

## SCIENTIFIC COMMITTEE THIRD REGULAR SESSION

13-24 August 2007 Honolulu, United States of America

# ANNUAL REPORT – PART 1 INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS

WCPFC-SC3-AR PART 1/WP-7

FEDERATED STATES OF MICRONESIA

### National Fisheries Report 3rd Meeting of the WCPFC Scientific Committee August 16-27, 2007 Honolulu, Hawaii

### FEDERATED STATES OF MICRONESIA

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#### 1 Annual Fisheries Information

### 1.1 Flag-State Reporting

The Federated States of Micronesia (FSM) had 29 FSM flagged (purse seine and longline) vessels, operated by five domestic-based fishing companies in 2006. The 29 vessels were comprised of 24 longline, and five purse seine vessels. Logsheet records for 2006 indicated three active FSM Purse Seine vessels and seven active FSM flagged longline vessels. For this period, the WCPO catch for the FSM flagged purse seine and longline fleets were productively from 10 active vessels, hence 14 vessels were inactive. A foreign domestic based purse seine company was no longer operational in mid 2006, which employed two FSM flagged vessels, reflected a significant decrease of effort and catch for the domestic purse seine fishery within the WCPO for 2006.

The total catch of the three main target species, (YFT, BET and SKJ) by the 10 active FSM flagged vessels for the year 2006 within the WCPFC Convention Area is estimated to be 10,120 mt. For this period, provisional logsheet coverage is 79%.

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

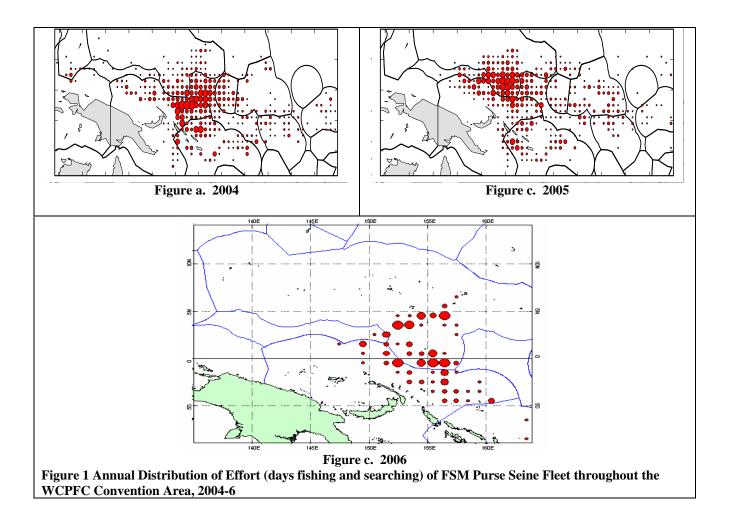
The three active FSM flagged purse seine vessels indicated catch record of 9,637 mt in the Convention Area, as presented in Table 1. Of the 92% of the total catch of FSM purse seine fleet, approximately 88% and 11% of it was predominantly skipjack and yellowfin tuna.

The three vessels exerted most effort in the lower equatorial region, mostly within the lower FSM waters and disbursing into the mid-upper waters of PNG. Submitted logsheets indicated a total of 461 reported fishing days by the domestic fleet in 2006. Due to the drop in FSM Flagged purse seine vessel numbers from six to three, there was less effort and catch by this fleet during 2006 period.

Table 1 Annual Catch (by Species) and Effort Estimates for the FSM Purse Seine fleet in the WCPFC Convention Area, 2001-2006.

	Purse S	eine Eff	ort	Ca	atch (me	etric	tones	5)
Year	Days Fishing & Searching	UnAss. Sets	Assoc. sets	SKJ	YFT	BET	отн	TOTAL
2001	853	367	339	10,689	5,107	859	0	16,654
2002	949	435	396	15,531	4,667	587	0	20,785
2003	1,332	651	502	24,054	5,505	337	0	29,895
2004	1,203	305	727	22,998	3,233	726	1	26,958
2005	1,115	562	484	23,161	3,551	793	0	27,504
2006				8,544	1,093	0	0	9,638

(Source: unraised logsheet data; data for 2006 are provisional)



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

The 2006 FSM longline total catch for all species in the WCPFC Convention Area was reported to be 482 mt. It represented an increase of approximately 10% above 2004 catch. The breakdown of the total catch is 172 mt of bigeye (~35%), 270 mt of yellowfin (~56 %), 36.5 mt and 40 mt (9.3%) of other species. For three years, total WCPO catch for the domestic longline fleet has remained constantly low.

