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FOURTEENTH REGULAR SESSION**

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

WCPFC-SC14-AR/CCM-21

SAMOA

INDEPENDENT STATE OF SAMOA

ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

JULY 2018

**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 April 2018	YES
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Abstract

Samoa's tuna fishery comprises of a longline fishery and troll fishery. Both fisheries operate within Samoa's Exclusive Economic Zone (EEZ) of approximately 120,000km². The main targeted species for these fisheries are albacore (*Thunnus alalunga*), yellowfin (*Thunnus albacares*), bigeye (*Thunnus obesus*) and skipjack (*Katsuwonus pelamis*). The catches from domestic longline fleet is estimated to be 3110 metric tonnes in 2017 which accounts for 71 percent of albacore total catches with yellowfin tuna at 19 percent and bigeye tuna at 4 percent. The foreign longline vessels that were fishing in Samoa's EEZ in 2017 showed a similar catch composition to that of the domestic fleet in which south pacific albacore tuna accounts for most of the catch.

The foreign fleets were licensed to fish in Samoa's EEZ from 2015. The size and structure of the fishing fleet operating in Samoa's EEZ has increased in numbers compared to 2015 which just had 10 foreign fleets, four additional foreign longline vessels were authorized to fish in Samoa's EEZ in 2016 and 15 in 2017.

Logsheets and port sampling continued to be the main source of fisheries data with VMS data being used for verification.

Total exports in 2017 have continued to increase dramatically, mostly as a result of catches from foreign fleets that are then re-exported out of Samoa. The majority of frozen exports goes to the canneries in American Samoa while the rest is exported either frozen or fresh chilled to Japan and the United States.

Background

Samoa's tuna fishery is predominately of tuna longline fishery and small scale troll fishery. The troll fishery involves Alia fishing vessels of around eight meters in length targeting skipjack that operates few miles offshore. The catches from the troll fishery are sold at the local market and restaurants. The tuna longline fleet targets South Pacific Albacore which now includes both foreign fishing vessels and domestic vessels. Bigeye and Yellowfin tuna are also important components of the tuna longline catch and are exported mostly fresh chilled to New Zealand and the United States of America. The Alia fishing fleet is also involved in the tuna longline fishery but their contribution is limited to peak months for this fishery and tend to change gear and target different species such as skipjacks and bottom fish species for other months of the year.

The tuna longline fishing in Samoa's EEZ was carried out exclusively by domestic fishing vessels before a change in policy in 2015 that saw the involvement of foreign fishing vessels in fishery. Like the domestic fishing vessels, the catch of the foreign fishing vessels in Samoa's EEZ also

comprises mostly of south pacific albacore tuna. These foreign fishing vessels operate out of Apia where most of their catches are landed.

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. 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, gear in the WCPFC Convention Area

The total catch from the domestic tuna longline fleet operating in Samoa's EEZ for 2017 is estimated around 3110 metric tons. The catches of south pacific albacore tuna accounts for over 71 percent of the total catch with yellowfin tuna at around 17 percent and bigeye tuna at around 4 percent. The broadbill species and other pelagic species make up the rest of the total tuna longline catch.

The albacore catch for 2017 is estimated at 2227 metric tons, an increase of over 57 percent from last year's catch. The yellowfin tuna catch is estimated at 584 metric tons, an increase of 59 metric tons from 2016. There was a slight increase of bigeye catches at an estimated 140 metric tons in 2017 from 61 metric tons in 2016.

Table 1: Annual catch estimates (in metric tons) for Samoa's domestic long line fleet by primary species, for the WCPFC Convention Area, for years 2013-2017

SPECIES	2013	2014	2015	2016	2017
ALBACORE	1,642	808	840	946	2227
BIGEYE TUNA	36	48	48	61	140
BLACK MARLIN	5	8	7	4	5
BLUE MARLIN	7	8	7	6	80
PACIFIC BLUEFIN					
SKIPJACK	14	15	20	20	59
STRIPED MARLIN	5	4	4	3	1
SWORDFISH	3	4	5	3	14
YELLOWFIN	330	231	252	239	584
TOTAL	2042	1126	1183	1282	3110

There were 15 foreign longline fishing vessels that fished in Samoa's EEZ for 2017. These licenses were issued under a fisheries access agreement with a foreign based fishing company. The catches from these fishing vessels are reported in table 2. The catch composition of the foreign fishing vessels in Samoa is similar to that of the domestic fleet in which south pacific albacore tuna accounts for most of the catch followed by yellowfin tuna.

