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10-18 August 2022

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

WCPFC-SC18-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 2021.** 

Country: PAPUA NEW GUINEA

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Port Moresby, Papua New Guinea.

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## 1. 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 locally-based foreign (LBF) vessels which are under domestic charter arrangements to support onshore processing facilities in PNG.

There were a total of 40 purse seine vessels in the PNG national fleet active in the WCPFC Convention Area in the year 2021. A total estimated catch of 170,755 mt of target tuna species were caught by these PNG purse vessels in 2021 using an estimated overall effort of 6,344 fishing days (*Table 1b & 2b*).

There were no domestic tuna longline vessel active inside PNG waters in 2021. There were however foreign tuna longline vessels fishing inside PNG waters in the year 2021. A total of 2,107 mt of target tuna species (YFT, ALB & BET) had been harvested using an overall effort of 1,423 hooks (Table 7).

Estimated catch by purse seine foreign vessels fishing inside PNG waters in 2021 under bilateral and multilateral access agreements stood at 159,026 mt with an estimated effort of 4,000 fishing days (*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.

## 2. Tabular Annual Fisheries Information

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 2017-2021. Source: SPC

Year		2017	2040	2040	2020	2021
tear	i cai		2018	2019	2020	Provisional
Effort (HHooks)		40,610	52,149	8,103	5,746	-
	Albacore	689	196	686	13	-
	Bigeye	47	87	243	5	-
Tuna Catch (mt)	Skipjack	2	2	26	0	-
	Yellowfin	1,249	2070	947	129	-
	Total Tuna	1,987	2355	1,902	147	-
	Black Marlin	65	83	2	10	-
	Blue Marlin	13	40	45	0	-
Billfish Catch (mt)	Striped Marlin	11	5	9	3	-
	Swordfish	6	21	13	0	-
	Total Billfish	95	149	69	13	-
	Blue Shark	6	22	-	-	-
	Silky Shark	-	-	-	-	-
	Hamerhead Sharks	-	-	-	-	-
Shark Catch (mt)	Mako Shark	-	-	-	-	-
	Oceanic White Tip	-	-	-	-	-
	Thresher Sharks	-	-	-	-	-
	Total Sharks	6	22	-	-	-

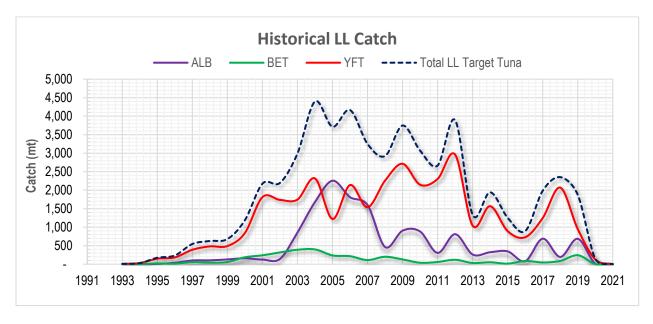


Figure 1 (a): Historical annual catch for the PNG longline fleet by primary species in the WCPFC Convention area.

Table 1(b): Annual catch and effort estimates for the PNG purse seine fleet by primary species for the WCPFC Convention Area for 2017-2021. Source: SPC

Year		2047	2040	2040	2020	2021
		2017 2018 2019		2020	Provisional	
Effort (fishing & searching days)		10,956	9,691	6,627	6,708	6,344
	Albacore	10	17	-	5	7
	Bigeye	8523	7,174	3,880	483	779
Catab (mt)	Pacific Bluefin	-	-	-	-	-
Catch (mt)	- ''	179,124	209,631	195,213	109,191	102,060
		118,847	94,694	66,296	70,839	67,910
	Total	313,466	319,006	265,389	180,518	170,755

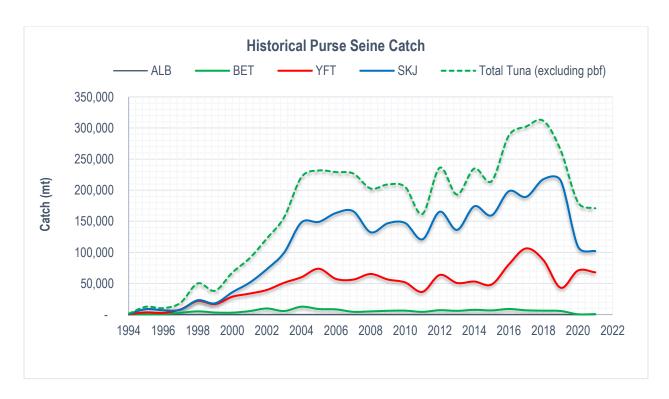


Figure 1 (b): Historical annual catch for the PNG purse seine fleet by primary species in the WCPFC Convention area.

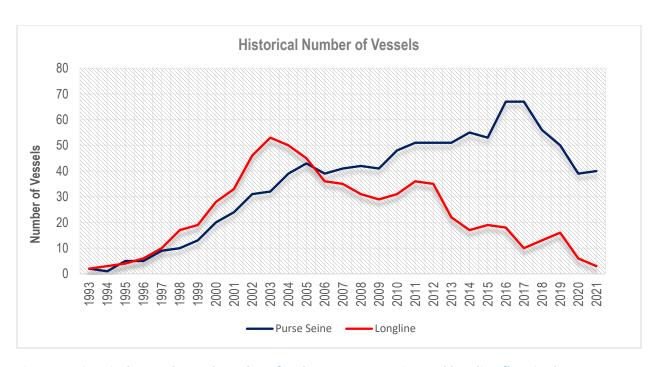


Figure 2: Historical annual vessel numbers for the PNG purse seine and longline fleet in the WCPFC Convention area.

