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

WCPFC-SC17-AR/CCM-25

TONGA



Ministry of Fisheries
GOVERNMENT OF THE KINGDOM OF TONGA

**The Commission for the Conservation and Management of Highly Migratory
Fish Stocks in the Western and Central Pacific Ocean**

Scientific Committee
**Seventeenth Regular
Session**
Online 11 – 19 August 2021

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



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
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1.0 ABSTRACT

The tuna fishery in Tonga is composed of a National (Flag State) and Foreign longline fleet (Coastal state). The total estimated catch for tuna and tuna-like species for national and foreign fishing fleets for 2020 was estimated to be 2,244.6mt, a massive drop of 48.7% from 3,338 mt in 2019. The Tonga National fleet consists of 6 National longline vessels fished entirely in Tongan waters with an estimated 230 mt for primary species, showing a drop of 37% compared to 366mt in 2019. The total estimated catch of all species for National fleets was 284.4 mt. The Foreign fleets consist of 10 longline vessels with a total estimated yield of 1,960 mt, which shows a vast decrease of 30.4 % compared to 2,816 mt in 2019.

The national fleets overall catch in 2020 dominated by Yellowfin tuna with 155 mt, and mahimahi dominated the catches for non-target species with 38 mt, indicating that the National fleets targeted Yellowfin and Bigeye tuna for the fresh fish market.

The foreign fleets catch in 2020 dominated by Albacore tuna of 852 mt. According to the Term and Conditions for tuna fishing licenses, targeting any shark's species is prohibited in Tonga. And the observer data reported that there were no interactions with Species of Special Interest (e.g. turtle, marine mammals and seabirds) by Tonga's longline fishery.

The total tuna harvested by the Tongan fleet in 2020 does show that the ongoing COVID-19 pandemic crisis has significantly impeded it. The decreases in the catches were due to fewer trips made by the fishing vessels, resulting from the COVID-19 restrictions. The closing down of the overseas market and international border also affected the exports of tuna. Despite the COVID-19 challenges face, the result still insignificant to pose any significant impact on the whole stock in the region and the WCPO.

Tonga has no purse seine fisheries; therefore, some WCPFC measures regarding purse seine fisheries do not apply to Tonga. But at the same time, Tonga has set an effort limit for Purse Seine fishing with its EEZ per calendar year not to exceed 150-200 days and no days recorded for any Purse seine fishing activity within Tonga EEZ in 2020.

Tonga has its National Observer Program and an active domestic port sampling program for highly migratory species. These programs continue to work closely with the Offshore Fisheries Program (OFP) of South Pacific Communities (SPC) on data collection regarding the status of tuna resources in the Tonga EEZ.

Table 1. Annual catch (retained and discard, mt) and effort (hooks) estimated for the Tonga longline vessels, by primary species, for the WCPFC Convention Area, 2016 – 2020
 (Source: TufMan2 Dorado Reports – RECON_Report #2.2.3 – "National Fleet – LL – Key species in WCPFC Area raised with VMS")

WCPFC Key Species	2016		2017		2018		2019		2020	
	MT	%	MT	%	MT	%	MT	%	MT	%
ALBACORE	60	10%	27	5%	23	7%	30	9%	13	6%
BIGEYE TUNA	31	5%	24	4%	34	10%	16	5%	10	4%
PACIFIC BLUEFIN TUNA	0	0%	0	0%	0	0%	0	0%	0	0%
SKIPJACK TUNA	6	1%	12	2%	4	1%	2	1%	3	1%
YELLOWFIN TUNA	351	60%	374	69%	201	61%	187	56%	155	67%
BLACK MARLIN	20	3%	13	2%	5	2%	4	1%	2	1%
BLUE MARLIN	48	8%	40	7%	17	5%	47	14%	21	9%
STRIPED MARLIN	12	2%	2	0%	11	3%	14	4%	4	2%
SWORDFISH	40	7%	32	6%	44	13%	35	10%	16	7%
BLUE SHARK	1	0%	0	0%	1	0%	2	1%	0	0%
SILKY SHARK	0	0%	0	0%	0	0%	10	3%	0	0%
HAMMERHEAD SHARKS	0	0%	0	0%	0	0%	0	0%	0	0%
MAKO SHARKS	20	3%	15	3%	35	11%	12	4%	6	3%
OCEANIC WHITETIP SHARK	0	0%	0	0%	3	1%	6	2%	0	0%
PORBEABLE / SALMON SHARK	0	0%	0	0%	0	0%	0	0%	0	0%
WHALE SHARK	0	0%	0	0%	0	0%	0	0%	0	0%
THRESHER SHARKS	0	0%	0	0%	0	0%	0	0%	0	0%
Total catch	589		539		332		336		230	
Total effort (hhks)	12348		15596		12253		12008		7774	

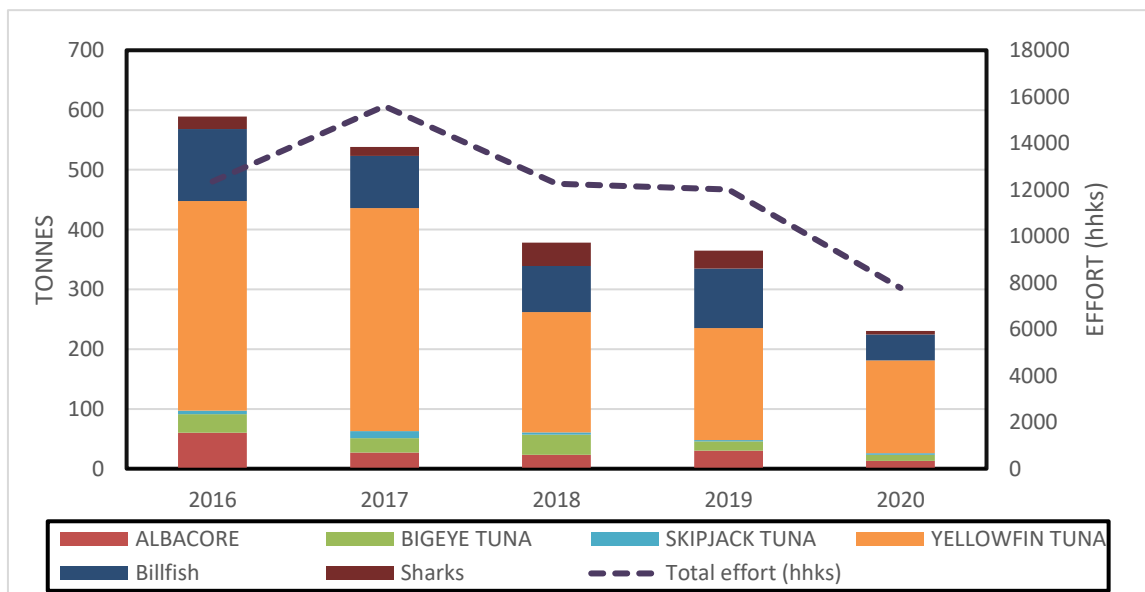


Figure 1: Historical annual Catch (mt) and Effort (no. of hooks), by primary species, for the Tongan longliners (National Fleets) were active in the WCPFC Convention Area for the years 2016 to 2020