During the reporting period, most of the fishing effort is concentrated in the RMI's EEZ by the FSM flagged longline vessels based in Majuro. Over the past five years, catch for the longline domestic fleet has been more dispersed in the adjacent southern RMI's EEZ.

Table 2 Annual Catch (by Species) and Effort Estimates for the FSM Longline Fleet in the WCPFC Convention Area, 2001-2006

	Effort(100s of hooks)	Catch (metric tones)							
Year		BET	YFT	BLM	BUM	MLS	SWO	ОТН	TOTAL
2001	49,282.10	650.6	337.5	67.4	5.2	0.1	22.5	20.9	1,104.30
2002	60,469.30	759.4	163.5	44.8	5.6	0.1	21.1	7.6	1,002.00
2003	51,543.90	656.1	275.9	45.7	8.4	0	11.3	83.8	1,081.20
2004	42,377.80	541.8	185.4	5.6	50.4	1.3	8.5	48.7	841.7
2005	17,887.50	181.7	98.8	0.3	33.3	0.1	2.8	17	333.9
2006		172	270				 	40	482

(Source: Raised logsheet data; Data for 2006 are provisional)

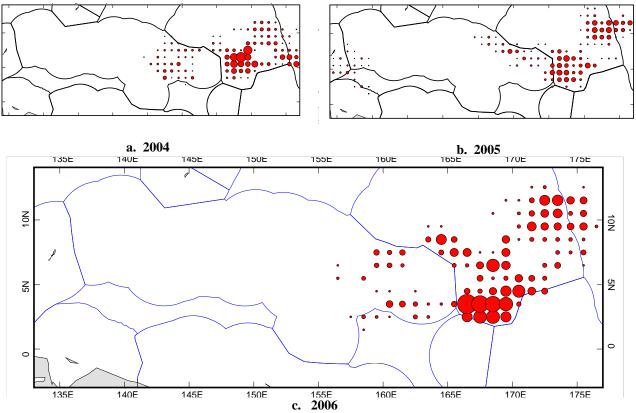


Figure 2. Annual Distribution of Effort (100s of hooks) for the FSM Longline Fleet throughout the WCPFC Convention Area, 2004-6

### 1.2 Coastal-state reporting

The number of both domestic and foreign fishing vessels licensed annually to fish within the EEZ from 14 countries, ranging from 340 to 400 vessels over the last decade. Japanese fishing vessels (all three gear types) has been the most numerous amongst the other countries. Japan also employed all and the only pole and line vessels within the fishery. For this period (2006), the total count of vessels licensed is 318, less than 2005 of 330 vessels, and 2004 of 399 vessels.

The majority of the vessels licensed by NORMA to fish in the FSM EEZ are the foreign vessels, and the license revenue from the activities of these vessels represents a significant percentage of overall government revenue. Catch and effort has fluctuated with total catches of target tuna species ranging from about 75,000 tons to over 200,000 tons during the last decade.

Table 3 Annual Number of Foreign Fleet Vessels (by Flag and Gear-type) Licensed to Fish in the FSM  $\rm EEZ, 2003-6$ 

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

(Source: NORMA Licensing Records)

The 2006 catch by the tuna fishery in the FSM EEZ by logsheets is estimated to be 129,577 mt. The three gear types comprise the total catch of the target tuna catch in the following order: purse seine 122,214; longline 6,004 mt; and pole and line 1,359 mt. Total EEZ catch has increased 12% over last year's total EEZ catch from all fleets within both the purse seine and longline fisheries.

