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

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SAMOA

INDEPENDENT STATE OF SAMOA



ANNUAL REPORT TO THE COMMISSION

PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

July 2024

FISHERIES DIVISION

MINISTRY OF AGRICULTURE AND FISHERIES

GOVERNMENT OF SAMOA

Scientific Data was provided to the Commission in	YES
accordance with the decision relating to the	
provision of scientific data to the Commission by	
30 th April, 2024	

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ABSTRACT

The tuna fishery in Samoa primarily consists of a national and a chartered foreign longline fleet which mainly target tuna species. Within and beyond national jurisdiction, the total fishing effort measured by the number of hooks used, increased by 38% from 7.2 million hooks in 2022 to 9.8million hooks in 2023. The total estimated catch for tuna and tuna-like species was 2,756 metric tons (mt) reflecting a 42% increase from the 2022 catch estimates, which was 1,941 metric tons (mt). The catch from the longline fishery is predominantly South Pacific Albacore (*Thunnus alalunga*) which accounts for 70% of the annual catch, Yellowfin tuna (*Thunnus albacares*) at 18% and Bigeye tuna (*Thunnus obesus*) at 7%.

The longline fleet operating in Samoa's EEZ includes vessels ranging from approximately 12.5 meters to over 20 meters in length. These fishing vessels are required to submit catch data logs to the Fisheries Division that are used for management, economic and scientific purposes. All catches from these fishing vessels are landed and processed at Samoa's ports before being exported to various international markets. In 2023, Samoa's national fleet consisted of 6 fishing vessels which operated exclusively within Samoa's EEZ, contributing to 14% of the annual catch estimates. In contrast, there were 12 foreign flagged vessels operated which accounts for 86% of the annual catch. The introduction of the foreign fleet in 2015 significantly boosted catch trends in the following years.

Samoa has no purse seine fishery, however, purse seiners only called into port for transshipment purposes. Some of the WCPFC measures regarding purse seine fisheries do not apply to Samoa.

The logsheets from fishing vessels and port sampling data continues to be the primary source of estimates based on raised catch and effort data, along with the Vessel Monitoring System (VMS) for verification.

BACKGROUND

Trolling and longline are the two main fishing gears used by fishing vessels to target tuna species in Samoa.

The troll fishery includes alia catamarans of around 9 to 11 meters in length and is characterized with their un-decked outboard motors. These vessels operate beyond the shore within 12 to 24 nm offshore, targeting Skipjack tuna (*Katsuwonus pelamis*) and free school or Fish Aggregating Devices (FAD) associated pelagic species. The alia fishing fleet is also involved with the tuna longline fishery however; their contribution is limited to peak months for this specific fishery. This is because the alia fleets have the ability to change their fishing gear type depending on the season of highly migratory tuna species. There is a tendency to change gear type to target tuna species during peak months and a turnover to trolling and bottomfishing gears during off-season. The catches from these operations are primarily sold locally at fish markets, restaurants, hotels and for local consumption.

In contrast, larger commercial vessels ranging from 12.5 to over 20 meters in length are engaged in longline fishing gear. The longline fishery specifically targets South Pacific Albacore (*Thunnus alalunga*), Yellowfin (*Thunnus albacares*) and Bigeye tuna (*Thunnus obesus*), while also encountering tuna-like species as by-catch. South Pacific Albacore is predominantly exported to frozen canneries. Yellowfin, Bigeye tuna and other pelagic are also exported but in lower volumes as well as catering to the local markets during low catch periods.

Purse Seine fishing activities within Samoa's EEZ are limited to vessels operating under the agreement between the United States of America and Pacific Island States (US Treaty). Samoa has declared a limit of 150 days for Purse Seine fishing in its EEZ in accordance with the requirement outlined in CMM 2015 – 01^{1} .

Samoa is dedicated to the ongoing development and establishment of sustainable fisheries. This commitment entails making informed management decisions that will ensure the long-term benefits for the people of Samoa, both in the present and in the future.

