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

WCPFC-SC20-AR/CCM-19

PAPUA NEW GUINEA



# ANNUAL REPORT to the WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION (WCPFC)

# *Report:* PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS for year 2023.

# Country: PAPUA NEW GUINEA

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**Revision** Notes:

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# 2. Summary

The Papua New Guinea (PNG) tuna fishery is made up of both the purse-seine and longline sectors. The domestic longline vessels fish exclusively in PNG waters and until recently after more than two decades, PNG opened its waters to the foreign longline vessels again. The purse-seine sector is made up of a mixture of both domestic and foreign access vessels. The domestic sector comprises the PNG flag vessels and the PNG LBF<sup>1</sup> vessels which are under domestic charter arrangements to support onshore processing facilities in PNG.

There was a total of 34 purse seine vessels in the PNG national fleet<sup>2</sup> were active in the WCPFC Convention Area in the year 2023. A total estimated annual catch of 199,667 mt of targeted tuna species were caught by the PNG national purse vessels fleet in 2023 utilizing an estimated overall effort of 6,494 fishing days (*Table 1b & 2b*). There was a decrease in the catch of around 16,000 mt by PNG National purse seine vessels in 2023 compare to 2022 catch. The decrease was a result of the strong El Nino (unfavorable fishing conditions) in the half of 2023 compared to the strong La Nina (favorable fishing conditions) in the whole of 2022.

There were 10 domestic chartered tuna longline vessels active inside PNG waters in 2023. A total of 1,469 mt of target tuna species (YFT, ALB & BET) were harvested using an overall effort of 58,658 HHooks (Table 1a).

Estimated catch by purse seine foreign vessels fishing inside PNG waters in 2023 under bilateral and multilateral access agreements stood at 164,070 mt of tuna with an estimated effort of 4,920 HHooks (Table 6).

PNG is striving to build its domestic fishing industry and increase onshore investment. This approach has seen fishing licenses linked to domestic onshore investments, as the rights to fish in PNG are linked to onshore investment. The country is working towards processing all fish caught within its waters domestically and is expecting to see a continuous increase in the domestic tuna production over the years.

<sup>&</sup>lt;sup>1</sup> Locally Based Foreign Vessels that are under Domestic Charter Arrangements.

<sup>&</sup>lt;sup>2</sup> PNG National Fleet comprised of both the PNG flag vessels and the LBF chartered vessels.

# 3. Tabular Annual Fisheries Information

		2019	2020	2021	2022	2023 (Provisional)
	Effort (HHooks)	8,103	5,746	-	53,271	58,658
	Albacore	312	19	-	595	112
	Bigeye	162	17	-	179	262
Tuna Catch (mt)	Skipjack	6	0	-	8	12
	Yellowfin	14792	116	-	1779	1083
	Total Tuna	1,902	152	-	2,378	1,469
	Black Marlin	48	6	-	10	8
	Blue Marlin	29	1	-	33	46
Billfish Catch (mt)	Striped Marlin	30	5	-	3	1
	Swordfish	15	0	-	8	5
	Total Billfish	122	13	-	33	60
	Blue Shark	18	-	-	3	0
	Silky Shark	-	-	-	52	0
	Hamerhead Sharks	-	-	-	0	1
Shark Catch (mt)	Mako Shark	1	-	-	0	0
	Oceanic White Tip	-	-	-	9	0
	Thresher Sharks	-	-	-	0	0
	Total Sharks	-	-		0	0

Table 1(a): Annual catch (mt) and effort estimates for the PNG tuna longline fleet by primary species for the WCPFC Convention Area for year 2019-2023. Source: SPC

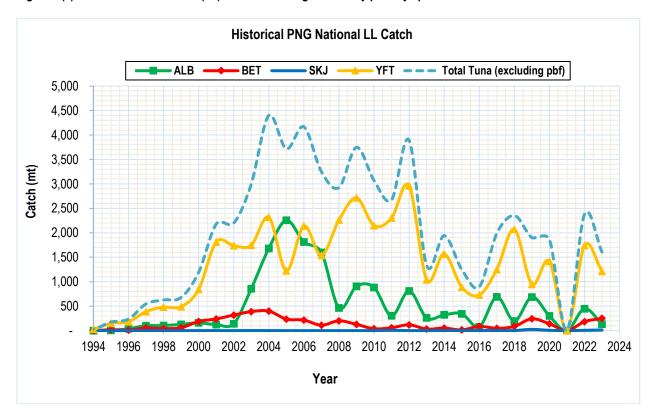


Figure 1 (a): Historical annual catch (mt) for the PNG longline fleet by primary species in the WCPFC Convention area.

Table 1(b): Annual catch (mt) and effort (fishing days) estimates for the PNG National Purse Seine fleet by primary species in the WCPFC Convention Area, 2019-2023. Source: SPC TUFMAN 2 PS ACE.

	Year	2019	2020	2021	2022	2023 Provisional
Effort (fishing & searching days)		6,627	6,708	6,344	6,519	6,494
	Albacore	-	4	7	-	-
	Bigeye	4,220	2,870	3,447	2,271	1,468
Catch (mt)	Pacific Bluefin	-	-	-	-	-
(1117)	Skipjack	194,396	109,989	102,389	132,359	97,090
	Yellowfin	66,773	85,458	63,498	81,077	101,109
	Total	265,389	198,321	169,341	215,707	199,667

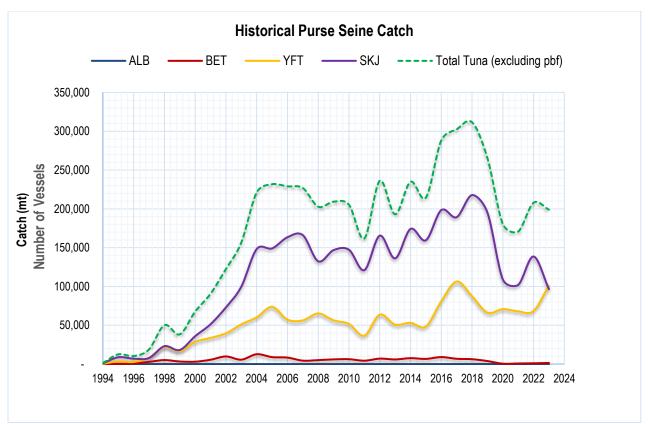


Figure 1 (b): Historical annual catch for the PNG purse seine fleet by primary species in the WCPFC Convention area.

