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FEDERATED STATES OF MICRONESIA

### National Fisheries Report 4th Meeting of the WCPFC Scientific Committee August 11-22, 2008 Port Moresby, PNG

### FEDERATED STATES OF MICRONESIA

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# **1** Annual Fisheries Information

## 1.1 Flag-State Reporting

Logsheet records for 2007 indicated that there were a total of 33 FSM flagged vessels licensed to fish in the Convention Area. However, of the 33 vessels licensed, only 30 vessels actively fished within the Convention Area. By gear type, 4 were purse seiners and 26 were longliners. The increase in 2007 is largely attributed to the establishment of a fish processing facility in Pohnpei which operated a mixture of Chinese, Chinese Taipei and FSM flagged longliners. In 2007, a number of FSM flagged longliners based their operations in the Republic of the Marshall Islands (RMI) and fishing entirely in the RMI EEZ with occasional fishing in the FSM EEZ.

The total catch of the three main target species, (YFT, BET and SKJ) by the 30 FSM flagged vessels for the year 2007 within the WCPFC Convention Area is estimated to be 15,439 mt. By gear type, purse seiners accounted for 87% (13,497) and longliners 13% (1,942).

## 1.1.1 FSM Purse Seine Catch in the WCPFC Convention Area

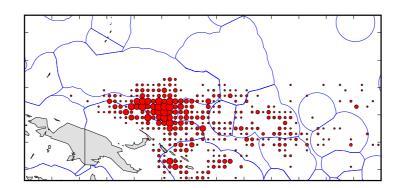
In 2007, FSM purse seine vessels recorded a total catch of 13,497 mt in the Convention Area, as illustrated in Table 1. Approximately 89% (12,004 mt) of the total purse seine catch within the WCPFC Convention Area was skipjack and 11% (1,493) yellowfin tuna. There was no indication of bigeye tuna catch for the FSM flagged purse seine vessels. Records indicated an effort of 650 fishing days but logsheets are provisional at this stage.

FSM purse seiners concentrated most of their fishing effort in the lower equatorial region, mostly within the lower FSM waters and dispersing into the mid-upper waters of PNG and into the high seas pockets between FSM and PNG. This fishing pattern appears to be the same as that of 2006 but the total catch increased by 3,861 mt compared to 2006 catches.

			CZ	ATCH (metric	c tonnes)	
Year	Vessels	Days	SKJ	YFT	BET	TOTAL
2003	8	1,403	24,078	5,355	486	29,919
2004	6	1,381	23,045	3,385	570	27,000
2005	б	1,222	23,115	4,062	282	27,459
2006	3	628	8,545	1,049	42	9,636
2007	4	650	12,004	1,493	0	13,497

Table 1. Annual catch and effort estimates for the FSM purse-seine fleet, by species in
the WCPFC Convention Area, 2003-2007.

(Source: unraised logsheet data; data for 2007 are provisional)



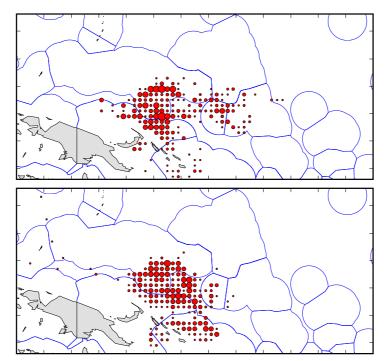


Figure 1. Annual distribution of effort (days fishing and searching) for the FSM purse seine fleet throughout the WCPFC Convention Area for 2005 (top), 2006 (middle) and 2007 (bottom)

#### 1.1.2 FSM longline Catch in the WCPFC Convention Area

The total catch for all species in the WCPFC Convention Area was reported to be 1,942 mt, three times more over 2006 total catch. The total catch is comprised of 72% (1,395mt) yellowfin and 28% (548mt) bigeye. By-catch species are still being processed and analyzed. The significant increase in the domestic longline catch can be largely attributed to the overall increase in the number of longliners actively fishing in 2007 (26) compared to that of 2006 (7). Collection of by-catch data by domestic longliners experienced delays due to the manner in which domestic companies recorded by-catch species. At preparation of this report, by-catch data are yet to be processed by SPC-OFP.

The distribution of catch by FSM longliners indicates a similar pattern to that of 2006 effort, i.e. effort is still concentrated in the RMI EEZ with some fishing effort also in the FSM. This can be largely attributed to some of the FSM flagged longliners basing in the RMI.

