



**SCIENTIFIC COMMITTEE
EIGHTEENTH REGULAR SESSION**

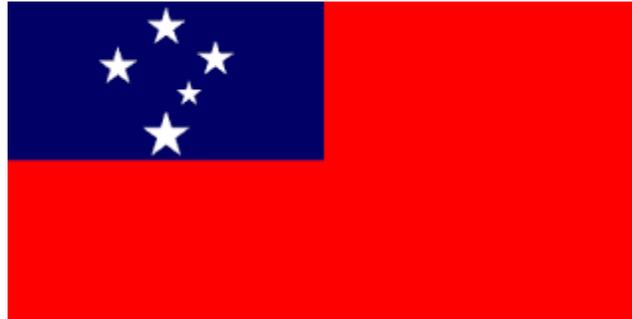
ELECTRONIC MEETING
10-18 August 2022

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

WCPFC-SC18-AR/CCM-21

SAMOA

INDEPENDENT STATE OF SAMOA



ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS 2022

**FISHERIES DIVISION,
MINISTRY OF AGRICULTURE AND FISHERIES,
GOVERNMENT OF SAMOA**

Scientific Data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the Commission by 30 th April, 2021	YES
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ABSTRACT

Samoa’s tuna fisheries consist of a trolling and longlining fishery which both operates within Samoa’s Exclusive Economic Zone (EEZ) of 120,000km². These fisheries operations mainly target South Pacific Albacore (*Thunnus alalunga*), Bigeye Tuna (*Thunnus obesus*), Yellowfin Tuna (*Thunnus albacares*) and Skipjack Tuna (*Katsuwonus pelamis*). The longline fishing fleet operating in Samoa has a total fishing effort in number of hooks decreased by 31% from 6.6 million hooks in 2020 to 4.5 million hooks in 2021. The total catch of tuna species and bycatch is approximately 1,027mt decreased by 60% compared to 2020 catch levels. South Pacific Albacore remains the dominant catch which accounted for 62% (635.9mt) of the total longline catches, followed by Yellowfin Tuna at 26% (264.3mt), Bigeye Tuna at 4% (40mt) and bycatch is accounted for the remaining 8%. Logsheets from fishing vessels 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 foreign fleet was introduced to Samoa in 2015 which accounted for a steady increase in catches over the following years within Samoa’s EEZ. In 2021, Samoa issued a total of 16 fishing licenses. In addition to Samoa’s national fleet, there were 8 foreign flagged vessels authorized to fish in Samoa’s EEZ which comprised of 4 Vanuatu flagged fishing vessels and 4 Cook Islands.

BACKGROUND

Trolling and longline are the two main fishing methods operated by fishing vessels to target tuna species in Samoa. These fishing vessels range from small alia catamarans to larger commercial fishing vessels. The alia catamarans are 9 to 11 meters in length which targets Skipjack (*Katsuwonus pelamis*) and operates a few miles offshore targeting free school or Fish Aggregating Devices (FAD) associated pelagic species. The catches from these operations are sold locally at fish markets, restaurants and various hotels. Larger commercial vessels, on the other hand, focus exclusively on longline gear targeting tuna species and bycatch

The tuna longline fleet (both domestic and foreign fishing fleet) targets South Pacific Albacore (*Thunnus alalunga*), Yellowfin (*Thunnus albacares*) and Bigeye (*Thunnus obesus*). South Pacific Albacore are mostly 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 New Zealand and the United States of America. However due to COVID19 restrictions in flights that were crucial for the fresh chilled markets, there has been a decrease in fresh chilled export

The Alia fishing fleet is involved in the tuna longline fishery as well; however, their contribution is limited to the peak months of the year. This fleet has the capability of changing their fishing gear to meet demands as well as prepare for peak months of a fishery that is dependent on this highly migratory species. During off season months, there is a switch back to other gears such as trolling and bottomfishing.

Purse Seine fishing activities in Samoa's EEZ is limited to vessels 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 as per requirement under the CMM 2015 – 011.