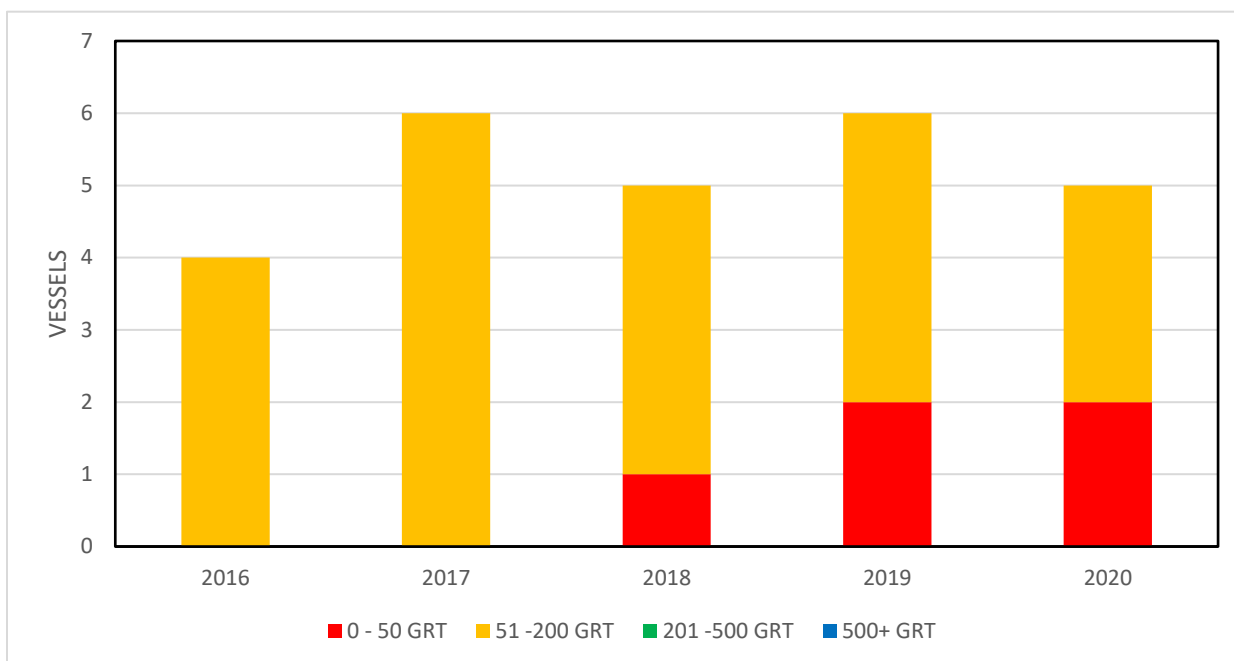


Figure 2: Historical annual longline vessels number for Tonga, for the WCPFC Convention Area, 2016– 2020.

Table 2. Number of active fishing vessels in tuna fisheries in WCPFC Convention Area by gear and size class.

Gear	LONGLINE
Fleet	National Fleets

Vessel category	2016		2017		2018		2019		2020	
	No.	%	No.	%	No.	%	No.	%	No.	%
0 - 50 GRT	0	0%	0	0%	1	20%	2	33%	2	40%
51 -200 GRT	4	100%	6	100%	4	80%	4	67%	3	60%
201 -500 GRT	0	0%	0	0%	0	0%	0	0%	0	0%
500+ GRT	0	0%	0	0%	0	0%	0	0%	0	0%
Total	4	100%	6	100%	5	100%	6	100%	5	100%

