



**SCIENTIFIC COMMITTEE
EIGHTEENTH REGULAR SESSION**

ELECTRONIC MEETING
10-18 August 2022

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

WCPFC-SC18-AR/CCM-26

TUVALU



**FISHERIES DEPARTMENT
MINISTRY OF FISHERIES AND TRADE
GOVERNMENT OF TUVALU**



ANNUAL REPORT TO THE WESTERN CENTRAL PACIFIC FISHERIES 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 the 30 th April 2022.	YES
---	-----

CONTENTS

ITEMS	PAGES
1.0 ABSTRACT	3
2.0 BACKGORUND	4
3.0 FLAG STATE REPORTING	4
3.1 DOMESTIC FLEET	4
3.2 CATCH DATA	5
3.2.1 PURSE SEINER	5
3.2.2 LONGLINER	5 -6
3.3 FISHING PATTERN AND DISTRIBUTION	6-8
3.3.1 CATCH AND FISHING EFFORT FOR PURSE SEINER	6-8
3.3.2 CATCH AND FISHING EFFORT FOR LONGLINER	8-10
3.3.3 ARTISANAL FISHERIES	10
3.4 SPECIES OF SPECIAL INTEREST	10
3.5 NON TARGET ASSOCIATED OR DEPENDENT SPECIES	10-11
4.0 COASTAL REPORTING	11
4.1 FISHING LICENSES	11
4.2 TUNA CATCH IN TUVALU EEZ	12-13
5.0 SOCIO ECONOMIC FACTORS	13
6.0 DISPOSAL OF CATCH	14
7.0 ONSHORE DEVELOPMENT	14
8.0 FUTURE PROSPECT OF FISHERY	14
9.0 STATUS OF TUNA FISHERY AND DATA COLLECTION	15
9.1 LOGSHEET DATA COLLECTION	15
9.2 OBSERVER PROGRAM	15
10.0 CMM REPORTING	16-19

1.0 ABSTRACT

In another difficulty year due to the impact of COVID-19 pandemic globally, Tuvalu's fishery comprised of six purse seiners and one longliner in the WCPO Convention Area in 2021. The Tuvalu Fisheries Department also manages and monitors all fishing activities in the Tuvalu EEZ that is carried out by foreign fishing vessels under the access agreements.

The Tuvalu flagged Purse Seiner vessels' total catch for the WCPFC Convention Area in 2021 was calculated at 29, 655mt. The highest catches species was skipjack (SKJ) which accounted for 24, 124mt (81%) of the total, with 4,889mt (16%) of yellow fin tuna species (YFT) and 626mt (2%) for bigeye tuna species (BET).

The Tuvalu flagged longline vessel's catch total in 2021 was 108 mt. Albacore tuna species accounted for the highest catch of 57mt (53%), big eye tuna (BET) of 23mt (21%), yellow fin tuna (YFT) of 9mt (8%), and 6mt (6%) for skipjack tuna species (SKJ), and others including billfish and sharks such as blue marlin, Striped marlin, swordfish and blueshark) were 13mt (12%). The low catch was due to the vessel requiring maintenance earlier in the year.

The Fisheries department issued a total of 183 fishing licenses in 2021. In comparing to 2020, when the number of licenses was 204, this is a decrease of 21. The vessels consisted of 108 purse seiners, 27 longliners, 12 pole and line, 26 fish carriers and 10 bunker vessels. The number of bunker vessels increased from 4 in 2020 to 6 in 2021, but fewer carrier vessels were licensed due to COVID 19 restrictions on transshipment in Tuvalu.

The total catches of tuna from fishing vessels of all fleets that fished in Tuvalu's EEZ in 2021 were 71, 817mt. These 71, 817mt comprising purse seiner total catches of 70, 906mt (98.7%), longline catches of 710mt (1%) and Pole line catches of 200mt (0.3%). By flag, for purse seine the vessels flying the Korean flag had the biggest catches, totaling of 27,866mt (39%), followed by Kiribati flag with 15, 824mt (22%), and those flying the Tuvaluan flag with 6272mt (9%). The smallest catch of 70 & 85mt was made by Chinese and Solomon flag (0.01%). For Longline the biggest catches were from Chinese flag vessels of 573mt (81%), Fiji flag vessels of 92mt (13%) and Tuvalu flagged vessel of 27mt (3.9%).

In 2021 there were no Tuvaluan observers placed on fishing vessels due to border restrictions. The placement of Tuvaluan observers expected to resume before the 1st January 2023.

2.0 BACKGROUND

Tuvalu's fishery consisted of seven active vessels that continually fished - six purse seiners and one longliner - in the WCPO Convention Area in 2021; another challenging year due to the COVID-19 pandemic's effects on the entire world. All fishing operations carried out by foreign fishing vessels within the Tuvalu Exclusive Economic Zone are managed and monitored by the Tuvalu Fisheries Department in accordance with the access agreements.

In 2021, the Purse Seine fishing effort and catch were dispersed across the PNA group's EEZs, including Nauru, Kiribati EEZ, and Tokelau, and were primarily concentrated in the Gilbert Island group, and adjacent Eastern High Seas, and the Tuvalu EEZ. There were also relatively few fish caught in the Federated States of Micronesia EEZ. The most fish caught were of the skipjack variety. The high seas south of New Caledonia, and the Tuvalu EEZ saw the majority of the longline fishing effort and catch. The catches from the purse seiners were transhipped in the ports of Funafuti, Kosrae, Majuro, Pago Pago, and Tarawa. In the Fijian port of Suva, the longliner discharged all of its catch.

3.0 FLAG STATE REPORTING

3.1 DOMESTIC FLEET

The Tuvalu seven flagged vessels are permitted to fish in the WCPO Area in 2021 under their registration WCPFC RFV. One longliner and six purse seiners were present. The tables 1a & 1b below show the number of purse seiner and longliner flagged vessels over the last five years, broken down by size category.