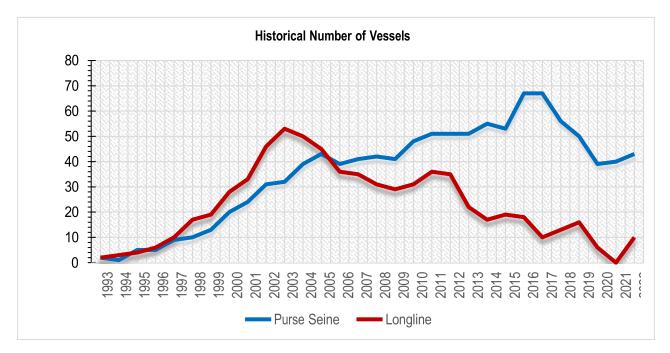


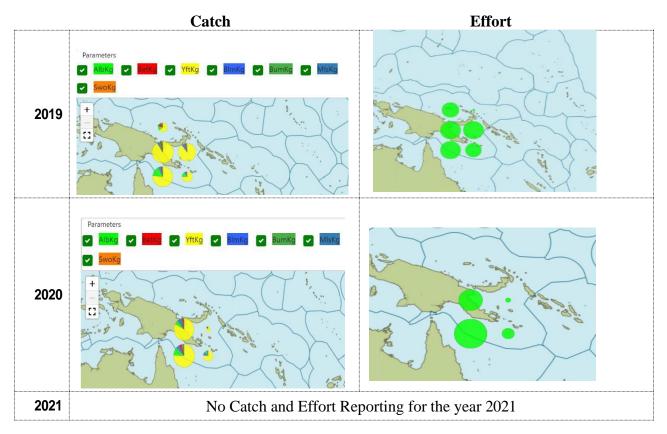
Figure 2: Historical annual vessel numbers for the PNG purse seine and longline fleet in the WCPFC Convention area.

Table 2(a). Number of PNG longline vessels by size category, active in the WCPFC Convention area for years 2019-2023.Note that there was no domestic LL operation inside PNG waters in 2021.

Yr	Size Class (GRT)								
	0-50	51-200	201-500	500+	Total				
2019	0	12	2	0	14				
2020	0	6	0	0	6				
2021	0	0	0	0	0				
2022	0	0	10	0	10				
2023	0	0	11	0	10				

Table 2(b). Number of PNG purse seine vessels by size category, active in the WCPFC Convention area for years 2019- 2023.

Yr	0-50	51-200	201-500	500+	Unknown	Total
2019	6	9	29	6	0	50
2020	6	6	24	2	0	38
2021	3	8	26	3	0	40
2022	3	9	26	4	1	43
2023	3	10	16	5	0	34



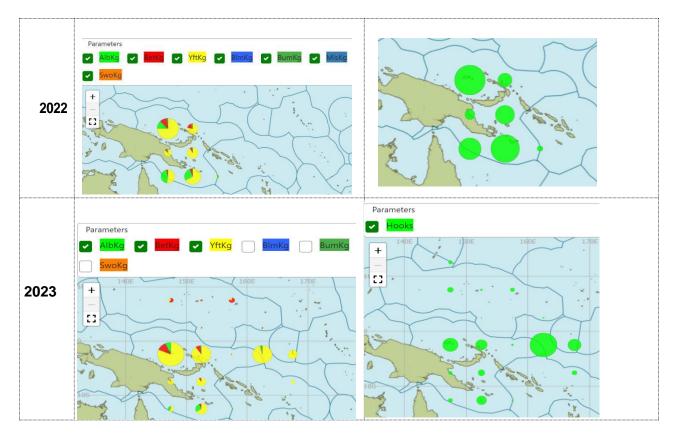
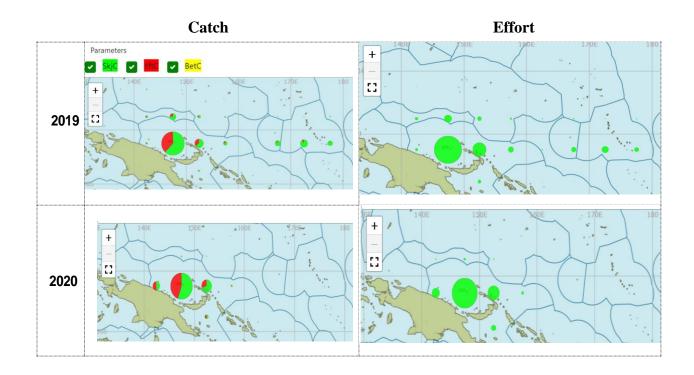


Figure 3(a). PNG active LL fleet Annual distribution of target catch (ALB = "green"; BET = "red"; and YFT = "yellow") and effort in the WCPFC Convention area for year 2018-2022. Source: SPC



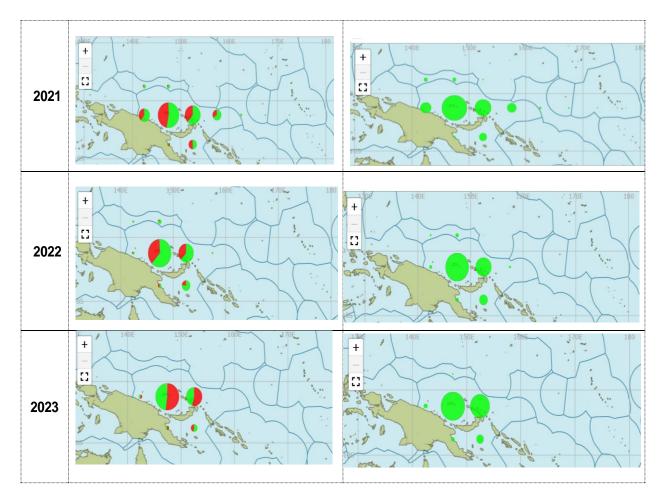


Figure 3(b). Annual distribution of target catch (SKJ = Blue; YFT = yellow; and BET = red and effort by the PNG purse seine fleet active in the WCPFC Convention area for year 2019-2023. Source: SPC

Species	2019	2020	2021	2022	2023
ALBATROSSES NEI	-	-	-	-	-
AQUATIC MAMMALS NEI	3	-	1	-	-
BALEEN WHALES NEI	7	5	10	6	2
BEAKED WHALES NEI	8	7	-		-
BIRD (UNIDENTIFIED)	-	-	-	1	-
BLUE WHALE	1	1	-		-
BOTTLENOSE DOLPHIN	21	-	9	3	20
BRYDE'S WHALE	27	18	19	24	-
COMMON DOLPHIN	11	8	10	15	10
CUVIER'S BEAKED WHALE	-	-	1		-
DOLPHINS NEI	-	4	-		-
DWARF SPERM WHALE	2	-	-		-
FALSE KILLER WHALE	107	49	33	27	12
FIN WHALE	-	-	-		-
FLATBACK TURTLE	-	-	1		1
GINKGO-TOOTHED BEAKED WHALE	3	-	3		-
GREEN TURTLE	6	4	3	2	7
HAWKSBILL TURTLE	5	-	7	1	1
HUMPBACK WHALE	-	-	1		-
INDO-PACIF. BOTTLENOSE DOLPHIN	4	7	16	19	1
KILLER WHALE	1	-	-		-
LEATHERBACK TURTLE	-	-	-	1	-
LOGGERHEAD TURTLE	4	-	-	5	1
LONG-BEAKED COMMON DOLPHIN	-	-	-		-
MARINE TURTLES NEI	3	-	-		-
MELON-HEADED WHALE	-	-	-	1	-
MINKE WHALE	-	-	1		-
OLIVE RIDLEY TURTLE	7	4	6	3	-
PANTROPICAL SPOTTED DOLPHIN	4	-	-		14
PYGMY KILLER WHALE	4	1	-	5	-
PYGMY SPERM WHALE	5	-	-		-
RISSO'S DOLPHIN	4	6	2		4
ROUGH-TOOTHED DOLPHIN	-	-	-	1	3
SEI WHALE	14	13	9	17	2
SHORT-FINNED PILOT WHALE	14	-	-	-	-
SPERM WHALE	-	-	-	2	1
SPINNER DOLPHIN	-	7	-		23
STRIPED DOLPHIN	4	4	-	18	-
WHALE SHARK	109	45	40	17	14

Table 3. Observed annual estimated catches of species of special interest (seabirds, turtles and marine mammals) by PNG vessels, in the WCPFC Convention Area for years 2019-2023. Source SPC.