¹Para 23 of CMM 2015-01

Table 2: Annual catch estimates (in metric tons) of foreign long line fleet by primary species, for the WCPFC Convention Area, for years 2013-2017

SPECIES	2013	2014	2015	2016	2017
ALBACORE			219	493	421
BIGEYE TUNA			10	43	20
BLACK MARLIN			2	3	1
BLUE MARLIN			8	14	18
PACIFIC BLUEFIN					
SKIPJACK			21	19	10
STRIPED MARLIN			1	1	0
SWORDFISH			2	5	4
YELLOWFIN			64	113	155
TOTAL			327	691	629

Number of vessels by gear type, size (fleet structure)

Samoa's commercial fishing fleet are not only domestic fleets but also foreign fishing vessels licensed to fish in Samoa EEZ and all their catch are landed in Samoa ports.

The Samoa's domestic longline fleet ranges from vessels of around 12.5 meters to over 20.5 meters in length. Table 3 presents information on the particulars of each vessel Class. Class A vessels are alia catamarans of between eight to eleven meters that are un-decked with outboard motors. These vessels fish a few miles offshore and are engaged mostly in surface trolling for skipjack tuna and bottom fishing for deep water snappers. Vessels of Class A engage in tuna longline fishing depending on catch rates from time to time. The number of vessels under other vessel classes has not changed from 2016 except Class A decreased its number because some licenses were not renewed and Class D Fishing vessel.

Table 3: Number of Samoan vessels, by gear and size category, active in Samoa's EEZ from 2013 - 2017

GROSS REGISTERED TONNAGE	CLASS	LENGTH (m)	FISHING METHOD	2013	2014	2015	2016	2017
0-10	A ²	Up to 11	Mixed	27	29	42	57	49
10-50	B	> 11-12.5	Long line	0	0	0	0	0
	C	>12.5-15	Long line	2	2	1	1	1
	D	>15-20.5	Long line	8	7	6	6	7
50-200	E	>20.5	Long line	2	4	4	4	4

Note: Mixed year, vessels shift gear from longline, trolling and bottom fishing.

There was one additional foreign longline vessel fishing in Samoa's EEZ in 2017. This vessel is flagged to Vanuatu making a total of 15 foreign fishing vessels that fished inside Samoa's EEZ.

Table 4: Number of Foreign vessels (CLASS F), by gear and size category, active in Samoa's EEZ from 2013- 2017

GROSS REGISTERED TONNAGE	LENGTH (m)	FISHING METHOD	FLAG	2013	2014	2015	2016	2017
50-200	>20.5	Long line	Cook Islands			1	1	1
			Kiribati			1	1	0
			Vanuatu			8	8	10
			Taiwan			-	4	4

Fishing patterns (catch by time/area)

The distribution of Samoa's longline catch is limited within Samoa's EEZ. The tuna longline fishery in Samoa occurs all year around with distinct periods of good catch rates from periods of relatively lower catch rates. Catches in 2014 were mostly taken from the western part of Samoa's EEZ, relative to the location of the two main islands, compared to 2015 where the majority of the catches were taken in the southern part of the EEZ. In 2016, the majority of the catch was taken from the northern part of Samoa's EEZ and was fairly distributed across the EEZ in 2017.

²This vessel Class is made up of Alia fishing vessels only and their operational range is between six to nine miles offshore from the coast. These vessels are un-decked and have outboard motors and their operations are small scale (artisanal) but is considered very important for livelihoods and food security in Samoa.