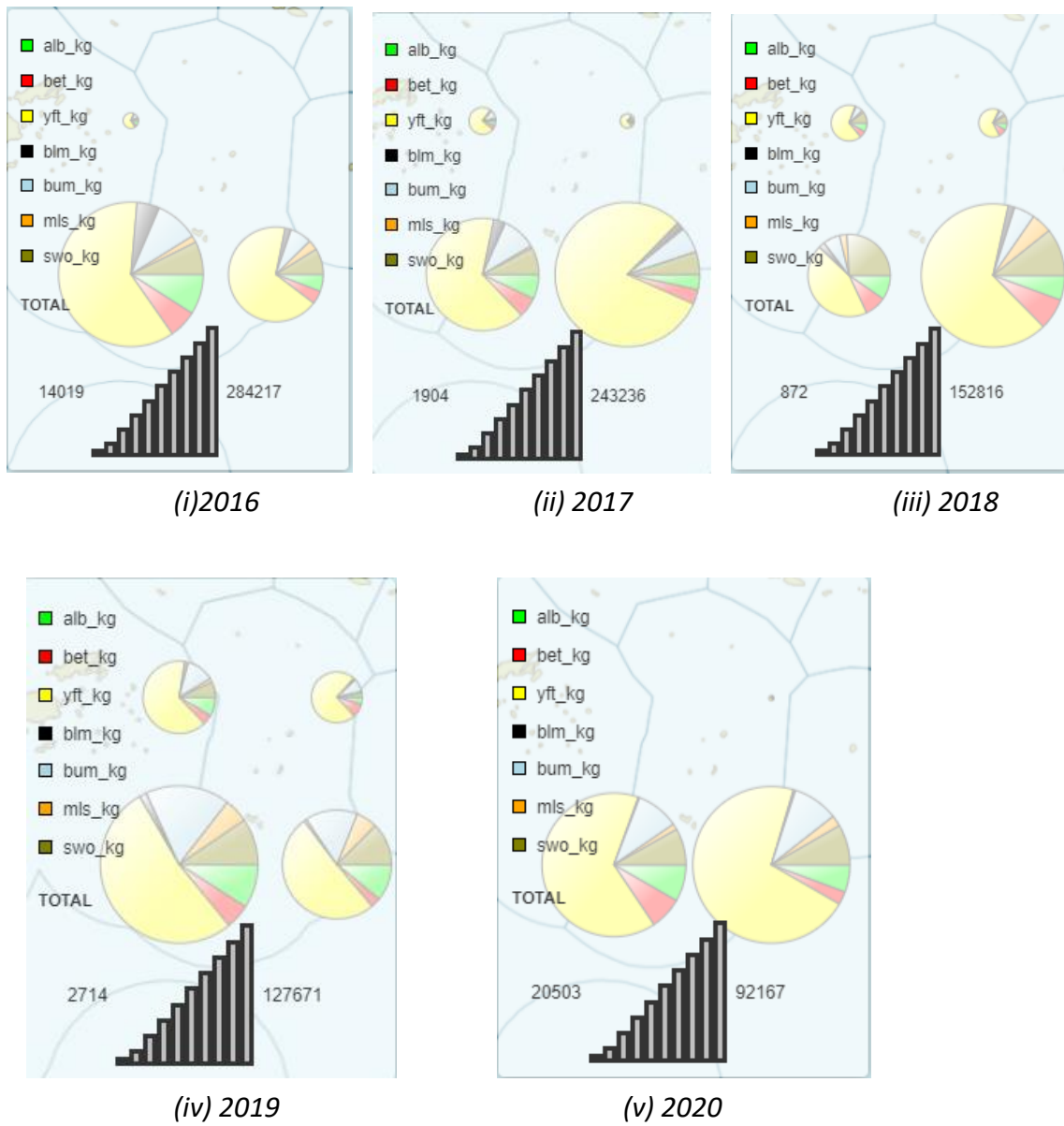


Figure 3a (i-v). Annual distribution of Longline National Fleet catches by target tuna species (in kilograms) in the WCPF Convention Area from 2016 to 2020.

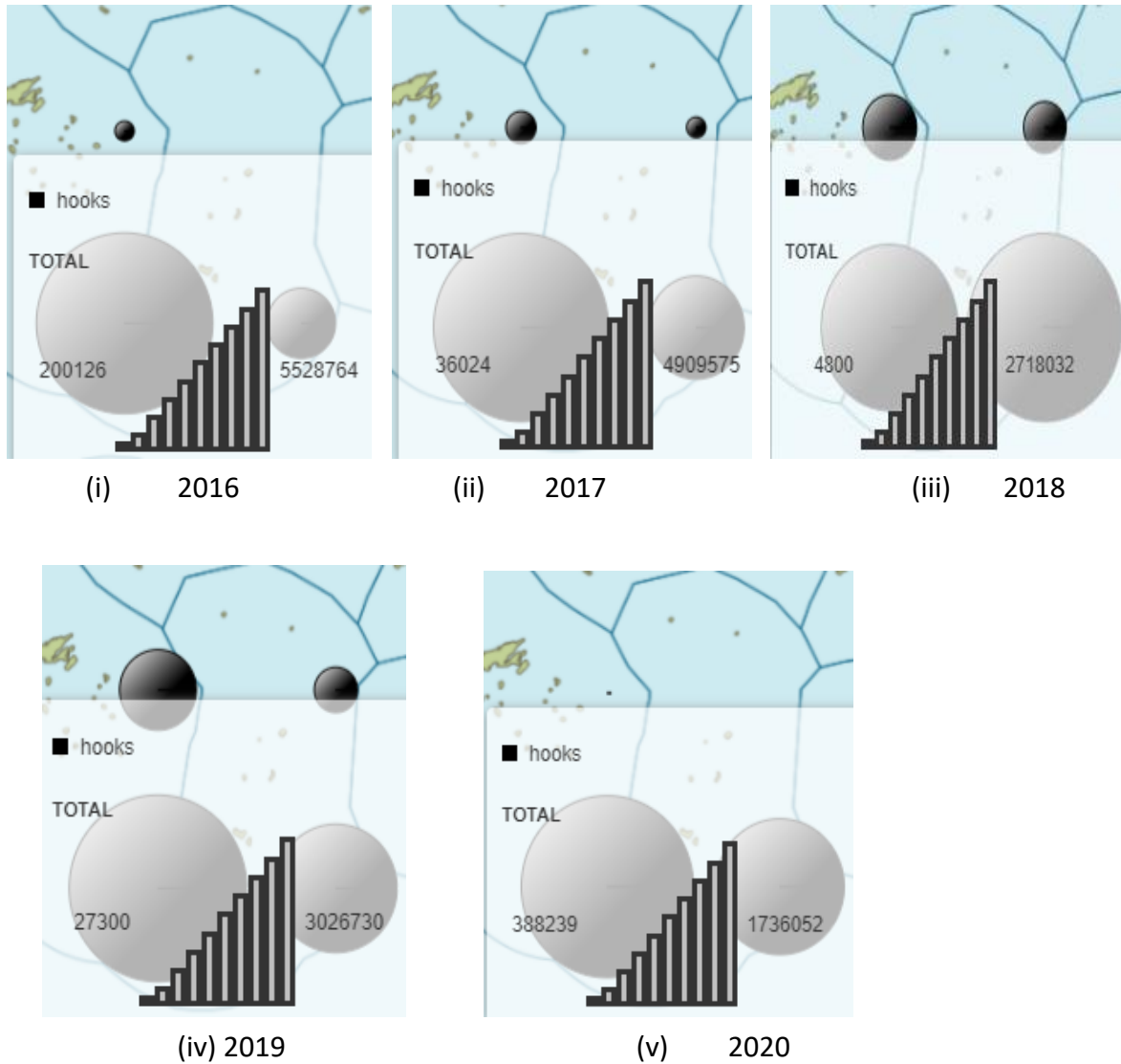


Figure 3b (i-v): Annual distribution of Longline National Fleet effort (in hooks) in the WCPF Convention Area 2016 to 2020.

Table 3: Annual RETAINED catch by key species in the WCPFC Convention Area for 2016 – 2020 (Source: TufMan2 Dorado Reports – RECON_Report #2.2.3 – "National Fleet – LL – Key species in WCPFC Area raised with VMS")

