SCIENTIFIC COMMITTEE
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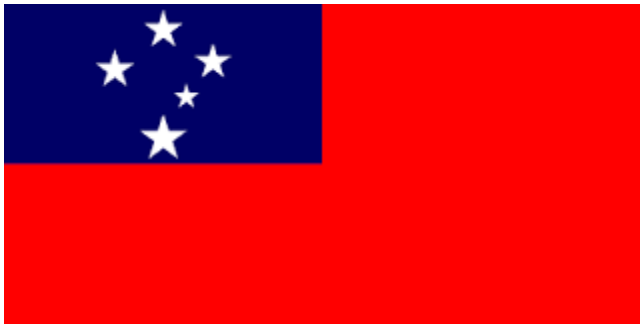
ELECTRONIC MEETING
11-19 August 2021

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

WCPFC-SC17-AR/CCM-21

SAMOA

INDEPENDENT STATE OF SAMOA



ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

JULY 2020

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 30th April, 2021	**YES**

Abstract

Samoa's tuna fisheries consist of a trolling and longlining fishery. Both fisheries operate within Samoa's Exclusive Economic Zone (EEZ) of 120,000km^2. The main targeted species for these fisheries are South Pacific Albacore (*Thunnus alalunga*), Bigeye Tuna (*Thunnus obesus*), Yellowfin Tuna (*Thunnus albacares*) and Skipjack Tuna (*Katsuwonus pelamis*). Bycatch species such as Wahoo (*Acanthocybium solandri*) and Dolphinfish (*Coryphaena hippurus*) play an important role as well in both domestic and international markets. The longline fishing fleet operating in Samoa reported an annual catch of around 2,564 metric tons. This is a decrease of 34% in catches from the previous year. South Pacific Albacore continues to account for the majority of catches making up 59%, Yellowfin was the second highest catch making up 25% in catches.

In 2015, the foreign fleet was introduced to Samoa which accounted for a steady increase in catches over the following years in Samoa's EEZ. The number of foreign fishing licenses, since then, has changed dramatically as well. In 2015, 10 foreign fishing licenses were granted in Samoa, in 2020, there were 15 foreign fishing vessel licenses.

Logsheets from fishing vessels and port sampling data continue to be the primary source of data collected by the Fisheries Division along with the Vessel Monitoring System (VMS) being used for verification.

In 2020, there was a decrease in exports from Samoa. This decrease is more notably due to fresh fish not being able to send to overseas markets as flights out of Samoa were ceased due to the COVID19 pandemic. Frozen fish destined for canneries were not affected much due to sea routes still being opened to market destinations such as American Samoa.

Background

There are 2 main types of fishing gear used to target tuna in Samoa. These vessels range from small alia catamarans to larger commercial fishing vessels. The alia catamarans operate with either trolling or longline gear depending on the season. Larger commercial vessels, on the other hand, tend to focus exclusively on longline gear. The troll fishery fishermen use alia catamarans that are 9 to 11 meters in length that targets Skipjack (*Katsuwonus pelamis*) and operates a few miles offshore targeting free schools or FAD (Fish Aggregating Devices) associated pelagics. The catches from the troll fishery are sold locally at fish markets, restaurants and various hotels.

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.

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 and gear

The total catch from the fleet operating in Samoa's EEZ is estimated to be 2,563 metric tons. This is a decrease from the precious year of around 734 metric tons. South Pacific Albacore continue to make up the majority of landings at 59% followed by Yellowfin Tuna at around 26% Bigeye tuna accounted for 6% with bycatch species accounting for the rest.

The South Pacific Albacore catches is estimated to be around 1,516 metric tons, a decrease of around 45% from the previous year. Yellowfin catches is estimated to be around 648 metric tons, which is an increase of around 28%. Bigeye catches saw a small increase in landings of about 13% in catches in 2020.