				CATCH (metr	ric tonnes	)
	Year	Vessels	ALB	YFT	BET	TOTAL TUNA
-	2003	25	1	276	656	933
	2004	18	0	185	542	727
	2005		0	99	182	281
	2006	7	0	270	172	442
-	2007	26		1,395	548	1,942

 Table 2. Annual catch and effort estimates for the FSM longline fleet, by species in the WCPFC

 Convention Area, 2003-2007

(Source : Raised logsheet data; Data for 2007 are provisional)

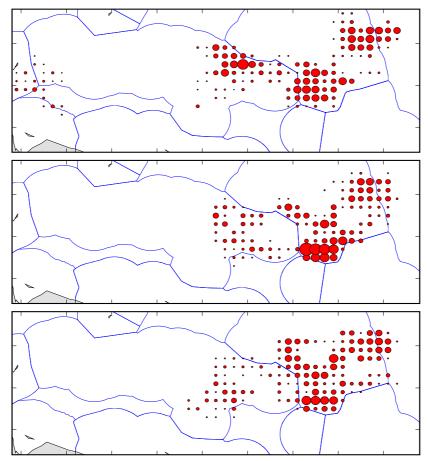


Figure 2. Annual distribution of effort (100s of hooks) for the FSM longline fleet throughout the WCPFC Convention Area for 2005 (top), 2006 (middle) and 2007 (bottom)

# 1.2 Coastal State Reporting

#### **1.2.1 Fleet Structure**

In 2007, a total of 303 vessels were licensed to fish in the FSM EEZ which were predominantly foreign fishing vessels. By gear type, longliners accounted for 133, pole and line 8, and purse seiners 162. Of the 133 longliners, Japan accounted for 66 followed by FSM with 29, Chinese Taipei 27 and China 11. It should be noted that although FSM licensed 29 FSM flagged longliners, only 26 were actively engaged in fishing operations in 2007. In terms of purse seiners, Japan accounted for 35 followed by Chinese Taipei with 34, Korea 28, United States with 21, Vanuatu 14, China 10 and Papua New Guinea 10. Japan is the only country employing the pole and line gear with 8 licensed in 2007.

		Longline				Pole & Line				Purse Seine					
Country	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007	2003	2004	2005	2006	2007
Chinese, Taipei	71	69	31	38	27	-	-	-			36	34	33	34	34
South Korea	-	-	-			-	-	-			26	28	27	28	28
United States	-	-	-			-	-	-			26	22	14	13	21
Japan	81	88	104	78	66	37	30	37	26	8	33	34	34	36	35
Peoples Republic of China	24	27	-	8	11	-	-	-			4	8	8	9	10
Vanuatu	-	9	-			-	-	-				11	8	8	14
Papua New Guinea	-	-	-			-	-	-			8	9	2	4	10
Belize	2	2	2			-	-	-					-		
Kiribati	-	-	-			-	-	-			1	1	-	1	1
FSM	20	22	20	24	29	-	-	-			11	6	6	5	4
Rep. of Marshall Islands	-	-	-			-	-	-			1	3	1	2	4
New Zealand	-	-	-			-	-	-			-	4	-		
Philippines	-	-	1	1		-	-	-			1	1	-		
Netherlands Antiiles														1	1
Solomon														2	
Total	198	217	159	149	133	37	30	37	26	8	147	161	133	143	162

 Table 3. Annual Number of Foreign Fleet Vessels (by Flag and Gear-type) Licensed to Fish in the FSM EEZ, 2003-2007

#### 1.2.2 Catch in FSM EEZ

The 2007 catch by the tuna fishery in the FSM EEZ by logsheets is estimated to be 139,119 mt. Purse seine accounted for 134,489 mt followed by longliners 4,630 mt with no catches reported by the pole and line vessels. Total EEZ catch in 2007 shows a decline of 75,781 mt compared to 2006 catches of 214,900 mt. The decline is most likely a result of less fishing effort by both purse seine and longline vessels. By comparison, purse seine fishing effort in 2007 was 5,243 fishing days while 2006 was 6,812 fishing days. On the other hand, longline catch declined also in 2007 to just 4,630 mt compared to 2006 catches of 6,116 mt. It should be noted that the catch data for 2003-2006 have been updated recently and is reported.