WCPFC Key Species	2016		2017		2018		2019		2020	
	MT	%	MT	%	MT	%	MT	%	MT	%
ALBACORE	60	10%	27	5%	23	7%	30	9%	13	6%
BIGEYE TUNA	31	5%	24	4%	34	10%	16	5%	10	4%
PACIFIC BLUEFIN TUNA	0	0%	0	0%	0	0%	0	0%	0	0%
SKIPJACK TUNA	6	1%	12	2%	4	1%	2	1%	3	1%
YELLOWFIN TUNA	351	60%	374	69%	201	61%	187	56%	155	67%
BLACK MARLIN	20	3%	13	2%	5	2%	4	1%	2	1%
BLUE MARLIN	48	8%	40	7%	17	5%	47	14%	21	9%
STRIPED MARLIN	12	2%	2	0%	11	3%	14	4%	4	2%
SWORDFISH	40	7%	32	6%	44	13%	35	10%	16	7%
BLUE SHARK	1	0%	0	0%	1	0%	2	1%	0	0%
SILKY SHARK	0	0%	0	0%	0	0%	10	3%	0	0%
HAMMERHEAD SHARKS	0	0%	0	0%	0	0%	0	0%	0	0%
MAKO SHARKS	20	3%	15	3%	35	11%	12	4%	6	3%
OCEANIC WHITETIP SHARK	0	0%	0	0%	3	1%	6	2%	0	0%
PORBEABLE / SALMON SHARK	0	0%	0	0%	0	0%	0	0%	0	0%
WHALE SHARK	0	0%	0	0%	0	0%	0	0%	0	0%
THRESHER SHARKS	0	0%	0	0%	0	0%	0	0%	0	0%
Total catch	589		539		332		336		230	
Total effort (hhks)	12348		15596		12253		12008		7774	

Table 4: Annual DISCARDED catch by key species in the WCPFC Convention Area for 2016 – 2020 (Source: TufMan2 Dorado Reports – RECON_Report #2.2.3 – "National Fleet – LL – Key species in WCPFC Area raised with VMS")

WCPFC Key Species	2016		2017		2018		2019		2020	
	MT	%	MT	%	MT	%	MT	%	MT	%
ALBACORE	0.0	0%	0.1	5%	0.0	0.0	2.9	0.0	0.0	0%
BIGEYE TUNA	0.1	7%	0.2	10%	0.0	0.4	0.0	0.0	0.0	0%
PACIFIC BLUEFIN TUNA	0.0	0%	0.0	0%	0.0	0.0	0.1	0.0	0.0	0%
SKIPJACK TUNA	0.0	0%	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
YELLOWFIN TUNA	0.4	19%	0.2	11%	0.0	0.5	0.0	0.1	0.2	64%
BLACK MARLIN	0.0	0%	0.2	11%	0.0	0.0	0.0	0.0	0.0	0%
BLUE MARLIN	0.0	0%	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
STRIPED MARLIN	0.0	0%	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
SWORDFISH	0.0	0%	0.7	38%	0.0	0.0	0.0	0.2	0.1	36%
BLUE SHARK	1.1	56%	0.5	26%	0.0	0.0	0.1	0.1	0.0	0%
SILKY SHARK	0.2	9%	0.0	0%	0.0	0.0	0.0	0.3	0.0	0%
HAMMERHEAD SHARKS	0.0	0%	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
MAKO SHARKS	0.1	5%	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
OCEANIC WHITETIP SHARK	0.1	4%	0.0	0%	0.0	0.1	0.0	0.2	0.0	0%
PORBEABLE / SALMON SHARK	0.0	0%	0.0	0%	0.0	0.0	0.1	0.0	0.0	0%
WHALE SHARK	0.0	0%	0.0	0%	0.0	0.0	0.0	0.0	0.0	0%
THRESHER SHARKS	0.0	0%	0.0	0%	0.0	0.0	1.3	0.0	0.0	0%
Total	1.9		1.8		0.0		4.5		0.3	

Table 5. Annual estimated catches (mt) of non-target, associated and dependent species by the Tongan Longliners (National Fleets) in the WCPFC Convention Area for 2016 to 2020.
(Source: Dorado – TufMan2 Longline Reports #2 – "National Fleet – LL – All species catch and effort in the WCPFC area")

Non-Target Species	2016	2017	2018	2019	2020
Wahoo	16	13	8	9	5
Sailfish (Indo Pacific)	11	6	6	20	6
Dolphin fish	126	121	107	141	38
Opah/Moonfish	0	0	0	0	0
Others	10	9	4	15	5
Total	163	149	125	185	54

2.0 BACKGROUND

Tongan commercial fisheries for high migratory species started in the early 1970's with a second-hand longliner and a skipjack vessel from Japan. In the early 1980's the Government investigated the commercial viability of tuna longlines using a new long-liner, *F.V. Lofa*, donated by the Government of Japan. In 1991, the Government established a semi- Government company, namely the Sea Star Fishing Co Ltd, to operate commercially operate *F.V. Lofa*. The US Aid/Tonga Fisheries project in the early 1990's tested the viability of medium-sized vessels for long lining targeting fresh fish for the sashimi market. Domestic fleets targeting fresh tuna increased in the late 1990's and peaking in the early 2000's.

Tonga is a small island developing state in the WCPFC and has continued to build its Tuna Fishery capacities. The current focus for Tonga is to strengthen the capabilities for the development and domestication of its Tuna fishery. The Tonga tuna fishery consists solely of longline fishing vessels targeting tuna and tuna-like species. A small artisanal fleet includes small fishing vessels with outboard engine and game fishing vessels that used trolling fishing method. Most of the activity is concerted within Tonga EEZ except for foreign-flagged vessels which can access high seas with a permit from flag states. Tonga has no flagged vessel license to fish in high seas for 2020.

Tonga has approximately 700,000km² of undeclared EEZ that extends from Latitude 14 degrees south to 26 degrees south, offers a moderate potential for exploitation. The total catches from

the Tonga EEZ have displayed a similar trend to effort. The total catches for Tonga's National fleets from the EEZ have decreased from 522 mt in 2019 to 284 mt in 2020. The decrease was mainly due to the COVID-19 pandemic crisis experienced in 2020, which reduced fishing efforts (number of active vessels) and fewer fishing trips made by the tuna fleets. There is also a significant game-fishing sector in Tonga with minor interactions with the commercial longline fleets.

An artisanal data collection continued using the TAIL application module on Tufman 2 for online data entry, but data collection from these fleets is still in its early stage. Tonga will continue to extend artisanal tuna data collection to outer and remote islands.

Tonga National Observer Programme (TOOB) has been authorized since 2011 to provide ROP observer trips. Tonga has four certified Debriefers to debrief observer data, speeding up observer data entry into the TUFMAN 2 database. Tonga uses the latest version (2014) of SPC/FFA regional forms for logsheets, port sampling and unloading. For observer data collection, Tonga is using the newest version (2016). These forms have had several revisions over the years, some of which cater to the WCPFC. For example, the identification to species level of seven key shark species. Shark species identification is one of the Compliance and Monitoring Scheme areas where many SIDS, including Tonga, require assistance. In 2020, there was 79% observer coverage on board foreign vessels and 17.61% observer coverage for domestic vessels. The port sampling and logsheets coverage were 100% in 2020. At the same time, Tonga continues to implement and monitor its obligation towards the Commission's Conservation and Management Measures and the Resolutions and report back to the Commission annually (**Appendix 1 – CMM Reporting**).

