



**SCIENTIFIC COMMITTEE
THIRTEENTH REGULAR SESSION**

**Rarotonga, Cook Islands
9 – 17 August 2017**

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

WCPFC-SC13-AR/CCM-21

SAMOA

INDEPENDENT STATE OF SAMOA

ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

JULY 2017

**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 2017	YES
--	------------

Abstract

The Tuna longline fishery occurs all year around in Samoa's Exclusive Economic Zone (EEZ) with the domestic longline fleet catching an estimated 1307 metric tonnes in 2016 with catches of south pacific albacore tuna accounted for over 70 percent of the total catch at 946 metric tonnes. The foreign longline vessels that were fishing in Samoa's EEZ for 2016 showed a similar catch composition to that of the domestic fleet in which south pacific albacore tuna accounts for most of the catch.

The size and structure of the fishing fleet operating in Samoa's EEZ has not changed much from 2015 except for four additional foreign longline vessels that were authorized to fish in Samoa's EEZ in 2016.

Total exports in 2016 has continued to increase dramatically, mostly as a result of catches 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 Japan and the United States

Background

Commercial Tuna fisheries in Samoa constitute mostly of the Tuna Longline Fishery and a lesser scale Troll fishery. The troll fishery started around the mid seventies with catamaran vessels of around eight meters in length carrying out surface trolling few miles offshore for skipjack and yellowfin tuna. The catches from the troll fishery are sold locally. In the mid nineties, the tuna longline fishery started to take off after a successful trial in Samoa's EEZ. The tuna longline fishery in its early years of development became the backbone of Samoa's economy and the leading foreign exchange earner for Samoa. The fishery involves vessels ranging from eight to over 20 meters in length targeting south pacific albacore tuna to be exported frozen mostly to the canneries in American Samoa. Bigeye and Yellowfin tuna are also important components of the tuna longline catch and are export mostly fresh chilled to New Zealand and the United States of America.

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 tuna longline fishing. Like the domestic fishing vessels, the catch of the foreign fishing vessels in Samoa's EEZ are also predominantly 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 2016 is estimated around 1307 metric tonnes. The catches of south pacific albacore tuna accounts for over 70 percent of the total catch with yellowfin tuna at around 18 percent and bigeye tuna at around five percent. The broadbill species and other pelagic species make up the rest of the total tuna longline catch.

The albacore catch for 2016 is estimated at 946 metric tons, an increase of over 12 percent from last year’s catch. The yellowfin tuna catch was estimated at 239 metric tons, a slight reduction of around five percent from the 2015 catch. There was a slight increase of bigeye catches at an estimated 61 metric tonnes in 2016 from 48 metric tonnes in 2015.

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 2012-2016

SPECIES	2012	2013	2014	2015	2016
<i>TOTAL HOOKS</i>	<i>5,642,500</i>	<i>4,182,200</i>	<i>4,868,200</i>	<i>3,961,100</i>	<i>4,299,400</i>
ALBACORE	2,038	1,642	808	840	946
BIGEYE TUNA	54	36	48	48	61
BLACK MARLIN	10	5	8	7	4
BLUE MARLIN	11	7	8	7	6
PACIFIC BLUEFIN	0.2				
SKIPJACK	27	14	15	20	20
STRIPED MARLIN	3	5	4	4	3
SWORDFISH	5	3	4	5	3
YELLOWFIN	234	330	231	252	239
TOTAL	2383	2042	1126	1183	1282

There were 14 foreign longline fishing vessels that were fishing in Samoa’s EEZ for 2016. 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.

The 14 foreign fishing vessels also chartered to Samoa caught and estimated amount of 0.45 metric tonnes of sword fish south of 20 degrees south in 2016.

¹ Para 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 2012-2016

SPECIES	2012	2013	2014	2015	2016
ALBACORE				219	493
BIGEYE TUNA				10	43
BLACK MARLIN				2	3
BLUE MARLIN				8	14
PACIFIC BLUEFIN					
SKIPJACK				21	19
STRIPED MARLIN				1	1
SWORDFISH				2	5
YELLOWFIN				64	113
TOTAL				327	691

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

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 fishes few miles offshore and are engaged mostly in surface trolling for skipjack tuna and bottom fishing for deep water snappers. Some vessels of Class A engaged in tuna longline fishing depending on catch rates from time to time. The number of vessels under other vessel classes has not changed from 2015.