Grand Total	378	183	172	168	115

Table 4(a). Annual estimated catches (mt) of non-target, associated and dependent species, including sharks, by the PNG purse seine vessels in the WCPFC Convention Area, for years 2019-2023. Data Source; SPC

Species –	2018	2019	2020	2021	2022	2023
Species -	(mt)	(mt)	(mt)	(mt)	(mt)	(mt)
BALEEN WHALES NEI		20	1.5			
BARRACUDAS NEI	0.1	0	0.2	0.01	0.13	0.29
BATFISHES						
BIGEYE SCAD						0
BIGEYE THRESHER SHARK			0.1	0.11	0.05	0
BIGEYE TREVALLY	0.2	0.3			0.02	
BIG-SCALE POMFRET						
BLACKFIN BARRACUDA					0.01	
BLACK MARLIN	8.3	15	6.9	10.55	6.13	3.51
BLACKTIP SHARK	1.9					
BLAINVILLE'S BEAKED WHALE			2		2	0
BLUE MARLIN	21.9	15.6	11.1	8.53	3.7	2.75
BLUE SEA CHUB / SNUBNOSE CHUB / TOPSAIL DRUMMER	0.5	0		0.04		
BLUE SHARK						0.02
BLUE WHALE		9				
BOTTLENOSE DOLPHIN	0.5	0	0.8		0.66	0.38
BRONZE WHALER SHARK	0.2					
BRYDE'S WHALE	0	11			40	
BULL SHARK						
BULLET TUNA	11.3	0.1	19.3		3.29	48.13
COMMON DOLPHIN		0.8			0.09	3.74
COMMON DOLPHINFISH	7.9	4.4	0.9	0.18	0.38	
DOLPHINS NEI		0.1	0.1	0.21		
EASTERN PACIFIC BONITO	18.6	30.3	65.8	25.99	68.13	114
FALSE KILLER WHALE	5.5	10.1		1.08	1.39	1.18
FILEFISHES NEI				1.5		
FLATBACK TURTLE						0.01
FRIGATE TUNA	35.5	4.5	56.3	57.16	9.28	89.1
GIANT MANTA	28.2	13.1	21.8	11.67	8.62	12.9
GOLDEN TREVALLY	0		0.1		0.01	
GREAT BARRACUDA	0.5	0.2	0.6	0.31	0.55	0.01
GREAT HAMMERHEAD	0.1	0.1	0.1	0.06	0.36	0.01

GREAT WHITE SHARK					0.11	
GREEN TURTLE	0.2	0	0			0.04
GREY REEF SHARK						
HAMMERHEAD SHARKS NEI					0.01	
HAWKSBILL TURTLE	0.1	0			0.01	0.1
HUMPBACK WHALE						1
INDO-PACIF. BOTTLENOSE DOLPHIN	0.1	0			0.31	
INDO-PACIFIC SAILFISH	0.8	0.1	0.3	0.16		0.66
KAWAKAWA	3	1.5	28.9	42.12	36.87	24.1
LEATHERBACK TURTLE	0					
LOGGERHEAD TURTLE	0.1	0.1			0.04	
LONG-BEAKED COMMON DOLPHIN				0.14		
LONGFIN BATFISH	0.1	0		0.01		0.01
LONGFIN MAKO		0.1				
MACKEREL SCAD	44	16.7	19.2	9.39	4.13	5.9
MANTAS DEVIL RAYS NEI	3.5	4	4.7	5.31	5.68	18.3
MARINE TURTLES NEI					0.01	0.03
MELON-HEADED WHALE						
MINKE WHALE		3				
MOBULA	10.4	5.5	9	14.12	3.89	1.4
NARROW-BARRED SPANISH MACKEREL	0.3					0.4
OCEAN SUNFISH	0.1	0.1	0	0.23	0.06	0.2
OCEAN TRIGGERFISH (SPOTTED)	12.4	6.9	2.1	2.3	0.5	0.3
OCEANIC WHITETIP SHARK	1.6	0.9	0.1	0.44	0.16	0.01
OILFISH						
OLIVE RIDLEY TURTLE	0	0	0		0.01	1
OTHER FISH	3.9	1.3	5.9	8.19	2.04	16
PACIFIC BLUEFIN TUNA						
PANTROPICAL SPOTTED DOLPHIN		0.1				
PELAGIC STINGRAY	0	0				
PELAGIC THRESHER SHARK	0				0.09	0.02
PYGMY KILLER WHALE						
RAINBOW RUNNER	93	55.8	22.5	12.57	27.2	29
RISSO's DOLPHIN				0.18	0.2	
ROUGH-TOOTHED DOLPHIN	0.2				0.01	
SCALLOPED HARMMERHEAD				0.17		
SEI WHALE		0.5				

SHARKS RAYS SKATES ETC. NEI	0.1					
SHARKS (UNIDENTIFIED)	2.1	0.4	1.4	2.3		
SHARPTAIL MOLA	0.1			0.02	0.05	
SHORTBILL SPEARFISH		0.1		0.08	0.16	
SHORTFIN MAKO				0.1		0.2
SILKY SHARK	363.6	464.9	259	167.98	130.18	99
SILVERTIP SHARK	0				0.04	0.7
SLENDER SUNFISH				0.03		0.07
SPERM WHALE			0.4			
SPOTFIN DRAGONET			0.1			
STINGRAYS BUTTERFLY RAYS NEI	0	0.1		0.04	0.37	
STRIPED MARLIN	1.8	0.5	0.2	0.03		0.3
SWORDFISH	0.1	0.3	0.2	0.02	0.01	0.3
TIGER SHARK	0.6					0.9
TRIGGERFISHES DURGONS NEI	3.4	4.7	2.4	2.62	0.97	9
TUNAS NEI	202.4	8	25	155	70.5	
UNICORN LEATHERJACKET FILEFISH	0.2	0		0.01		
UNSPECIFIED	2.1	0.3	0.2	0.03		0.19
WAHOO	1.4	0.1	0.1	0.03		0.13
WHALE (UNIDENTIFIED)	20			58.2		
WHALE SHARK	104.9	200.1	57.8	58.2	43.1	77.7
WINGHEAD SHARK	1					0.05
Grand Total	1,018.80	910.7	627.1	657.42	471.51	563.33

Table 4(b). Annual estimated catches (by weight) of non-target, associated, and dependent species, including sharks, by the PNG longline vessels in the WCPFC Convention Area, for the years 2019 -2023. Data Source; SPC.