¹Para 23 of CMM 2015-01

ANNUAL CATCH AND EFFORT

The total effort of Samoa's longline fleet within the WCPF Convention Area in 2023 was approximately 9.8 million hooks, with about 5.4 million hooks deployed within Samoa's EEZ. The rest are from chartered vessels fishing in other EEZs. The annual catch estimates for primary key species amount to 2,737 mt within and beyond our national jurisdiction

The annual catch estimates of tuna and tuna-like species from the national fleets, which includes both domestic and chartered vessels increased in 2019 (3,364 mt) before a general decline in 2020 to 2022. This can be attributed to various challenges faced by fisheries operators including the COVID-19 pandemic and other related border restrictions imposed by the Government of Samoa. However, catches increased by 47% (606 mt) from 2022, marking a recovery from the decline observed over the previous three years.

South Pacific Albacore remains the dominant species which accounts for 69% of the national fleet's total annual catch. This reflects an increase of 38% (527 mt) compared to 2022. Yellowfin and Bigeye tuna catch volume fluctuates with lower quantities compared to South Pacific Albacore, but showing a similar pattern of fluctuations. Yellowfin tuna increased by 190 mt followed by Bigeye tuna at 74 mt in comparison to catch estimates in 2022. Billfish species represented 4% of the annual catch, with catch volume fluctuating over the years, alternating between 1 to 16 metric tons.

SPECIES	2019	2020	2021	2022	2023
South Pacific Albacore (Thunnus alalunga)	2,451	1,406	719	1,369	1896
Bigeye Tuna (Thunnus obesus)	147	156	77	106	180
Black Marlin (Makaira indica)	2	2	2	0	0
Blue Marlin (Makaira mazara)	53	67	50	48	86
Skipjack (Katsuwonus pelamis)	192	112	35	34	55
Striped Marlin (Tetrapturus audax)	3	2	1	1	4
Swordfish (Xiphias gladius)	16	15	5	11	16
Yellowfin Tuna (Thunnus albacares)	500	597	384	310	500
TOTAL	3,364	2,357	1,273	1,879	2,737

Table 1: Annual Catch Estimates (in metric tons) by WS national fleet by Primary Species, within the Convention Area; 2019-2023

In 2023, twelve (12) foreign-flagged longline fishing vessels were chartered and licensed to fish within Samoa's EEZ. These fishing licenses were issued under an Access Agreement with a locally based foreign fishing company.

The chartered fleet's catch, which is considered an integral part of Samoa's national fleet, is predominantly South Pacific albacore, followed by yellowfin and bigeye tuna. Albacore catch volume increased significantly by 42% (477

mt) compared to volume caught in 2022. Yellowfin tuna catch volume consistently averaged above 300 mt, except in 2022 when it dropped to 275 mt. Bigeye tuna also increased by 69 mt, with volume alternating above 100 mt over the years. Overall, the catch volume for primary key species increased respectively by 768 mt from 1,592 mt to 2,360 mt, marking a significant recovery from the decline experienced in 2020 to 2021.

SPECIES	2019	2020	2021	2022	2023
South Pacific Albacore (Thunnus alalunga)	1,783	1,126	453	1,127	1,604
Bigeye Tuna (Thunnus obesus)	120	132	64	100	169
Black Marlin <i>(Makaira</i> <i>indica)</i>	1	1	2	0	0
Blue Marlin <i>(Makaira</i> mazara)	51	67	50	47	85
Skipjack (Katsuwonus pelamis)	163	99	29	31	50
Striped Marlin <i>(Tetrapturus audax)</i>	2	1	1	1	3
Swordfish (Xiphias gladius)	14	15	5	11	16
Yellowfin Tuna (Thunnus albacares)	355	465	314	275	433
TOTAL	2,489	1,906	918	1,592	2,360

Table 2: Annual Catch Estimates (in metric tons) by WS chartered fleet by primary key species, within the Convention Area; 2019 – 2023

In the executive summary, it is highlighted that the majority of catches from Samoa's EEZ are from the chartered fleet, which contribute to over half of the total annual catch estimates, as shown in Figure 2. This dominance is due to the higher number of active fishing vessels and their extended fishing durations, often exceeding a month at sea.