Table 3 : Number of Samoan vessels, by gear and size category, active in Samoa's EEZ from 2012 - 2016

GROSS REGISTERED TONNAGE	CLAS S	LENGT H (m)	FISHING METHOD	2012	2013	2014	2015	2016
0-10	A ²	Up to 11	Mixed	23	27	29	42	57
10-50	B	> 11-12.5	Long line	1	0	0	0	0
	C	>12.5-15	Long line	2	2	2	1	1
	D	>15-20.5	Long line	8	8	7	6	6
50-200	E	>20.5	Long line	2	2	4	4	4

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

² This 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 there operations are small scale (artisanal) but is considered very important for livelihoods and food security in Samoa.

There were four additional foreign longline vessels fishing in Samoa’s EEZ in 2016. These are flagged to Chinese Taipei making a total of 14 foreign fishing vessels fishing inside Samoa’s EEZ.

Table 4 : Number of Foreign vessels(CLASS F) , by gear and size category, active in Samoa’s EEZ from 2012- 2016

GROSS REGISTERED TONNAGE	LENGTH (m)	FISHING METHOD	FLAG	2012	2013	2014	2015	2016
50-200	>20.5	Long line	Cook Islands				1	1
			Kiribati				1	1
			Vanuatu				8	8
			Taiwan					4

Fishing patterns (catch by time/area)

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.

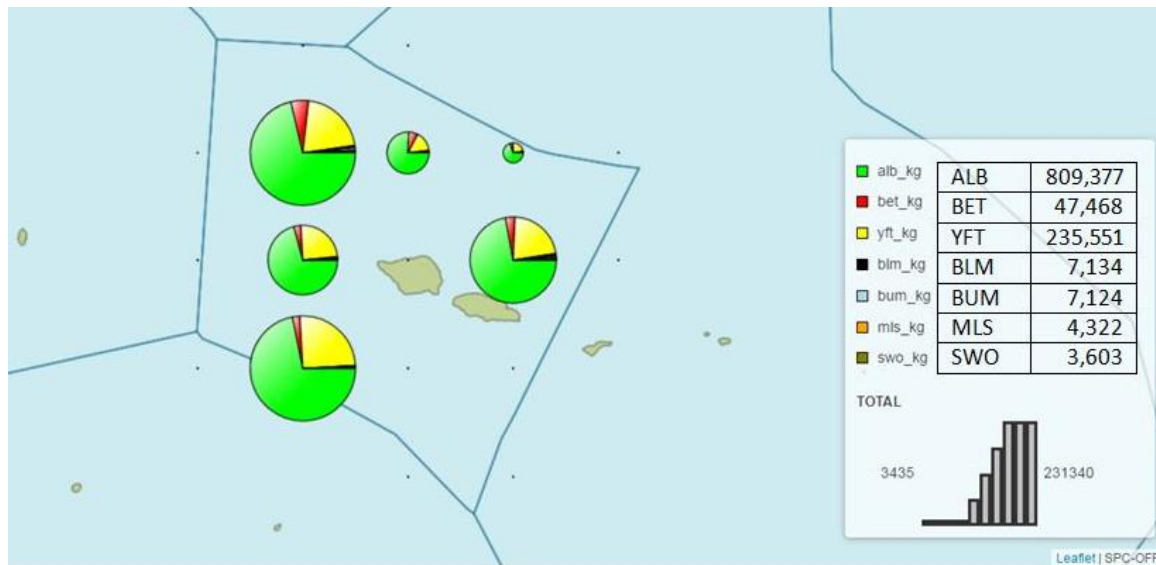


Figure 1: Catch distribution of key species from Samoa’s domestic longline fleet in Samoa’s EEZ for 2014

