknown
(Carcharhinus longimanus)			
Silky Shark	39	0	Unknown
(Carcharhinus falciformis)			
TOTAL	100	0	Unknown

Table 4: Status of SSI (sharks) based on logsheets within Samoa's EEZ; 2022

Given the lack of observer data for Samoa in 2022, there were no instances of reported species of special interest. The table above is solely derived from logsheet submissions received from commercial fishing vessels.

• FISHING PATTERNS

Samoa's longline catches are limited to within its EEZ. The tuna longline fishery occurs all year round with distinct periods of good catch rates to periods of relatively lower catch rates.



Figure 2: Catch by species within Samoa's EEZ 2018



Figure 3: Catch by species within Samoa's EEZ 2019



Figure 4: Catch by species within Samoa's EEZ 2020

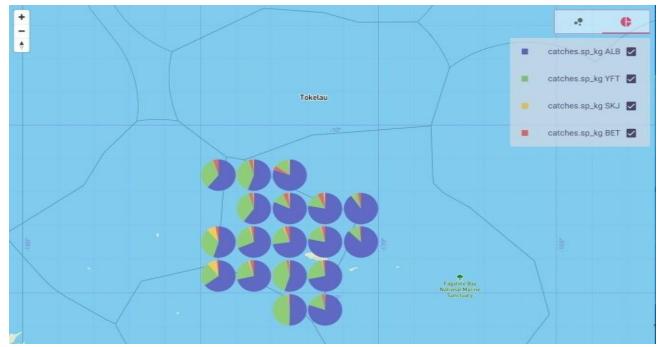


Figure 5: Catch by species within Samoa's EEZ 2021

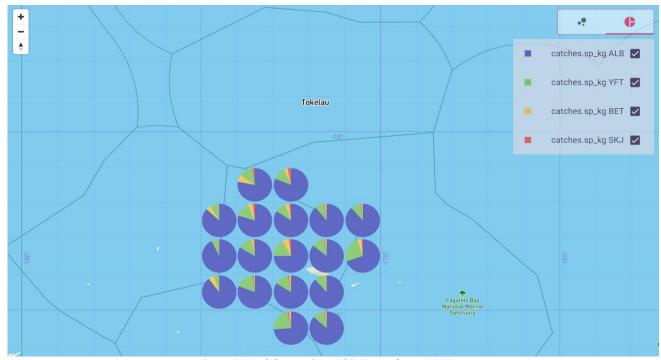


Figure 6: Catch by species within Samoa's EEZ 2022

The distribution of Samoa longline catches is currently confined to its own EEZ. In 2018 catches were mostly attributed to the Southern side of the EEZ (Fig.2), while in 2019, catches were mainly caught on the Northern side (Fig. 3). In 2020 and 2021 were fairly distributed in terms of catch (Fig. 4-5). In 2022, longline catches were also fairly distributed within Samoa's national jurisdiction with South Pacific Albacore being the dominant species (Fig.6)

4. LICENSING AND FLEET STRUCTURE

• NUMBER OF VESSELS BY GEAR TYPE AND SIZE

Samoa's national fishing fleet comprises of both domestic fishing vessels and foreign fishing vessels that are licensed to fish in Samoa's EEZ. All catches from these vessels are landed and processed in Samoa are either sold locally and/or exported to various markets worldwide.

The domestic longline fleet ranges from fishing vessels of around 12.5 meters and over in length. Class A vessels, known as Alia catamarans range from 8 to 11 meters in length and are un-decked with outboard motors. These fishing vessels fish a few miles offshore and are engaged in surface trolling for skipjack tuna, longlining for pelagic species and bottom fishing which target deepwater snappers that underpins oceanic fisheries. Class A to E categorizes domestic fishing vessels while Class F is reserved for foreign fishing vessels licenses to fish in Samoa's EEZ.

The licensing structure in 2022 reflects an increase in the number of licenses issued to fishing vessels operating in Samoa's EEZ. A total of 40 active fishing vessels in 2021 have increased to 76 active fishing vessels (Tables 6&7). In addition to Samoa's national fishing fleet, there were 13 foreign license vessels which consisted of 10 Vanuatu flagged vessels and 3 Cook Islands flagged vessels authorized to fish in Samoa's EEZ (Table 7)

Gross Registered and Tonnage	CLASS	Length (Meters)	Fishing Method	2018	2019	2020	2021	2022
0 - 10	Α	>8 - 11	Mixed	42	48	26	25	56
	B >11 - 12.5		0	0	1	1	0	
10 - 50	С	>12.5 - 15	Longline	1	1	1	1	1
	D	> 15 - 20.5	Longine	4	4	3	2	3
50 - 200	E	> 20.5	1	4	4	3	3	3

Table 5: Number of Samoan Fishing Vessels, by gear and size category, active in the WCPFC Convention Area 2018 – 2022