ANNUAL CATCH BY SPECIES

The total effort of longline fishing vessels operating in Samoa's EEZ is approximately 4.5 million hooks. The annual catch of tuna and bycatch, 1,027mt decreased significantly by 60% compared to 2020 catch levels. One of the reasons for this reduction in catch is because there was a decrease in effort in Samoa's EEZ and that many foreign fishing vessels tend to fish more in other EEZ.

South Pacific Albacore continues to make up the majority of total catch which comprised of 62% (635mt), a decrease of 58% at a total volume of 881mt compared to 2020 catches. Yellowfin Tuna accounted for 26% (264mt) of 2021 catches decreased by 59% (384mt) and Bigeye Tuna also decreased to 4% (39mt) of the total catch in comparison with 2020 catch levels

Longline – domestic and foreign fishing vessels (issues)

	2017	2018	2019	2020	2021
South Pacific Albacore Tuna	2374	1684	2408	1516	635
Bigeye Tuna	150	62	145	166	39
Black Marlin	6	3	2	3	0.3
Blue Marlin	83	33	51	79	33
Blue Shark	0	0	0	0	0
Hammerhead Shark	0	0	0	0.2	0
Mako Shark	0	0	0	0	0
Oceanic Whitetip Shark	0	0	0	0	0
Silky Shark	0	0	0	0	0
Skipjack Tuna	62	44	188	132	24
Striped Marlin	2	2	2	1.8	0.7
Broadbill Swordfish	16	11	15	17	4.5
Thresher Shark	1	0	0	0	0
Yellowfin Tuna	644	401	486	648	264

Table 1: Annual Catch Estimates (in metric tons) for Samoa's National Fleet, for the WCPFC Convention Area 2017 – 2021

LICENSING AND FLEET STRUCTURE

Samoa's national fishing fleet comprises of both domestic fishing vessels and foreign fishing vessels that are authorized to fish in Samoa's EEZ. All catches from these vessels are landed and processed in Samoan ports and are exported to various markets around the world

Samoa's domestic longline fleet ranges from fishing vessels of around 12.5 meters to over 20.5 meters in length. Class A – Alia catamarans ranges 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 bottomfishing which target deepwater snappers that underpins oceanic fisheries.

Table 2 and table 3 shows the particulars of each vessel class in terms of length, fishing gears and the number of active vessels in each class.

Gross Registered and Tonnage	CLASS	Length (Meters)	Fishing Method	2017	2018	2019	2020	2021
0 - 10	A	>8 - 11	Mixed	49	42	48	26	25
10 - 50	B	>11 - 12.5	Longline	0	0	0	1	1
	C	>12.5 - 15		1	1	1	1	1
	D	> 15 - 20.5		7	4	4	3	2
50 - 200	E	> 20.5		4	4	4	3	3

Table 2: Number of Samoan Fishing Vessels, by gear and size category, active in the WCPFC Convention Area 2016 – 2020

Gross Registered and Tonnage	Length (In Meters)	Fishing Method	FLAG	2017	2018	2019	2020	2021
50 - 200	> 20.5m	Longline	Cook Islands	1	6	6	5	4
			Kiribati	0	0	0	0	0
			Vanuatu	10	10	9	10	4
			Taiwan	4	0	0	0	0

Table 3: Number of Foreign Fishing Vessels, by size and gear category, active in Samoa's EEZ from 2016 – 2021

The overall licensing structure in 2021 shows a decrease in the number of licenses issued to fishing vessels operating in Samoa's EEZ. A total of 49 active fishing vessels in 2020 decreased to 40 active fishing vessels as seen in the above tables. Cook Islands flagged fishing vessels decreased to 4 compared to 2020 whereas Vanuatu flagged fishing vessels decreased to 4 as well from the 10 active fishing vessels in 2020

LONGLINE CATCHES BY AREA – FISHING PATTERN

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

The images shown below indicate where the majority of catches came from in the past 5 years. The tuna longline fishery in Samoa occurs all year around with distinct periods of good catch rates from periods of relatively lower catch rates. The distribution of Samoa's longline catch is currently confined to its own EEZ.