Species	2019 (mt)	2020 (mt)	2021 (mt)	2022 (mt)	2023 (mt)
BARRACUDAS NEI	1.16	0.02	-	2.21	3.10
BLACK MARLIN	25.91	10.61	-	5.79	8.32
BLACKFIN BARRACUDA	0.16		-		
BLUE MARLIN	14.76	0.98	-	16.44	46.21
BLUE SHARK	14.08		-	-	0.09
COMMON DOLPHINFISH	0.09		-	1.24	5.43
ESCOLAR				0.16	0.40
GREAT BARRACUDA					0.51
INDO-PACIFIC SAILFISH	17.92	9.51	-	9.59	27.53
OILFISH	6.30	1.23	-	3.85	4.19

Grand Total	131.58	32.06	-	77.68	135.91
WAHOO	14.73	5.67	-		8.45
UNSPECIFIED			-	-	
SWORDFISH	8.16	0.18	-	4.71	5.22
STRIPED MARLIN	16.72	3.61	-	2.20	1.45
SKIPJACK TUNA	3.25	0.21	-	6.50	12.02
SICKLE POMFRET				1.28	0.30
SCALLOPED HAMMERHEAD					1.28
RAINBOW RUNNER					0.01
SHORTBILL SPEARFISH				0.12	
PACIFIC BLUEFIN TUNA				3.06	4.44
OTHER FISH	3.88		-	15.58	5.48
OPAH	4.46	0.04	-	4.95	1.48

Table 5. Estimated annual coverage of operational catch/effort, observer and port sampling data for the PNG vessels by gear, active in the WCPFC Convention Area, for years 2019-2023. Source: SPC & NFA.

Year	Gear	Logsheet	Observ	ver Coverage	Port
fear	Gear	Coverage	Trip	Days	Sampling
2019	LL	100%	4%	1%	0%
2019	PS	100%	77%	51%	0%
2020	LL	100%	3%	1%	0%
2020	PS	100%	39%	35%	0%
2021	LL	0%	0%	0%	0%
2021	PS	67%	36%	40%	0%
2022	LL	63%	0%	0%	0%
2022	PS	84%	32%	27%	0%
2023	LL	88.61%	0%	0%	20%
2023	PS	100%	15%	15%	0%

#### 4. Background

Tuna in the Papua New Guinea (PNG) national waters are caught by two main fishing methods, namely purse-seine and longline. Most of the catch (99%) is attributed to the purse-seine fishery. Purse-seining started in PNG waters in the early 1980s and has since intensified, with the 2010 catch being the highest on record at 702,969 mt. The longline fishery started even earlier than the purse-seine fishery, originally by foreign fleets under access arrangements. But in the mid-1990s, a policy on domestication enabled the longline fishery to be a national activity only, hence doing away with access by foreign fleets. However, in 2015, under a trial albacore fishery to determine longline catch rate of albacore, a total of 5

foreign flag ultra-low longline fishing vessels were given access to PNG waters under a domestic charter arrangement. This marks the first steps towards the re-introduction of foreign longline vessels into PNG waters once again. By 2016 there was already 20 foreign vessels fishing under bilateral arrangements inside the PNG EEZ. That number triple in 2023 when a total of 61 foreign vessels were licensed to fish under bilateral arrangements within the PNG EEZ. In 2023, PNG's national fleet was made up of 10 chartered longline vessels actively operating in the PNG waters.

The tuna fishery in PNG represents a balance of both domestic industry development and foreign distant water fishing nations (DWFN) access agreements. Domestic industry development is pursued by using a model whereby a fishing license is granted on the condition that the vessels catch fish for processing facilities in-country. Vessels under this scheme are either re-flagged to PNG or are given incentives by way of reduced license fees and allowed to fish within the archipelagic waters (AW), or are sponsored to fish under the Federated States of Micronesia Arrangement (FSMA) within the PNA members' waters.

The fishery is guided by the National Tuna Fishery Management and Development Plan (NTFMDP) which establishes an overall management structure, and an application framework for all tuna fisheries. This includes catch and effort controls, gear restrictions, the use of Fish Aggregating Devices (FAD), and other management tools for the purpose of tuna resource conservation and management, as well as combating illegal, unregulated, and unreported fishing activities (IUU). The Plan is updated where necessary to conform to the country's development plans as well as regional and international obligations and agreements.

The purse-seine fishery operates within the guidelines of regional and sub-regional arrangements such as the Implementation Arrangements of the Parties to the Nauru Agreement (PNA) and the Harmonized Minimum Terms and Conditions adopted by the Forum Fisheries Agencies (FFA) whose requirements are incorporated into the National Tuna Management and Development Plan.

# 5. Flag State Reporting

This section reports activities by the national fleet inside the waters of the Western and Central Pacific Fisheries Commission Convention Area (WCPFC CA) including PNG's Exclusive Economic Zone (EEZ). The national fleet comprises of longline and purse seine vessels under PNG flag and those foreign flag vessels under domestic charter arrangements.

### 5.1 National Fleet Tuna Longline

The National tuna longline fishing operation in 2021 has been greatly affected by the COVID-19 pandemic. There were no LL fishing activities in the year 2021. The domestic longline operation commenced in 2022 with a total of 10 chartered foreign vessels. The 2022 longline operation saw a total of 2,378 mt of tuna being harvested using a total effort of 53,085 HHooks. There were 10 domestic chartered tuna longline vessels active inside PNG waters in 2023. A total of 1,469 mt of

target tuna species (YFT, ALB & BET) were harvested using an overall effort of 58,658 HHooks in 2023 (Table 1a).

### **5.2 National Fleet: Purse Seine**

PNG manages a purse seine fleet made up of two categories; Domestic PNG flagged vessels and Locally-Based Foreign (LBF) vessels. LBF vessels are foreign flagged and whose activities are governed under charter arrangements with locally based companies. These vessels support onshore processing plants in PNG.

Catches comprise mostly of skipjack with the highest composition, followed by yellowfin and bigeye tuna. Although skipjack is the main target species in this fishery, yellowfin and bigeye are also commercially important.

Catches by the PNG domestic fleet have generally seen a comeback in 2022 (*Figure 1b*) as a result of favorable fishing conditions (La Nina) in the whole of the year. A total logsheets catch of 132,359 mt of skipjack, 81,077 mt of yellowfin and 2,271 mt of bigeye tuna were caught by the PNG purse fleet in the WCPFC convention area (*Table 1b*). This contributed to a total of 215,707 mt of tuna being harvested by the PNG National Fleet in 2022, an increase of 37,096 mt from the 2021 catch. This catch level was reduced in 2023 to 199,920 mt as a result of the El Nino conditions that covered almost half of 2023.