Figure 2: Percentage of Catches from the domestic and chartered fleets; 2023

Figure 1 illustrates the annual Catch per Unit Effort (CPUE) (kg/100 hooks) estimates for the three key tuna species during the reporting period. Since 2019, there has been a decline in the CPUE for these species. CPUE for Albacore declined in 2020 but subsequently rebounded in the following years. CPUE for Yellowfin and Bigeye tuna showed stability, except for a decrease observed in 2022. Environmental factors such as El Nino and La Nina likely impacted the abundance and accessibility of tuna species, resulting in a lower catch per unit effort. Additionally, the global COVID-19 crisis has impacted fishing operations and led to a reduction in the number of active fishing vessels.



Figure 1: CPUE (kg/100 hooks) of key tuna species within WS EEZ; 2019-2023

• NON-TARGET SPECIES

In 2023, Wahoo (*Acanthocybium solandri*) had the highest catch volume among both the national and foreign fleets. The overall catch volume of non-target species increased by 58% from the previous year. No key shark species were retained as seen in the table below.

SPECIES	2019	2020	2021	2022	2023
Blue Shark (Prionace glauca)	0	0	0	0	0
Common Dolphinfish (Coryphaena hippurus)	6	8	1	7	3
Great Barracuda (Sphyraena barracuda)	2	3	1	2	4
Indo Pacific Sailfish (Istiophorus platypterus)	0	5	0	0.2	1
Mako Shark	0	0	0	0	0
Moonfish (Lampris guttatus)	5	2	1	0.1	1
Oilfish (Ruvettus pretiosus)	10	7	1	3	4
Shark spp	0	0	0	0	0

Shortbill Spearfish (Tetrapturus anguistrosris)	14	4	0	1	4
Sickle Pomfret	1	1	0	0.2	0.4
Silky Shark (Carcharhinus falciformis)	0	0	0	0	0
Thresher Shark (Alopias spp)	0	0	0	0	0
Tuna spp	4	0	0	0	0
Wahoo (Acanthocybium solandri)	40	24	7	7	15
TOTAL	82	54	11	20.5	32.4

Table 3: Annual Catch Estimates in metric tons of non-target species (including key shark species) within Samoa's EEZ; 2019-2023.

• SPECIES OF SPECIAL INTEREST - SSI

There were no reported species of special interest for 2023 in regards to turtles, sea birds and dolphins apart from the common shark species. Since there was no observer data, the information is derived solely from logsheets as discarded with their fate being unknown (Table 4).

SHARK SPECIES	DISCARDED NUMBER	DISCARDED WEIGHT	STATUS ON DISCARD
Oceanic Whitetip	57	0	Unknown
(Carcharhinus longimanus)			
Silky Shark	19	0	Unknown
(Carcharhinus falciformis)			
TOTAL	76	0	Unknown

Table 4: Status of SSI (sharks) based on logsheets within Samoa's EEZ; 2023

FISHING PATTERNS

Samoa's longline catches are limited to within its EEZ. The tuna longline fishery occurs all year round with distinct periods of good catch rates to periods of relatively lower catch rates.



Figure 3: Catch by species within Samoa's EEZ 2019



Figure 4: Catch by species within Samoa's EEZ 2020



Figure 5: Catch by species within Samoa's EEZ 2021



Figure 6: Catch by species within Samoa's EEZ 2022



Figure 7: Catch by species within Samoa's EEZ 2023

The distribution pattern of Samoa longline catches is currently confined to its own EEZ. In 2020 to 2021 catches were widely distributed from the Central part (Fig.4) to the Southern part (Fig.5) of Samoa's EEZ compared to

catches in 2019. Noticeable a slight decline in 2022 (Fig.6) and an inclination of catches in 2023 as illustrated in Figure 7. Take into consideration the South Pacific Albacore as the dominant species.

LICENSING AND FLEET STRUCTURE

• NUMBER OF VESSELS BY GEAR TYPE AND SIZE

Samoa's commercial fishing fleet comprises of both national and foreign chartered fishing vessels that are licensed to fish in Samoa's EEZ. All catches from these vessels are landed and processed in Samoa and are either sold locally and/or exported to various markets worldwide.