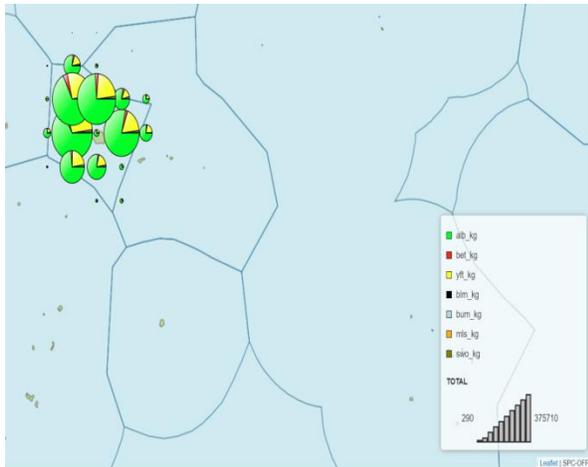


Figure 1: 2017 Catches in Samoa's EEZ

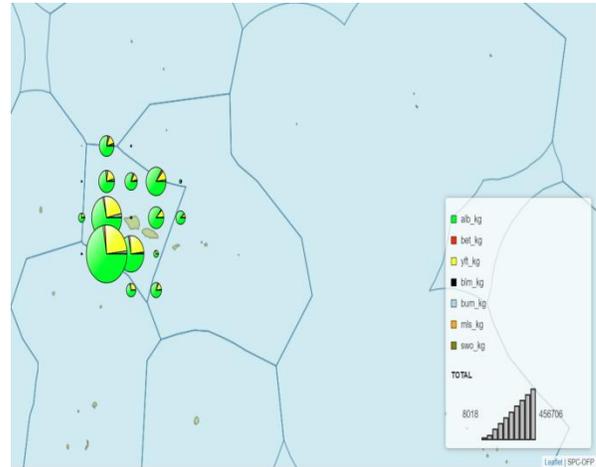


Figure 2: 2018 Catches in Samoa's EEZ

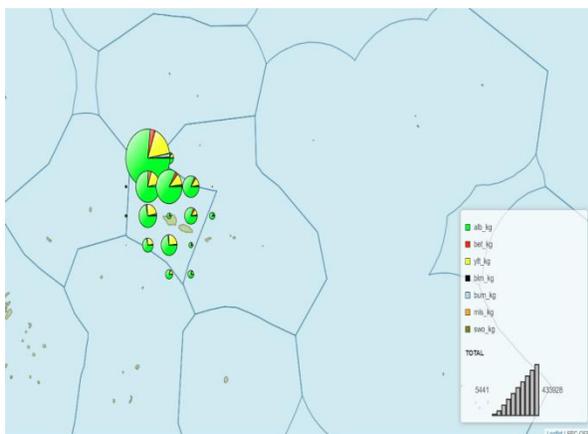


Figure 3: 2019 Catches in Samoa's EEZ

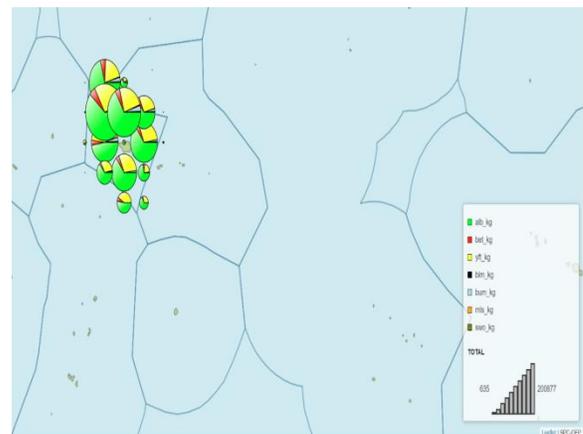


Figure 4: 2020 Catches in Samoa's EEZ

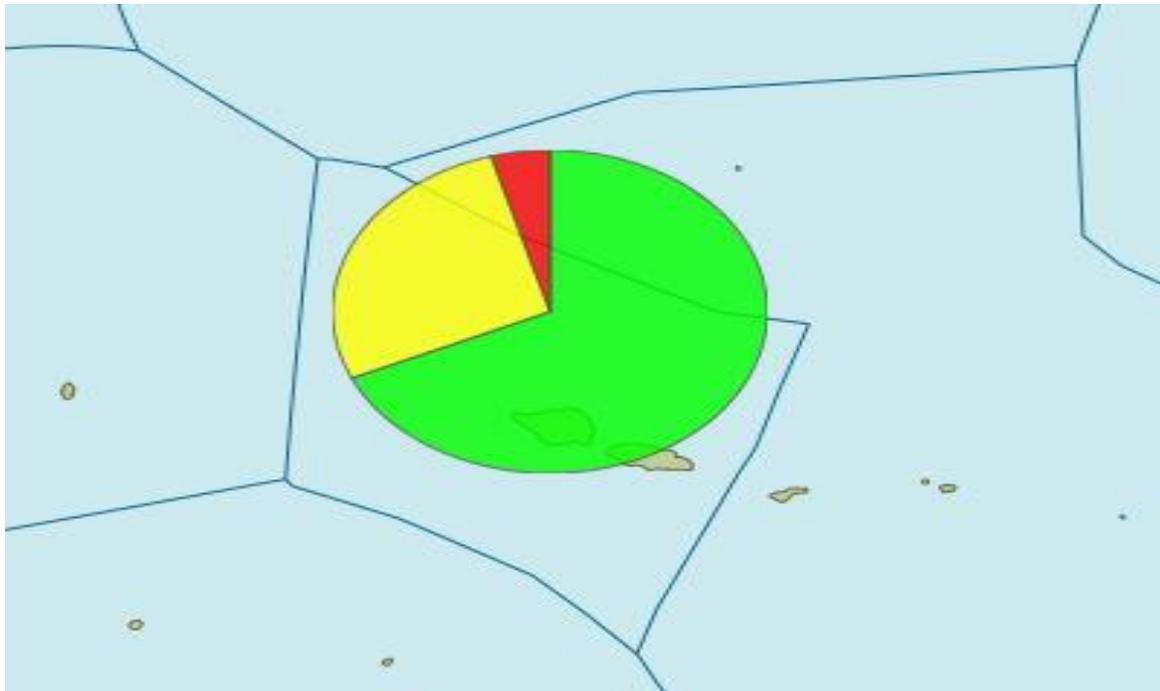


Figure 5: 2021 Catches in Samoa's EEZAs seen in the figure above, 2016 catches were mainly from the Northern side of Samoa with minor focus on the Southern side of the fisheries. 2017 Catches tend to be fairly distributed in Samoa's EEZ with main catches stemming from the West side of the EEZ. 2018 Catches were mostly attributed to the Southern side of Samoa's EEZ. 2019 Catches for Samoa's EEZ were mainly caught on the Northern side of the EEZ whereas 2020 catches were fairly distributed in terms of catch. 2021 catches were fairly distributed over the EEZ of Samoa, however it was noted that there were considerable less effort in the EEZ for 2021.

ESTIMATED CATCHES – NON TARGET SPECIES

Non-targeted species or bycatch species comprised of 19.19 metric tons decreased by 64% compared to 2020 catch levels

	2017	2018	2019	2020	2021
Thresher Shark (<i>Alopias spp</i>)	0	0	0	0	0
Blue Shark (<i>Prionace glauca</i>)	0	0.0059	0	0	0
Common Dolphinfish (<i>Coryphaena hippurus</i>)	36.78	10.29	6.189	8.085	1.02
Great Barracuda (<i>Sphyraena barracuda</i>)	0.07	0.083	1.535	2.563	1.07
Mako Shark	0	0	0.062	0	0.03
Moonfish (<i>Lampris guttatus</i>)	0.07	3.33	5.423	1.714	1
Oilfish (<i>Ruvettus pretiosus</i>)	2.84	1.25	10.2	6.95	2.23
Pomfret	0	0	0.047	0.165	0
Indo Pacific Sailfish (<i>Istiophorus platypterus</i>)	3.9	2.44	0	5.435	0.05
Shark spp	0.12	0	0	0	0
Shortbill Spearfish (<i>Tetrapturus angustirostris</i>)	8.88	6.95	14.29	4.141	0.84