Table 1a. Numbers of Tuvalu Flagged Purse Seiner vessels and size category, active in the WCPFC Convention Area for 2017-2021. Source TUFMAN 2

Years	00-500 GRT	501-1000 GRT	1001-1500 GRT	1500+ GRT	Total Vessels
2017	0	0	0	2	2
2018	0	0	0	1	1
2019	0	0	0	1	1
2020	0	1	0	2	3
2021	0	2	1	3	6

Table 1b. Numbers of Tuvalu Flagged Long Liner vessels and size category, active in the WCPFC Convention Area for 2017-2021. Source TUFMAN 2

Years	00-500-GRT	501-1000 GRT	1001-1500 GRT	1500+ GRT	Total Vessels
2017	2	0	0	0	2
2018	0	2	0	0	2
2019	0	1	0	0	1
2020	0	1	0	0	1
2021	0	1	0	0	1

3.2 CATCH DATA

3.2.1 Purse Seine

Purse Seiner Tuvalu-flagged vessels catch in 2021 was calculated to be 29,655mt (Table 2 & Figure 1) as shown below. It can be seen there was an increase in catch from 2019 to 2021. The foundation of this occurrence is from the increase in the number of vessels from 1 to 3 at the end of 2020 and six by mid-2021. The highest catch by species was skipjack (SKJ) which accounted for 24,124mt (81%) of the total, 4,889mt (16%) of yellow fin tuna species (YFT) and 626mt (2%) for bigeye tuna species (BET).

Table 2: Number of Tuvalu Purse seiner flagged vessels and size category, active in the WCPO Area from 2017 - 2021. Source: TUFMAN 2.

Years	BET	SKJ	YFT	OTH	Total
2017	209	3573	1859	12	5653
2018	746	8721	1619	10	11096
2019	107	6364	304	2	6777
2020	547	8160	1095	3	9805
2021	626	24124	4889	16	29655

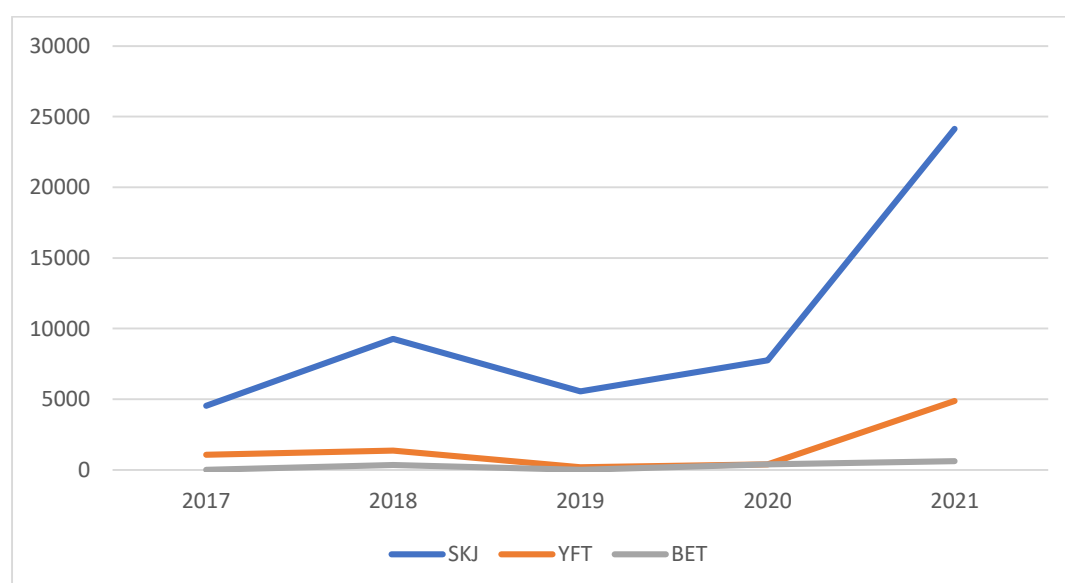


Figure 1. Chart of annual catches of target species for Tuvalu Purse Seiner for the WCPO Area over the past five years (2017-2021). Source: TUFMAN 2

3.2.2 Longline

The Tuvalu's longline vessel's catch total in 2021 was 95 mt (Table 3 & Figure 2). The decreasing catch was due to the vessel's maintenance and some financial problem due to COVID 19. Albacore tuna species accounted of the highest catch of 57mt (53%), bigeye tuna (BET) of 23mt (21%), yellowfin tuna (YFT) of 9mt (8%) and 6mt (6%) for skipjack tuna species (SKJ) and other species including billfish and sharks such as blue marlin, Striped marlin, swordfish and blueshark) were 13mt (12%).

Table 3. Catches of Tuvalu-flagged long liners in the WCPO Area from 2017-2021. Source: TUFMAN 2

Years	ALB	BET	SKJ	YFT	OTH	Total
2017	175	111	7	164	39	457
2018	121	64	13	106	33	304
2019	64	53	32	76	18	225
2020	117	9	5	16	4	147
2021	57	23	6	9	13	108