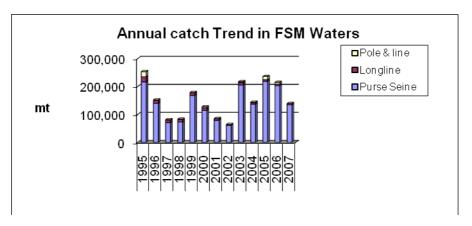


Figure 3. Trend of Catch by all gear-types in FSM Waters, 1995-2007

	Purse Seine	Longline	Pole & line	Total
1995	216,294	18,724	18,156	253,174
1996	139,731	11,081	1,054	151,866
1997	70,572	9,597	1,003	81,172
1998	73,027	9,216	1,026	83,269
1999	168,127	9,791	555	178,474
2000	114,372	9,125	3,814	127,311
2001	79,171	5,221	687	85,079
2002	61,101	2,820	83	64,004
2003	205,389	9,364	2,562	217,315
2004	137,139	5,328	1,384	143,851
2005	218,419	6,106	11,096	235,621
2006	202,752	6,116	6,032	214,900
2007	134,489	4,630	*	139,119

Table 4. Annual Catch Records for all Gear-types within FSM EEZ, 1995-2007<sup>1</sup>

### 1.1.3 Purse Seine Catch in FSM Waters

In 2007, total catch reported was 139,119 mt. of which skipjack accounted for 93% and yellowfin 7% with minimal bigeye catch. The total purse seine catch in the FSM EEZ for 2007 was 134,489mt of which 90% (121,325mt) was skipjack and yellowfin 9% (12,550mt). Bigeye accounted for 1% at 598mt. Chinese Taipei was the dominant purse seine fleet catching 53,286mt (40%) followed by Japan with 29,352mt (22%) and FSM Arrangement vessels with 27,557 (20%) and Korea accounted for just 10,870mt (8%).

The 2007 total EEZ effort by days fishing within the EEZ was reported as 5,243 fishing days, representing a decrease of 1,569 days compared to 2006 of 6,812 fishing days.

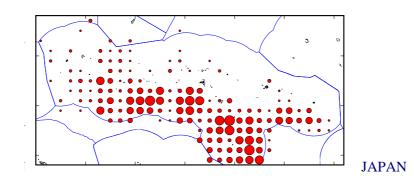
In terms of fishing effort, Chinese Taipei dominated the fishery with 2,049 effort days while FSM Arrangement vessels carried out 1,052 fishing days in the FSM EEZ. Despite being the largest purse seine fleet in the fishery and dominating the fishery over the last five years, in 2007, Japanese purse seiners fishing effort showed a decline compared to the previous five years from 1,721 days in 2006 to just 930 days in 2007. Figure 4 displays the three main purse seine fleets and their areas of concentrated fishing days within the EEZ in 2007. The Chinese Taipei purse seine fleet with the most effort, indicated most of its fishing effort within the lower FSM EEZ, into the high seas pocket adjacent to the PNG EEZ.

<sup>&</sup>lt;sup>1</sup> 2003-2006 Data updated by SPC-OFP in June 2008.

		CATCH (metric tonn						
Fleet	Year	Days	SKJ	YFT	BET	OTH	TOTAL	
China	2003	291	8,377	897	39	0	9,313	
	2004	261	2,232	29	3	0	2,263	
	2005	561	9,888	3,160	178	0	13,226	
	2006	931	15,623	1,415	41	0	17,078	
	2007	500	7,874	1,017	0	2	8,892	
FSM Arrangement	2003	932	20,015	3,052	337	0	23,404	
	2004	1,018	19,369	2,948	379	0	22,697	
	2005	1,457	27,316	6,164	449	0	33,928	
	2006	1,235	28,543	4,808	146	0	33,497	
	2007	1,052	24,520	2,995	29	13	27,557	
Japan	2003	1,994	65,043	5,412	999	0	71,454	
	2004	2,131	46,952	7,965	1,112	0	56,030	
	2005	2,503	68,401	11,161	1,151	0	80,713	
	2006	1,721	58,641	7,068	926	0	66,634	
	2007	930	26,490	2,360	503	0	29,352	
Korea	2003	1,702	46,607	2,894	40	0	49,541	
	2004	1,366	19,125	3,774	268	0	23,167	
	2005	1,422	28,313	6,839	494	0	35,647	
	2006	992	28,115	3,177	285	0	31,577	
	2007	545	10,064	805	0	1	10,870	
Chinese Taipei	2003	1,919	37,288	4,940	455	0	42,683	
	2004	1,593	25,958	4,040	185	0	30,183	
	2005	2,416	42,975	7,058	558	0	50,591	
	2006	1,838	48,295	3,167	158	0	51,620	
	2007	2,049	48,700	4,541	46	0	53,286	
USA	2003	296	4,907	462	103	0	5,471	
	2004	61	239	174	60	0	474	
	2005	81	1,559	265	92	0	1,916	
	2006	24	109	8	4	0	121	
	2007	99	1,870	412	15	0	2,297	
Vanuatu	2003	155	3,187	294	43	0	3,523	
	2004	112	1,640	654	33	0	2,327	
	2005	91	2,166	226	6	0	2,397	
	2006	71	2,026	198	1	0	2,224	
	2007	68	1,808	422	5	0	2,235	
TOTAL EEZ	2003	7,288	185,424	17,950	2,015	0	205,389	
	2004	6,542	115,515	19,583	2,041	0	137,139	
	2005	8,531	180,618	34,874	2,927	0	218,419	
	2006	6,812	181,351	19,840	1,561	0	202,752	
	2007	5,243	121,325	12,550	598	16	134,489	