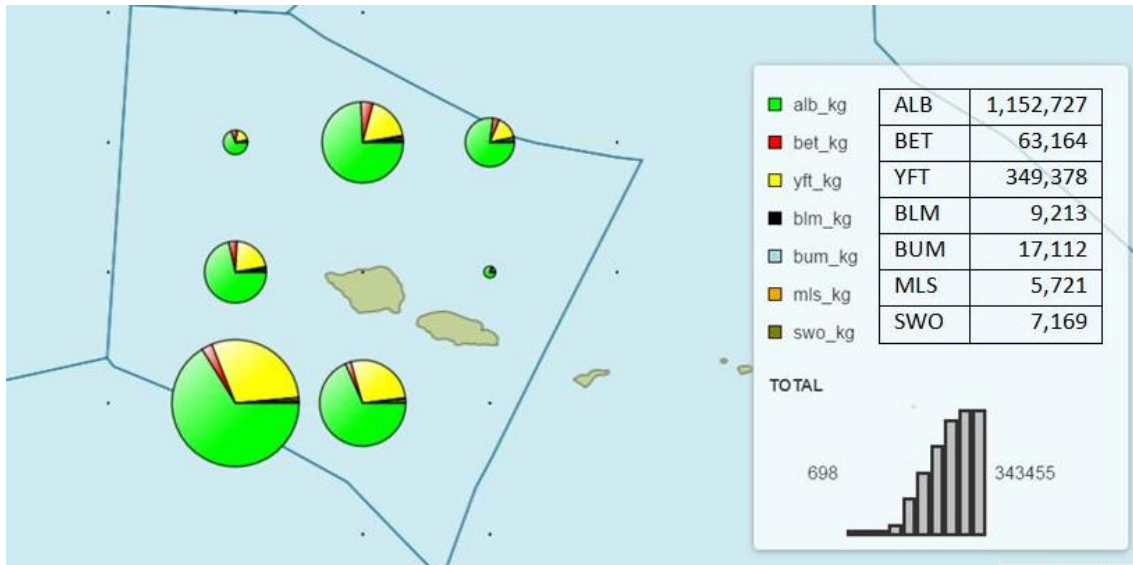


Figure 2: Catch distribution of key species from Samoa's domestic longline fleet in Samoa's EEZ for 2015

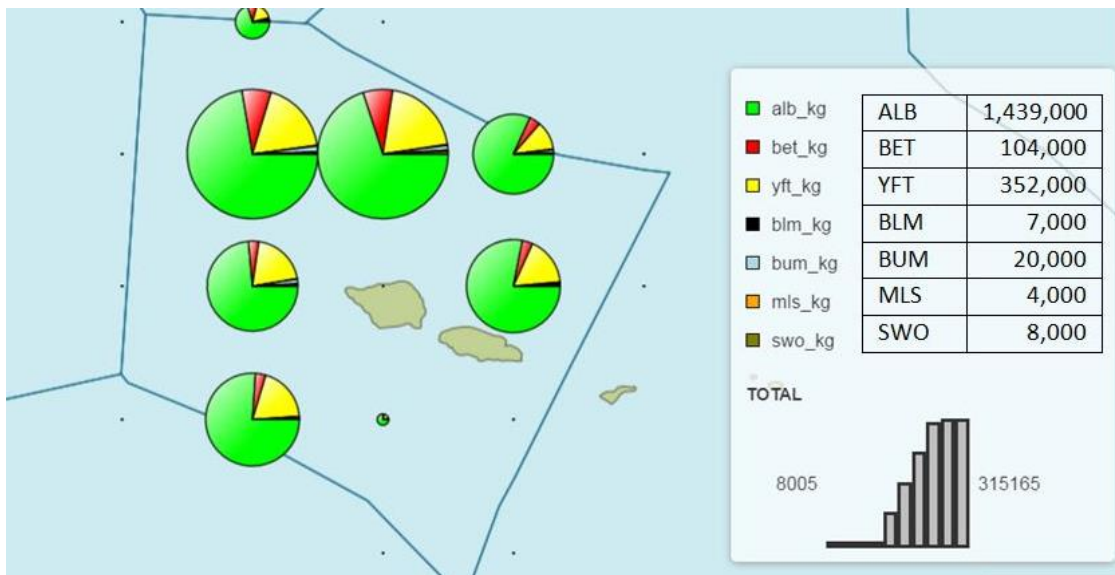


Figure 3: Catch distribution of key species from Samoa's domestic longline fleet in Samoa's EEZ for 2016

Estimated catches of non-targeted species

Non-targeted species comprised at just over one percent of the total tuna longline catch in 2016. Wahoo and Dolphin fish continues to dominate the catch of non targeted species and are both important component of the catch 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 2012-2016 (2016 estimates are un-raised, log sheet coverage 95%)