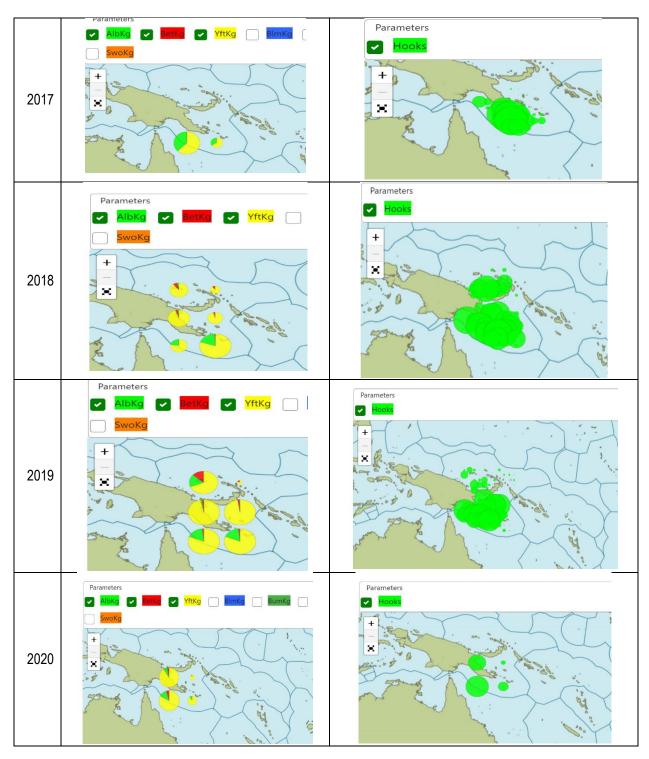
Table 2(a). Number of PNG longline vessels by size category, active in the WCPFC Convention area for years 2017-2020. Note that there were no domestic LL operation inside PNG waters in 2021.

Size class (GRT)	2017	2018	2019	2020	2021 Provisional
0–50	6	-	-	-	-
51–200	9	12	12	6	-
201–500	-	2	2	-	-
500+	-	-	-	-	-
Total	15	14	14	6	-

Table 2(b). Number of PNG purse seine vessels by size category, active in the WCPFC Convention area for years 2017- 2021.

Circ class (CDT)		2040	2040	2020	2021
Size class (GRT)	2017	2018	2019	2020	Provisional
0–500	7	4	6	6	3
501–1,000	14	10	9	7	8
1,001–1,500	37	33	29	21	26
1,500+	9	9	6	2	3
Unknown	-	-	-	1	-
Total	67	56	50	37	40

Catch Effort



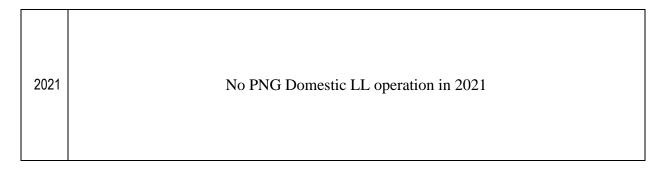
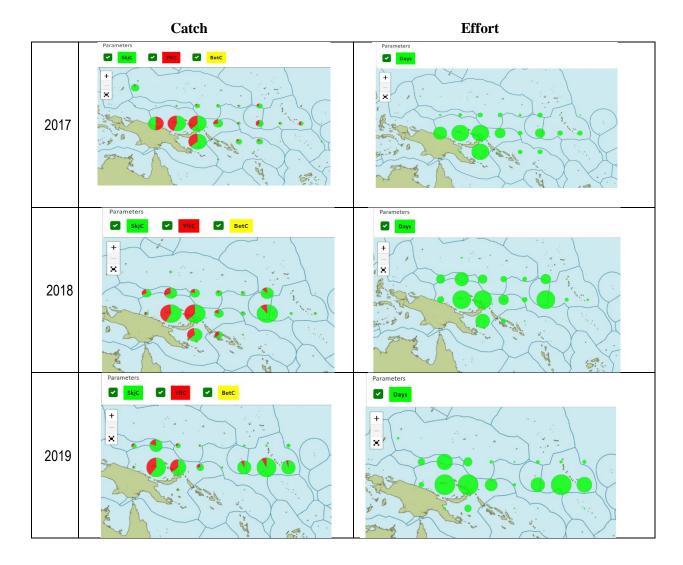


Figure 3(a). Annual distribution of target catch (ALB = "green"; BET = "red"; and YFT = "yellow") and effort by the PNG longline fleet active in the WCPFC Convention area for year 2017-2021. Source: SPC



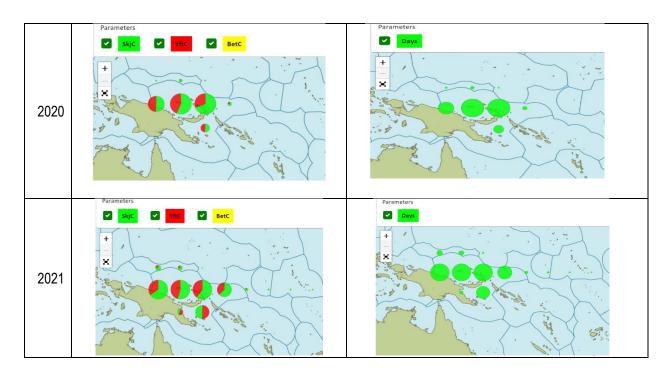


Figure 3(b). Annual distribution of target catch (SKJ = Blue; YFT = yellow; and BET = red and effort by the PNG purse seine fleet active in the WCPFC Convention area for year 2017-2021. Source: SPC

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 2017-2021. Source SPC.

Species	2017	2018	2019	2020	2021
ALBATROSSES NEI	1	1	1	-	-
AQUATIC MAMMALS NEI	-	-	3	-	1
BALEEN WHALES NEI	3	3	7	5	10
BEAKED WHALES NEI	11	8	8	7	-
BIRD (UNIDENTIFIED)	-	-	-	-	-
BLUE WHALE	-	1	1	1	-
BOTTLENOSE DOLPHIN	61	153	21	-	9
BRYDE'S WHALE	29	13	27	18	19
COMMON DOLPHIN	14		11	8	10
CUVIER'S BEAKED WHALE	-	1	-	-	1
DOLPHINS NEI	-	-	-	4	-
DWARF SPERM WHALE	-	-	2	-	-
FALSE KILLER WHALE	325	220	107	49	33
FIN WHALE	2	6	-	-	-
FLATBACK TURTLE	3	3	-	-	1
GINKGO-TOOTHED BEAKED WHALE	2	-	3	-	3
GREEN TURTLE	10	26	6	4	3