# 6. Coastal State Reporting

This section captures reports on activities of foreign flag and other small scale domestic fishery activities in the national waters. The foreign flag vessels comprised of the foreign purse seine vessels and the recently re-introduced foreign tuna longline vessels. Activities of the now banned domestic shark longline fishery and a very small handline fishery are also reported under this section since all their activities are inside PNG waters.

### 6.1 Purse Seine - Foreign Bilateral Vessels

Foreign purse seine vessels that fish inside PNG EEZ are licensed under the Bilateral Access Agreements between PNG and either Foreign Fishing Companies or Fishing Associations of the home party state. This also includes foreign vessels fishing under the terms of the US Treaty and FSM Arrangement. In the last five years, catches by foreign vessels fishing in PNG waters has averaged around 164,070 mt.

The total tuna catch and effort of foreign flag purse seine vessels fishing in the PNG EEZ between 2020 and 2023 were maintained between 100,000 mt and  $\approx$ 300,000 mt, and the logsheet effort in fishing days were maintained between a little above 3,000 fishing days and  $\approx$ 6,700 fishing days. Refer to Table 6 for detailed information.

		pecies	ecies		
Year	Fishing Days	SKJ	YFT	BET	Total
2019	2,081	64,616	13,683	973	79,272
2020	3,407	111,606	23,035	1,695	136,336
2021	4,000	127,946	27,799	3,281	159,026
2022	6,670	252,706	42,581	3,279	298,566
2023 (Provisional)	4,920	113,366	31,661	2,124	147,150

Table 6: Catch (mt) and effort (logsheets days) estimates for foreign purse seiners fishing in PNG waters from 2019-2023.

#### **6.2 Longline - Foreign Vessels**

Foreign Bilateral Longline vessels that fish in PNG waters are licensed under the Foreign Bilateral Access Agreements between PNG and the Bilateral Access partners through company, fishing association, or home party state.

A total of 61 Foreign Bilateral LL vessels were active inside PNG waters in the year 2023. A total of 368 mt of tuna (provisional) were recorded to be caught by these vessels using an effort of around 8,064 hhooks in 2023. Refer to Table 7 for more information.

The government's plan to domesticate tuna longline fishing activities for local participation has led to the ban in foreign bilateral longline fishing activities inside PNG waters since 1996. For more than two decades no foreign bilateral LL vessels were given access to PNG waters until 2015. An albacore trial fishery in 2015 utilizing six (6) Taiwanese flag ULT LL vessels under chartered arrangement was seen has the first step towards having more Foreign flag Longline vessels re-introduced into PNG waters once again. Changes in the policy after 2020 has finally seen full fleets of Foreign LL vessels given access into PNG waters once again.

Veer	Effort	Catch		Tatal	
Year	(HHooks)	ALB	YFT	BET	Total
2019	67,994	647	1,339	7,704	9,690
2020	96	1	0	2	6
2021	1,423	364	1,534	210	2,107
2022	54,817	898	2005	158	3,061
2023 (Provisional)	8,064	1,116	3,667	331	5,115

Table 7: Catch (mt) and effort (hhooks) estimates for foreign longline fishing in PNG waters from 2019-2023. Data Source: SPC

#### 6.3 Shark Longline

The shark longline fishery was managed under a separate management plan from the tuna longline fishery. The fishery was limited to 9 vessels, setting 1,200 hooks per day with a total allowable catch of 2,000 mt dressed weight per year. All vessels in this fishery fished only in PNG waters.

The shark fishery was closed in the first quarter of 2014 in response to the CMM 2011-04 and CMM 2013-08 which prohibited landings of Oceanic White-Tip and Silky Shark respectively. Figure 4a and 4b shows the recorded catch, number of vessels and effort (hundred hooks) since 2009. Considerable amount of tuna (mainly yellowfin) and billfishes are also caught in this fishery as bycatch. The average estimated catch in 2010-2015 was 1,344.26 mt with 1,011.47 mt being shark catches alone (*Table 8*).

Table 8: Annual catch estimates (mt) of shark species and effort estimate (hundred hooks) for PNG domestic shark longline fleet in waters under national jurisdiction. Data source: PNG NFA.

Year	2010	2011	2012	2013	2014	Average
Effort (HHooks)	22,790	27,934	20,817	16,367	6,129	18,808
Blacktip Shark	18.93	2.81	1.31	5.59	7.45	9.22
Blacktipped Reef Shark	19.75	43.98	36.53	11.17	12.79	24.85
Blue Shark	10.21	18.93	16.08	16.59	9.38	14.24
Galapagos Shark	0.99	0.29	0.06	2.89	2.69	1.38
Grey Reef Shark	23.87	8.42	2.59	4.68	2.1	8.33
Hammerhead Shark	39.15	22.34	18.64	31.06	15.09	25.26
Oceanic White Tip	12.9	7.15	3.74	7.42	7.66	7.77
Silky Shark	907.26	1,292.90	902.46	796.12	399.27	859.6
Silvertip Shark	6.37	0.45	0.39	0.38	0.3	1.58
Tiger Shark	8.76	2.15	1.21	2.16	0.16	2.89
Shark Unidentified	71.72	80.25	52.65	54.61	22.6	56.37
SHARK TOTAL	1,119.90	1,479.66	1,045.64	932.65	479.48	1,011.47
Albacore	1.46	7.32	9.68	1.37	0.23	4.01
Bigeye	3.66	2.37	10.69	18.96	15.56	10.25
Yellowfin	140.03	173.98	205.34	112.84	25.58	131.55
Black Marlin	10.85	4.38	3.51	9.12	2.79	6.13
Blue Marlin	53.92	113.04	65.63	64.83	16.32	62.75
Sailfish	43.85	65.9	35.16	28.69	9.98	36.72
Striped Marlin	0.99	1.23	1.69	1.13	0.65	1.14
Swordfish	49.3	77.57	86.61	56.39	21.71	58.31
Other	36.75	21.79	20.53	26.37	4.28	21.94
OVERALL TOTAL	1,460.72	1,947.22	1,484.46	1,252.35	576.57	1,344.26

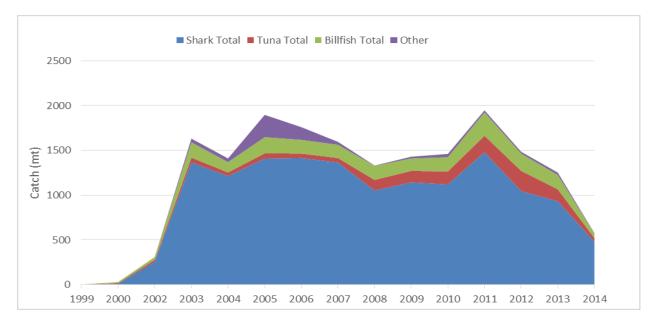


Figure 4a: Catch estimate by shark longline vessels. Data source: NFA

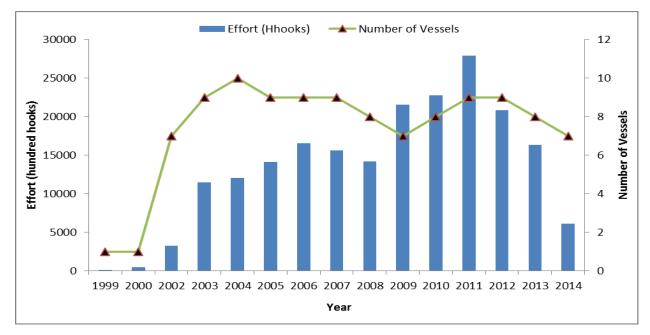


Figure 4b: Effort estimates (hhooks) and the number of shark longline vessels. Data source: NFA

#### 6.4 Handline

The trial on handline fishery commenced in 2005 with 10 pump-boats. In 2009, the number of pumpboats declined to 5 vessels. Although there was some growth potential for this fishery, most of the vessels failed to continue fishing mainly due to lack of proper business management, and the high operational cost for artisanal operators during its inception. The vessels were solely owned and operated by local fishermen. Catch by these vessels, which do not normally exceed 10 mt (estimate) per year, were sold to processing companies as well as local supermarkets. There is no handline fishery existing in PNG at the moment and no pump-boats operating in the waters of PNG to date.