Tonga Ministry of Fisheries continues to work closely with the Oceanic Fisheries Program (OFP) of SPC on tuna stock status in the Tonga EEZ relative to the whole stock within the Western and Central Pacific Ocean (WCPO).

The tuna fishery operations in 2020 appeared to have been significantly affected by the COVID-19 crisis. The restrictions and border close hindered the fishing efforts in term of vessel number and number of trips made by the active vessels, resulting in the decline in total catches for 2020.

Even though the many challenges faced, Tonga continues to develop and build sustainable fisheries through better management decision that will allow the people of Tonga to continue benefiting from now and in the future.

3.0 FLAG STATE REPORTING

3.1 Status of the Fishery

3.1.1 Total annual catch, by primary species

The annual catch and effort estimated by primary species for the national longline fleet fishing throughout the WCPF Convention Area for 2016 to 2020 summarized in Table 1 with the historical estimates provided in Figure 1. The total effort in the WCPF-CA was approximately 7742 hundred hooks (Table 1), a drop of 35 % decrease from 12008 hundred hooks in 2019, and it's all attributed to the Tonga EEZ. The annual catch estimates of primary species (Table 1) in 2020 were 230 mt, showing a drop of 37 % decrease from the previous year.

The decrease in catch estimates shows a slight change in YFT CPUE compares to previous years.

In 2020, the catches for primary species dominated by yellowfin (67 %) for main tuna species, followed by albacore and bigeye with 6% and 4%, respectively, then skipjack tuna with 1%. For billfish species, blue marlin occupied 9 % of the total catch of primary species, followed by swordfish with 70 % and a lesser percentage of stripe and black marlin with 2 % and 1 %, about the history of this fishery in Tongan waters. For shark's species, catch and retained was dominated by Mako sharks with 3%. Other shark species caught and recorded by observers were blue sharks, silky and oceanic whitetip with all 0%, respectively, and were all discarded.

The annual CPUE (kg/100hks) estimated for the main tuna species caught by the Tongan Longliners during the reporting period (2016 to 2020) shows in Figure 4 below. The trends being stable for bigeye and albacore while a slight decline in the CPUE of yellowfin since 2016. The fall was due to some environmental factors such as El-Nino and La Nina during the reporting period, which impacts catch rate, leading to a decrease in fishing efforts regarding the number of hooks put in the water.

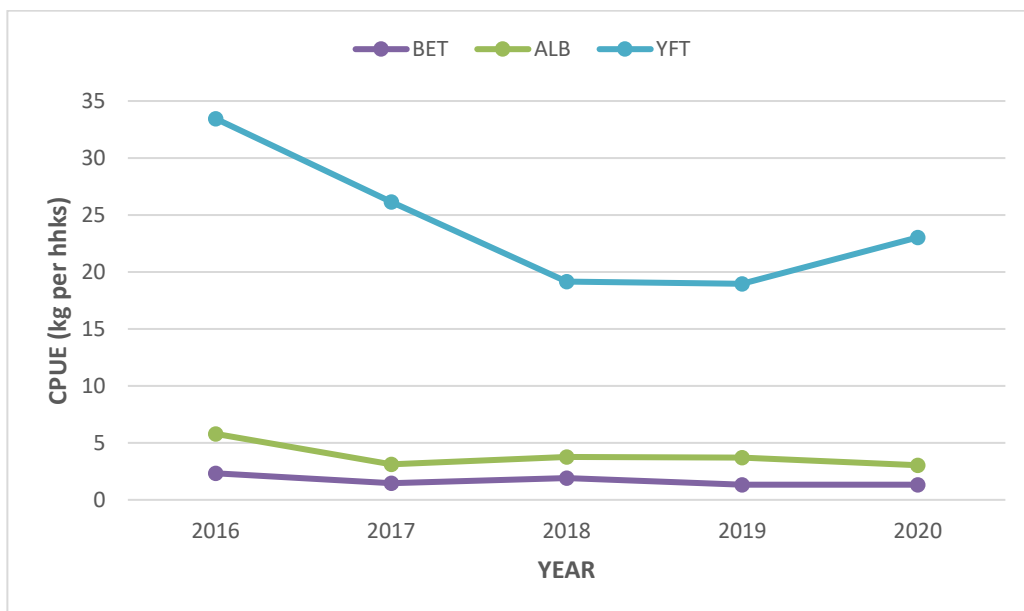


Figure 4. CPUE (kg per 100 hooks) of main tuna species for Tonga longliners were active in the WCPF Convention Area for the years 2016 to 2020

3.1.2 Annual catch estimates of non-target, by-catch associated, and dependent species

The estimated total catch of non-target associated and dependent species for the national longline fleets provided in Table 5 shows the species composition of the catch by weight in 2020 dominated by Dolphin fish (*Mahimahi*), totalling 38 mt, followed by *Sailfish* and *Wahoo* with 6 mt and 5 mt, respectively. The total shark catches for the National fleets within WCPF-CA were dominated by *Mako* sharks with 6 mt and were retained (Table 3). There was **no retention** record for other key shark species or discarded, as shown in Table 4.

By-catches obtained from log sheets, observer records, and port sampling data. Observer records are essential for estimating catches of the less valuable species that are less likely to be retained or recorded. Observers have reported high retention rates of target tunas, including those discarded due to different conditions (Table 1). *Wahoo*, *mahimahi*, *moonfish*, and *billfishes* also had high retention rates as they are also having valuable components for the fishery, especially the local market.

Based on available data, there was no interaction of Tonga flagged longliners with Species of Special Conservation Interest (e.g., Marine turtle, marine mammal and sea birds) recorded by observers (Appendix 1). Tonga National longline fleets used circle hooks and fish baits with less squid bait in longline fishing operations to reduce sea turtle mortality in fishing operations.

3.2 Fishing Patterns – National Fleets in the WCPF Convention Area

Figures 3a & 3b illustrate the annual catch and effort distribution pattern for the national longline fleets over the past five years in the WCPF Convention Area. In 2020, more than 70% of the catch and effort of the National longline fleet widely distributed in the central and southern part of the Tonga EEZ.

The Commission's reporting requirements stipulated under the conservation and management measures are providing in appendix 1. According to **CMM 2006-04**, none of the four flagged vessels specifically targeted striped marlin, and all catches caught were by-catch. A total of 1.469 mt of stripe marlin caught as bycatch in the south of 15°S of the Convention area. For the **CMM 2009-03**, four vessels caught a total of 14.735 mt of swordfish as bycatch in the Convention Area South of 20°S. No vessels were operating under a charter, lease, or other similar mechanisms as a domestic fishery. Twelve foreign-flagged vessels caught 9.9mt mt of swordfish as bycatch in the area south of 20°S. More of the CMM reports and details are attached to this report as **Appendix 1**.