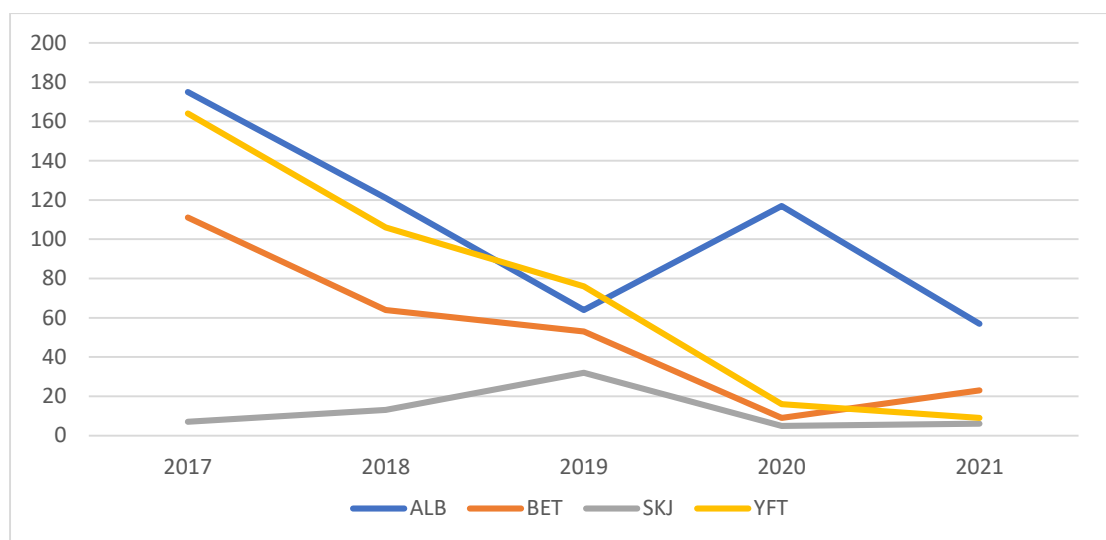


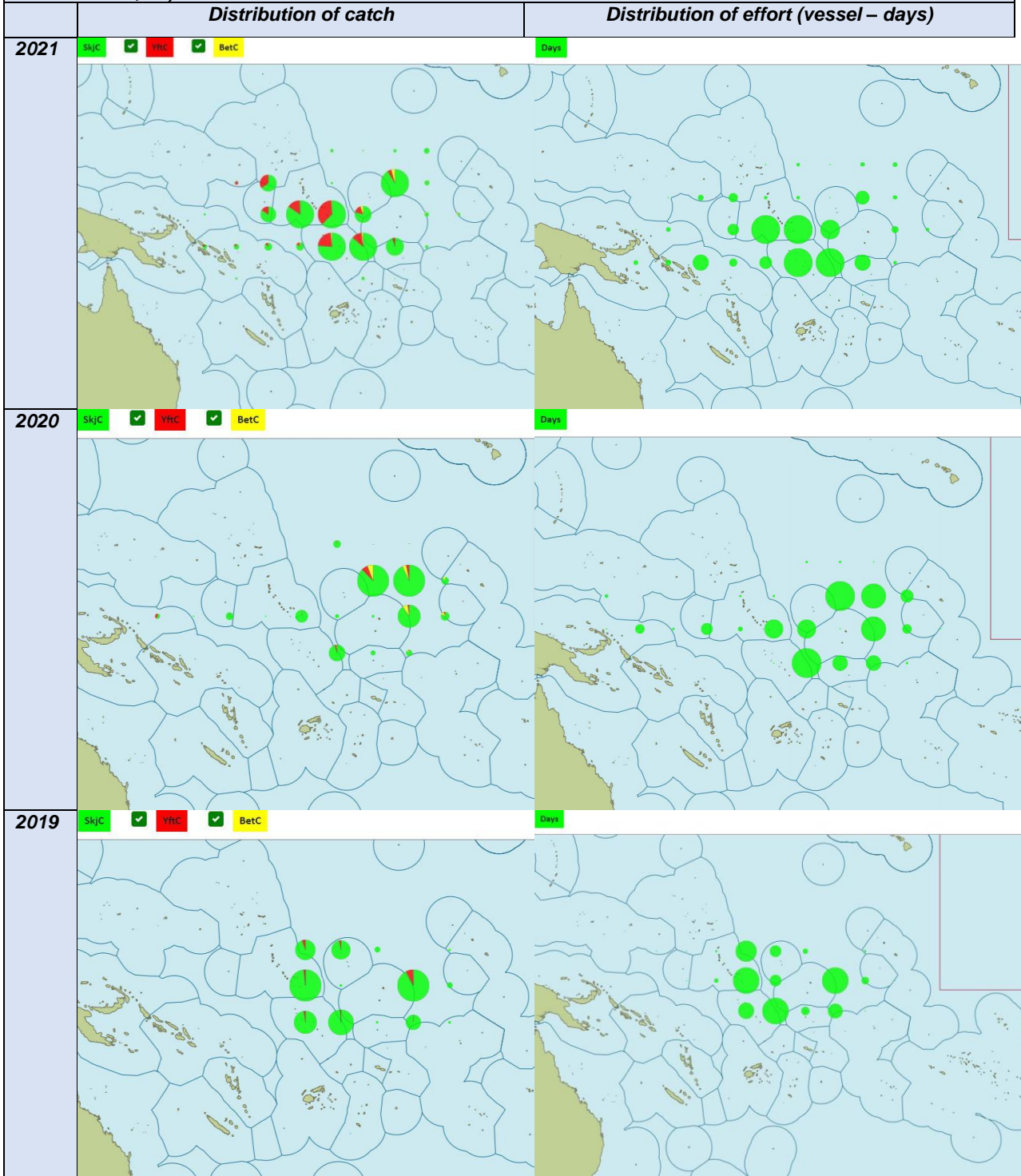
Figure 2. Chart of annual catches of target species for Tuvalu Longliners for the WCPO Area over the past five years (2017-2021). Source: TUFMAN 2