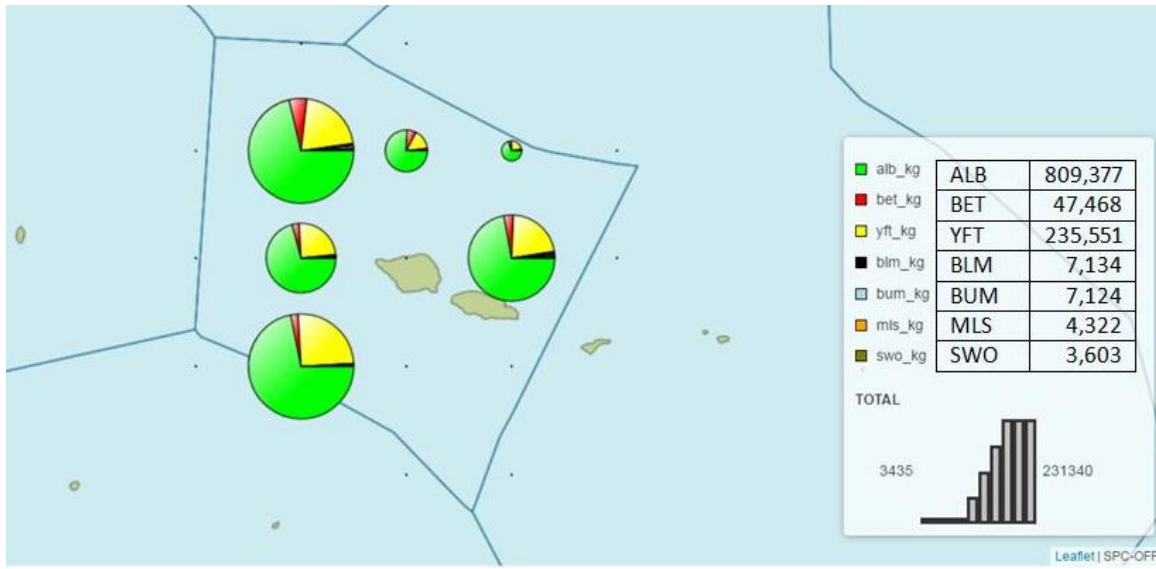


Figure 1: Catch distribution of key species from Samoa's domestic longline fleet in Samoa's EEZ for 2014

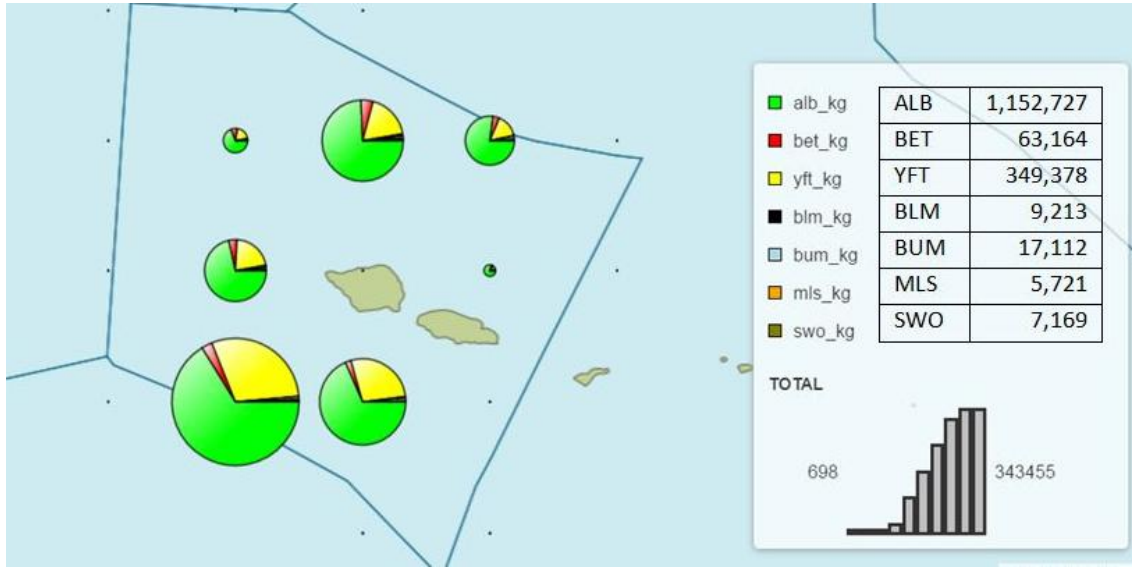


Figure 2: Catch distribution of key species from Samoa's domestic longline fleet in Samoa's EEZ for 2015