# 7. Socio-Economic Factors

Papua New Guinea is focused on building its domestic tuna industry to an extent where the socioeconomic benefits generated from the domestic tuna industry can offset those that are currently obtained from the bilateral access arrangements.

Some of the government's main focus areas include increase downstream processing of tuna products and value adding, increase employment, increase export earnings, improve enabling infrastructure and improve industry operating environment. The government is also looking at expanding and enhancing International Trade and market access for fishery products as well as supporting, maintaining and encouraging genuine Foreign Direct Investment, and optimization of PNG's participation and local content in the tuna fishery and processing sector.

The government of PNG is now working in collaboration with members within the Forum Fisheries Agency (FFA) under the East New Britain Initiative (ENBi) in implementing FFA Leaders directives to optimize socio-economic returns from their shared tuna resources.

# 8. Exports

The quantity of processed products tuna exported from the domestic industry has been steadily increasing since the 90's to over 100,000 mt commencing 2012. The peak exports and revenue was a little above 200,000 t in 2014 and 2020 earning a revenue of about USD 440 Million and USD 424 Million. The export quantities and value were determined by market demands as well as the level of supply of raw materials (market determined tuna sizes for processing). The sudden fall in the production level in 2015 was linked to the decreased catches in the national waters as a result of the El Nino southern oscillation and the decreasing trend in the exports after 2020 is linked to the downsizing of some of the domestic processing plants in PNG as a result of the tougher financial operational environment created by the Russian – Ukraine war. Most of the export products were canned and processed frozen tuna (*Figure 5b*).

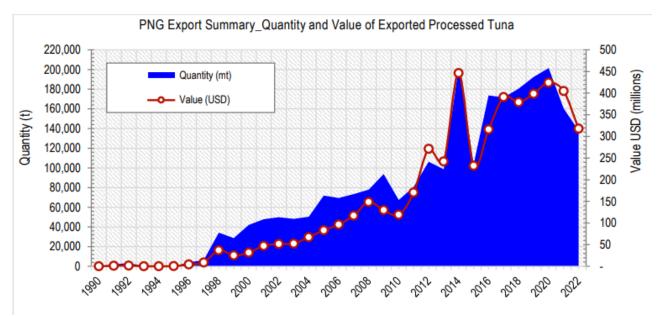


Figure 5a: Quantity (tons) and value (USD) of processed tuna export products by domestic companies. Data source; NFA

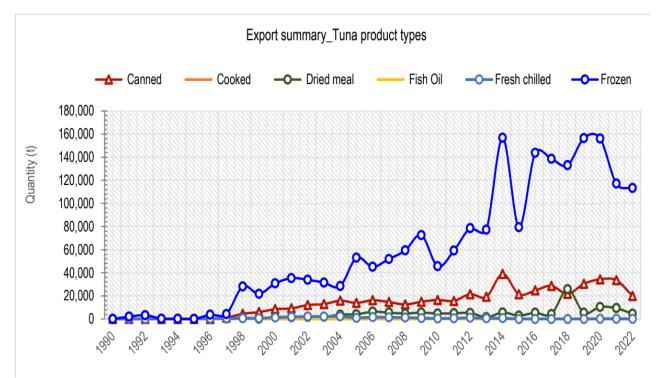


Figure 5b: Quantity of exports by processed product type. Data source; NFA



### ADDENDUM TO ANNUAL REPORT PART 1

#### 8 April 2024<sup>3</sup> SECTION A: SPECIFIC INFORMATION TO BE PROVIDED IN ANNUAL REPORT PART 1 AS REQUIRED BY CMMS AND OTHER DECISIONS OF THE COMMISSION.

REQUIRED D	Y CMMS AND OTHER DECISIONS OF THE COMMIS	
CMM 2009- 03 [Swordfish], Para 8	CCMs shall report to the Commission the total number of vessels that fished for swordfish and the total catch of swordfish for the following: a. vessels flying their flag anywhere in the Convention Area south of 20°S other than vessels operating under charter, lease or other similar mechanism as part of the domestic fishery of another CCM; b. vessels operating under charter, lease or other similar mechanism as part of their domestic fishery south of 20°S; and c. any other vessels fishing within their waters south of 20°S. This information shall be provided in Part 1of each CCM's annual report. Initially, this information will be provided in the template provided at Annex 2 for the period 2000- 2009 and then updated annually. *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.	There was <b>no fishing</b> activities carried out by the <b>PNG National Fleet south</b> of 20° S. Thus, there were no catch and effort directed on swordfish or any other by-catch south of 20°S.
Observer coverage (WCPFC 11 decision – para 484(b))	CCMs are to compile and include in Annual Report Part 1 to be submitted from 2015 onwards, observer coverage for their longline fleet activity in the previous calendar year, noting that revisions can be provided at the annual TCC meeting. A sample report format is provided as guidance to assist CCMs with reporting (WCPFC11 Summary Report Attachment L Table 4) $\underbrace{\frac{CCM Fleet}{REPUBLIC OF} \underbrace{\frac{No. of Hooks}{Distant-water}}_{Total} \underbrace{\frac{Observe}{99} \underbrace{\frac{100}{100}}_{Total}}_{22}$	Refer to Table A4 for detail information on PNG National Fleet LL Observer Coverage.

<sup>&</sup>lt;sup>3</sup> 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.