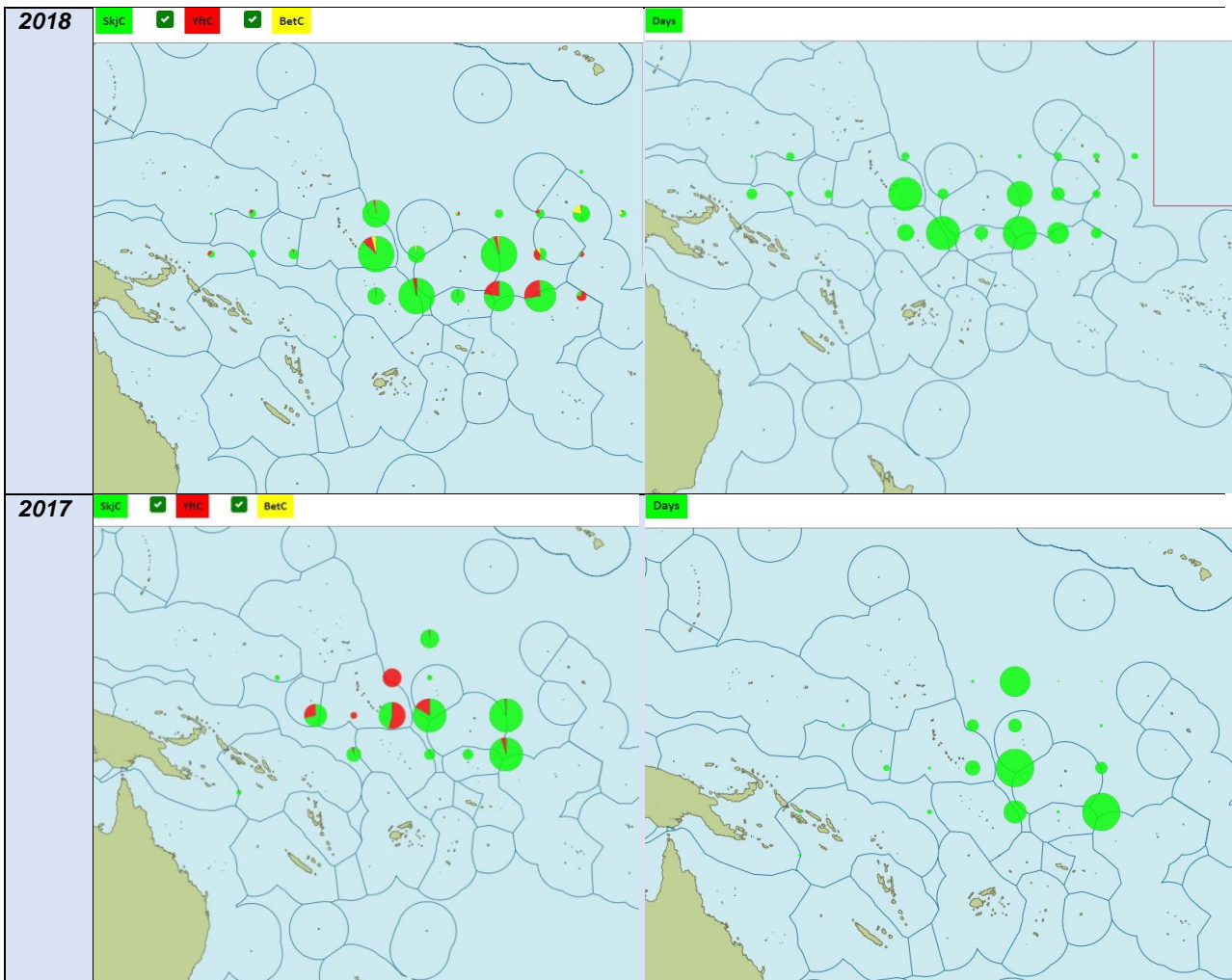
3.3 FISHING PATTERN AND DISTRIBUTION

3.3.1 Catch and Effort Distribution for Tuvalu flagged purse seiners

In 2021, the fishing effort and catch for purse seine were dispersed throughout PNA group’s EEZs including Nauru, Kiribati EEZ, Tokelau, and Tuvalu. There was also fishing in the Eastern High Seas. There was also a small catch in the Solomon Islands and FSM EEZs. The most abundant species caught was skipjack tuna (Figure 3a).

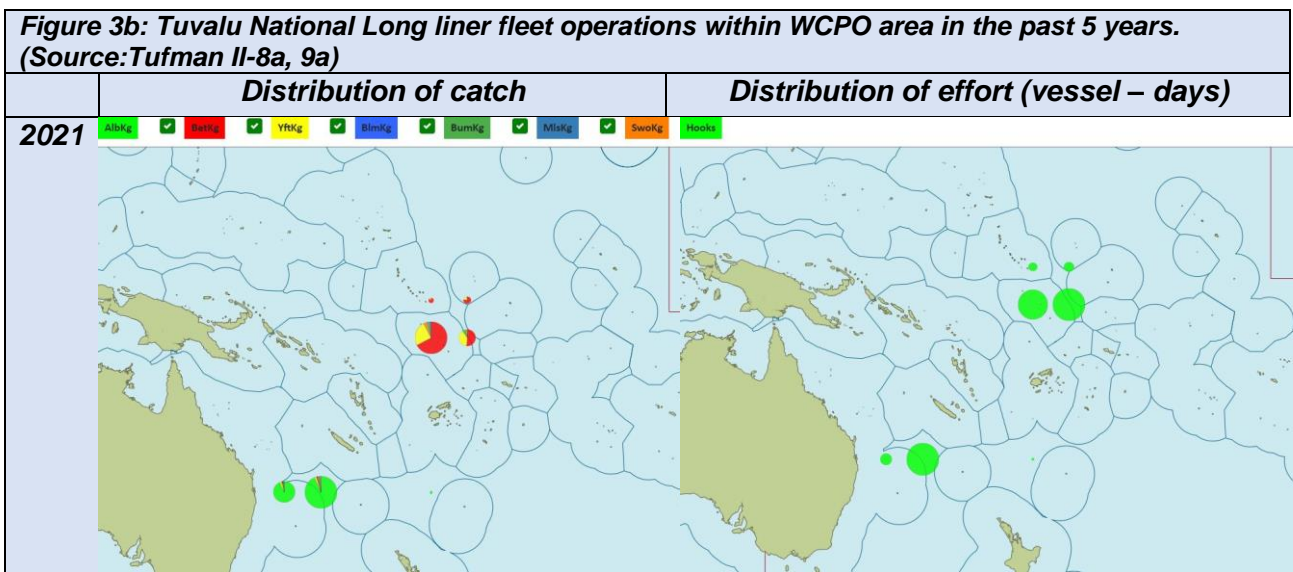
Figure 3a: Tuvalu National Purse Seiner fleet operations within WCPO area in the past 5 years. (Source :Tufman II-8b, 9b)