HAWKSBILL TURTLE	506	8	5	-	7
HUMPBACK WHALE	3	1	1	1	1
INDO-PACIF. BOTTLENOSE DOLPHIN	38	12	4	7	16
KILLER WHALE	ı	ı	1	ı	-
LEATHERBACK TURTLE	2	1	1	1	-
LOGGERHEAD TURTLE	4	12	4	-	-
LONG-BEAKED COMMON DOLPHIN	7	-	-	-	-
MARINE TURTLES NEI	-	-	3	-	-
MELON-HEADED WHALE	5	7	-	-	-
MINKE WHALE	5	2	-	-	1
OLIVE RIDLEY TURTLE	13	12	7	4	6
PANTROPICAL SPOTTED DOLPHIN	13	10	4	-	-
PYGMY KILLER WHALE	-	6	4	1	-
PYGMY SPERM WHALE	-	4	5	-	-
RISSO'S DOLPHIN	106	9	4	6	2
ROUGH-TOOTHED DOLPHIN	11	16	-	-	-
SEI WHALE	30	29	14	13	9
SHORT-FINNED PILOT WHALE	21	33	14	-	-
SPERM WHALE	1	4	-	-	-
SPINNER DOLPHIN	48	48	-	7	-
STRIPED DOLPHIN	5	77	4	4	-
WHALE SHARK	104	131	109	45	40
Grand Total	1,383	855	378	183	172

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 2016-2020. Data Source; SPC

Species	2016	2017	2018	2019	2020
BALEEN WHALES NEI				20	1.5
BARRACUDAS NEI	0.1	0.1	0.1	0	0.2
BATFISHES	0	0.1			
BIGEYE SCAD	0.2				
BIGEYE THRESHER SHARK		0.1			0.1
BIGEYE TREVALLY	0.2	0	0.2	0.3	
BIG-SCALE POMFRET		0.1			
BLACK MARLIN	5.5	11.3	8.3	15	6.9
BLACKTIP SHARK		0	1.9		
BLAINVILLE'S BEAKED WHALE					2
BLUE MARLIN	15.7	25.6	21.9	15.6	11.1
BLUE SEA CHUB / SNUBNOSE CHUB / TOPSAIL DRUMMER	1.5	0	0.5	0	
BLUE WHALE				9	

BOTTLENOSE DOLPHIN			0.5	0	0.8
BRONZE WHALER SHARK	2.4	0.8	0.2		
BRYDE'S WHALE		0.1	0	11	
BULL SHARK		0.2			
BULLET TUNA	0.6	2.6	11.3	0.1	19.3
COMMON DOLPHIN		0.2		0.8	
COMMON DOLPHINFISH	3.9	8.7	7.9	4.4	0.9
DOLPHINS NEI	0.1	0.1		0.1	0.1
EASTERN PACIFIC BONITO	2.7	2.1	18.6	30.3	65.8
FALSE KILLER WHALE	0.1	3.4	5.5	10.1	
FRIGATE TUNA	3.3	10.1	35.5	4.5	56.3
GIANT MANTA	3.5	5.7	28.2	13.1	21.8
GOLDEN TREVALLY	0	0.2	0		0.1
GREAT BARRACUDA	0.6	1.8	0.5	0.2	0.6
GREAT HAMMERHEAD		0.1	0.1	0.1	0.1
GREEN TURTLE		0	0.2	0	0
GREY REEF SHARK	0	0.1			
HAWKSBILL TURTLE	0	0	0.1	0	
INDO-PACIF. BOTTLENOSE DOLPHIN			0.1	0	
INDO-PACIFIC SAILFISH	0.6	1.3	0.8	0.1	0.3
KAWAKAWA	0.8	3.9	3	1.5	28.9
LEATHERBACK TURTLE	0.1		0		
LOGGERHEAD TURTLE		0.1	0.1	0.1	
LONGFIN BATFISH	0.1	0	0.1	0	
LONGFIN MAKO				0.1	
MACKEREL SCAD	95.7	61.9	44	16.7	19.2
MANTAS DEVIL RAYS NEI	1.5	4	3.5	4	4.7
MARINE TURTLES NEI	0.1	0			
MELON-HEADED WHALE		0.5			
MINKE WHALE				3	
MOBULA	2	5.2	10.4	5.5	9
NARROW-BARRED SPANISH MACKEREL			0.3		
OCEAN SUNFISH	0.1	0.1	0.1	0.1	0
OCEAN TRIGGERFISH (SPOTTED)	19.6	26.3	12.4	6.9	2.1
OCEANIC WHITETIP SHARK	2	0.4	1.6	0.9	0.1
OILFISH	0.5				
OLIVE RIDLEY TURTLE	0	0	0	0	0
OTHER FISH	78.7	19.6	3.9	1.3	5.9
PACIFIC BLUEFIN TUNA		0.5			
PANTROPICAL SPOTTED DOLPHIN	0.1			0.1	
PELAGIC STINGRAY	0.3	0.2	0	0	

PELAGIC THRESHER SHARK		0.1	0		
PYGMY KILLER WHALE		0.4			
RAINBOW RUNNER	270.5	105	93	55.8	22.5
ROUGH-TOOTHED DOLPHIN			0.2		
SEI WHALE				0.5	
SHARKS RAYS SKATES ETC. NEI			0.1		
SHARKS (UNIDENTIFIED)		1	2.1	0.4	1.4
SHARPTAIL MOLA	0	0.2	0.1		
SHORTBILL SPEARFISH	0.1	0.1		0.1	
SILKY SHARK	120.5	324.5	363.6	464.9	259
SILVERTIP SHARK	0.1		0		
SLENDER SUNFISH	0.1	0			
SPERM WHALE					0.4
SPOTFIN DRAGONET					0.1
STINGRAYS BUTTERFLY RAYS NEI		0	0	0.1	
STRIPED MARLIN	0.7	0.7	1.8	0.5	0.2
SWORDFISH	1.2	0.3	0.1	0.3	0.2
TIGER SHARK			0.6		
TRIGGERFISHES DURGONS NEI	16.2	6.1	3.4	4.7	2.4
TUNAS NEI	242.3	332.5	202.4	8	25
UNICORN LEATHERJACKET FILEFISH		0.1	0.2	0	
UNSPECIFIED	0.1	2	2.1	0.3	0.2
WAHOO	0.9	2.7	1.4	0.1	0.1
WHALE (UNIDENTIFIED)	2	0.3	20		
WHALE SHARK	3.2	91.1	104.9	200.1	57.8
WINGHEAD SHARK			1		
Grand Total	900.5	1064.6	1018.8	910.7	627.1

Table 4(b). Annual estimated catches of non-target, associated and dependent species, including sharks, by the PNG longline vessels in the WCPFC Convention Area, for years 2016 -2020. Data Source; SPC

Species	2016	2017	2018	2019	2020	2021
BARRACUDAS NEI	0.444	2.868	3.798	1.165	0.02	-
BLACK MARLIN	25.721	66.439	61.78	25.909	10.612	-
BLACKFIN BARRACUDA				0.16		-
BLUE MARLIN	3.693	1.285	33.26	14.763	0.977	-
BLUE SHARK				14.078		-
COMMON DOLPHINFISH			0.583	0.085		-
INDO-PACIFIC SAILFISH	8.405	22.227	27.469	17.918	9.509	-
MACKERELS NEI	0.099					-
OILFISH	6.377	7.844	12.816	6.297	1.231	-

ОРАН			0.823	4.464	0.04	-
OTHER FISH			1.521	3.875		ı
SHARKS (UNIDENTIFIED)	0.121	0.425				-
SKIPJACK TUNA	0.126	0.72	0.863	3.248	0.21	-
STRIPED MARLIN	8.367	9.493	3.769	16.723	3.606	ı
SWORDFISH	1.244	3.151	18.515	8.163	0.18	ı
UNSPECIFIED		0.02				-
WAHOO	29.056	46.921	28.114	14.73	5.673	-
Grand Total	83.653	161.393	193.311	131.578	32.058	-

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 2017-2021. Source: SPC & NFA.