3.3 Fleet Structure

In 2020, the Tonga National fleets consisted of six (6) domestically based longline vessels that operate within the WCPF-CA. All these vessels are Tonga flagged vessels and authorized to fish within the Tonga EEZ only.

4.0 COASTAL STATE REPORTING

In 2020, twelve (12) foreign-flagged longline vessels licensed to fish in Tonga EEZ compared to ten (10) vessels in 2019 (Table 6 and 7). The increase in foreign vessels was due to two vessels being returned to Taiwan and Fiji and replaced by another two(2) new vessels.

Table 6. A number of foreign longline vessels with valid licenses to fish in the Tonga EEZ by year and size category (GRT).

Gear	Longline				
Fleets	FFV				
Source	Number of Licenses vessel (RIMF2 License)				
Size Category (GRT)	2016	2017	2018	2019	2020
0 - 100MT	5	8	3	7	7
101 - 200MT	0	0	2	3	5
201+	0	0	0	0	0
Total	5	8	5	10	12

Table 7. Number of foreign longline vessels with valid license to fish in the Tonga EEZ by flag and year.

Year	Flag			Total
	CHINA	CH-TAIPEI	FIJI	
2016	0	8	0	8
2017	0	7	0	7
2018	0	3	2	5
2019	0	7	3	10
2020	0	7	5	12

The annual catch for foreign-flagged vessels in 2020 is given in Table 8 and is similar in species composition of the catches to Tonga National fleets. Those catches by foreign vessels contributed to the Tonga National Catch of tuna and tuna-like species within Tonga jurisdiction waters. The total catch for 2020 was 1,960 mt, an enormous decrease of 44 % compared to 2,816 mt in 2019.

Table 8. Annual foreign Longline catch and effort estimates by foreign-flagged vessels licensed to fish with Tonga EEZ (national waters) in 2019. Operational logsheet data raised using Dorado Recon reports. (Dorado report 12)

SPECIES_WT (mt)																					
Flag	YEAR	GEAR	ALB	YFT	BET	SKJ	BUM	BLM	MLS	SWO	SFA	DOL	FAL	BSH	OCS	THR	MAK	HAM	POR	OTH	Total
FJ	2020	LL	307	246	23	24	7	6	1	4	2	3	0	0	0	0	0	0	0	16	639
TW	2020	LL	545	457	49	28	34	0	15	12	6	14	0	59	0	0	11	0	0	92	1321
TOTAL			852	703	72	52	41	6	16	16	8	17	0	59	0	0	11	0	0	108	1960

4.0 SOCIO-ECONOMIC FACTOR

Tuna export from tonga continued in 2020, although it faced some challenges due to the restrictions of the COVID-19 crisis. The tuna fleets contribute a large portion of fish exported from Tonga compared to other fishery such as snapper fishery and aquarium trades. The worldwide pandemic of COVID-19 greatly affected the tuna export resulted in a massive drop in the export quantity of longline catch in 2020 compared to 2019. The total yield exported was 1,392 mt, a considerable drop compared to 2,288 mt exported in 2019. The total estimated FOB revenue collected from fish exported during 2020 was TOP 7,436,910.00. A 66% decrease from TOP 12,358,782.00 collected in 2019. Apart from export value, the local market continues the supply of fish to local people for domestic consumption. Licensing of fishing vessels (domestic & foreign) and resources rent from landing and export catches continue to provide an additional revenue stream to the domestic fisheries sector. All the catches unloaded by foreign vessels were unloaded in port Nuku'alofa, then repacked into a shipping container and export to overseas markets with a portion of their catch sold in the local market and retail store.

5.0 DISPOSAL OF CATCH

5.1 Marketing

Tonga regulates that all longline vessels license to fished in Tonga water shall 100 % discharge in designated port in Tonga before disposed to respective market destination whether to overseas or domestic market. The foreign fishing vessels unloaded all catch in Nuku'alofa, repacked the export fish into a cargo container, and sent it to overseas markets, whereas the local fish sold locally. Since 2017, the Ministry of Fisheries started a new fish selling scheme in agreement with the foreign vessel's agency as part of fish consumption promotion to fight against NCDs. In this new fish selling scheme, the fish price becomes lower, encouraging the locals to buy and eat healthy. So, they will provide at least 2 mt of fish on every foreign vessel trip to the Ministry to sell it out at a lower price. This program is being successful and allows local people to consume more fish.

Tonga's main export markets for its fresh, chilled tuna (Yellowfin and Bigeye) were Japan, the US (Los Angeles, Hawaii), with less to New Zealand and Australian markets. The frozen tuna and tuna-like species with other bycatch were mainly export to American Samoa, Thailand, Taiwan, and Vietnam. In 2020, foreign vessels continued exporting frozen tuna (Bigeye and Yellowfin) to the Japanese market. Fresh, chilled albacore and some of the bycatch (frozen and new) sold locally.

Figure 5 describes the leading markets destination of tuna longline catches exported from Tonga in 2020. Frozen fish dominates the total export volume of longline vessels catches landed in 2020. The most significant portion of the total export volume was American Samoa (Pagopago) with 55%, followed by Taiwan with 36%, Vietnam and Fiji with 3% each. These market destinations received frozen fish only. Japan's market gains 2% of the total export volume, but it's a combination of frozen and fresh chilled yellowfin and bigeye tuna. Mainland US contributes 1% and a lesser portion of the export sent to Australia, New Zealand, and Honolulu.

Albacore tuna dominated the exported individual species with 54% of the total volume, followed by yellowfin with 26% and lesser per cent of bigeye, mahimahi, marlin, shark, skipjack, and Others with 4%, 1%, 2%, 5%, 2%, 6% respectively. Exported bycatch species described as "Others" (OTH) mainly frozen fish exported to Taiwan, including barracuda, escolar, oilfish, sailfish, spearfish, and wahoo. Other species export to the US market primarily were mahimahi and wahoo sends to Hawaii.