	2016	**2017**	**2018**	**2019**	**2020**
South Pacific Albacore Tuna	946	2374	1684	2408	1516
Bigeye Tuna	61	150	62	145	166
Black Marlin	4	6	3	2	3
Blue Marlin	6	83	33	51	79
Blue Shark	0	0	0	0	0
Hammerhead Shark	0	0	0	0	0.2
Mako Shark	1	0	0	0	0
Oceanic Whitetip Shark	0	0	0	0	0
Silky Shark	1	0	0	0	0
Skipjack Tuna	20	62	44	188	132
Striped Marlin	3	2	2	2	1.8
Broadbill Swordfish	4	16	11	15	17
Thresher Shark	0	1	0	0	0
Yellowfin Tuna	239	644	401	486	648

Table 1: Annual Catch Estimates (in metric tons) for Samoa's National Fleet, for the WCPFC Convention Area 2016 – 2020

Fleet Structure by Size and Gear

Samoa's Commercial fishing fleet comprises of both domestic fishing vessels and foreign fishing vessels licensed to fish in Samoa's EEZ. All catches from these vessels are landed and processed in Samoa's ports. These catches are then 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. The table below shows the particulars of each vessel class in terms of length, gears licensed to use and number of active vessels in each class. Class A Alia catamarans are 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 for deepwater snappers.

Gross Registered and Tonnage	CLASS	Length (Meters)	Fishing Method	2016	2017	2018	2019	2020
0 - 10	**A**	>8 - 11	Mixed	57	49	42	48	26
10 50	**B**	>11 - 12.5	Longline	0	0	0	0	1
	C	>12.5 - 15		1	1	1	1	1
	D	> 15 - 20.5		6	7	4	4	3
50 - 200	**E**	> 20.5		4	4	4	4	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	2016	2017	2018	2019	2020
50 - 200	**> 20.5m**	**Longline**	**Cook Islands**	1	1	6	6	5
			Kiribati	1	0	0	0	0
			Vanuatu	8	10	10	9	10
			Taiwan	4	4	0	0	0

Table 3: Number of Foreign Fishing Vessels, by size and gear category, active in Samoa's EEZ from 2016 – 2020

In 2020, there was no change in licensed vessels from foreign fishing companies. However, there was only a decrease of one from Cook Islands and an increase of one from Vanuatu. In total, as seen in Table 3, there were 15 foreign fishing vessels active in Samoa from time to time.

Fishing Patterns by Time/Area

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.