Vasu	Coon	Logsheet	Observer (	Coverage	Port Sampling
Year	Gear	Coverage	Trip	Days	Coverage
2017	LL	100%	0%	0%	0%
2017	PS	79%	98%	45%	≈ 20%
2018	LL	100%	8%	16%	0%
2010	PS	80%	90%	87%	≈ 20%
2019	LL	100%	4%	1%	0%
2013	PS	100%	77%	51%	0%
2020	LL	100%	3%	1%	0%
2020	PS	100%	39.%	35%	0%
2021	LL	0%	0%	0%	0%
provisional	PS	67%	36.26%	40%	0%

# 3. 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 longline fishery arrangement to determine longline catch rate, a total of 5 foreign flag ultra-low longline vessels were given access to the PNG waters. This marks the re-introduction of foreign longline vessels into PNG waters once again.

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 licence 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 licence fees and allowing them to fish within archipelagic waters (AW) or sponsoring them to fish under the Federated States of Micronesia Arrangement (FSMA).

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.

# 4. Flag State Reporting

This section reports activities by the national fleet in 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 vessels under charter arrangements with domestic companies.

#### **4.1 Domestic Tuna Longline**

The domestic 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.

There were however domestic longline fishing activities before the year 2021. In 2020, the estimated catch of yellowfin tuna was 129 mt, bigeye tuna 5 mt and albacore tuna 13 mt. Total estimated catch of primary billfish species (black marlin, blue marlin, striped marlin and swordfish) in 2019 was 147 mt while primary shark species landed was 0 mt (*Table 1a*). Billfishes and sharks were caught by the tuna longline fishery as bycatch.

The target catches by domestic tuna longline vessels were dominated by yellowfin tuna followed by albacore and bigeye. Catches of domestic tuna longline have generally been increasing since the 90s. The highest estimated catch of total targeted tuna species stood at 4,398 mt in 2003 and 3,891 in 2012 (*Figure 1a*). Decline in overall catches was related to vessels pulling out of the fishery from after 2003 (*Figure 2*). This was due to the governments domestication policy that takes effect in those years coupled with high cost of operation since most of the vessels' operations were engaged to supplying the Japanese Sashimi market through airfreighted exports.

#### 4.2 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 been increasing (*Figure 1b*) as the number of vessels associated to onshore processors increased (*Figure 2*). In 2020 a total catch estimate of 109,191 mt of skipjack, 70,839 mt of yellowfin and 483 mt of bigeye tuna were caught by the PNG purse fleet in the WCPFC convention area (*Table 1b*).

PNG purse seine vessels fish in the PNG waters as well as waters of other PNA member countries under the FSM Arrangement. During the peak El Nino condition in late 2015 activities of the purse seine vessels under the PNG national fleet shifted towards the East. In 2016, vessels' catch and effort were almost equally distributed between the West and the East. *Figure 3(b)*. In 2017 onwards the fishing activities of the purse seine vessels under the PNG national fleet was more concentrated towards the west.

# 5. 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 in this section since all their activities are inside PNG waters.

#### **5.1 Purse Seine - Foreign Vessels**

Foreign purse seine vessels that fish in PNG waters are licensed under the conditions of access agreements between PNG and their company, fishing association or 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 108,565 mt.

There was an increase in the catch and effort of foreign flag purse seine vessels in the PNG EEZ in 2021. The total tuna catches by these foreign flag purse seine vessels in 2021 totaled at 159, 026 mt with an estimated applied effort of 4,000 fishing day (Table 6).

Table 6: Catch and effort estimates for foreign purse seiners fishing in PNG waters from 2017-2021.

Voor	Fishing Days	Catch (mt) / Species					
Year	Fishing Days	SKJ	YFT	BET	Total		
2017	3,050	68,592	17,778	1,186	87,556		
2018	2,625	76,520	15,806	1,020	93,346		
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		

#### **5.2 Longline - Foreign Vessels**

Foreign Bilateral Longline vessels that fish in PNG waters are licensed under the conditions of access agreements between PNG and their company, fishing association or home party state. In the last five years, catches by foreign vessels fishing in PNG waters has averaged around 2,650 mt (Table 7).

Foreign Bilateral Longline vessels were re-introduced into PNG waters in 2015 after non-access for more than two decades. The government's plan to domesticate longline fishing activities for local participation has resulted in the ban in foreign bilateral longline fishing activities inside PNG waters commencing 1996. Change in the government policy in 2014 and 2015 has seen this category of longline vessels given access once again into the PNG national waters.

Table 7: Catch and effort estimates for foreign longline fishing in PNG waters from 2017-2021. Data Source: SPC & PNG NFA Database.