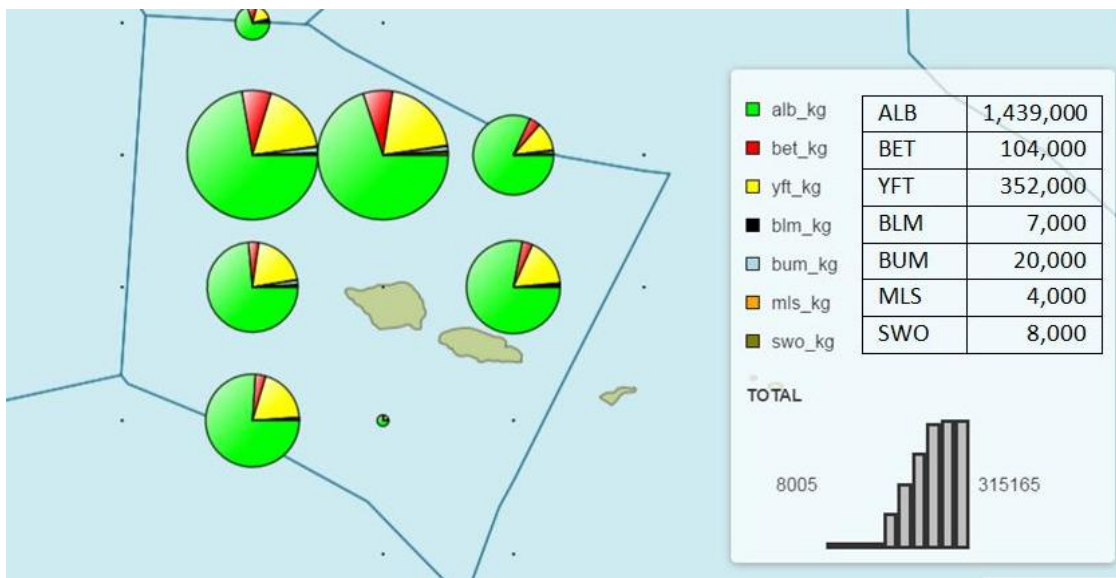


Figure 3: Catch distribution of key species from Samoa's domestic longline fleet in Samoa's EEZ for 2016