Gross Registered and Tonnage	CLASS	Length (Meters)	Fishing Method	FLAG	2018	2019	2020	2021	2022
	_			Cook Islands	6	6	5	4	3
50 - 200	F	> 20.5m	Longline	Vanuatu	10	9	10	4	10

Table 6: Number of Foreign Fishing Vessels, by size and gear category, active in Samoa's EEZ from 2018 – 2022

5. SOCIO-ECONOMIC FACTOR

The export of tuna catches from Samoa continued to be a significant contributor to the fish exports, particularly in comparison to other fisheries such as reef fishery. In addition to the export value, the local market remains an important source of fish for domestic consumption among the local population. The licensing of fishing vessels, both domestic and foreign, along with the issuance of transshipment authorizations for foreign vessels not licensed in our EEZ, further contribute to the revenue stream of Samoa's fisheries sector.

All catches made by foreign licensed vessels are unloaded at Port Matautu wharf, repacked into shipping containers, and exported to overseas markets. A portion of their catch is also sold in the local market and retail stores. The operations at Matautu ports incur high operating costs but continue to drive the growth of our industry. There has been a growing interest from incoming foreign vessels seeking to use our port for activities such as transshipment, crew exchanges, food supplies, and maintenance. These activities benefit the local economy through the purchase of fuel, temporary labor for assistance with unloadings, procurement of provisions, and associated port fees.

The Fisheries Division plays a crucial role in conducting port side boarding, inspections, and monitoring of catches, ensuring compliance with regulations and sustainable fishing practices.

6. DISPOSAL OF CATCH

• EXPORTS OF TUNA

Exports for the past 5 years are based on data provided to Samoa Fisheries Division in the form of export consignments. Fish exports have decreased since its highest recorded exports in 2019, more notably due to the presence of multiple companies operating in Samoa's EEZ since the introduction of the foreign fleet in 2015. However, the global impact of the COVID19 pandemic and other related crises has abruptly affected the usual operations of our exports with the declaration of the Government of Samoa SOE Restrictions from 2020 to 2022.

The prices for fish value tend to vary over time in the market which explains the inconsistent values in regards to export quantity and value over time. In terms of export and value, 2019 stands as the highest recorded year compared to the years 2020 to2022. These years display the immense decline in exports and value as well as catches harvested within Samoa's EEZ. The fish exporters faced many challenges including the measles outbreak in the final quarter of 2019, the COVID19 Pandemic, and border restrictions imposed by the Government SOE Restrictions. Unfortunately, exports have significantly increased smoothly since 2022 making 2019 the year with the highest marked export value (Table 7)

Year	2018	2019	2020	2021	2022
TOTAL	4165	5313	4216	2069	2720

Table 7: Annual exports in metric tons; 2018-2022

7. NEW FISHERY DEVELOPMENT

Forum Fisheries Agency (FFA) was able to procure tablets for electronic reporting (ER) usage in Samoa's fisheries sector. Samoa fisheries has noted several benefits with ER since trialing in 2019 including improved efficiencies in data management, access and utilization, which in turn support improved scientific, economical and statistical information for reporting obligations.

In collaboration with the Pacific Community (SPC) and the Forum Fisheries Agency (FFA), Samoa aims to implement SPC ER applications on all domestic longline fishing vessels operating within Samoa's Exclusive Economic Zone (EEZ). Thus tool through ONBOARD applications, enabling captains to submit their logsheet data online. The online data entry feature of the TUFMAN 2 database allows for timely submissions of logsheet data, facilitating easier and faster data extraction, particularly for scientific reports. Artisanal data collection through TAILS is also an ongoing effort.

The utilization of these tools has significantly contributed to a better understanding and quantification of fishing effort and trends in Samoa. Moreover, it has enabled raised catch estimates based on logsheets and reported data. This data has not only supported domestic fishing companies but has also provided crucial information for fulfilling Samoa's reporting responsibilities to local communities. Additionally, it assists Samoa in its scientific data collection functions and obligations to SPC and WCPFC.

8. RESEARCH AND STATISTICS

• DATA COLLECTION AND VERIFICATION

Samoa continues its partnership with the Pacific Community (SPC) in the collection of tuna biological samples from domestic and foreign catches in Samoa's EEZ. These biological samples once collected will be analyzed by SPC as part of a project to strengthen our understanding on the movement and distribution of tuna species. Fish Aggregating Devices (FAD) monitoring are also conducted to monitor FADs deployed by Samoa Fisheries to help improve food security, increase the economic returns for fishers and most importantly, ensure their safety at sea.

The logsheet coverage of 89% was achieved for Samoa's national fleet². Logsheets from fishing vessels and port sampling activities continue to be the primary source of information on catch and effort of tuna and bycatch species caught in Samoa's EEZ. Unloading forms are also provided by fishery operators for Bigeye tuna ICCAT verification and comparison purposes with logsheet data. The forms used are forms compiled from data collection committee meetings under the SPC and FFA Framework. The information and data collected are entered and stored into the TUFMAN 2 database on a cloud server hosted by SPC

Since the COVID19 pandemic, Samoa fisheries have implemented transshipment monitoring activities at the port. This operation provides us with the actual weights and number of species unloaded in Samoan port. This information is used to verify logsheet data provided by the captain to deter any unreported and misreported catches within Samoa's EEZ.