NON TARGETED SPECIES	2012	2013	2014	2015	2016
THRESHER SHARK (<i>Alopias sp.</i>)					0.02
BLUE SHARK (<i>Prionaceglauca</i>)	0.83	0.35	0.51	1.10	0.09
DOLPHINFISH (<i>Coryphaenahippurus</i>)	35.59	31.50	20.50	9.20	5.40
GREAT BARRACUDA (<i>Sphyraena barracuda</i>)	3.80	0.57	0.68	0.65	0.16
MAKO SHARK	0.09	0.18	0.07	0.25	0.09
MOONFISH (<i>Lamprisguttatus</i>)	1.65	0.63	1.00	0.04	0.19
OCEANIC WHITETIP (<i>Carcharhinuslongimanus</i>)		0.12			
OILFISH (<i>Ruvettuspretiosus</i>)	0.47	0.06	0.09	0.35	0.06
POMFRET	0.69	0.21	0.23	1.30	0.05
RAINBOW RUNNER (<i>Elagatisbipinnulata</i>)	0.08				
SAILFISH (<i>Istiophorusplatypterus</i>)	1.90	0.79	1.60	1.77	
SHARK	0.08		0.11	0.22	
SHORTBILL SPEARFISH (<i>Tetrapturusangustirostris</i>)	0.07		0.40	0.31	
SICKLE POMFRET				0.11	0.01
SILKY SHARK (<i>Carcharhinusfalciformis</i>)	0.09	0.24	0.08	0.08	
SOUTHERN BLUEFIN TUNA (<i>Thunnusmaccoyii</i>)		0.01			
SUNFISH (<i>Ranzanialaevis</i>)	0.09			0.02	
TUNA			7.40	0.65	3.82
WAHOO (<i>Acanthocybiumsolandri</i>)	33.72	26.38	18.6	19.30	14.78
TOTAL	79.15	61.05	50.97	35.35	24.67

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 2016 log sheets

SHARK SPECIES	RELEASED WEIGHT (MT)	RELEASED INDIVIDUALS (No.)
OCEANIC WHITETIP (<i>Carcharhinus longimanus</i>)	0.45	37
SILKY SHARK (<i>Carcharhinus falciformis</i>)	1.08	54
TOTAL	1.53	91

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 generally continues to experience low catches although there was improvement observed in 2015 and 2016. Recent catches are still below the long term average (2002 – 2012) and there is not much change in the fleet size and structure from 2015 except for the additional four Chinese Taipei flagged vessels that started fishing in Samoa’s EEZ in 2016.

Disposal of catch

Total exports in 2016 has continued to increase dramatically mostly as a result of catches 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 frozen and fresh chilled fish exports from 2012 to 2016

EXPORT TYPE	2012	2013	2014	2015	2016
FROZEN	1,777	1,435	730	1587	4234
FRESH CHILLED	49	7	1.9	639	111
TOTAL	1,826	1,441	732	2226	4345

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 amongst other things, 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.

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 2016

	NO. FISHING TRIPS	NO. COLLECTED/CONDUCTED	COVERAGE (%)
LOG SHEETS	188	182	95
PORT SAMPLING	188	65	15
OBSERVER	188	0	0



ADDENDUM TO ANNUAL REPORT PART 1

Specific information to be provided in Part 1 as required by CMMs³

10 May 2017

CMM 2005-03 [North Pacific Albacore],Para 4	CMM not applicable to Samoa because no Samoan flagged 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> <p>Table 1: Number of Samoan vessels that caught Striped marlin as by catch in 2014-2016</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>YEAR</th> <th>VESSELS</th> <th>CATCH (Numbers)</th> <th>CATCH (MT)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">2014</td> <td style="text-align: center;">6</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td style="text-align: center;">2015</td> <td style="text-align: center;">6</td> <td style="text-align: center;">3</td> <td style="text-align: center;">0.075</td> </tr> <tr> <td style="text-align: center;">2016</td> <td style="text-align: center;">3</td> <td style="text-align: center;">2</td> <td style="text-align: center;">0.060</td> </tr> </tbody> </table>	YEAR	VESSELS	CATCH (Numbers)	CATCH (MT)	2014	6	0	0	2015	6	3	0.075	2016	3	2	0.060
YEAR	VESSELS	CATCH (Numbers)	CATCH (MT)														
2014	6	0	0														
2015	6	3	0.075														
2016	3	2	0.060														
CMM 2009-03 [Swordfish],Para 8	CMM not applicable to Samoa because no Samoan flagged vessels fish in 20° South.																