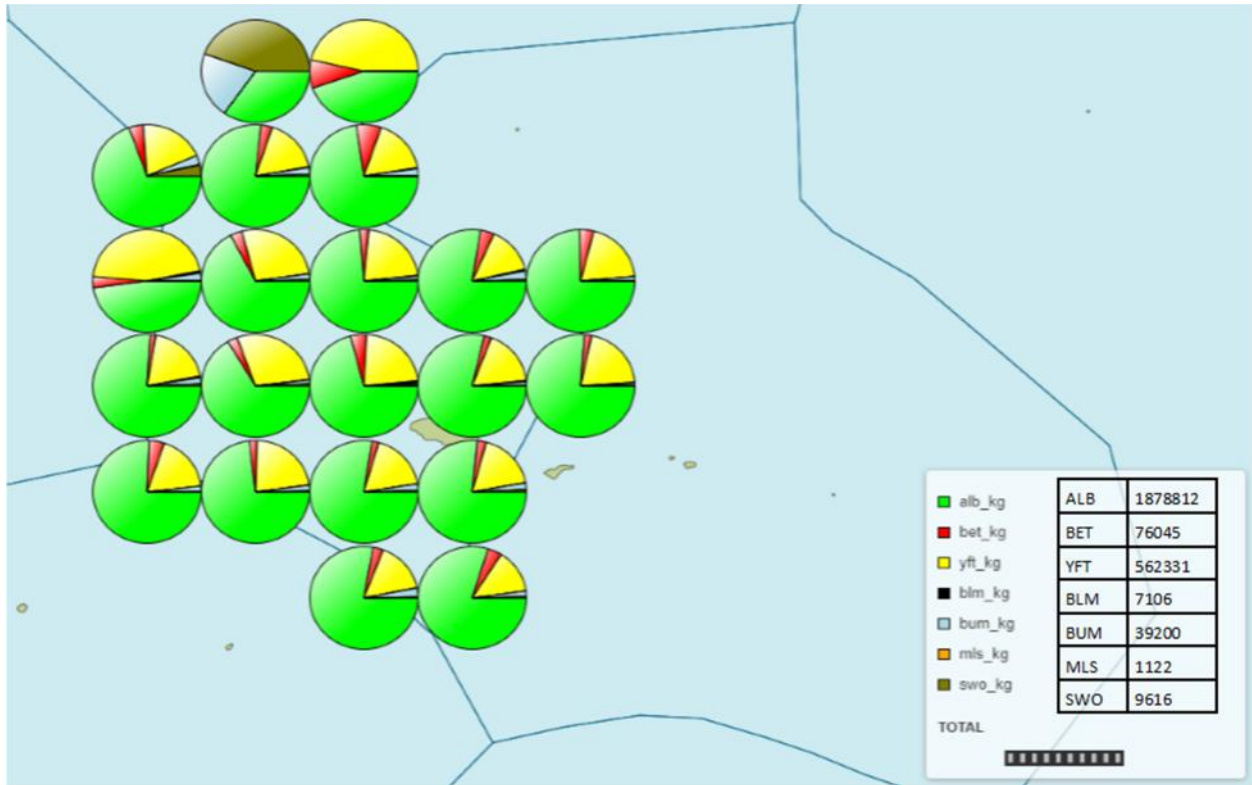


Figure 4: Catch distribution of key species from Samoa's national longline fleet in Samoa's EEZ for 2017

Estimated catches of non-targeted species

Non-targeted species comprised at just over three percent of the total longline catches for 2017. Wahoo and Dolphinfinch continues to dominate the catch of non targeted species and are important bycatch for the local markets and restaurants.

Table 5: Annual catch estimates (in metric tons) of non target, associated and dependent species, including sharks, by the tuna long line fleet operating in Samoa's EEZ, in the WCPFC Convention Area for years 2013-2017 (2017 estimates are un-raised, log sheet coverage 98%)

NON TARGETED SPECIES	2013	2014	2015	2016	2017
THRESHER SHARK (<i>Alopias sp.</i>)				0.02	
BLUE SHARK (<i>Prionaceglauca</i>)	0.35	0.51	1.10	0.09	
DOLPHINFISH (<i>Coryphaenahippurs</i>)	31.50	20.50	9.20	5.40	36.78
GREAT BARRACUDA (<i>Sphyraena barracuda</i>)	0.57	0.68	0.65	0.16	0.07
MAKO SHARK	0.18	0.07	0.25	0.09	
MOONFISH (<i>Lamprisguttatus</i>)	0.63	1.00	0.04	0.19	0.07
OCEANIC WHITETIP (<i>Carcharhinuslongimanus</i>)	0.12				
OILFISH (<i>Ruvettuspretiosus</i>)	0.06	0.09	0.35	0.06	2.84
POMFRET	0.21	0.23	1.30	0.05	
RAINBOW RUNNER (<i>Elagatisbipinnulata</i>)					
SAILFISH (<i>Istiophorusplatypterus</i>)	0.79	1.60	1.77		3.90
SHARK		0.11	0.22		0.12
SHORTBILL SPEARFISH (<i>Tetrapturusangustirostris</i>)		0.40	0.31		8.88
SICKLE POMFRET			0.11	0.01	
SILKY SHARK (<i>Carcharhinusfalciformis</i>)	0.24	0.08	0.08		
SOUTHERN BLUEFIN TUNA (<i>Thunnusmaccoyii</i>)	0.01				
SUNFISH (<i>Ranzanialaevis</i>)			0.02		
TUNA		7.40	0.65	3.82	11.35
WAHOO (<i>Acanthocybiumsolandri</i>)	26.38	18.6	19.30	14.78	52.77
TOTAL	61.05	50.97	35.35	24.67	116.78

Species of Special Interests.