Fishing vessels classified under Class A are known as Alia catamarans range from 8 to 11 meters in length and are undecked with outboard motors. These fishing vessels fish offshore within the 12 nm - 24 nm and are engaged in surface trolling for skipjack tuna, longlining for pelagic species and bottom fishing which target deepwater snappers that underpin oceanic fisheries.

The national longline fleet ranges from fishing vessels of around 12.5 meters and over in length are classified under Class C to Class F. However, Class A to Class E categorizes domestic fishing vessels while Class F is reserved for chartered fishing vessels licensed to fish in Samoa's EEZ.

The licensing structure in 2023 reflects a decrease in the number of licenses issued to fishing vessels operating in Samoa's waters. A total of 63 active fishing vessels in 2022 have decreased to 59 active fishing vessels (Table 5). In addition to Samoa's national fleet, there were 12 chartered fishing vessels, all of which are VU flagged vessels authorized to fish in Samoa's EEZ (Table 6)

Gross Registered and Tonnage	CLASS	Length (Meters)	Fishing Method	2019	2020	2021	2022	2023
0 - 10	А	>8 - 11	Mixed	45	26	33	56	53
10 - 50	В	>11 - 12.5		0	1	0	0	0
	С	>12.5 - 15	Longlino	1	1	1	1	1
	D	> 15 - 20.5	LOUGHINE	4	3	3	3	2
50 - 200	E	> 20.5		4	3	4	3	3

Table 5: Number of Samoan Fishing Vessels, by gear and size category, active in the WCPFC Convention Area 2019 – 2023

Gross Registered and Tonnage	CLASS	Length (Meters)	Fishing Method	FLAG	2019	2020	2021	2022	2023
	_			Cook Islands	6	5	4	3	0
50 - 200	F	> 20.5m	Longline	Vanuatu	9	10	4	10	12

Table 6: Number of Foreign Fishing Vessels, by size and gear category, active in Samoa's EEZ from 2019 – 2023

SOCIO-ECONOMIC FACTOR

The export of tuna catches from Samoa continued to be a significant contributor to the fish exports, particularly in comparison to other fisheries such as coastal fishery. In addition to the export value, the local market remains an important source of fish for local consumption among the population. The licensing of fishing vessels, both domestic and foreign, along with the issuance of transshipment authorizations for foreign vessels that do not hold Samoa fishing license, further contribute to the revenue stream of Samoa's fisheries sector.

All catches made by foreign licensed vessels are unloaded at Matautu Port, repacked into shipping containers and exported to overseas markets. A portion of their catch is also sold locally and in retail stores. The operations at port incur high operating costs but continue to drive the growth of our industry. There has been a growing interest from incoming foreign vessels seeking to use our port for activities such as transshipment, crew exchanges, re-provisional, and maintenance. These activities benefit the local economy through the purchase of fuel, temporary labor for assistance with unloadings, procurement of provisions and associated port fees.

The Fisheries Division plays a crucial role in conducting dockside boarding, inspections, and monitoring of catches, ensuring compliance with regulations and sustainable fishing practices.

DISPOSAL OF CATCH

• EXPORTS OF TUNA

Export data is provided to the Fisheries Division in the form of export consignments. Table 7 shows that exports have decreased since its highest recorded exports in 2019 with the impact of the global pandemic COVID19 and other related crises having abruptly affected the usual operations of our exports with the declaration of the Government SOE Restrictions from 2020-2022. These years display the immense decline in exports as well as catches harvested within Samoa's EEZ.

Prices for fish value tend to vary over time in the market which explains the inconsistent values in regards to export quantity and value over time. The fish exporters had faced many challenges including the measles outbreak in the final quarter of 2019, the COVID19 Pandemic, and followed by other global crises that impacted the supply chain and material costs globally. Despite these challenges, exports gradually increased since its lowest recorded record in 2021. However, most recently the main exporting companies have shifted their focus to local sale of catch rather than choosing to export due to the domestic market being more cost effective and offering potential higher prices.