Sickle Pomfret	0	0.12	0.588	0.708	0.45
Sunfish	0	0	0	0	0
Silky Shark (<i>Carcharhinus falciformis</i>)	0	0	0	0	0
Tuna spp	11.35	0	3.873	0	0
Wahoo (<i>Acanthocybium solandri</i>)	52.77	30.01	39.917	23.778	12.5
TOTAL	116.78	54.4789	82.124	53.539	19.19

Table 4: : Annual catch estimates (in metric tons) of non-target, associated and dependent species, including sharks, by the tuna longline fleet operating in Samoa's EEZ , in the WCPFC Convention Area for years 2017 – 2021.

SPECIES OF SPECIAL INTEREST - SSI

There were no reported species of special interest for 2021 in regards to turtles, sea birds and dolphins apart from the usual shark species. These information were reported from logsheets as discarded or released with their date being unknown.

SHARK SPECIES	RELEASED WEIGHT	RELEASED INDIVIDUALS	STATUS ON RELEASE
Oceanic Whitetip <i>(Carcharhinus longimanus)</i>	0	27	<i>Unknown</i>
Silky Shark (<i>Carcharhinus falciformis</i>)	0	0	<i>Unknown</i>
TOTAL		27	

Table 5: Status of Species of Special Interest (SHARKS) based on logsheets

Given the lack of observer data for Samoa in 2021, there are no instances of reported species of special interest. The table above is purely based of logsheet submissions received from commercial fishing vessels.

TRENDS IN FISHERY

The Samoa National Fleet participates mostly in the longline fishery with the artisanal fleet undertaking trolling and longlining. The Commercial Fleet operating outside 24 nautical miles experienced low catches in 2015 before picking it slightly in 2016 and 2017. Annual catches in tuna and bycatch gradually decreased in 2021 by 60% due to a decrease in effort by the longline fleet operating in Samoa's EEZ. Most of the foreign fishing vessels authorized to fish in Samoa's EEZ tends to fish more in other EEZ and it was also observed that the majority of locally foreign fishing vessels went back to their home ports for maintenance. These catches nonetheless still fall behind the long term average along with various changes surrounding number of active fishing vessels participating in the fishing industry

NEW FISHERY DEVELOPMENT

A new fish processing plant was established in 2015 bringing in Samoa foreign fishing vessels. There were 16 foreign fishing vessels that were issued foreign fishing license to fish in Samoa's EEZ in 2018. There is also a similar arrangement that is currently being negotiated for another fish processing plant to be established bringing in more foreign fishing vessels to be based in Samoa, however negotiations are currently on hold till the end of the current pandemic.

EXPORTS

Fish exports have decreased exponentially from 4,216 metric tons to 2,069 metric tons as of 2021. This is a decrease of 2,147 metric tons (51%) and it is attributed to less fishing days by the domestic and foreign fleet due to various COVID19 restrictions affecting international flights to markets where fresh fish (highly valuable tuna) is usually sold. The majority of frozen catches are exported to canneries based in American Samoa with the rest being exported to other markets around the world

Year	2017	2018	2019	2020	2021
TOTAL	4104	4165	5313	4216	2069

Table 6: Highly Migratory Fish Exports 2016 – 2020

RESEARCH ACTIVITIES

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

There is also work being done behind the scenes towards e-reporting and e-monitoring, in particular for captains of various fishing vessels to report using various applications in place in the move towards a paperless future.