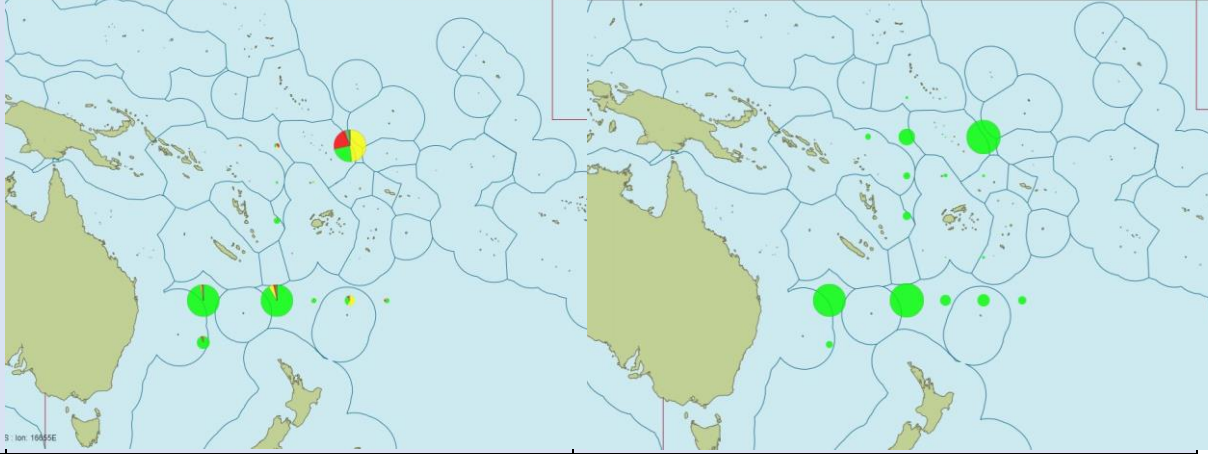
3.3.2 Catch and Effort Distribution for Longliners

The fishing catch and effort for longline were mainly fished in the High Seas south of New Caledonia as well in the Tuvalu EEZ in 2021 (Figure 3b).



2020

AlbKg BasKg YRtKg BlmKg BumKg MskKg SwaKg HooKg



2019

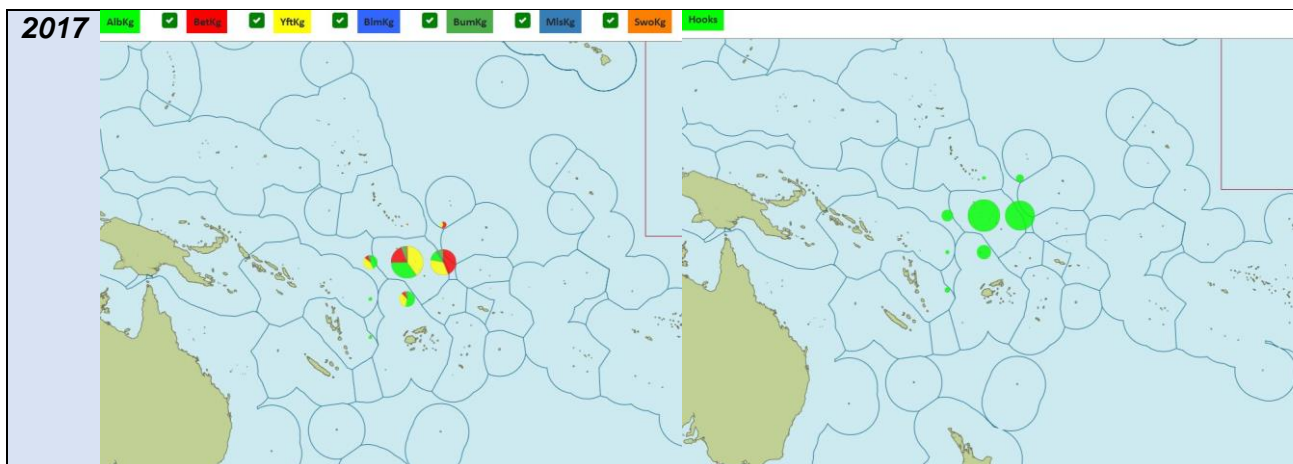
AlbKg BasKg YRtKg BlmKg BumKg MskKg SwaKg HooKg



2018

AlbKg BasKg YRtKg BlmKg BumKg MskKg SwaKg HooKg





3.3.3 ARTISANAL FISHERIES

Information is still being collected on catches of target species of bigeye, yellowfin, and skipjack tuna, all of which were taken using handline troll fishing, as part of the small-scale artisanal tuna data collection initiative. They were gathered through this initiative by data collectors from in Funafuti and outer islands, and were overseen by the Coastal Fisheries Section. Since 2017 data has been gathered, but there are still no accurate figures for total catch, which is estimated at a few hundred tonnes.

3.4 SPECIES OF SPECIAL INTEREST

The observer data is not yet available and shark interactions, cetaceans and turtles are derived from logsheet data.