CMM 2009- 06 [Transshipm ent], Para 11 (ANNEX II)	by this N occur in accordar CCMs sh where p undertal such as o reports a WCPFC19 agreed to provided CCMs for CMM 200 Annex 3 annually in accord Each CCN Commiss (1) the to stocks co fishing ve	Aeasure (ir ports or El nce with the all take all ossible, co- king transh catch and e and port m of Outcome e the TCC14-20 their future 09-06 parage of RP03: Tr by CCMs as ance with the shall inclu- ion: tal quantiti	ncluding EZs) as p ne guide reason rrect in nipment effort da onitorin documen recomm 018-RP0 e reporti raph 11 <b>anshipm</b> <b>anshipm</b> <b>be guide</b> de in Pau <b>is measu</b> CM is res	nt para 48: T nendation th 3 Annex 3 be ing in Annual (Attachment <b>nent informa</b> ed by CMM 2 elines in Ann rt 1 of its Ann rt	ent act Annua nex II. I o valid eceiver vailable n data, The Com at the t e used b Report c O of W <b>tion to</b> <b>009-06</b> <b>nual Rep</b> hly mig transh	ivities al Repo n doin ate an d from e inforr observ nmissio emplate y all ap Part 1, /CPFC1: <b>be pro</b> <b>paragr</b> <b>the me</b> port to ratory f ipped b	that ort in g so, d vessels mation ver n e pplicable , as per 5). vided aph 11 easure. the	Transshipment activities were carried out in the 4 PNG domestic ports in the year 2023. A total of <b>171,185 mt</b> of tuna was transshipped by the <b>PNG National Purse Seine</b> <b>vessels</b> in 2023 inside PNG domestic ports. A total of <b>1,502 mt</b> of tuna was transshipped by the <b>PNG National longline</b> fleet at the domestic port in 2023. Refer to Table A1 and A2 for more information.
	offload ed	n						
	receive d							
	(2) the <b>number of transhipments</b> involving highly migratory							
			-	easure by fis	-		nat is	
responsible for reporting against, broken down by:a)b) transhippedc)d) caughte)offloadein port,transhippedinside thefishi						e) fishing gear		

	••	tside the Convention nvention Area ea	
	offloade d		
	received		
CMM 2009- 06 [Transshipm ent], Para 11 (ANNEX II)	AUDIT POINT [RP] The Secr the CCM in AR Pt 1 of the re prescribed format container 06, and confirms that the re information for all CCM tra Convention Area of all HMI Convention, as well as HMI Area and transhipped outsi accordance with paras 10, 2	equired information in the ed at Annex II of CMM 20 eport includes the requir inshipment events in the FS covered by the FS taken in the Conventio ide the Convention Area,	ne 09- ed on in
	TRANSHIPMENT INFOR	9-06 ANNEX II MATION TO BE REPORTEI LY BY CCMs	
	Each CCM shall include in Pathe Commission:	art 1 of its Annual Report	to
	fish stocks covered by transhipped by fishing responsible for reporti quantities broken dow a. offloaded and rece b. transhipped in por of national jurisdic areas of national ju c. transhipped inside transshipped outsi	ing against, with those n by: eived; rt, transhipped at sea in a ction, and transhipped be urisdiction; e the Convention Area and ide the Convention Area; Convention Area and caug	reas yond
	<ul><li>f. product form; and</li><li>g. fishing gear used</li><li>(2) the number of tranship</li></ul>	pments involving highly overed by this measure b	

	<ul> <li>fishing vessels that is responsible for reporting against, broken down by:</li> <li>a. offloaded and received;</li> <li>b. transhipped in port, transhipped at sea in areas of national jurisdiction, and transhipped beyond areas of national jurisdiction;</li> <li>c. transhipped inside the Convention Area and transhipped outside the Convention Area;</li> <li>d. caught inside the Convention Area and caught outside the Convention Area; and</li> <li>e. fishing gear.</li> </ul>	
CMM 2011- 03 [Impact of PS fishing on cetaceans], Para 5	CCMs shall include in their Part 1 Annual Report any instances in which cetaceans have been encircled by the purse seine nets of their flagged vessels, reported under paragraph 2(b). AUDIT POINT [RP] Secretariat confirms that CCM submitted a report on instances in which cetaceans have been encircled by the purse seine nets of flagged vessels	A total of 41 counts of cetaceans from 8 Species had been reported as interacting with the purse seine fishing in 2023. Refer to Table A3 for more information.
CMM 2018- 03 [Seabirds] Para 13	and as reported in ARPt1 under para 2(b) of CMM. CCMs shall annually provide to the Commission, in Part 1 of their annual reports, all available information on interactions with seabirds reported or collected by observers to enable the estimation of seabird mortality in all fisheries to which the Convention applies. (see below for Part 1 reporting template guideline). These reports shall include information on: 1. the proportion of observed effort with specific mitigation measures used; and 2. observed and reported species specific seabird bycatch rates and numbers or statistically rigorous estimates of species- specific seabird interaction rates (for longline, interactions per 1,000 hooks) and total numbers. AUDIT POINT [RP] The Secretariat confirms that CCM submitted a report using the reporting template in Annex 2 of CMM 2018-03 on seabird interactions reported or collected by observers.	<b>No Applicable to PNG.</b> There were no PNG Flag vessels targeting or interacting with sea bird South of 20 <sup>o</sup> S or North of 20 <sup>o</sup> North.

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  $30^{0}$ S;  $25^{0}$ S- $30^{0}$ S; North of  $23^{0}$ N; or  $23^{0}$ N –  $25^{0}$ S<sup>1</sup>]. 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	Observed seabird captures			
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate <sup>2</sup>
2023						
2022						
2021						
2020						
2019						

1 Insert 'North of 23oN', 'South of 30oS', '25oS-30oS' or '23oN – 250oS'. 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 types<sup>1</sup> used by the fleet in [year].

	Combination of	Proportio	on of observed e	ffort using mitiga	ation mea	asures	
	Combination of Mitigation Measures	South of 30°S	25°S-30°S	25°S to 23°N	North of 23°N		
	No mitigation measures						
Options required	TL + NS						
south of 25°S	TL + WB						
	NS + WB						
	TL + WB + NS						
	HS						
Other options	WB						
25°S-30°S	TL						
Other options	SS/BC/WB/DSLS						
north of 23 <sup>0</sup> N	SS/BC/WB/(MOD or BDB)						
Provide any other							
combination of							
mitigation measures here							
	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, 2023, by species and area.

Species	South of 30°S	25°S-30°S	North of 23°N	$23^{\circ}N - 25^{\circ}S$	Total
E.g. Antipodean albatross					

[species name]			
[species name]			
Total			

 Table A1. Estimated quantity (mt) of tuna transhipped by PNG National Fleet (PNG flag and chartered vessels) inside PNG ports in 2023. Report from the PNG National Catch Documentations Scheme (CDS).

a	) Offloaded and received;	b) Transshipped in domestic port (quantity in metric tons)	c) Transshipped in pacific island port inside the Convention Area (quantity in metric tons);	d) Tuna caught inside the Convention Area	e) Species	f) Product Form	g) Fishing gear
		84,631	Nill	Refer to Table 1b	SKJ	Frozen	PS
		85,043	Nill	Refer to Table 1b	YFT	Frozen	PS
		1,510	Nill	Refer to Table 1b	BET	Frozen	PS
	offloaded	1	Nill	Refer to Table 1b	ALB	Frozen	PS
		8	Nill	Refer to Table 1a	SKJ	Frozen	LL
		1,196	Nill	Refer to Table 1a	YFT	Frozen	LL
		118	Nill	Refer to Table 1a	BET	Frozen	LL
		180	Nill	Refer to Table 1a	ALB	Frozen	LL

Note: Transshipment information for PNG National Fleet only (Domestic flag and Chartered Vessels).