DATA COLLECTION SCHEME

Logsheets from fishing vessels continue to be the primary source of information on catch and effort of tuna and bycatch species caught in Samoa's EEZ. Other scientific data collected included biological sampling data and size data. The forms used for this work 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 COVID19 pandemic, Samoa fisheries carry out transshipment monitoring activities on port. This operation provides us with the actual weight and number of species unloaded in Samoan port and this information is used to verify logsheet data provided by the captain to deter any unreported and misreported catches within Samoa's EEZ

89% logsheet coverage was achieved by Samoa in 2021 and it is a decrease of 10% in 2020 logsheet coverage of longline fleet operating in Samoa's EEZ. One of the reasons for this is because of VMS installation errors as logsheet data on Tufman2 are verified against the VMS Data. Logsheets provide information on operational catch and effort data for all species caught in Samoa's EEZ from the active domestic and foreign fishing fleet. Samoa is committed to strengthening its observer program to accommodate the observer needs of the foreign and domestic fishing fleet.



ADDENDUM TO ANNUAL REPORT PART 1

15 February 2021¹

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

CMM 2009-03 [Swordfish], Para 8	Flag	Year	Vessels	Catch (Number)	Catch (MT)										
	WS	2021	0	0	0										
	WS	2020	3	5	0.29										
	WS	2019	4	9	0.33										
<i>*Note: WCPFC11 confirmed a common understanding that “total catch” in this reporting requirement refers to both targeted and bycatch catches of swordfish.</i>															
Observer coverage (WCPFC 11 decision – para 484(b))	CCM Fleet	Fishery	No. of Hooks			Days Fished			Days at Sea			No. of Trips			See NOT Es
			Total Estimated	Observer	%	Total Estimated	Observer	%	Total Estimated	Observer	%	Total Estimated	Observer	%	
	WS	WS-EEZ				0	0	0	0	0	0	0	0	0	
Samoan observers did not carry out any observer trips in 2021 due to COVID19 restrictions															

¹ Reporting requirements requested by CMMs and decisions of the Commission, as of WCPFC17 (Dec 2020). First issued on 15 February 2021. Changes made from Addendum for 2020, include separating the annual reporting requirements that specify needing to be included in Annual Report Part 1 (Section A) from those that may be included in Annual Report Part 1 if they are not otherwise provided to WCPFC (Section B). The entry into force of CMM 2019-04 *Conservation and Management Measure for Sharks* for most CCMs in late 2020 and the specified reporting in Section VII, has removed a few annual reporting requirements from this Addendum.

CMM 2009-06 [Transshipment], Para 11 (ANNEX II)	<p>Samoa had monitored forty two (42) transshipment operations with a total volume of 3206.06mt throughout 2021 and these activities are observed on Samoan ports.</p> <table border="1"> <tr> <td>Offloaded and Recieved</td> <td>Transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction</td> <td>Transhipped inside the Convention Area and transhipped outside the Convention Area</td> <td>Caught inside the Convention Area and caught outside the Convention Area</td> <td>Fishing gear</td> </tr> <tr> <td>Offloaded</td> <td>100% transhipped in ports</td> <td>N/A</td> <td>100% caught inside the Convention Area</td> <td>LL</td> </tr> </table>	Offloaded and Recieved	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	Fishing gear	Offloaded	100% transhipped in ports	N/A	100% caught inside the Convention Area	LL
	Offloaded and Recieved	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	Fishing gear						
Offloaded	100% transhipped in ports	N/A	100% caught inside the Convention Area	LL							
CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5	N/A – Samoa do not have any PS										
CMM 2018-03 [Seabirds] Para 13	There are no interactions with seabirds within Samoa’s EEZ in 2021										

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

CMM 2006-04 [South West striped Marlin], Para 4					
	Flag	Year	Vessels	Catch (Numbers)	Catch (MT)
	WS	2021	7	0	0
	WS	2020	8	26	0.45
	WS	2019	13	94	0.766

<p>CMM 2015-02 [South Pacific Albacore] Para 4</p>	<p>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.</p>
<p>CMM 2019-03 [North Pacific Albacore], Para 3</p>	<p>Samoa's National Fleet do not have any catches for North Pacific Albacore throughout 2021</p> <p><i>* Note: WCPFC10 clarified that this reporting responsibility lies with the flag State</i></p>