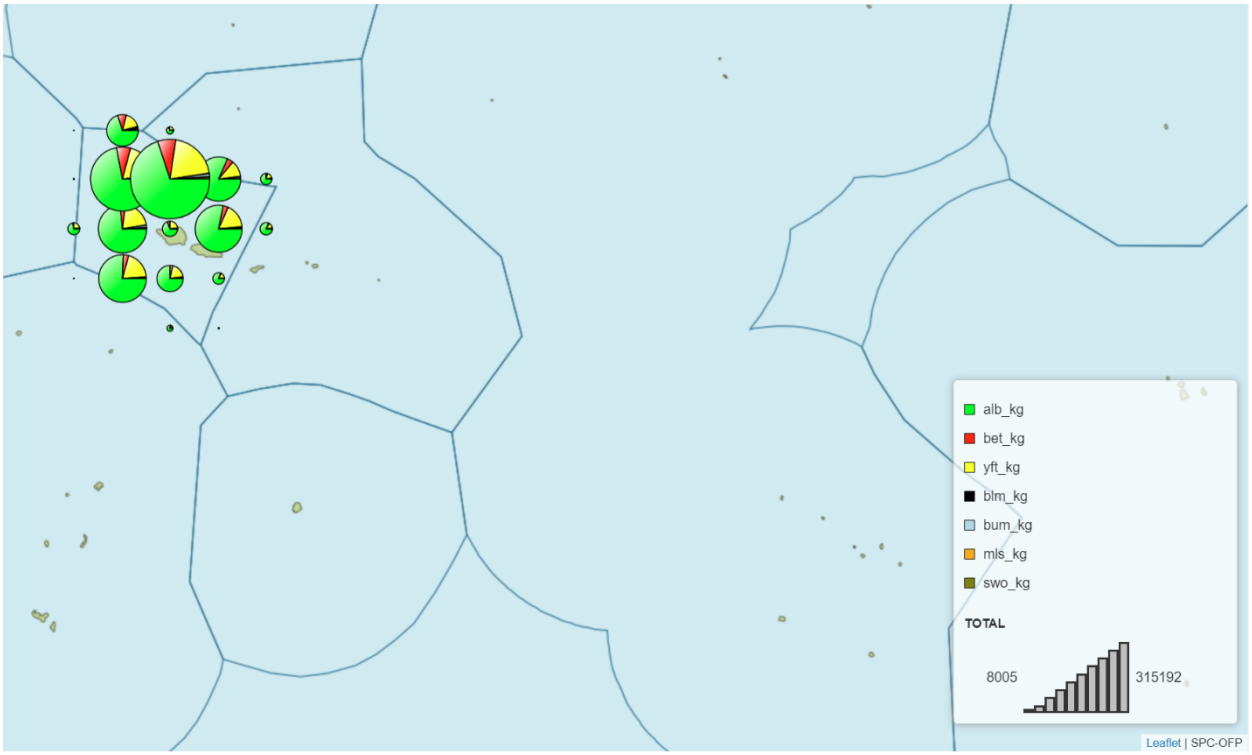


Figure 1: 2016 Catches in Samoa's EEZ

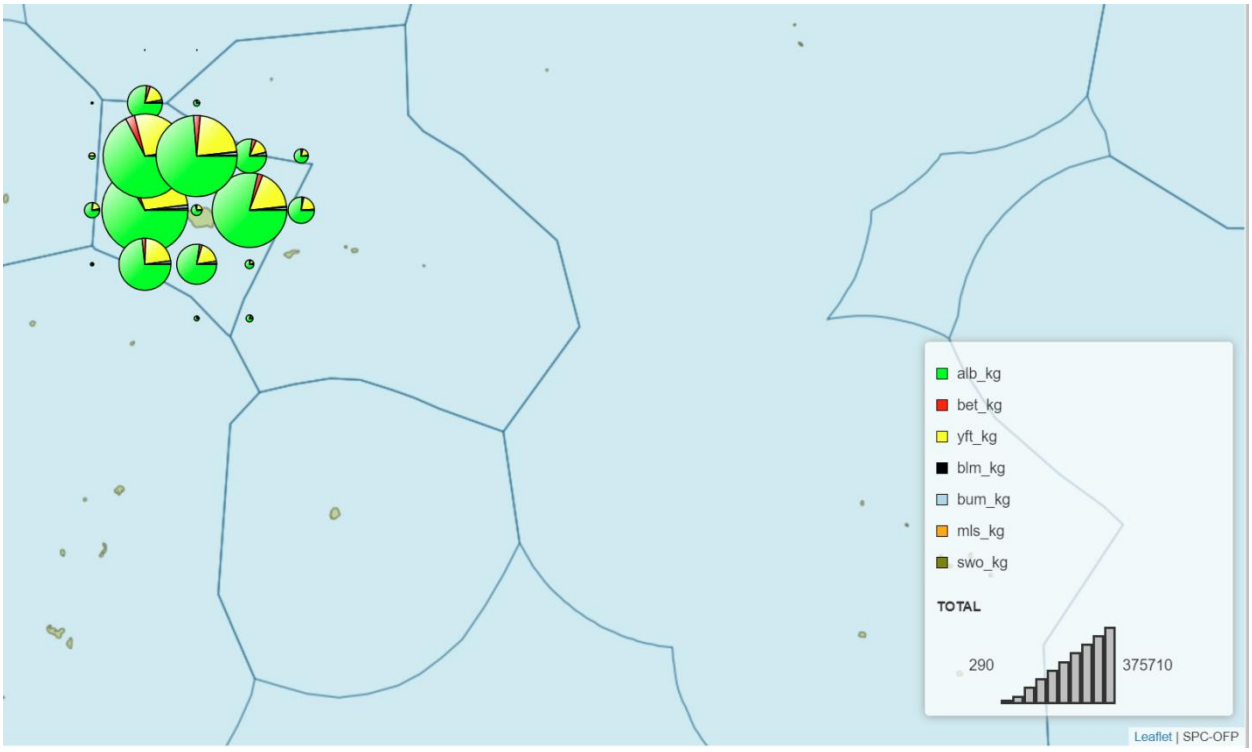


Figure 2: 2017 Catches in Samoa's EEZ

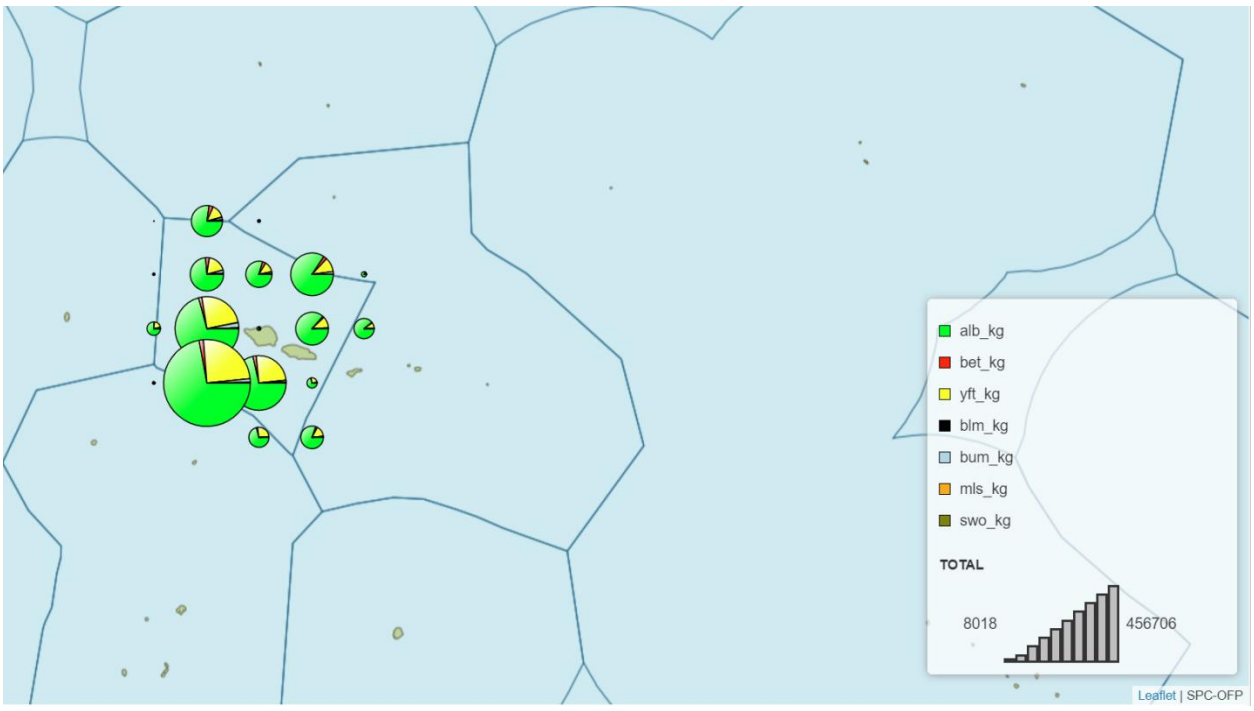