Voor	Effort					
Year	(HHooks)	ALB	YFT	BET	Total	
2017	7,295	17	333	203	553	
2018	11,429	45	402	2,548	2,995	
2019	67,994	647	1,339	7,704	9,690	
2020	96	1	0	2	6	
2021 (provisional)	1,423	364	1,534	210	2,107	

## **5.3 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: 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
Ð	Tiger Shark	8.76	2.15	1.21	2.16	0.16	2.89
E)	Shark Unidentified	71.72	80.25	52.65	54.61	22.6	56.37
Catch (mt)	SHARK TOTAL	1,119.90	1,479.66	1,045.64	932.65	479.48	1,011.47
0	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

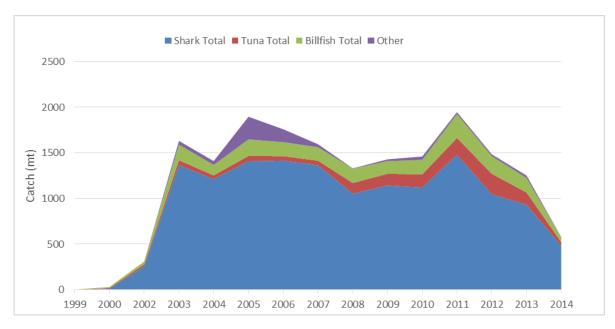


Figure 4a: Catch estimate by shark longline vessels. Data source: NFA

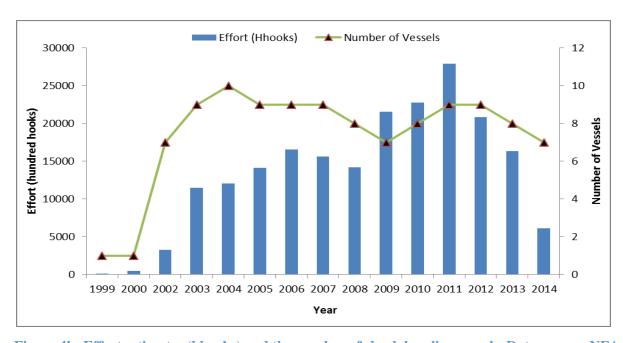


Figure 4b: Effort estimates (hhooks) and the number of shark longline vessels. Data source: NFA

# **5.4 Handline**

The trial on handline fishery commenced in 2005 with 10 pump-boats. In 2009, the number of pump-boats 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.

#### 6. Socio – Economic Factors

Papua New Guinea is focused on building its domestic tuna industry to an extent where the generated revenue can offset that currently obtained from bilateral access fees. The government's main objective is to maximize the benefits from tuna resource to citizens and promote the involvement of nationals in the industry. The government had realized that adding value to the tuna resources is one of the ingredients in encouraging positive growth in the domestic tuna industry, increase in employment opportunities, increased foreign exchange earnings for the country, and increase direct and indirect spin-off benefits among other benefits. In 2021 the PNG National Domestic Fishing and Processing Industries supported around 12,652 direct employment and of this 96% of employment are PNG nationals. Overall, the sector directly employed around 68% of PNG females, 28% PNG males and 4% foreigners (both males and females) in 2021. New commitments and investments in PNG such as the Pacific Marine Industrial Zone (PMIZ) would triple these figures.

# 7. 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 highest quantity exported stood at around 200,000 mt in 2014, earning revenue of about USD 440 million. The production dropped in 2015 to 100, 000 mt due to decreased catch in the national waters as a result of the El Nino southern oscillation effect, however production picked up again in 2016 at around 170, 000 mt.

In 2020 about 201,000 tons of processed tuna products were exported earning a total revenue of around USD 424 million. This was an increase of 9,000 tons exported products and additional USD 26 million revenue earned from the 2019 export quantity of 192,000 tons and export revenue of USD 398 million (*Figure 5a*). This growth is in line with the country's industry development aspirations.

Most of the export products are canned and processed frozen tuna (*Figure 5b*). The quantity of canned tuna exports has been increasing with more tuna processed onshore and the trend is likely to continue as the industry expands in the country.

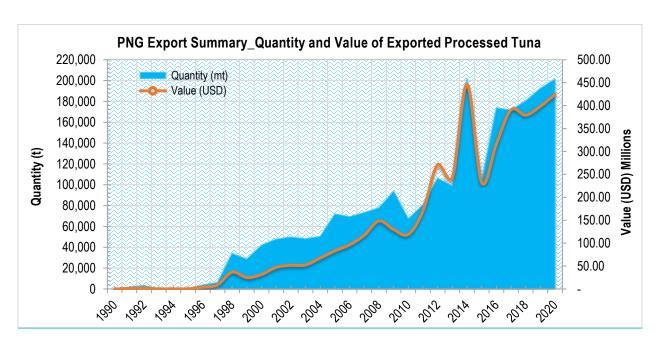


Figure 5a: Quantity (tons) and value (USD) of processed tuna export products by domestic companies. Data source; NFA

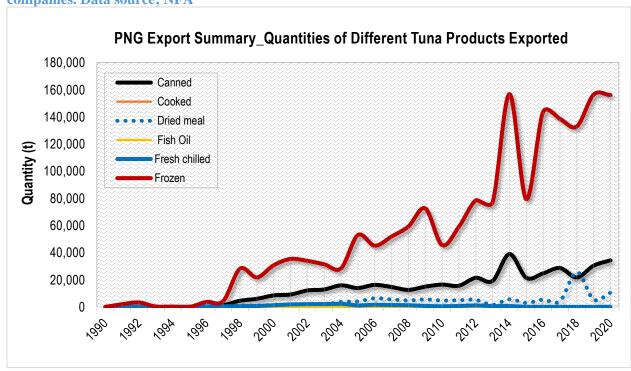


Figure 5b: Quantity of exports by processed product type. Data source; NFA

# **ADDENDUM - CMM REPORTING**



# ADDENDUM TO ANNUAL REPORT PART 1

# <u>SECTION A:</u> 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	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.	There was no fishing operation carried out by the PNG National Fleets south of 20°S. Thus, there were no catch and effort directed on swordfish or any other by-catch south of 20°S.
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Observer coverage (WCPFC 11 decision – para	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)	There were no domestic LL Activities inside PNG national waters. No ROP trips were
484(b)	CCM Fleet Fishery Total estimated r Days Fished Days at Sea No. of Trips  Total estimated r Dobserve estimated r Dobserve estimated r Sea No. of Trips  Total estimated r Sea No. of Trips	therefore implemented.
	CCMs shall report on all transhipment activities covered by this Measure (including transhipment activities that occur in ports or EEZs) as part of their Annual Report in accordance with the guidelines at Annex II. In doing so, CCMs shall take all reasonable steps to validate and where possible, correct information received from vessels undertaking transhipment using all available information such as catch and effort data, position data, observer reports and port monitoring data.	There were transshipment activities by purse seine vessels under PNG National Fleet
	WCPFC15 Outcome document para 48: The Commission agreed to the TCC14 recommendation that the template provided in TCC14-2018-RP03 Annex 3 be used by all applicable CCMs for their future reporting in Annual Report Part 1, as per CMM 2009-06 paragraph 11 (Attachment O of WCPFC15).	and Foreign Bilateral Fleet inside PNG ports in 2021.
CMM 2009-06 [Transshipment], Para 11 (ANNEX II)	Annex 3 of RP03: Transhipment information to be provided annually by CCMs as required by CMM 2009-06 paragraph 11 in accordance with the guidelines in Annex II of the measure.  Each CCM shall include in Part 1 of its Annual Report to the Commission:	Refer to Table A1 & A2 for details.
	(1) the <b>total quantities, by weight</b> , 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  b) transhipped in port, transhipped at sea in areas of national jurisdiction  c) transhipped in side the Convention Area and transhipped outside the Convention Area;  c) transhipped in port, transhipped inside the Convention Area and caught outside the Convention Area;  Area and caught outside the Convention Area;  Area;	

offloaded			
received			

(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				
received				

# ANNEX II TRANSHIPMENT INFORMATION TO BE REPORTED ANNUALLY BY CCMs

Each CCM shall include in Part 1 of its Annual Report to the Commission:

- (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 transshipped outside the Convention Area;
  - d. caught inside the Convention Area and caught outside the Convention Area;
  - e. species;
  - f. product form; and
  - g. fishing gear used

	<ul> <li>(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: <ul> <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> </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).	A total of 117 counts of cetaceans from 14 species had been reported as either interacted or landed in the purse seine fishing operation in 2021. Refer to Table A3 for more information.
CMM 2018-03 [Seabirds] Para 13	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.	No ROP monitoring on PNG longline fleet in 2021 as there were no operation of PNG longline fleet in 2021.

# 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	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.	Not applicable. There were no PNG flagged vessels fishing at south of 15°S.
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.	Not applicable. There were no PNG flag vessels fishing south of 20° S during the period 2007 to 2021.

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 Not applicable. There both catch and fishing effort shall be made by gear type. Catches shall be reported in terms of was no fishing operation weight. Fishing effort shall be reported in terms of the most relevant measures for a given gear carried out by vessels type, including at a minimum for all gear types, the number of vessel-days fished using the under PNG National **CMM** template provided in Annex 1. 2019-03 Fleets North of the **North** Annex 1: equator. Thus, there **Pacific** were no catch and effort Annex I: Average annual fishing effort for 2002-2004 and annual fishing effort for subsequent years for fisheries directed at North Pacific albacore in the North Pacific Ocean Albacore], directed on albacore or Para 3 CCM Area1 Fishery any by-catch north of No. of Vessel No. of Vessel the equator. \* Note: WCPFC10 clarified that this reporting responsibility lies with the flag State

Table A1. Estimated quantity (mt) of tuna transshipped by National Fleet (PNG flag & chartered vessels) inside PNG ports in 2021. Report from the national Catch Documentation 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
	258,663	Nill	Reefer to Table 1b	SKJ	Frozen	PS
offloaded	82,943	Nill	Reefer to Table 1b	YFT	Frozen	PS
	5,564	Nill	Reefer to Table 1b	BET	Frozen	PS

Note: This transshipment information includes those from the National Fleet as well as the Foreign Bilateral vessels. There were no LL transshipment in 2021.

Table A2. Estimated number of transshipments by PNG National Fleet in 2021. 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	552	-	Refer to Table 1b	PS

Table A3. Estimated number and species of cetacean interacted with purse seine gear in 2021. Report from observer data.

Species	Date	Lat	Lon	EEZ	Fate	Gear iinteraction Desc	Туре	Individuals
AQUATIC MAMMALS NEI	28/11/2021	0400.252S	14751.42E	PG	DPA	Broke through net	INTERACTION	1
BALEEN WHALES NEI	02/03/2021	0337.695S	15458.020E	PG	DPA	Crew released from net	INTERACTION	2
BALEEN WHALES NEI	06/01/2021	0126.866S	14720.760E	PG	DPA	Broke through net	INTERACTION	1
BALEEN WHALES NEI	22/03/2021	0142.216S	15125.20E	PG	DPA	Broke through net	INTERACTION	2
BALEEN WHALES NEI	22/03/2021	0142.216S	15125.20E	PG	DPD	Crew released from net	INTERACTION	1
BALEEN WHALES NEI	23/03/2021	0157.331S	15054.84E	PG	DPA	Crew released from net	INTERACTION	2
BALEEN WHALES NEI	28/06/2021	0402.2145	17614.70E	GL	DPA	Crew released from net	INTERACTION	1
BALEEN WHALES NEI	31/07/2021	0256.832S	15752.92E	PG	DPA	Crew released from net	INTERACTION	1
BOTTLENOSE DOLPHIN	04/09/2021	0029.386S	14639.00E	PG	DPA	Entangled in gear	INTERACTION	1
BOTTLENOSE DOLPHIN	09/05/2021	0155.272N	14457.12E	PG	DPA	Crew released from net	INTERACTION	3
BOTTLENOSE DOLPHIN	16/07/2021	0216.426S	15821.72E	PG	DPA	Crew released from net	INTERACTION	5
BRYDE'S WHALE	03/05/2021	0132.157N	14256.820E	PG	DPA	Broke through net	INTERACTION	1
BRYDE'S WHALE	04/05/2021	0133.177N	14258.62E	PG	DPA	Broke through net	INTERACTION	1
BRYDE'S WHALE	06/08/2021	0359.229\$	15511.100E	PG	DPA	Broke through net	INTERACTION	2
BRYDE'S WHALE	06/08/2021	0359.229\$	15511.100E	PG	DPA	Entangled in gear	INTERACTION	1
BRYDE'S WHALE	07/01/2021	0008.448\$	14546.680E	PG	DPD	Crew released from net	INTERACTION	1
BRYDE'S WHALE	14/08/2021	0123.196\$	15444.460E	PG	DPA	Broke through net	INTERACTION	2
BRYDE'S WHALE	14/08/2021	0123.616S	15445.060E	PG	DPA	Other	INTERACTION	1
BRYDE'S WHALE	14/08/2021	0125.147S	15446.740E	PG	DPA	Other	INTERACTION	2
BRYDE'S WHALE	15/08/2021	0203.726S	15442.06E	PG	DPA	Broke through net	INTERACTION	1