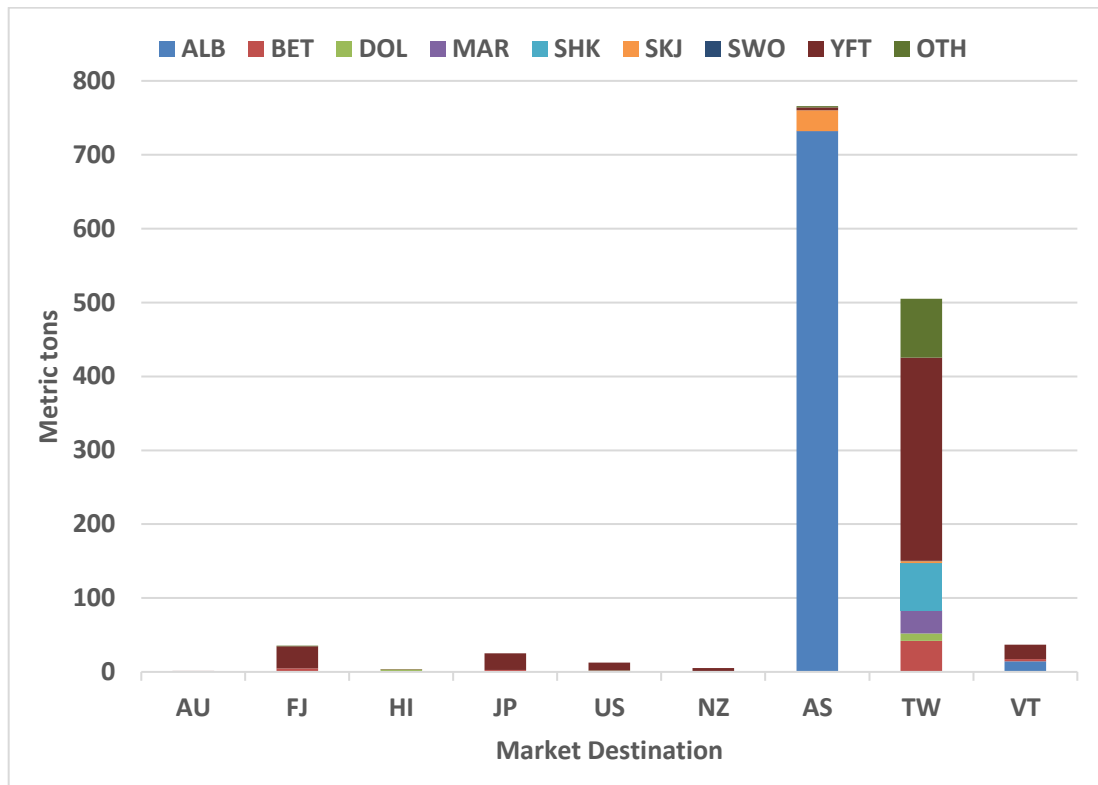


Figure 5. Longline catch (MT) export and Destinations for Tonga, 2020

6.0 ONSHORE DEVELOPMENT AND FUTURE PROSPECTS OF FISHERY

Tonga commercial longline fishery currently limited by a cap on the number of longline vessels authorized to fish within the EEZ to only 20 licenses (*Revised Tonga Tuna Management & Development Plan 2018 - 2022*). Unfortunately, high operating costs and a lack of adequate infrastructure have restricted a locally-based fleet development.

Two domestic tuna fishing companies operated in 2020, the Pacific Sunrise Fishing Co. and the Big Kahuna Fishing Co. Unfortunately, the Big Kahuna fishing Co. ceased operation after tropical cyclone Harold damaged its fishing vessel in April 2020.

Regardless of the COVID-19 and tropical cyclone, Harold challenges faced the domestic fleets yet still concentrated on exporting fresh, chilled tuna to sashimi markets, especially to Japan, the US, Australia, Honolulu, and New Zealand. Also entailing in employs local people in crewing their vessels and its processing and retailing plant. The COVID-19 crisis significantly impacts the overall catches of the domestic fleets, with a drop of 45% compared to 2019. A decrease in domestic vessels operated from six fleets in 2019 to only 5 in 2020.

The National Fisheries Council (NFC) collaborates with the Ministry of Fisheries and respective stakeholders in developing different fisheries, including Tuna fisheries. Within this partnership, the NFC planned to deal with many challenges, especially the infrastructure such as the development of

fisheries wharf, packing facilities that provide low fees for fishers, and equipment such as vessels, fishing gears, etc. More domestic vessels to operate in the future are expected and lessen foreign fishing vessels for future development.

The Regional Tuna Data and Stock Assessment workshop are a data workshop annually conducted by SPC for its member countries. The workshops improve member countries' scientific tuna monitoring and data management capacity and satisfy their data reporting obligations to the Western and Central Pacific Fisheries Commission (WCPFC). The Stock Assessment Workshop is an essential program in capacity building for fisheries officers and managers in the region. In this workshop, the course instructors introduced participants to various stock assessment models that assist officers in providing scientific advice to managers and policy-makers based on the best models. Not only that, but participants are also introduced to the Tuna Management Simulator (TUMAS), a new software tool developed by the OFP that allows fishery managers and advisors to evaluate the performance of different management options. The Seapodym model also introduced, and it is very supportive, especially the status of the stock about fishing activities and climate change. In 2020, and due to the COVID-19 pandemic, both workshops were affected. The Tuna Data workshop conducted virtually, and the Stock Assessment course had to cancel until further notice.

TUFMAN 2 and its recent developments, such as the e-Reporting tool through ONBOARD, ONSHORE, and TAILS applications, allow online submission of datasheets electronically from sea captains, port samplers, and artisanal data collectors. Tonga is currently implementing these e-Reporting tools installed into tablets to enable timely submissions of the log sheets data to allow a more efficient and faster data extraction for data analyzing. All our local vessels are on the ONBOARD applications for their logsheets data entry and data submissions. We have two(2) foreign fishing vessels with the ONBOARD applications on trial. We are targeting for five foreign fishing vessels to use ONBOARD this year. The ONSHORE application is 100% coverage on the local fishing vessels port sampling activities and still on trial in most foreign fishing vessels port sampling unloading. Artisanal data collection through TAILS is still ongoing. Tonga is very pleased to report that we have implemented a very comprehensive eReporting program.

7.0 RESEARCH ACTIVITIES AND STATUS OF TUNA FISHERY DATA COLLECTION

7.1 Logsheets and Unloading data collection

Tonga continued to use the expanded SPC/FFA Regional Longline Logsheets (2014) format for data collection in 2020. 100% coverage of logsheets, unloading, and port sampling data were achieved from national and foreign vessels licenses to fish in Tonga. Unloading forms were submitted together with log sheets promptly.

7.2 Observer Programme

The Tonga National Observer Programme (TOOP) continues to deploy observers onboard domestic and foreign longline vessels operated within Tonga EEZ and place observers onboard US purse seiner vessels under the Multilateral Treaty arrangement. The observer coverage for TOOP was 82 % onboard foreign fishing vessels licensed to fish in Tonga EEZ and 16.71 % onboard Tonga flagged vessels. All those observer trips are non-ROP trips.