There were no species of special interest (turtles, sea birds and dolphins) except for shark species (table 6) reported from log sheets as release/discards.

Table 6 shows the amount of oceanic white tip and silky sharks that were released as estimated from log sheet data.

Table 6: Shark release/discards estimates from 2017 log sheets

SHARK SPECIES	RELEASED WEIGHT (MT)	RELEASED INDIVIDUALS (No.)
OCEANIC WHITETIP (<i>Carcharhinus longimanus</i>)	0.06	5
SILKY SHARK (<i>Carcharhinus falciformis</i>)	0	0
TOTAL	0.06	5

Note: status of release for the above sharks can be alive/dead as estimates were derived from log sheets

Development/Trends in the Fishery

The Samoa domestic longline fishery continues to experience low catches although there was slightly increase in 2016 and 2017. Recent catches are still below the longterm average (2002 – 2012) and there is not much change in the fleet size and structure from 2016 except for the additional one Vanuatu flagged vessels that started fishing in Samoa’s EEZ in 2017.

A new fishing processing plant was established in 2015 bringing in Samoa foreign fishing vessels. There were 14 foreign fishing vessels that were issued foreign fishing license to fish in Samoa’s EEZ in 2017. 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.

Disposal of catch

Total exports of highly migratory fish (HMF) in 2017 has decreased by over 300 MT from 2016. The majority of these catches are from foreign fleets that are re-exported out of Samoa. The majority of frozen exports goes to the canneries in American Samoa while the rest is exported either frozen or fresh chilled to mostly Japan and the United States.

Table 6: Volume in (MT) of Samoa’s HMF exports from 2012 to 2017

Year	2013	2014	2015	2016	2017
TOTAL	1,441	732	2226	4345	4104

Research Activities

Samoa is continuing its working cooperation with SPC for the provision of tuna biological samples from tuna caught in Samoa’s EEZ by Samoa’s domestic fleet. These biological samples will be analyzed by SPC and is part of a project to strengthen our understanding on the movement and distribution of tuna species.

Data Collection System

Catch Log sheets and port sampling data continues to provide information on catch and effort as well as size data on tuna caught in Samoa's EEZ. The forms used for the collection of these data and information are regional forms used by SPC and FFA members. The information and data collected are entered into the TUFMAN database where the data is processed and stored.

There was 98 percent coverage achieved for log sheets from the domestic longline fishing fleet operating in Samoa's EEZ. Log sheets provide information on operational catch and effort data for all species caught in Samoa's EEZ from both the domestic and foreign Longline fleet. Samoa is committed to prioritize the strengthening of its observer programme to accommodate the observer needs of foreign fleets that are based out of Apia.

Table 7: Coverage of catch and effort and size data for all species caught in Samoa's EEZ in 2017

	NO. FISHING TRIPS	NO. COLLECTED/CONDUCTED	COVERAGE (%)
LOG SHEETS	209	195	98
PORT SAMPLING	209	9	2
OBSERVER	209	0	0



ADDENDUM TO ANNUAL REPORT PART 1

Specific information to be provided in Part 1 as required by CMMs¹

26 February 2018

CMM 2005-03 [North Pacific Albacore],Para 4	Not applicable to Samoa as no Samoan flagged fishing vessels fish in the North of the Equator																				
CMM 2006-04 [South West striped Marlin],Para 4	<p>Samoa does not have fishing vessels that targets striped marlin. There are vessels that retain striped marlin as by catch from area south of 15°S. Table 1 portrays the estimates on these by catches and the number of vessels.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Flag</th> <th>Year</th> <th>Vessels</th> <th>Catch (Numbers)</th> <th>Catch (MT)</th> </tr> </thead> <tbody> <tr> <td>WS</td> <td>2015</td> <td>6</td> <td>3</td> <td>0.075</td> </tr> <tr> <td>WS</td> <td>2016</td> <td>6</td> <td>2</td> <td>0.06</td> </tr> <tr> <td>WS</td> <td>2017</td> <td>10</td> <td>0</td> <td>0</td> </tr> </tbody> </table> <p>Table 1:: Number of Samoan vessels that caught Striped marlin as by catch in 2015-2017</p>	Flag	Year	Vessels	Catch (Numbers)	Catch (MT)	WS	2015	6	3	0.075	WS	2016	6	2	0.06	WS	2017	10	0	0
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WS	2015	6	3	0.075																	
WS	2016	6	2	0.06																	
WS	2017	10	0	0																	
CMM 2009-03 [Swordfish],Para 8	CMM not applicable to Samoa because no Samoan flagged vessels fish in 20° South.																				