BRYDE'S WHALE         19/07/2021         0412.465S         15841.340E         PG         DPA         Crew released from net         INTERACTION         1           BRYDE'S WHALE         21/04/2021         0305.931S         14619.860E         PG         DPA         Broke through net         INTERACTION         1           BRYDE'S WHALE         25/07/2021         0311.404S         15523.760E         PG         DPA         Broke through net         INTERACTION         1           BRYDE'S WHALE         26/08/2021         0336.604S         15412.96E         PG         DPA         Broke through net         INTERACTION         1           BRYDE'S WHALE         30/07/2021         0336.604S         15412.96E         PG         DPA         Other         INTERACTION         1           BRYDE'S WHALE         30/07/2021         0330.9795         15802.640E         PG         DPU         Crew released from net         INTERACTION         1           COMMON DOLPHIN         12/09/2021         0335.748S         14936.360E         PG         DPA         Crew released from net         INTERACTION         4           CUVIER'S BEAKED WHALE         02/02/2021         0312.592S         15618.420E         PG         DPA         Crew released from net         INTERACTION	BRYDE'S WHALE	17/08/2021	0319.1115	15738.40E	PG	DPA	Broke through net	INTERACTION	1
BRYDE'S WHALE   21/04/2021   0050.931S   14619.860E   PG   DPA   Broke through net   INTERACTION   1							-		1
BRYDE'S WHALE         25/07/2021         0311.404S         15523.760E         PG         DPA         Broke through net         INTERACTION         1           BRYDE'S WHALE         26/08/2021         0156.584S         15642.480E         PG         DPA         Broke through net         INTERACTION         1           BRYDE'S WHALE         27/12/2021         0336.604S         15412.96E         PG         DPA         Other         INTERACTION         1           BRYDE'S WHALE         30/07/2021         0300.697S         15802.640E         PG         DPA         Other         INTERACTION         1           COMINON DOLPHIN         12/09/2021         0335.748S         14936.360E         PG         DPA         Crew released from net         INTERACTION         4           CUVIER'S BEAKED WHALE         02/08/2021         0315.592S         15618.420E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         02/09/2021         0348.858S         15104.92E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Other         INTERACTION         1									1
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COMMON DOLPHIN         12/09/2021         0335.7485         14936.360E         PG         DPD         Crew released from net         INTERACTION         4           CUVIER'S BEAKED WHALE         02/08/2021         0312.5925         15618.420E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         02/02/2021         0015.664N         14442.06E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         04/10/2021         0448.090S         15026.340E         PG         DPA         Other         INTERACTION         3           FALSE KILLER WHALE         06/05/2021         1040.122N         14308.28E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         07/05/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>6</td>									6
CUVIER'S BEAKED WHALE         02/08/2021         0312.592S         15618.420E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         02/02/2021         0015.664N         14442.06E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Other         INTERACTION         2           FALSE KILLER WHALE         04/10/2021         0448.090S         15026.340E         PG         DPA         Other         INTERACTION         3           FALSE KILLER WHALE         06/05/2021         0140.122N         14308.28E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         07/05/2021         0348.080         15021.42E         PG         DPA         -         LANDED         7           FALSE KILLER WHALE         07/05/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1									4
FALSE KILLER WHALE         02/02/2021         0015.664N         14442.06E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Other         INTERACTION         2           FALSE KILLER WHALE         04/10/2021         0448.090S         15026.340E         PG         DPA         Other         INTERACTION         3           FALSE KILLER WHALE         06/05/2021         0140.122N         14308.28E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         07/05/2021         0352.750S         15021.42E         PG         DPA         -         LANDED         7           FALSE KILLER WHALE         07/05/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPA         Crew released from net         INTERACTION         2									1
FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Other         INTERACTION         2           FALSE KILLER WHALE         04/10/2021         0448.090S         15026.340E         PG         DPA         Other         INTERACTION         3           FALSE KILLER WHALE         06/05/2021         0140.122N         14308.28E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         07/02/2021         0352.750S         15021.42E         PG         DPA         -         LANDED         7           FALSE KILLER WHALE         07/05/2021         0014.802N         14413.08E         PG         DPD         Other         INTERACTION         1           FALSE KILLER WHALE         09/08/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPA         Crew released from net         INTERACTION         2							-		1
FALSE KILLER WHALE         03/09/2021         0348.858S         15104.92E         PG         DPA         Other         INTERACTION         2           FALSE KILLER WHALE         04/10/2021         0448.090S         15026.340E         PG         DPA         Other         INTERACTION         3           FALSE KILLER WHALE         06/05/2021         0140.122N         14308.28E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         07/02/2021         0352.750S         15021.42E         PG         DPA         -         LANDED         7           FALSE KILLER WHALE         07/05/2021         0014.802N         14413.08E         PG         DPD         Other         INTERACTION         1           FALSE KILLER WHALE         09/08/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0204.216S         15128.80E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPA         Crew released from net         INTERACTION         1					PG	DPA			1
FALSE KILLER WHALE         04/10/2021         0448.090S         15026.340E         PG         DPA         Other         INTERACTION         3           FALSE KILLER WHALE         06/05/2021         0140.122N         14308.28E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         07/02/2021         0352.750S         15021.42E         PG         DPA         -         LANDED         7           FALSE KILLER WHALE         07/05/2021         0014.802N         14413.08E         PG         DPD         Other         INTERACTION         1           FALSE KILLER WHALE         09/08/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0204.216S         15128.80E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Crew released from net         INTERACTION         1									2
FALSE KILLER WHALE         07/02/2021         0352.750S         15021.42E         PG         DPA         -         LANDED         7           FALSE KILLER WHALE         07/05/2021         0014.802N         14413.08E         PG         DPD         Other         INTERACTION         1           FALSE KILLER WHALE         09/08/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Entangled in gear         INTERACTION         1           FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1 </td <td>FALSE KILLER WHALE</td> <td></td> <td>0448.090S</td> <td>15026.340E</td> <td>PG</td> <td>DPA</td> <td>Other</td> <td>INTERACTION</td> <td>3</td>	FALSE KILLER WHALE		0448.090S	15026.340E	PG	DPA	Other	INTERACTION	3
FALSE KILLER WHALE         07/05/2021         0014.802N         14413.08E         PG         DPD         Other         INTERACTION         1           FALSE KILLER WHALE         09/08/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0204.216S         15128.80E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPU         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Entangled in gear         INTERACTION         1           FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION <td>FALSE KILLER WHALE</td> <td>06/05/2021</td> <td>0140.122N</td> <td>14308.28E</td> <td>PG</td> <td>DPA</td> <td>Crew released from net</td> <td>INTERACTION</td> <td>1</td>	FALSE KILLER WHALE	06/05/2021	0140.122N	14308.28E	PG	DPA	Crew released from net	INTERACTION	1
FALSE KILLER WHALE         09/08/2021         0304.068S         15543.680E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         10/01/2021         0204.216S         15128.80E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPU         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Entangled in gear         INTERACTION         1           FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net <td< td=""><td>FALSE KILLER WHALE</td><td>07/02/2021</td><td>0352.750S</td><td>15021.42E</td><td>PG</td><td>DPA</td><td>-</td><td>LANDED</td><td>7</td></td<>	FALSE KILLER WHALE	07/02/2021	0352.750S	15021.42E	PG	DPA	-	LANDED	7
FALSE KILLER WHALE         10/01/2021         0204.216S         15128.80E         PG         DPA         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPU         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Entangled in gear         INTERACTION         1           FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTE	FALSE KILLER WHALE	07/05/2021	0014.802N	14413.08E	PG	DPD	Other	INTERACTION	1
FALSE KILLER WHALE         10/01/2021         0709.079S         15449.50E         PG         DPU         Crew released from net         INTERACTION         2           FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Entangled in gear         INTERACTION         1           FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Crew released from net <td< td=""><td>FALSE KILLER WHALE</td><td>09/08/2021</td><td>0304.0685</td><td>15543.680E</td><td>PG</td><td>DPA</td><td>Other</td><td>INTERACTION</td><td>1</td></td<>	FALSE KILLER WHALE	09/08/2021	0304.0685	15543.680E	PG	DPA	Other	INTERACTION	1
FALSE KILLER WHALE         10/03/2021         0107.590S         14525.64E         PG         DPA         Entangled in gear         INTERACTION         1           FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTI	FALSE KILLER WHALE	10/01/2021	0204.216S	15128.80E	PG	DPA	Crew released from net	INTERACTION	2
FALSE KILLER WHALE         13/01/2021         0311.814S         14623.700E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTI	FALSE KILLER WHALE	10/01/2021	0709.0795	15449.50E	PG	DPU	Crew released from net	INTERACTION	2
FALSE KILLER WHALE         15/02/2021         0155.374S         15226.04E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTIO	FALSE KILLER WHALE	10/03/2021	0107.590S	14525.64E	PG	DPA	Entangled in gear	INTERACTION	1
FALSE KILLER WHALE         15/11/2021         0109.513N         14637.80E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTION         2	FALSE KILLER WHALE	13/01/2021	0311.8145	14623.700E	PG	DPA	Crew released from net	INTERACTION	1
FALSE KILLER WHALE         16/08/2021         0134.015S         15839.900E         PG         DPA         Other         INTERACTION         1           FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTION         2	FALSE KILLER WHALE	15/02/2021	0155.374\$	15226.04E	PG	DPA	Crew released from net	INTERACTION	1
FALSE KILLER WHALE         17/02/2021         0221.514S         15210.20E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         2           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTION         2	FALSE KILLER WHALE	15/11/2021	0109.513N	14637.80E	PG	DPA	Other	INTERACTION	1
FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Broke through net         INTERACTION         2           FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTION         2	FALSE KILLER WHALE	16/08/2021	0134.015S	15839.900E	PG	DPA	Other	INTERACTION	1
FALSE KILLER WHALE         19/10/2021         0329.877S         14604.98E         PG         DPA         Crew released from net         INTERACTION         1           FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTION         2	FALSE KILLER WHALE	17/02/2021	0221.514S	15210.20E	PG	DPA	Crew released from net	INTERACTION	1
FALSE KILLER WHALE         23/05/2021         0417.881N         14731.32E         FM         DPA         Broke through net         INTERACTION         1           FALSE KILLER WHALE         24/10/2021         0715.886S         15221.72E         PG         DPA         Broke through net         INTERACTION         2	FALSE KILLER WHALE	19/10/2021	0329.8775	14604.98E	PG	DPA	Broke through net	INTERACTION	2
FALSE KILLER WHALE 24/10/2021 0715.886S 15221.72E PG DPA Broke through net INTERACTION 2	FALSE KILLER WHALE	19/10/2021	0329.8775	14604.98E	PG	DPA	Crew released from net	INTERACTION	1
	FALSE KILLER WHALE	23/05/2021	0417.881N	14731.32E	FM	DPA	Broke through net	INTERACTION	1
FRASER'S DOLPHIN 21/04/2021 0055.683S 14329.880E PG DPA - LANDED 2	FALSE KILLER WHALE	24/10/2021	0715.886S	15221.72E	PG	DPA	Broke through net	INTERACTION	2
	FRASER'S DOLPHIN	21/04/2021	0055.683S	14329.880E	PG	DPA	-	LANDED	2