 Table 5. Annual catches by major purse seine fleets in the FSM EEZ, by flag and species, 2003-2007

(Source : Regional tuna fisheries database; 2007 data are provisional)



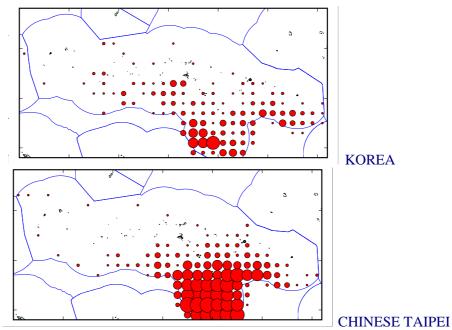


Figure 3. Annual distribution of effort by the main foreign purse seine fleets active in the FSM EEZ, 2007

### 1.1.4 Longline Catch in FSM Waters

FSM EEZ Longline catch for 2007 shows a decline by 24% compared to 2006 catches. The total longline catch targeting yellowfin and bigeye tuna in the FSM EEZ by the four fleets was 4,630 mt. Catch by flag, Japan accounted for 66% (3,079mt) of the total catch while the Pohnpei based Chinese longline fleet accounted for 22% (1,020mt). The catch of the Guam-based Chinese Taipei longliners also declined accounting for just 10% (481mt) while FSM accounted for a mere 2% or 49 mt. Logsheet records indicated that most of the fishing effort by the Japan occurred in both the upper and lower mid areas within the EEZ, whereas the Taiwan longline fleet concentrated most of their effort in the mid-western section of the EEZ. The domestic based Chinese longline fleet fished concentrated most of their effort closer to their home base area, (Pohnpei area). FSM flagged longline fleet showed the same pattern fishing closer to Pohnpei.

leets in the r Swi EEZ	, by hag a			
		Tuna Catch	ı (metric	tonnes)
Fleet	Year	YFT	BET	TOTAL
China	2003	568	2,358	2,925
	2004	158	754	912
	2005	14	38	53
	2006	147	257	405
	2007	249	772	1,020
FSM	2003	195	438	633
	2004	105	274	379
	2005	33	4 5	78
	2006	21	22	44
	2007	17	3 2	49
Japan	2003	2,202	2,564	4,766
	2004	1,362	2,154	3,517
	2005	3,109	2,654	5,764
	2006	2,460	2,703	5,162
	2007	1,330	1,749	3,079
Chinese Taipei	2003	382	658	1,040
	2004	179	341	520
	2005	97	115	212
	2006	181	324	505
	2007	136	345	481
TOTAL EEZ	2003	3,346	6,018	9,364
	2004	1,804	3,524	5,328
	2005	3,253	2,853	6,106
	2006	2,809	3,307	6,116
	2007	1,732	2,898	4,630
10				-

Table 6.	Estimated	Annual	tuna	catches	by	foreign	longline
fleets in th	ne FSM EE	Z, by flag	g and	species, 2	2003	8-2007	

(Source : Regional tuna fisheries database; 2007 data are provisional)

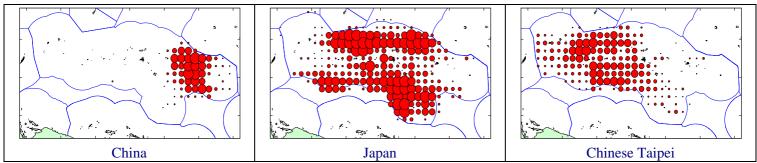


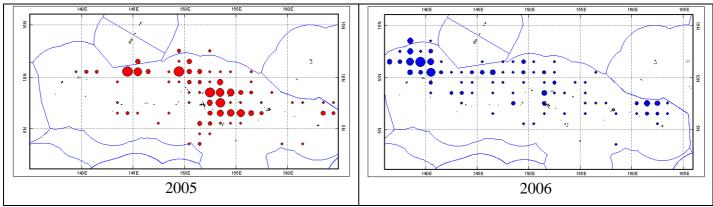
Figure 4. Annual distribution of effort by the main foreign longline fleets active in the FSM EEZ for 2006 (2007 data are *incomplete*)