³Reporting requirements requested by CMMs and decisions by the Commission, as of WCPFC13 (Dec 2016)

CMM 2009-06 [Transshipment],P ara 11 (ANNEX II)	Samoan flagged vessels do not conduct transshipment in other ports.																																																														
CMM 2010-07 [Sharks],Para 4	<p>Samoa does not have a shark fishery, but some sharks are caught as by catch.</p> <p>Annual catch estimates of shark species from 2012-2016 by national fleet</p> <table border="1" data-bbox="516 632 1365 1077"> <thead> <tr> <th>SHARK SPECIES</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> <th>2016</th> </tr> </thead> <tbody> <tr> <td>THRESHER SHARK</td> <td></td> <td></td> <td></td> <td>0.05</td> <td>0.02</td> </tr> <tr> <td>BLUE SHARK</td> <td>0.83</td> <td>0.35</td> <td>0.51</td> <td>1.1</td> <td>0.09</td> </tr> <tr> <td>MAKO SHARK</td> <td>0.09</td> <td>0.18</td> <td>0.07</td> <td>0.25</td> <td>0.09</td> </tr> <tr> <td>OCEANIC WHITE TIP</td> <td></td> <td>0.12</td> <td></td> <td></td> <td></td> </tr> <tr> <td>SILKY SHARK</td> <td>0.09</td> <td>0.24</td> <td>0.08</td> <td>0.08</td> <td></td> </tr> <tr> <td>SHARK</td> <td>0.08</td> <td></td> <td>0.11</td> <td>0.22</td> <td></td> </tr> </tbody> </table> <p>Annual number of shark interactions (release) from observer reports in 2012-2016</p> <table border="1" data-bbox="516 1461 1365 1717"> <thead> <tr> <th>SHARK SPECIES</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> </tr> </thead> <tbody> <tr> <td>BLUE SHARK</td> <td colspan="4">7 (6A, 1D)</td> </tr> <tr> <td>OCEANIC WHITE TIP</td> <td>7 (6A, 1D)</td> <td>19 (16A, 3D)</td> <td colspan="2">8 (7A, 1D)</td> </tr> <tr> <td>SILKY SHARK</td> <td colspan="2"></td> <td>28 (24A, 4D)</td> <td>6 (5A, 1D)</td> </tr> </tbody> </table> <p><i>Note: A-Alive healthy, D-Dead</i></p>	SHARK SPECIES	2012	2013	2014	2015	2016	THRESHER SHARK				0.05	0.02	BLUE SHARK	0.83	0.35	0.51	1.1	0.09	MAKO SHARK	0.09	0.18	0.07	0.25	0.09	OCEANIC WHITE TIP		0.12				SILKY SHARK	0.09	0.24	0.08	0.08		SHARK	0.08		0.11	0.22		SHARK SPECIES	2012	2013	2014	2015	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)
SHARK SPECIES	2012	2013	2014	2015	2016																																																										
THRESHER SHARK				0.05	0.02																																																										
BLUE SHARK	0.83	0.35	0.51	1.1	0.09																																																										
MAKO SHARK	0.09	0.18	0.07	0.25	0.09																																																										
OCEANIC WHITE TIP		0.12																																																													
SILKY SHARK	0.09	0.24	0.08	0.08																																																											
SHARK	0.08		0.11	0.22																																																											
SHARK SPECIES	2012	2013	2014	2015																																																											
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)																																																											

CMM 2011-03 [Impact of PS fishing on cetaceans], Para 4	CMM not applicable to Samoa because no Samoan purse seine fleet.
CMM 2011-04 [Oceanic whitetip sharks], Para 3	<p>Oceanic white tip shark was estimated from log sheets as there were no observer trips conducted in 2016. Hence the status or state of release could not be determined.</p> <p><i>Oceanic white tip shark release/discards = 0.45 mt</i></p> <p><i>Note: status of release for the above sharks can be alive/dead</i></p>
CMM 2012-04 [Whale sharks], Para 06	CMM not applicable to Samoa because no purse seine vessels.
CMM 2012-07 [Seabirds], Para 9 <i>Applies until 1 Jan 2017 (see CMM 2015-03 below)</i>	No sea bird interaction
CMM 2013-08 [Silky sharks], Para 3	<p>Silky shark was estimated from log sheets as there were no observer trips conducted in 2016. Hence the status or state of release could not be determined.</p> <p><i>Silky shark release/discards = 1.08 mt</i></p> <p><i>Note: status of release for the above sharks can be alive/dead</i></p>
Observer coverage (WCPFC 11 decision – para 484(b))	<p>Samoan flagged vessels do not fish outside of EEZ, ROP 5% coverage does not apply to Samoa.</p> <p>For this year, there were no observer trips conducted on Samoan flagged vessels due to challenges on availability of observer (1 observer).</p>

<p>CMM 2015-02</p> <p>[South Pacific Albacore] Para 4</p>	<p>2016 Operational catch and effort data has been submitted to SPC as well as number of active fishing vessels that fish for South Pacific Albacore and other key species group.</p> <p>No Samoan fishing vessels fish at 20°S</p>
---	---