Year	2019	2020	2021	2022	2023
TOTAL	5750	4390	2069	2720	2667

Table 7: Annual exports in metric tons; 2018-2022

NEW FISHERY DEVELOPMENT

Forum Fisheries Agency (FFA) was able to procure tablets for electronic reporting (ER) usage in Samoa's fisheries sector. Samoa fisheries has noted several benefits with ER since trialing in 2019 including improved efficiencies in data management, access and utilization, which in turn support improved scientific, economical and statistical information for reporting obligations.

Tufman 2 and its recent developments have facilitated data collection and reporting purposes within the fisheries sector. Samoa aims to implement e-Reporting applications such as ONBOARD on all domestic longline fishing vessels. This tool enables electronic submission of logsheet data from the captains. The online data entry feature of the TUFMAN 2 database allows for timely submissions of logsheet data, facilitating easier and faster data extraction, particularly for management and scientific reports.

The utilization of these tools has significantly contributed to a better understanding and quantification of fishing effort and trends in Samoa. Moreover, it has enabled raised catch estimates based on logsheets and reported data. This data has not only supported domestic fishing companies but has also provided crucial information for fulfilling Samoa's reporting obligations to the Commission and to local communities.

RESEARCH AND STATISTICS

• DATA COLLECTION AND VERIFICATION

Samoa continues its partnership with the Pacific Community (SPC) in the collection of tuna biological samples from domestic and foreign catches in Samoa's EEZ. These biological samples once collected will be analyzed by SPC as part of a project to strengthen our understanding on the movement and distribution of tuna species. Fish Aggregating Devices (FAD) monitoring are also conducted to monitor FADs deployed by Samoa Fisheries to help improve food security, increase the economic returns for fishers and most importantly, ensure their safety at sea.

The logsheet coverage of 97% was achieved for Samoa's national fleet. Logsheets from fishing vessels and port sampling activities continue to be the primary source of information on catch and effort of tuna and bycatch species caught in Samoa's EEZ. Unloading forms are also provided by fishery operators for Bigeye tuna and Swordfish ICCAT verification and comparison purposes with logsheet data. The forms used are forms compiled from data collection committee meetings under the SPC and FFA Framework. The information and data collected are entered and stored into the TUFMAN 2 database on a cloud server hosted by SPC

Since the COVID19 pandemic, Samoa fisheries have implemented transshipment monitoring activities at port. This operation provides us with the actual weights and number of species unloaded. This information is used to verify logsheet data provided by the captain to deter any unreported and misreported catches within Samoa's EEZ.

• **OBSERVER PROGRAMME**

Currently, there are only 5 certified observers within Samoa fisheries, but they are also authorized fisheries officers with other responsibilities which has prevented them from conducting fishing trips. We have not been able to conduct observer trips since 2020, however, we are now considering recruiting outsiders to serve as observers to address this data gap. Samoa remains committed to achieving 5% longline observer coverage and reports to be debriefed by a certified Pacific Islands Regional Fisheries Observer (PIRFO) debriefer prior to data entry.



ADDENDUM TO ANNUAL REPORT PART 1

8 April 2024¹

<u>SECTION A:</u> SPECIFIC INFORMATION TO BE PROVIDED IN ANNUAL REPORT PART 1 AS REQUIRED BY CMMS AND OTHER DECISIONS OF THE COMMISSION.

	Samoa's chartered fleet do not have any catches for Swordfish from S of 20°S								
		Flag	Yr	Vessels	SwoN	SwoMt]		
		WS	2021	0	0	0			
<u>CMM 2009-03</u>		WS	2022	0	0	0	_		
[Swordfish], Para 8		WS	2023	0	0	0			
	*Note: WCPFC11 confirmed a common understanding that "total catch" in this reporting requirement refers to both targeted and bycatch catches of swordfish. AUDIT POINT [RP] The Secretariat confirms that the CCM submitted the required information contained in the template in Annex 2 of CMM in its AR Pt 1								
Observer coverage (<u>WCPFC 11 decision</u> <u>– para 484(b)</u>)	Not Applica	able							
<u>CMM 2009-06</u> [Transshipment], Para 11 (ANNEX II)	Samoa moi transshipm while the re	Samoa monitored 79 transshipment activities at a volume of 10,614mt in 2023. 6 of these transshipment monitoring activities were purse seiners with a total volume of 3,701mt while the rest are longline fishing vessels. All these activities were observed at port.							