### 1.1.5 Pole and Line Catch in the FSM Waters

Provisionally, there was no catch reported by the pole and line fleet in 2007. Table 7 presents the annual catch summaries for years 2002 to 2006, whereas Figure 6 illustrated the spread of Japan's pole and line fleet in 2005 and 2006. There is an increase in the observed pole and line effort in the region, although Japan's fleet has reduced from 37 (in 2005) active vessels to 26 active vessels in 2006. 2007 catches is still provisional as of this report.

#### Table 7. Annual catches by foreign pole-and-line fleets in the FSM EEZ, by flag and species, 2003-2007

				CATCH	(metric	tonnes)		
F	'leet	Year	SKJ	YFT	BET	OTH	TOTA	L
J	apan	2003	2,547	10		5	0	2,562
		2004	1,374	7		3	0	1,384
		2005	11,063	28		5	0 1	1,096
		2006	6,023	9		0	0	6,032
		2007						



(Source : Regional tuna fisheries database; 2007 data are not yet available)

Figure 5. Japan Pole and Line Catch and Effort, 2005-2006 (2007 data is not available)

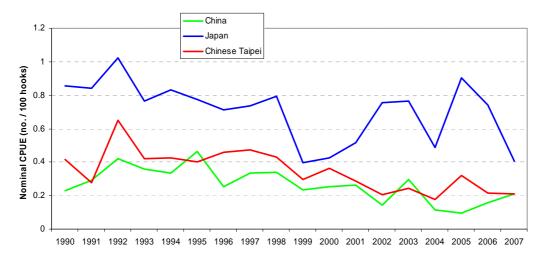


Figure 6. Trends in nominal catch rates of YELLOWFIN TUNA taken by longline fleets operating in the FSM EEZ, 1990-2007

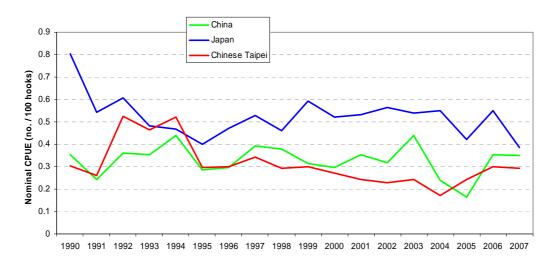
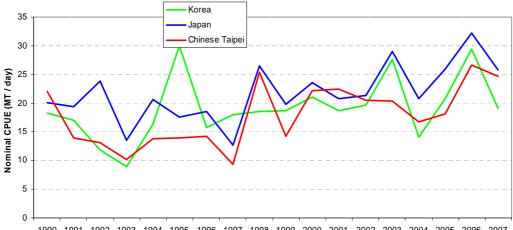


Figure 7. Trends in nominal catch rates of BIGEYE TUNA taken by longline fleets operating in the FSM EEZ, 1990-2007



1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007

Figure 8. Trends in nominal catch rates of SKIPJACK TUNA taken by purse-seine fleets operating in the FSM EEZ, 1990-2007

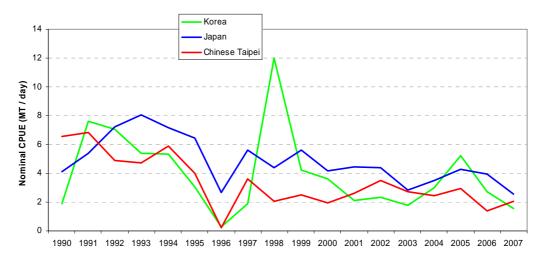


Figure 9. Trends in nominal catch rates of YELLOWFIN TUNA taken by purse-seine fleets operating in the FSM EEZ, 1990-2007

# 2 Research and Statistics

### 2.1 The FSM Fisheries Observer Program

NORMA's Fisheries Observer Program (FOP) has been operating since the Authority began in 1979. With the expansion and diversification of the fleets in the FSM, FOP was expanded to a maximum pool of 12 personnel. Since 1995, FOP has been operating with 10-12 observers under contractual services.