3.5 NON-TARGET ASSOCIATED OR DIFFERENT SPECIES

The annual estimates of non-target species caught by vessels flying the Tuvalu flag are provided in Table 4. It shows that there were no catches for the year 2021 according to Purse Seine data for non-target species, although longline catches were 3.551 mt (refer table 5)

Table 4: Annual raised catch estimates (mt) of non-target, associated or dependent species for Tuvalu flagged vessels in the WCPFC Convention Area. (Source: TUFMAN 2 Dorado ref 2.1.3PS & 2.2.3LL– Key species catches in WCPFC Area raised with VMS – National Fleet)

YEAR	BLM	BUM	MLS	SWO	BSH	FAL	HAM	MAK	TOTAL
Purse seine									
2021	0	3	0	0	0	13	0	0	16
2020	0	0	0	0	0	0	0	0	0

2019	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0
Longline									
2021	0	1	0	1	10	1	0	0	13
2020	0	3.145	0.15	1.399	0	0	0	0	4.694
2019	0.215	10.7	0	1.21	0	0	0	0	12.125
2018	0.785	14.185	0	2.365	3.313	0.794	0.043	0.043	21.528
2017	0.17	20.3	0.02	5.997	1.713	0.694	0	0	28.894

4.0 COASTAL STATE REPORTING

4.1 FISHING LICENSES

Despite the COVID-19 outbreak, the annual practice of providing fishing licenses under access agreements to fishing companies continued. The government continued to issue licenses via an online system. As well as its foreign partners in the Philippines, Korea, Taiwan, China, and the Sub-Regional Pooling Agreement, the government of Tuvalu continues to grant fishing permits to its domestic companies. In addition, multinational accords like the US Treaty and FSM Arrangement allowed for the operation of vessels operating under regional licences in the Tuvalu EEZ.

The Fisheries department issued a total of 183 fishing licenses this year under the category of bilateral agreements, which is 21 fewer than previous year and 56 fewer than the high point reached in 2019. The Purse Seiners made up 59% of this, followed by Longliners and Reefer Carriers at 14% each, and Pole and Line and Bunkers at 6% each (Table 5 & Figure 4).

Table 5: Number of licenses issued for fishing in Tuvalu's EEZ, by flag and gear type from 2017 to 2021.
Source: TUFMAN 1 & PNA FIMS.

Years	Longline	Purse seine	Pole & Line	Fish Carrier	Bunker	TOTAL
2017	115	82	0	40	0	474
2018	77	93	0	45	0	215
2019	70	104	14	51	0	239
2020	31	98	16	55	4	204
2021	27	108	12	26	10	183

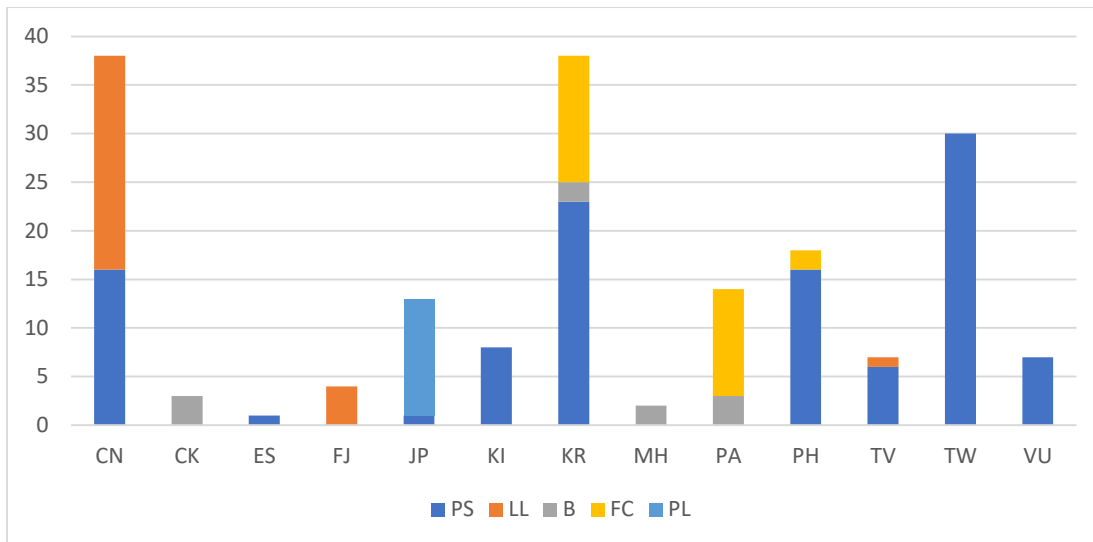


Figure 4: Annual number of licensed fishing vessels by flag and gear in 2021.

4.2 CATCHES IN TUVALU'S EEZ

In Tuvalu's EEZ in 2021, vessels operating under bilateral agreements with countries including Korea, Taiwan, and Kiribati as well as multilateral agreements with the US Treaty and FSM Arrangement made the majority of the tuna catches. In Tuvalu's EEZ, fishing vessels brought in 71, 817mt of tuna in total for 2021. These 71, 817mt including purse seiner total catches of 70, 906mt (98.7%), longline catches of 710mt (1%) and Pole line catches of 200mt (0.3%). For purse seine the vessels flying the Korean flag had the biggest catches, totaling of 27,866mt (39%), followed by Kiribati flag with 15, 824mt (22%), and those flying the Tuvaluan flag with 6272mt (9%). The smallest catch of 70 & 85mt was made by Chinese and Solomon flag (0.01%) (Figure 5).

For Longline the biggest catches were from Chinese flag vessels of 573mt (81%), Fiji flag vessels of 92mt (13%) and Tuvalu flagged vessel of 27mt (3.9%) (Figure 5).

Japanese pole and line tuna catches had an unraised estimated catch of 200mt in Tuvalu EEZ. This is an increased in the catch compared to 2020 due to the increased in the number of pole and line fishing in Tuvalu EEZ in 2021.