Table A2. Estimated number of transshipments by PNG National Fleet in 2023. Report from national Catch Documents
Scheme (CDS).

Offloaded	No. of transshipment in domestic port	No. of transshipped in pacific island country ports inside the convention area	Caught inside the convention area	Fishing gear
Offloaded	533	-	Refer to Table 1b	PS
Offloaded	26	-	Refer to Table 1a	LL

Species	Date	EEZ	Fate	Discarde dCondCo	GearInteractionDesc	Туре	Indiv idual
				de			S
BALEEN WHALES NEI	22/01/2023	PG	DPA	A0	Broke through net	INTERACTION	1
BOTTLENOSE DOLPHIN	15/02/2023	PG	DPA	A2	Entangled in gear	INTERACTION	1
BOTTLENOSE DOLPHIN	15/02/2023	PG	DPD	D	Entangled in gear	INTERACTION	3
BOTTLENOSE DOLPHIN	16/02/2023	PG	DPA	A1	Crew released from net	INTERACTION	8
BOTTLENOSE DOLPHIN	16/02/2023	PG	DPD	D	Entangled in gear	INTERACTION	3
BOTTLENOSE DOLPHIN	26/01/2023	PG	DPD	D	Other	INTERACTION	5
FALSE KILLER WHALE	1/5/2023	PG	DPA	A1	Crew released from net	INTERACTION	1
FALSE KILLER WHALE	5/2/2023	PG	DPA	A0	Other	INTERACTION	3
FALSE KILLER WHALE	6/4/2023	PG	DPA	A1	Crew released from net	INTERACTION	1
FALSE KILLER WHALE	21/03/2023	PG	DPA	A2	Jump out over net	INTERACTION	2
FALSE KILLER WHALE	22/04/2023	PG	DPU	U	Crew released from net	INTERACTION	2
FALSE KILLER WHALE	24/01/2023	PG	DPA	A2	Crew released from net	INTERACTION	1
FALSE KILLER WHALE	25/01/2023	PG	DPD	D	Entangled in gear	INTERACTION	2
INDO-PACIF. BOTTLENOSE DOLPHIN	20/01/2023	PG	DPD	D	Crew released from net	INTERACTION	1
PANTROPICAL SPOTTED DOLPHIN	20/01/2023	PG	DPD	D	Crew released from net	INTERACTION	1
ROUGH- TOOTHED DOLPHIN	20/01/2023	PG	DPA	A3	Crew released from net	INTERACTION	1
ROUGH- TOOTHED DOLPHIN	20/01/2023	PG	DPD	D	Crew released from net	INTERACTION	2
SEI WHALE	16/02/2023	PG	DPA	A2	Crew released from net	INTERACTION	1
SEI WHALE	17/12/2023	PG	DPA	A1	Crew released from net	INTERACTION	1
SPINNER DOLPHIN	9/2/2023	PG	DPA	A2	Entangled in gear	INTERACTION	1

Table A3. Estimated number and species of cetacean interacted with purse seine gear in 2023. Report from observer data.

 Table A4: Observer coverage for the PNG National longline fleet activity in 2023.

CCM No. of Hooks		Days Fished		Days at Sea			No. of Trips						
Fleet	Fishery	Total estimated (hhooks)	Obs	%	Total Estimated	Obs	%	Total Estimated	Obs	%	Total Estima ted	Obs	%
PNG	SIDS	58,658	45,2 81	77	2,622	24	0.9	2,971	2,300	77	58	1	1.7

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

WCPFC		
CMM 2006-04 [South West striped Marlin], Para 4	In accordance with paragraph 1, CCMs shall provide information to the Commission, by 1 July 2007, on the number of their vessels that have fished for striped marlin in the Convention area south of 15°S, during the period 2000 – 2004, and in doing so, nominate the maximum number of vessels that shall continue to be permitted to fish for striped marlin in the area south of 15°S. CCMs shall report annually to the Commission the catch levels of their fishing vessels that have taken striped marlin as a bycatch as well as the number and catch levels of vessels fishing for striped marlin in the Convention Area south of 15°S. 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.	Not applicable. There was no reported catch of South-west striped marlin by PNG-flagged vessels in 2023.
CMM 2015-02 [South Pacific Albacore] Para 4	CCMs shall report annually to the Commission the annual catch levels taken by each of their fishing vessels that has taken South Pacific albacore, as well as the number of vessels actively fishing for South Pacific albacore, in the Convention area south of 20°S. Catch by vessel shall be reported according to the following species groups: albacore tuna, bigeye tuna, yellowfin tuna, swordfish, other billfish, and sharks. Initially this information will be provided for the period 2006-2014 and then updated annually. CCMs are encouraged to provide data from periods prior to these dates. WCPFC20 Outcome: The Commission agreed that the term "actively fishing for" used in CMM 2015-02 is applied to:	There were <b>no PNG</b> <b>Fishing vessels' operating</b> south of 20 <sup>0</sup> S in the year 2023.

	<ul> <li>'Vessels fishing south of 20 degrees South with an annual catch of albacore in that area with South Pacific albacore greater than 50% of the catch of potential target tuna (albacore, yellowfin and bigeye, southern bluefin, skipjack) and swordfish.'</li> <li>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.</li> </ul>	
CMM 2019-03 [North Pacific Albacore], Para 3	All CCMs shall report annually to the WCPFC Commission all catches of albacore north of the equator and all fishing effort north of the equator in fisheries directed at albacore. The reports for both catch and fishing effort shall be made by gear type. Catches shall be reported in terms of weight. Fishing effort shall be reported in terms of the most relevant measures for a given gear type, including at a minimum for all gear types, the number of vessel-days fished using the template provided in Annex 1.         Annex 1:       Annex 1: Average annual fishing effort for 2002-2004 and annual fishing effort for subsequent years. North Pacific albacore in the North Pacific Ocean         CCM       Area'       Fishery       Vessel       Vessel	There was <b>no fishing effort</b> by PG flag vessels targeted at North Pacific Albacore since 2020. There were however instances of 9 PG chartered (Chinese flag vessels) reported to have caught as by-catch an estimated quantity of 7.7 mt of North Pacific Albacore in the year 2023.

<sup>&</sup>lt;sup>4</sup> For the US swordfish longline fishery, the level of fishing effort shall not be increased beyond the maximum number of limited entry permits available during 2008-2010.

<sup>&</sup>lt;sup>5</sup> For the Chinese Taipei's coastal artisanal longline fishery, the level of fishing effort shall not be increased beyond the number of vessels licensed during 2008-2010.

<sup>&</sup>lt;sup>6</sup> If collective effort limits across the North Pacific Ocean, report the Area and North Pacific Ocean separately.

<sup>&</sup>lt;sup>7</sup> Fishing days shall be the total days of fishing (both targeting and bycatch). CCMs can consider the plural effort metrics in Annex 1 to this CMM in their entirety and in the case of fisheries that take NPS as bycatch, the metric of "fishing days" may not be appropriate for assessing the compliance with the effort control provision.