The NORMA FOP achieved 42 observed trips for a total of 1,120 sea-days covering both longline and purse seine vessels. The observer placement coverage on longline gear for 2007 is indicating 24%, and 17.7% on the purse seine gear. However this need to be viewed cautiously as the logsheets and observer data are incomplete and some observer trips did not enter FSM's waters.

The 2007 purse seine and longline observer coverage is based on the available information sourced from the SPC and NORMA records.

	<b>F</b>	age per mag and C	EEZ F.	
Gear	Flag	Obsvd.Seadays	days	Coverage%
Longline				
Trips- 1	China	15	149	10.1
11	FSM	120	312	38.5
2	Chinese Taipei	32	226	14.2
2	Japan	88	369	23.8
Purse Seine				
Trips- 1	China	20	500	4.0
2	FSM (FSMA)	58	395	14.7
7	Japan	272	930	29.2
3	Korea	77	545	14.1
9	Chinese Taipei	250	2,049	12.2
4	FSMA	293	1,052.0	27.9
Longline	Total 16	255	1,056	24.1
Purse Seine	Total 26	970	5,471	17.7
Grand Total		1,225.0	6,527	18.8

Table 8. Observer Trip Coverage per Flag and Gear-type, 2007

The trend in coverage for the program has been positive with a general increase in coverage over the past years. Table 10 presents the overall coverage of the main fishing gear-types, by flag, operating in FSM EEZ. For 2007, the coverage for all gear type is 18.8%, although it needs to be reviewed carefully as some of the observed trips may not have actually entered FSM waters.

*Currently, the observer data is still awaiting analysis by SPC, therefore there is no update for 2007 observer catch composition. We are attaching the same 2005-2006 data.* The NORMA FOP continued to provide SPC observer data for scientific analyses. Tables of species catch composition from observer trip data collected from longline (<u>Attachment 1</u>) and purse seine (<u>Attachment 2</u>) gear-types are attached for details in regards with catch compositions from the FSM FOP. The FSM domestic purse seine fleet (<u>Attachment 3</u>) still awaits data quality briefings before it could be processed.

## 2.2 The FSM Port Sampling Program

NORMA continues to coordinate its port sampling program and monitor the continuous unloading and transshipment activities within FSM ports. There has been no reported transshipment /unloading activities from the other FSM unloading ports over the last three years, but rather concentrated in one port, Pohnpei. NORMA's current record is showing a sampling coverage for purse seine transshipments at 70%, while longline sampling coverage is indicating a much higher coverage of 88%.

## 2.3 Purse Seine Transshipment in FSM

The 2007 purse seine unloading volume is incomplete and the current NORMA record is indicating a much lower unloaded volume of 131,476 mt from 162 vessels. In port visit log is indicating a total of 268 vessels transshipped in Pohnpei Port but not all unloading data are processed, therefore the current total is still an under-estimate. Pohnpei port has been the most active purse seine port of transshipments during the last five years and it has remained the only active port of Purse Seine and longline unloading. Tables 12 and 13 present summaries of the purse seine transshipment activities in FSM for years 2006 and 2007 by total volume and flag.

In 2006, it remained the only active port of transshipment in comparison to the other three ports, Chuuk, Kosrae, and Yap ports. The majority of the vessels were Chinese Taipei (TW) flagged (18 boats) that transshipped 54% of the FSM total transshipment volume (20,289 mt). There were 8 Chinese flagged purse seine vessels that transshipped approximately 15%. Three US vessels, and two Vanuatu registered vessels unloaded a much lesser volume, and so the other fleets. A total of 33 purse seine vessels (8 different flag) transshipped 20,289 mt of tuna during this period (2006).

			Reco	rds in MT		
Port	Flag	SKJ	YFT	Mixed	Total	Unloading
Pohnpei	CN	1,560	25	30	1,615	5
	JP	610	110	0	720	1
	KI	544	136	0	680	1
	KR	0	1,860	0	1,860	2
	PG	1,000	0	0	1,000	1
	ΤW	10,324	297	836	11,457	18
	US	1,187	970	0	2,157	3
	VU	650	150	0	800	2
TOTAL		15,875	3,548	866	20,289	33
TOTAL	TW US	10,324 1,187 650	297 970 150	836 0 0 866	11,457 2,157 800	

 Table 9. Purse Seine Transshipment Activities in FSM, 2006

Source: NORMA Records

Table 10. Purse Seine Transshipment Activities in FSM, 2007

			Reco	rds in MT		
Port	Flag	SKJ	YFT	Mixed	Total	Unloading
Pohnpei	CN	30980	664	336	31,980	41
	KI	470	20	0	490	1
	KR	23,100	100	0	23,200	29
	TW	59,251	2,601	68	61,920	72
	FM	4,000	100	0	4,100	6
	VU	9,770	10	6	9,786	13
TOTAL		127,571	3,495	410	131,476	162