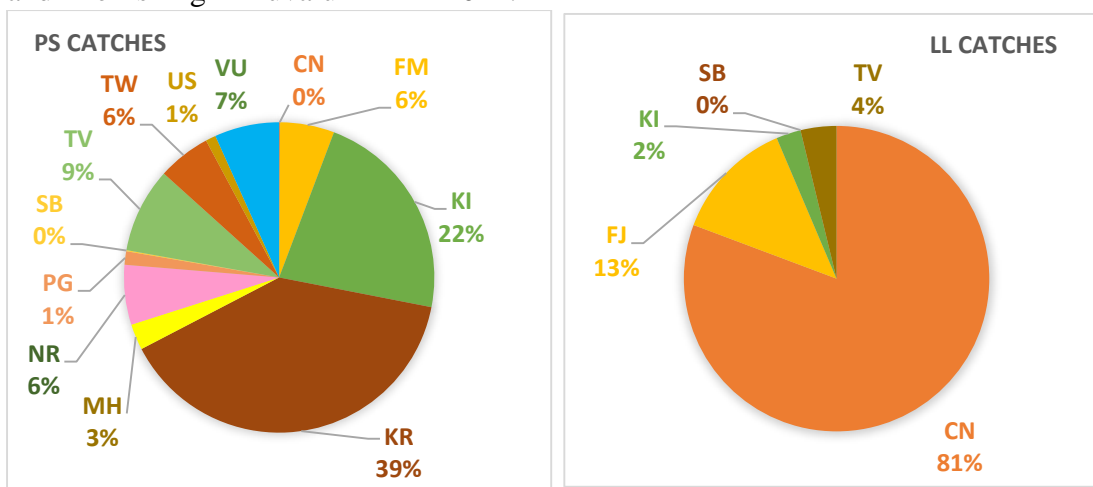


Figure 5: Total raised catch estimates (mt) in Tuvalu EEZ by flag and by gear type for 2021. Source: TUFMAN 2

The skipjack tuna species is the dominant species for purse seine fishing, followed by the yellowfin tuna species, in terms of catch composition for purse seine fishing in Tuvalu EEZ in 2020 and 2021. While the yellowfin tuna species dominates the catch composition for longline, the number of flagged vessels has remained low in recent years (Figure 6).

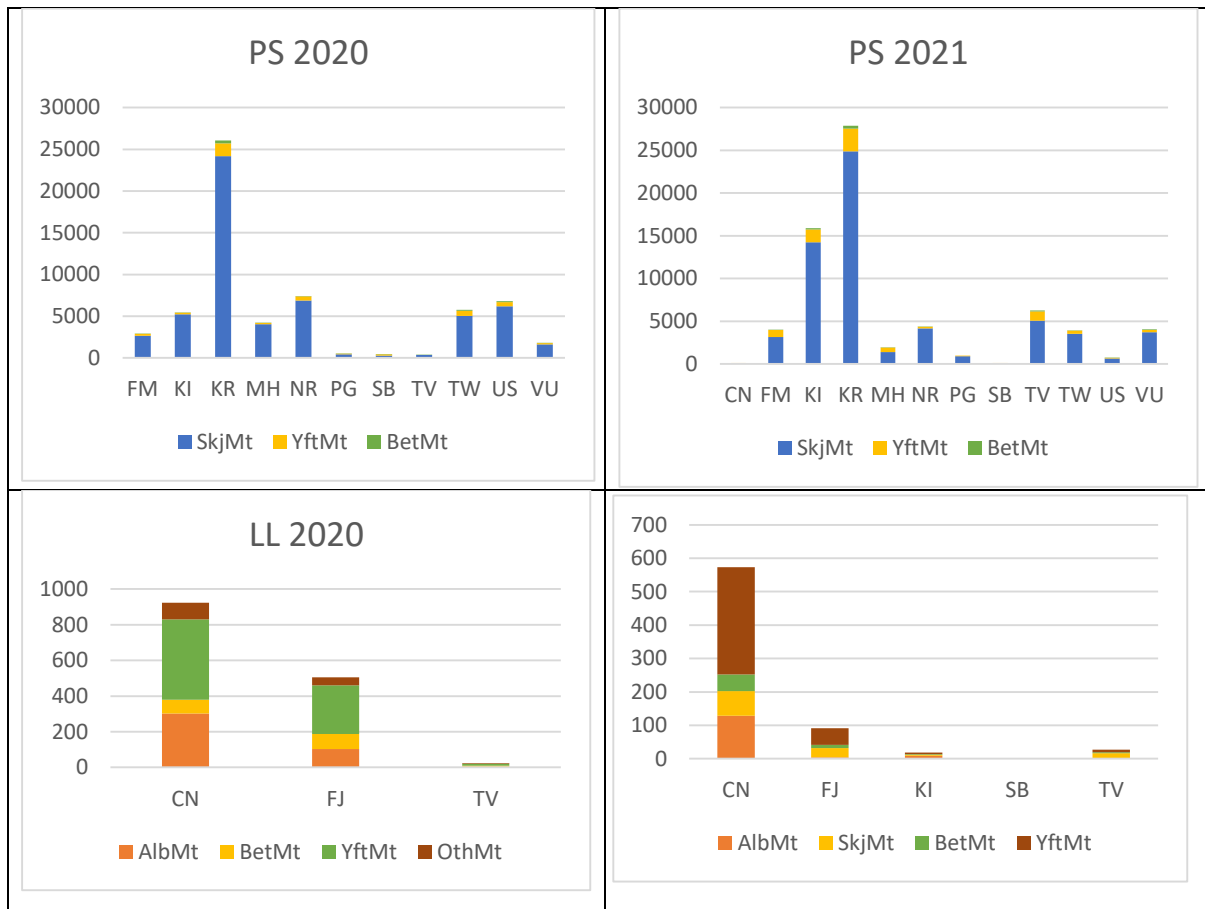


Figure 6: Comparison of purse seine and longline total tuna catches within Tuvalu EEZ by flag in 2020 & 2021. Source: TUFMAN 2

5.0 SOCIO ECONOMIC FACTORS

The fisheries licensing continues provide fisheries revenue to the Government of Tuvalu annually. This is crucial for sustaining government services, especially those related to health, education, and other crucial areas of government expenditure.