² TUFMAN 2 DATABASE

• OBSERVER PROGRAMME

Currently, there are only 4 certified observers and 4 trainees within Samoa Fisheries. Due to the COVID19 pandemic restrictions, observers were unable to carry out fishing trips and trainings in 2022, however, Samoa fisheries is looking to start placing observers onboard since most of the restrictions are ceased. The trainees will undergo an in -country sea safety training. Samoa fisheries remain committed to achieving 5% longline observer coverage and reports to be debriefed by a certified Pacific Islands Regional Fisheries Observer (PIRFO) debriefer prior to data entry.



ADDENDUM TO ANNUAL REPORT PART 1

23 March 2023¹

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

	Flag		Yea	r		Vessels		Catcl	ո (Number)	C	Catch (M	Γ)		
	WS			2	022		0				0		0		
	WS			2	021		0				0		0		
CMM 2009-03	WS			2	020		3				5	(0.298		
,Para 8	*Note:	ned in	the tem	nplate i	in An	at confirm nex 2 of C common un ted and by	MM in	its A	R Pt 1. g that "tot	al catch				tior	
Observer coverage (WCPFC 11 decision	CCM Fish No. of Hooks Fleet ery					Days Fisl	hed		Days at Sea No. of Trip				f Trips	os os	
				T	T								- ·	%	
coverage (WCPFC 11 decision			Total Estim ated	Obs erve r	%	Total Estimat ed	Obse rver	%	Total Estimat ed	Obse rver	%	Tota 1 Esti mat ed	Obs erve r	%0	
coverage (WCPFC	WS	WS- EEZ	Estim	erve	0	Estimat		0	Estimat		0	l Esti mat	erve	0	

¹Reporting 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, including the new CMM 2022-02 for North Pacific Swordfish and WCPFC19 Agreed Audit Points.

CMM 2009-06		Transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction	Transhipped inside the Convention Area and transhipped outside the Convention Area	Caught inside the Convention Area and caught outside the Convention Area	2022 and Fishing gear
[Transship ment],Para	Offloaded	100% transshipped in ports	N/A	100% caught inside the Convention Area	LL
	Convention Area	is the required information all HMFS covered by the and transhipped outside 1/2009-06.	he Convention, as we	ll as HMFS taken in the	
CMM 2011-03 [Impact of	N/A – Samoa do n	ot have any PS			
PS fishing on cetaceans], Para 5		Secretariat confirms thaten encircled by the purse 2(b) of CMM.		•	
CMM 2018-03	There were no inte	eractions with seabirds wi	thin Samoa's EEZ in 2	2022	
[Seabirds]		The Secretariat confirm	s that CCM submitted	a report using the re	oorting
Para 13	template in Annex	c 2 of CMM 2018-03 on s	eabird interactions re	eported or collected by	_

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

	Flag	Year	Vessels	Catch (Numbers)	Catch (MT)	
	ws	2022	4	0	0	
	WS	2021	7	0	0	
CMM 2006-04	ws	2020	8	26	0.45	
[South West						
striped Marlin],Para 4	AUDIT POINT [RP] The Secretariat confirms that the CCM submitted in its ARPt1: a. the number of its flagged vessels that fished for MLS south of 15S between 2001-					
14141111]51 414 4						
		2004 and has nominated the maximum number of its flagged vessels that are permitted to continue to fish for MLS south of 15S				
	b. the catch levels of CCM flagged vessels that have taken MLS as a bycatch					
	c. the number and catch levels of its vessels fishing for MLS south of 15S.					
CMM 2015-02 [South Pacific Albacore] Para 4	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 authorization. AUDIT POINT [RP]The Secretariat confirms that the CCM submitted information on annual catch levels by its flagged vessels taking SP Albacore, as well as the number of					
	CCM flagged vessels actively fishing for SP Albacore south of 20S, with catch levels reported by species groups.					
			any catches for N	orth Pacific Albaco	ore in 2022	
CMM 2019-03 [North Pacific Albacore],Para 3	on catch and effo	ort by CCM flagge ator, by gear type	ed vessels engage e and days fished	M submitted a repo d in directed fishin (effort) and by wei	g for NP albacore	
	* Note: WCPFC	10 clarified that t	his reporting resp	onsibility lies with t	the flag State	

CMM 2022-02
[North Pacific Swordfish],
para 4

*Note: CMM 2022-02 paragraph 3 clarifies that paragraphs 2 and 4 shall not be applied to those fisheries taking less than 200 metric tons of North Pacific swordfish in the Area per year. However, if the catches of such fisheries exceed 200 metric tons in any given year, the Commission shall adopt appropriate management measure for such fisheries.