Source: NORMA Records

### 2.4 Longline Unloading in FSM

In early 2007, Luenthai Fishing Venture Limited settled in Pohnpei, hosting over 20 longline vessels, thus contributing to the increased unloading activity in Pohnpei port. Some of the vessels were re-flagged later on during the year from China flags to FSM flagged, and there were 20 vessels converted from CHLL to FMLL. The other 12 remained Chinese flagged and four were Chinese Taipei flagged. Six FSM Flagged Longline vessels were operating under the Clear Water Fishing Incorporated but had moved to RMI and settled through out the year.

Current records showed a total of 468 longline vessels unloading in Pohnpei port of a total volume of 2,372.3 mt (67.7% BET, 25.5% YFT, and 6.7% other species). Majority of the unloaded total was by the FSM flagged longline vessels.

Table 11.	Longline	Unloading i	n FSM,	2006
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Port	Year	Flag	Species	Mt	Unloading
POHNPEI	2006	CN	ALB	0.092	45
		CN	BET	109.995	
		CN	BLM	8.618	
		CN	BUM	0.253	
		CN	MLS	0.263	
		CN	SWO	2.095	
		CN	YFT	93.074	
		FM	BET	3.662	1
		FM	BLM	0.034	
		FM	YFT	2.582	
Total				220.668	46

Source: NORMA Records

Table 12. Longline Unloading in FSM, 2007

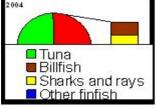
Port	Year	Flag	Species	Mt	Unloading
POHNPEI	2007	CN			
		CN	BET	277.8	16
		CN	YFT	89.2	
		CN	OTH	16	
		TW	BET	292.7	12
		TW	YFT	101.6	
		TW	OTH	62	
		FM	BET	1,036.6	458
		FM	YFT	415.4	
		FM	OTH	81	
Total				2,372.3	486

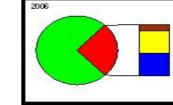
Source: NORMA Records

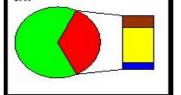
## Attachments

	2004	2005	2006	7	
	3,720	4,354	5,322		
	6	3	3	-	
	0	3		i og Gommogik	
				ies Composit	
		<b>a</b>	2004	2005	2006
Category		Species	%	8	8
Target Tuna		Albacore	1.8818%	0.0000%	0.2131
		Yellowfin	10.8240%	28.9377%	28.5649
		Bigeye	37.0231%	35.7448%	45.0888
Billfish		ue marlin	7.2512%	5.0977%	2.3982
		ck marlin	0.2864%	0.2900%	0.5014
	Strip	ed marlin	1.0261%	1.9536%	0.0000
		Swordfish	4.4898%	0.6716%	0.5348
	Other	Billfish	0.5318%	0.000%	0.0292
Sharks and Pays	ם	lue shark	21.1536%	18 20212	8 0242
Rays		ko sharks	1.1762%	18.8034%	8.0343
				0.4426%	0.4220
	Oceanic white		0.2352%	0.0000%	0.0000
		lky shark	2.2193%	3.6325%	1.2367
	Other sharks		2.3625%	0.3510%	1.4122
Other finfish	Bullet/Frig		0.000%	0.0000%	0.0000
		Kawakawa	0.0000%	0.0000%	0.0000
	Rainb	ow Runner	0.0136%	0.0000%	0.0000
	Common do	Wahoo	0.6580%	1.5263%	0.5557
	Common do		0.1432%	0.9768%	0.7938
		iggerfish arracudas	0.0000%	0.0000%	0.0084
	D	Escolars	0.4432%	0.0000%	4.5415
	T.a	nctfishes	1.6807%	0.1832%	0.3217
		n sunfish	1.0364%	0.0000%	0.0000
	0000	Oilfish	0.4364%	0.2442%	0.0209
		Opah	3.2762%	0.0000%	1.0612
		Pomfrets	1.0466%	0.2289%	0.5055
	Small	baitfish	0.0000%	0.0000%	0.0000
		ther fish	0.7534%	0.4579%	3.6724
					2.0,2.
		Tuna	49.7290%	64.6825%	73.8667
		Billfish	13.5854%	8.0128%	3.4635
			27.1469%		
		and rays		23.2295%	11.1051
	Other	finfish	9.5387%	4.0751%	11.5647
	Total no	n-target	50.2710%	35.3175%	26.1333
		sh (non-			
	Sw	ordfish)	9.0956%	7.3413%	2.9288