TOOB aimed at collecting information on fish catch, fish handling techniques, fishing technology, by-catch and discards, and all other activities that the vessel conducted for the duration of the trip. All these data will analyze, and it will be beneficial for stock assessment and management purposes. Fishing vessels' compliance with fisheries legislation is also an integral part of this program.

7.3 Port sampling Programme

The Ministry of Fisheries employs dedicated port samplers covering 100% of the longline unloading in Nuku'alofa port. The Ministry is also obliged to maintain this high percentage coverage of port sampling to ensure its obligation to the Commission. Data types collected are log sheets, unloading, and port sampling data. The logsheets and the unloading forms are collected and entered into TUFMAN 2. The port sampling forms are then scanned and sent to SPC/OFP regularly for data entry and further analysis.

The ONBOARD application has been ongoing since 2018 on our domestic tuna vessels. The ONSHORE application came into trial in 2019 and is currently in progress. SPC donated tablets to assist with the e-logs application trial.

The National Observer and Port sampling program warmly extend our sincere gratitude and appreciation to the overseas donor (JTF fund) and regional organization (FFA & SPC) for their excellent financial and technical support in developing our tuna data collection and analysis as well as training of new observers for the Observer program. Their kind assistance in terms of financial and technical support for almost a decade is greatly appreciated. Furthermore, the implementation of both program and the completion of this scientific report would not have been possible if we did not have your support in all approaches.

Malo' aupito



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	<p>a) 2020 – 4 domestic flagged LL vessels fished and caught a total of 1.163mt of swordfish within South of 20°S of the Convention Area; All swordfish were caught as bycatch, there are no Tonga flagged vessels targeting swordfish.</p> <p>b) NO vessels were operating under a charter, lease, or other similar mechanisms as part of the domestic fishery</p> <p>c) 2020– 4 foreign-flagged LL vessels fished and caught 0.955 mt of SP_SWO as bycatch within South of 20°S of the Convention Area, inside the Tonga EEZ.</p> <p><i>*Note: WCPFC11 confirmed a common understanding that “total catch” in this reporting requirement refers to both targeted and bycatch catches of swordfish.</i></p>																																										
Observer coverage (WCPFC 11 decision – para 484(b))	<p>Observer Coverage:</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th rowspan="2">CCM Fleet</th> <th rowspan="2">Fishery</th> <th colspan="3">No. of Hooks</th> <th colspan="3">Days Fished</th> <th colspan="3">Days at Sea</th> <th colspan="3">No of Trips</th> <th rowspan="2">See NOTES</th> </tr> <tr> <th>Total estimate d</th> <th>Observer</th> <th>%</th> <th>Total estimate d</th> <th>Observer</th> <th>%</th> <th>Total estimate d</th> <th>Observer</th> <th>%</th> <th>Total estimate d</th> <th>Observer</th> <th>%</th> </tr> </thead> <tbody> <tr> <td>Tonga</td> <td>Local Tuna Fishery</td> <td>777400</td> <td>87639</td> <td>11 %</td> <td>545</td> <td>62</td> <td>11 %</td> <td>736</td> <td>90</td> <td>12 %</td> <td>109</td> <td>11</td> <td>10 %</td> <td>All flagged vessels’ observer trips are Non-ROP trips</td> </tr> </tbody> </table>	CCM Fleet	Fishery	No. of Hooks			Days Fished			Days at Sea			No of Trips			See NOTES	Total estimate d	Observer	%	Total estimate d	Observer	%	Total estimate d	Observer	%	Total estimate d	Observer	%	Tonga	Local Tuna Fishery	777400	87639	11 %	545	62	11 %	736	90	12 %	109	11	10 %	All flagged vessels’ observer trips are Non-ROP trips
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CMM 2009-06 [Transshipment], Para 11 (ANNEX II)	<p>NOT APPLICABLE</p> <p>There were NO transshipment activities undertaken by TO flag vessel or occurring in Tonga ports or Tonga EEZ.</p>																																										
CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5	<p>NOT APPLICABLE</p> <ul style="list-style-type: none"> • Tonga does not have purse seine fleets 																																										

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.

Source: Dorado – TUBs Reports – Regional Reporting – Report # 12 – “CMM 12-07 Seabird interactions by NATIONAL FLEETS”

- There is NO interaction with seabirds by Tonga longline vessels

Year	Fishing Effort				Observed seabird capture	
	No. of vessels	No. of Hooks	Observed Hooks	% hooks observed	Number	Rate
2015	4	1116100	53945	5%	0	0
2016	4	1234800	37452	3%	0	0
2017	6	1559600	53282	3%	0	0
2018	5	1225300	29320	2%	0	0
2019	6	1200800	47286	4%	0	0
2020	5	777400	87639	11%	0	0

**CMM 2018-03
[Seabirds] Para
13**

	Combination of Mitigation Measures	Proportion of observed effort using mitigation measures			
		South of 30°S	25°S-30°S	25°S to 23°N	North of 23°N
	No mitigation measures	0	0	0	0
Options required south of 25°S	TL + NS	0	0	0	0
	TL + WB	0	0	0	0
	NS + WB	0	0	0	0
	TL + WB + NS	0	0	0	0
	HS	0	0	0	0
Other options 25°S-30°S	WB	0	0	0	0
	TL	0	0	0	0
Other options north of 23°N	SS/BC/WB/DLSL	0	0	0	0
	SS/BC/WB/(MOD or BDB)	0	0	0	0
Provide any other combination of mitigation measures here	MOD	0	0	35%	0
	NS	0	0	2%	0
	NS MOD	0	0	52%	0
	NS WB MOD	0	0	2%	0
	WB MOD	0	0	10%	0
	Totals (must equal 100%)			100%	

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

<p>CMM 2006-04 [South West striped Marlin], Para 4</p>	<p>2020 – 5 LL vessels caught a total of 4.109mt of SW_MLS as bycatch south of 15°S of the Convention area. No flagged vessel target MLS south of 15°S</p>
<p>CMM 2015-02 [South Pacific Albacore] Para 4</p>	<p>Data has been submitted to SPC</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 authorisation.</p>
<p>CMM 2019-03 [North Pacific Albacore], Para 3</p>	<p>Not Applicable</p> <ul style="list-style-type: none"> • Tonga’s domestic LL vessel does not fish above the equator. <p><i>* Note: WCPFC10 clarified that this reporting responsibility lies with the flag State</i></p>