GINKGO-TOOTHED BEAKED WHALE	04/05/2021	0133.060N	14258.980E	PG	DPA	Broke through net	INTERACTION	1
GINKGO-TOOTHED BEAKED WHALE	09/04/2021	0118.780S	14544.580E	PG	DPA	Crew released from net	INTERACTION	2
HUMPBACK WHALE	13/03/2021	0010.464N	14218.900E	PG	DPA	Crew released from net	INTERACTION	1
INDO-PACIF. BOTTLENOSE DOLPHIN	06/09/2021	0128.425\$	14916.50E	PG	DPD	•	LANDED	4
INDO-PACIF. BOTTLENOSE DOLPHIN	06/09/2021	0128.425\$	14916.50E	PG	DPU	•	LANDED	2
INDO-PACIF. BOTTLENOSE DOLPHIN	19/08/2021	0445.225\$	15026.34E	PG	DPA	Jump out over net	INTERACTION	7
INDO-PACIF. BOTTLENOSE DOLPHIN	19/08/2021	0445.225\$	15026.34E	PG	DPD	Entangled in gear	INTERACTION	3
MINKE WHALE	25/10/2021	0702.481S	15221.300E	PG	DPA	Other	INTERACTION	1
RISSO'S DOLPHIN	14/03/2021	0037.23N	14114.40E	PG	DPD	Crew released from net	INTERACTION	2
SEI WHALE	01/01/2021	0141.269S	14858.56E	PG	DPA	Broke through net	INTERACTION	1
SEI WHALE	04/09/2021	0231.852S	15303.06E	PG	DPA	Crew released from net	INTERACTION	1
SEI WHALE	05/08/2021	0350.266S	15513.200E	PG	DPA	Broke through net	INTERACTION	2
SEI WHALE	07/03/2021	0133.061N	15514.880E	FM	DPA	Crew released from net	INTERACTION	2
SEI WHALE	17/07/2021	0253.380S	15913.80E	PG	DPA	Crew released from net	INTERACTION	2
SEI WHALE	28/01/2021	0015.750S	14356.760E	PG	DPA	Jump out over net	INTERACTION	1