¹ Reporting requirements requested by CMMs and decisions of the Commission, as of WCPFC20 (Dec 2023). First issued on 8 April 2024. Changes made from Addendum for 2022 include the revised CMM 2023-03 for North Pacific Swordfish and WCPFC20 Agreed Audit Points.

	Offloaded and	Transhipped in	Transhipped	Caught inside the	Fishing
	Received	port.	inside	Convention Area	gear
		transhipped at	the Convention	and	0
		sea in areas	Area	caught outside	
		of national	and transhipped	the	
		or national			
		jurisdiction, and	outside	Convention Area	
		transhipped	the Convention		
		beyond areas of	Area		
		national			
		jurisdiction			
	Offloaded	100%	N/A	100% caught	LL and PS
		transshipped in		inside the	
		ports		Convention Area	
		•••	•	•	
		The Convetoriet a	onfirms resaint h	the CCM in AD Dt	1 of the required
		j me secretariat t	ommis receipt by	y the CCIVI III AR PL	1 of the required
	information in the	e prescribed form	at contained at Ar	nex II of CMM 200)9-06, and
	confirms that the	report includes th	ne required inform	nation for all CCM	transhipment
	events in the Con	vention Area of a	I HMES covered b	v the Convention.	as well as HMES
	takan in the Conv	ontion Aros and t	ranchinned outcid	a the Convention	Aroo in
					Alea, III
	accordance with	paras 10, 11, and 1	12 of CMM 2009-0	6.	
CN404 2011 02	Not Applicable - 9	Samoa do not have	any flag nurse sei	iners	
<u>CIVIIVI 2011-03</u>			any hag purse set		
[Impact of PS	_				
fishing on	AUDIT POINT [RP] Secretariat confi	rms that CCM sub	mitted a report on	instances in
cetaceans] Para 5	which cetaceans	have been encircle	ed by the purse se	ine nets of flagged	vessels and as
	reported in ARPt1	under nara 2(h)	of CMM		
	There were no int	eractions with coa	hirds within Samo	a's FF7 in 2022	
		eractions with sea		a S EEZ III 2025	
<u>CMM 2018-03</u>					
[Seabirds] Para 13	AUDIT POINT [RP] The Secretariat o	onfirms that CCM	submitted a report	rt using the
	reporting templat	te in Annex 2 of Cl	MM 2018-03 on se	abird interactions	reported or
	collected by abca				
	conected by obse	1 461 5.			

<u>SECTION B:</u> 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	Flag	Year	Vessels	Number	Weight
	WS	2021	7	0	0
	WS	2022	4	0	0
	WS	2023	9	4	0.12
	AUDIT POINT [RP] The Secretariat confirms that the CCM submitted in its ARPt1: a. the number of its flagged vessels that fished for MLS south of 15S between 2001-2004 and has nominated the maximum number of its flagged vessels that are permitted to continue to fish for MLS south of 15S b. the catch levels of CCM flagged vessels that have taken MLS as a bycatch the number and catch levels of its vessels fishing for MLS south of 15S.				
<u>CMM 2015-02</u> [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. AUDIT POINT [RP] The Secretariat confirms that the CCM submitted information on annual catch levels by its flagged vessels taking SP Albacore, as well as the number of CCM flagged vessels actively fishing for SP Albacore south of 20S, with catch levels reported by species groups.				
CMM 2019-03 [North Pacific Albacore], Para 3	Not applicable AUDIT POINT [RP] The Secretariat confirms that CCM submitted a report of information on catch and effort by CCM flagged vessels engaged in directed fishing for NP albacore north of the equator, by gear type and days fished (effort) and by weight (catch), using the template at Annex 1 of CMM 2019-03.				
CMM 2023-03 [North Pacific Swordfish], para 4	Not Applicable				