Figure 3: 2018 Catches in Samoa's EEZ

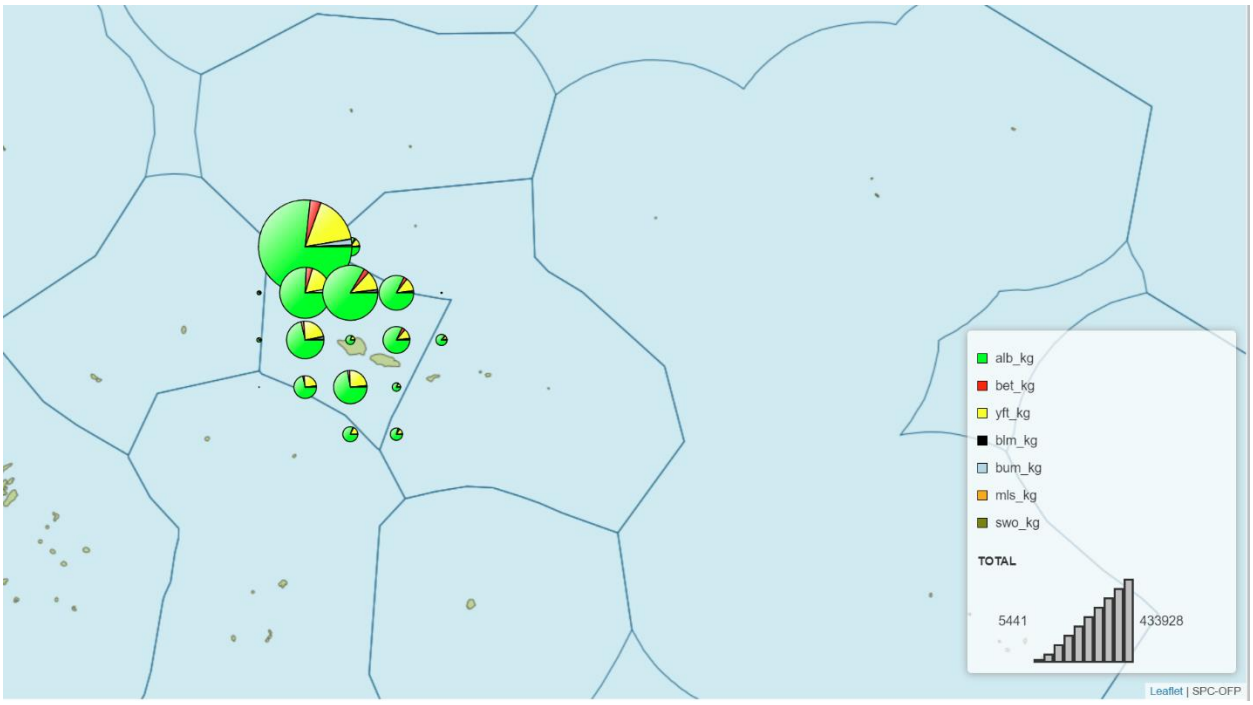


Figure 4: 2019 Catches in Samoa's EEZ

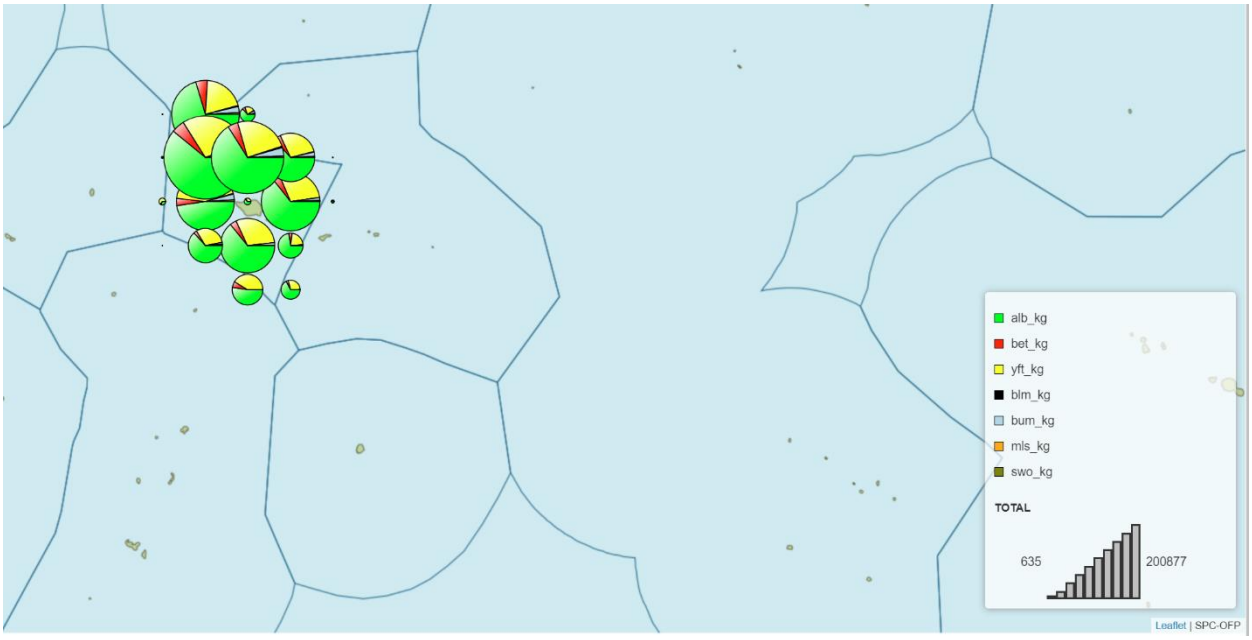


Figure 5: 2020 Catches in Samoa's EEZ

As 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.

Estimated Catches of Non-Targeted Species

Non-targeted species or bycatch species comprised of 46.89 metric tons in 2020. This is a decrease of about 42% from the previous year as seen in the table below.