<p>CMM 2009-06 [Transshipment],Para a 11 (ANNEX II)</p>	<p>Transshipment in Samoan Ports are carried out by foreign flagged vessels.</p>																																																																		
<p>MM 2010-07 [Sharks],Para 4</p>	<p>Samoa does not have a shark fishery, but some sharks are caught as by catch.</p> <p><i>Annual Catch Estimates of Shark Species from 2013 - 2017</i></p> <table border="1" data-bbox="505 525 1430 1207"> <thead> <tr> <th>SHARK SPECIES</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td>THRESHER SHARK</td> <td></td> <td></td> <td>0.05</td> <td>0.02</td> <td>0</td> </tr> <tr> <td>BLUE SHARK</td> <td>0.35</td> <td>0.51</td> <td>11</td> <td>0.09</td> <td>0</td> </tr> <tr> <td>MAKO SHARK</td> <td>0.18</td> <td>0.07</td> <td>0.25</td> <td>0.09</td> <td>0</td> </tr> <tr> <td>OCEANIC WHITE TIP</td> <td>0.12</td> <td></td> <td></td> <td></td> <td>0</td> </tr> <tr> <td>SILKY SHARK</td> <td>0.24</td> <td>0.08</td> <td>0.08</td> <td></td> <td>0</td> </tr> <tr> <td>SHARK</td> <td></td> <td>0.11</td> <td>0.22</td> <td></td> <td>0.216</td> </tr> </tbody> </table> <p>Annual number of shark interactions (release) from observer reports in 2013-2017</p> <table border="1" data-bbox="505 1386 1430 1837"> <thead> <tr> <th>SHARK SPECIES</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> <th>2017</th> </tr> </thead> <tbody> <tr> <td>BLUE SHARK</td> <td>7 (6A, 1D)</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>OCEANIC WHITE TIP</td> <td>7 (6A, 1D)</td> <td>19 (16A, 3D)</td> <td>8 (7A, 1D)</td> <td></td> <td></td> </tr> <tr> <td>SILKY SHARK</td> <td></td> <td>28 (24A, 4D)</td> <td>6 (5A, 1D)</td> <td></td> <td></td> </tr> </tbody> </table>	SHARK SPECIES	2013	2014	2015	2016	2017	THRESHER SHARK			0.05	0.02	0	BLUE SHARK	0.35	0.51	11	0.09	0	MAKO SHARK	0.18	0.07	0.25	0.09	0	OCEANIC WHITE TIP	0.12				0	SILKY SHARK	0.24	0.08	0.08		0	SHARK		0.11	0.22		0.216	SHARK SPECIES	2013	2014	2015	2016	2017	BLUE SHARK	7 (6A, 1D)					OCEANIC WHITE TIP	7 (6A, 1D)	19 (16A, 3D)	8 (7A, 1D)			SILKY SHARK		28 (24A, 4D)	6 (5A, 1D)		
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	A-Alive, D-Dead
CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5	Not applicable to Samoa as Samoa do not have a Purse Seine Fleet.
CMM 2011-04 [Oceanic whitetip sharks], Para 3	No oceanic whitetip sharks were recorded by observers nor mentioned on logsheets by fishing vessels.
CMM 2012-04 [Whale sharks], Para 06	Not applicable to Samoa as we do not have a Purse Seine fleet nor recorded interactions.
CMM 2013-08 [Silky sharks],Para 3	No silky sharks were recorded by observers nor mentioned on logsheets by fishing vessels.
Observer coverage (WCPFC 11 decision – para 484(b))	Samoa is not yet part o WCPFC ROP
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 authorisation.
CMM 2017-06 [Seabirds] Para 9	There are no reported interactions with seabirds over the period of 2017.