6.0 DISPOSAL OF CATCH

The Tuvalu Purse Seine vessels transhipped in Tuvalu at a designated transshipment area as specified in the Condition for Transshipment Order because of the pandemic COVID 19. Transshipment also occurred in the ports of Tarawa, Majuro and Kosrae, with some catches unloaded in Pago Pago. The Tuvalu longline vessel continued unloading its catches in the Fijian port of Suva.

7.0 ONSHORE DEVELOPMENTS

The GOT's commercial fishery interests are represented by the National Fisheries Corporation of Tuvalu (NAFICOT), which has undergone reform to conform to the Public Enterprises (Performance and Accountability) Act 2009's requirements. In 2020, the newly appointed Chief Executive Officer and the Financial Officer officially created the NAFICOT management. The NAFICOT started marketing catches of local fishermen at the end of 2021.

8.0 FUTURE PROSPECTS OF THE FISHERY

Despite significant obstacles, Tuvalu currently promotes domestication of its tuna fisheries. However, the ability to place seafarers to work on fishing vessels would be an important step in the development of our resources.

9.0 STATUS OF TUNA FISHERY DATA COLLECTION SYSTEM

9.1 LOGSHEET DATA COLLECTION AND VERIFICATION

Despite the COVID 19 epidemic, the department continues to gather and verify data for logsheets. The coverage of the longline and purse seiner logsheets in 2021 is 79.3% and 92.96%, respectively.

9.2 OBSERVER PROGRAMME

Due to border constraints, there were no Tuvaluan observers on fishing vessels in 2021. Before January 1st 2023, Tuvaluan observers are anticipated to be placed once more

10.0 CMM REPORTING

Table 6: 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	There was one Tuvalu vessel recorded fishing in the Convention Area South of 20 ⁰ S						
Observer coverage (WCPFC 11 decision – para 484(b))	There were no observers deployed onboard in 2021						
CMM 2009-06 [Transshipment], Para 11 (ANNEX II)	(1) the total quantities, by weight , of highly migratory fish stocks covered by this measure that were transhipped by fishing vessels the CCM is responsible for reporting against, with those quantities broken down by:						
	a) offloaded and received;	b) transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction	c) transhipped inside the Convention Area and transhipped outside the Convention Area;	d) caught inside the Convention Area and caught outside the Convention Area;	e) Species	f) Product Form	g) Fishing gear
	Offloaded 34,890.87MT	In Funafuti, Kosrae, Majuro, Pagopago, Tarawa	Inside the Convention Area	Inside the Convention Area	SKJ (27,839.23MT)	FROZEN	PS
		In Funafuti, Kosrae, Majuro, Pagopago, Tarawa	Inside the Convention Area	Inside the Convention Area	BET (814.691MT)	FROZEN	PS
		In Funafuti, Kosrae, Majuro, Pagopago, Tarawa	Inside the Convention Area	Inside the Convention Area	YFT (6,236.951)	FROZEN	PS
(2) the number of transhipments involving highly migratory fish stocks covered by this measure by fishing vessels that is responsible for reporting against, broken down by:							
a) offloaded and received	b) transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction	c) transhipped inside the Convention Area and transhipped outside the Convention Area	d) caught inside the Convention Area and caught outside the Convention Area	e) fishing gear			
Offloaded 48	In Funafuti, Kosrae, Majuro, Pagopago, Tarawa	Inside the Convention Area	Inside the Convention Area	PS			

CMM 2011-03 [Impact of PS fishing on cetaceans], Para 5	There was no interaction reported for TV PS flag vessels
CMM 2018-03 [Seabirds] Para 13	There were no interaction of seabirds for TV PS flag vessels

CMM 2018-03: [Seabirds] Annex 2. Guidelines for reporting templates for Part 1 report

The following tables should be included in the annual Part 1 country reports, summarizing the most recent five years.

Table x: Effort, observed and estimated seabird captures by fishing year for [CCM] [South of 30°S; 25°S-30°S; North of 23°N; or 23°N – 25°S¹]. For each year, the table gives the total number of hooks; the number of observed hooks; observer coverage (the percentage of hooks that were observed); the number of observed captures (both dead and alive); and the capture rate (captures per thousand hooks).

Year	Fishing effort				Observed seabird captures	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate ²
[year]						
[year]						
[year]						
[previous year e.g. 2017]						
[current year e.g. 2018]						

¹ Insert 'North of 23°N', 'South of 30°S', '25°S-30°S' or '23°N – 25°S'. For CCMs fishing in all areas, provide separate tables for each area.

² Provide data as captures per one thousand hooks.

Table y: Proportion of mitigation types¹ used by the fleet in [year].

	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						
Options required south of 25°S	TL + NS						
	TL + WB						
	NS + WB						
	TL + WB + NS						
Other options 25°S-30°S	HS						
	WB						
Other options north of 23°N	TL						
	SS/BC/WB/DSLS						
Provide any other combination of mitigation measures here	SS/BC/WB/(MOD or BDB)						
	Totals (must equal 100%)						

¹ TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC = bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

Table z: Number of observed seabird captures in [CCM] longline fisheries, 2012, by species and area.

Species	South of 30°S	25°S-30°S	North of 23°N	23°N –25°S	Total
---------	---------------	-----------	---------------	------------	-------

E.g. Antipodean albatross					
[species name]					
[species name]					
[species name]					
[species name]					
[species name]					
[species name]					
Total					

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

CMM 2006-04 [South West striped Marlin], Para 4	There was one Tuvalu vessel recorded fishing south of 15 degrees south and were 0.656mt of striped marlin catches as a by-catch in this area.
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 authorization
CMM 2019-03 [North Pacific Albacore], Para 3	There were no North Pacific Albacore recorded by Tuvalu flagged vessel