	2016	2017	2018	2019	2020
Thresher Shark (*Alopias spp)*	0.02	0	0	0	0
Blue Shark (*Prionace glauca*)	0.09	0	0.0059	0	0
Common Dolphinfish (*Coryphaena hippurus*)	5.4	36.78	10.29	6.189	8.085
Great Barracuda (*Sphyraena barracuda*)	0.16	0.07	0.083	1.535	2.563
Mako Shark	0.09	0	0	0.062	0
Moonfish (*Lampris guttatus*)	0.19	0.07	3.33	5.423	1.714
Oilfish (*Ruvettus pretiosus*)	0	2.84	1.25	10.2	6.95
Pomfret	0.01	0	0	0.047	0.165
Indo Pacific Sailfish (*Istiophorus platypterus*)	0	3.9	2.44	0	5.435
Shark spp	0	0.12	0	0	0
Shortbill Spearfish (*Tetrapturus anguistrosris)*	0	8.88	6.95	14.29	4.141
Sickle Pomfret	0	0	0.12	0.588	0.708
Sunfish	0	0	0	0	0
Silky Shark (*Carcharhinus falciformis*)	0	0	0	0	0
Tuna spp	3.82	11.35	0	3.873	0
Wahoo (*Acanthocybium solandri*)	14.87	52.77	30.01	39.917	23.778
TOTAL	24.65	116.78	54.4789	82.124	53.539

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 2016 – 2020.

Species of Special Interest

There were no reported species of special interest for 2019 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 (*Carcharhinus longimanus*)	0	19	*Unknown*
Silky Shark (*Carcharhinus falciformis*)	0	8	*Unknown*
TOTAL	0	27	*Unknown*

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

Given the lack of observer data for Samoa in 2020, there are no instances of reported species of special interest. The table above is purely based of logsheet submissions received from commercial fishing vessels.

Development/ Trends in the 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. There was a slight decrease in 2018 before increasing again in 2019 and dropping again in 2020 due to various restrictions in place surrounding COVID-19. These catches nonetheless still fall behind the long term average along with various changes surrounding number of vessels participating in the fishery.

A new fishing processing plant was established in 2015 bringing in Samoa foreign fishing vessels. There were 15 foreign fishing vessels that were issued foreign fishing license to fish in Samoa's EEZ in 2020. 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.

Highly Migratory Fish Exports

Highly migratory fish exports have decreased exponentially from 5,313 metric tons to 4216 metric tons. This is a decrease of 1,097 metric tons and is attributed to less fishing days by the domestic fleet due to the COVID19 pandemic affecting 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 frozen or fresh chilled to other markets like New Zealand and the United States of America.

Year	2016	2017	2018	2019	2020
TOTAL	4345	4104	4165	5313	4216

Table 6: Highly Migratory Fish Exports 2016 – 2020

Research Activities

Samoa is continuing 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.

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 System

Logheets from fishing vessels and port sampling activities continue to be the main source of information on catch and effort and 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.

There was 99 percent coverage of logsheets from the domestic longline fishing fleet operating in Samoa's EEZ. 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 2021[1]

<u>SECTION A:</u> 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	2020	3	5	0.285
WS	2019	4	9	0.334
WS	2018	3	19	1.179

Observer coverage (WCPFC 11 decision – para 484(b)

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	%	
WS	WS-EEZ				1840	17	0.9	2479	721	29.1	122	20	16.4	

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

Samoa had monitored forty (40) transshipment operations with a total volume of 4839.4mt throughout 2020 and these activities are observed on Samoan ports.

Offloaded and Received	Transhipped in port, transhipped at sea in areas of national jurisdiction, and	Transhipped inside the Convention Area and transhipped outside	Caught inside the Convention Area and caught outside the	Fishing gear

[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.

		transhipped beyond areas of national jurisdiction	the Convention Area	Convention Area	
	Offloaded	100% transshipped in ports	N/A	100% caught inside the Convention Area	LL
CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5	N/A as there is no Purse Seine Fishing in Samoa's waters				
CMM 2018-03 [Seabirds] Para 13	There has been no incident in which seabirds have been reported by fisheries observers or any fishing vessel that fish in Samoa's EEZ				

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

<table>
<tr>
<td>CMM 2006-04 [South West striped Marlin], Para 4</td>
<td>
<table>
<tr><th>Flag</th><th>Year</th><th>Vessels</th><th>Catch (Numbers)</th><th>Catch (MT)</th></tr>
<tr><td>WS</td><td>2019</td><td>13</td><td>94</td><td>0.766</td></tr>
<tr><td>WS</td><td>2020</td><td>8</td><td>26</td><td>0.45</td></tr>
<tr><td>WS</td><td>2018</td><td>13</td><td>69</td><td>0.85</td></tr>
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<tr>
<td>CMM 2015-02 [South Pacific Albacore] Para 4</td>
<td>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.</td>
</tr>
<tr>
<td>CMM 2019-03 [North Pacific Albacore], Para 3</td>
<td>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.</td>
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