#### Attachment 1 Longline Species Catch Composition Summary







		Total I	'una Ca	tch E	stimat	e		
		2004	20	)5	20	06		
	Catch	133,509	172,	481	171	,934		
	Trips	7	5			3		
					Spec	cies Con	nposi	tion
				20	04	2005	5	2006
Category		Sp	ecies	2	5	%		%
Target Tuna		Ski	pjack	66.5	5410%	69.40	71%	65.4466%
		Yell	owfin	22.8	8133%	26.64	95%	23.2596%
		В	igeye	6.9	9682%	2.52	45%	10.5562%
Billfish		Blue m	arlin		)150%	0.05	91%	0.0130%
		Black m	arlin	0.0	)131%	0.00	45%	0.0207%
		Other Bil	lfish	0.0	)070%	0.00	73%	0.0043%
Sharks and Rays		Plue	shark	0 0	)000%	0.00	002	0.0000%
Rays		Mako s			)000%	0.00		0.0000%
	Ocean	Mako s ic whitetip			056%	0.00		0.0000%
	JUCEAIL	Silky			.699%	0.00		0.0708%
	Other	sharks and			)796%	0.00		0.0000%
Other finfish		let/Frigate			2356%	0.00		0.1209%
	Dui		akawa		001%	0.00		0.0000%
		Rainbow R	unner		l676%	0.49		0.1507%
			Wahoo	0.0	)707%	0.03	24%	0.0049%
	Co	ommon dolphi	nfish	0.2	2956%	0.18	51%	0.0057%
		Trigge		0.5	5701%	0.21	50%	0.0371%
			cudas		)044%	0.00		0.0016%
			olars		0008	0.00		0.000%
		Lanctf			0008	0.00		0.0000%
		Ocean su	nrisn lfish		)0008 )0008	0.00 0.00		0.0000% 0.0000%
		01	Opah		)000%	0.00		0.0000%
		Pom	frets		0008	0.00		0.0000%
		Small bai			1344%	0.21		0.0044%
		Other	fish	0.3	8087%	0.06	16%	0.3035%
_								
-		Target	tuna	96.3	225%	98.58	11%	99.2623%
_		Bill	lfish	0.0	351%	0.07	09%	0.0380%
		Sharks and	-		552%	0.12		0.0708%
_		Other fin	nfish	3.3	871%	1.21	98%	0.6289%
-								
	T	otal non-ta	arget	3.6	775%	1.41	89%	0.7377%
□ Target tuna ■ Billfish □ Sharks and ■ Other finfis	rays	2005				2006		

#### Attachment 3 Purse Seine (FM Flagged) Species Catch Composition Summary

	Total Tuna Catch Estimate						
	2004	2005	2006				
Catch	26,957	27,504	*				
Trips	10	5	0				

Species Composition							
		2004	2005				
Category	Species	8	8				
Target Tuna	Skipjack	72.6707%	73.7259				
	Yellowfin	21.6599%	20.4808				
	Bigeye	4.5271%	4.5413				
Billfish	Blue marlin	0.0509%	0.0116				
	Black marlin	0.0144%	0.0451				
	Other Billfish	0.0046%	0.0088				
Sharks and							
Rays	Blue shark	0.0018%	0.0000				
	Mako sharks	0.0000%	0.0000				
	Oceanic whitetip shark	0.0059%	0.0073				
	Silky shark	0.1295%	0.3223				
	Other sharks and rays	0.0123%	0.1431				
Other finfish	Bullet/Frigate tunas	0.0061%	0.0000				
	Kawakawa	0.0201%	0.0012				
	Rainbow Runner	0.5509%	0.3991				
	Wahoo	0.0146%	0.0143				
	Common dolphinfish	0.0366%	0.0234				
	Triggerfish	0.1895%	0.0481				
	Barracudas	0.0100%	0.0080				
	Escolars	0.0000%	0.0000				
	Lanctfishes	0.0000%	0.0000				
	Ocean sunfish	0.0000%	0.0028				
	Oilfish	0.0000%	0.0000				
	Opah	0.0000%	0.0000				
	Pomfrets	0.0000%	0.0000				
	Small baitfish	0.0819%	0.1541				
	Other fish	0.0133%	0.0628				
-	Target tuna	98.8577%	98.7480				

Billfish	0.0699%	0.0654%
Sharks and rays	0.1495%	0.4727%
Other finfish	0.9230%	0.7139%