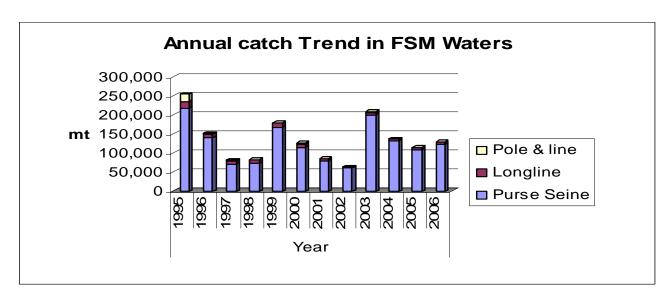


Figure 3.Trend of Catch by all Gear-types in FSM Waters, 1995-2006

Table 4 Annual Catch Records for all Gear-types within FSM EEZ, 1995-2006

	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	199,188	6,593	1,733	207,514			
2004	133,011	3,747	*	136,758			
2005	110,055	4,244	1,049	115,348			
2006	122,214	6,004	1,359	129,577			

#### 1.2.1 Purse Seine Catch in FSM Waters

A total of 140 vessels of 10 different flags fished in the FSM waters for 2006 period. A record of over 122,000 mt of the three target species (skipjack >83%, yellowfin ~14%, and < 2%) of tuna was harvested by the purse seine gear-type within FSM's waters.

The Japanese purse seine fleet of 34 active vessels dominantly fished with the most catch effort (42.5%) of the target catch. The Chinese Taipei purse seine fleet of 33 active vessels fished a close catch effort of 30% of the total EEZ purse seine catch. The Korean purse seine fleet of 27 vessels showed a much lesser catch effort of 22.3%. These are the three dominant fleets with the most catches of over 20,000 mt of the target species.

The FSM EEZ catch (122,214 mt) for the purse seine fishery by nine fleets is dominantly comprised of SKJ (93%), YFT (6.4%) and BET (0.5%). Effort by days fishing within the EEZ was reported as 3,442. The Japanese, Korean and Taiwanese purse seine fleets significantly fished with the most effort within the EEZ for this period. Japan purse seine fleet remained dominant over the other fleets with the most effort for this period, as it has been over the last decade.

Table 5 Annual Catch Records for all Flags within FSM EEZ, 2006

Year	Flag	Days	Bet	SKJ	YFT	ОТН	TOTAL
2006	CN	15	0	130	15	0	145
2006	FM	70	0	1,617	114	0	1,731
2006	JP	1,258	627	47,459	3,951	0	52,037
2006	KR	770	0	25,187	2,163	0	27,350
2006	PG	27	0	619	43	0	662
2006	SB	1	0	0	0	0	0
2006	TW	1,189	5	35,415	1,290	7	36,717
2006	US	17	0	18	0	0	18
2006	VU	95	0	3,298	257	0	3,555
TOTA	TOTAL		632	113,742	7,833	7	122,214

Table 6 Purse Seine Annual Catches (Mt) by flag and species in the FSM EEZ, 2002-2006

	Catch (metric tonnes)							
Fleet	YEAR	SKJ	YFT	BET	OTH	TOTAL		
China	2002	440	15	0	0	455		
	2003	4,319	509	0	0	4,828		
	2004							
	2005	655	105	0	0	760		
	2006	130	15	0	0	145		
FSM	2002	904	279	0	0	1,183		
	2003	0	0	0	0	0		
	2004							
	2005	2,935	475	0	0	3,410		
	2006	1,617	114	0	0	1,731		
Japan	2002	7,252	1,679	129	0	9,060		
	2003	65,079	5,408	997	0	71,484		
	2004	46,406	7,918	1,085	0	55,409		
	2005	30,943	7,909	479	0	39,331		
	2006	47,459	3,951	627	0	52,037		
Korea	2002	6,735	915	0	0	7,650		
	2003	35,965	2,335	40	0	38,340		
	2004	14,805	3,613	18	0	18,436		
	2005	18,877	6,338	1	0	25,216		
	2006	25,187	2,163	0	0	27,350		
New Zealand	2002							
	2003	1,101	56	0	0	1,157		
	2004							
	2005							
	2006	0	0	0	0	0		
PNG	2002							
	2003	290	431	183	0	905		
	2004	540	0	0	0	540		
	2005							
	2006	619	43	0	0	662		
Chinese Taipei	2002	18,999	3,461	10	0	22,470		
	2003	31,841	4,644	35	1	36,521		
	2004	22,107	3,994	54	8	26,163		
	2005	32,896	5,822	85	75	38,878		
	2006	35,415	1,290	5	7	36,717		
Vanuatu	2002	0	0	0	0	0		
	2003	1,877	95	0	0	1,972		
	2004	1,196	610	0	0	1,806		
	2005	2,165	295	0	1	2,461		
	2006	3,298	257	0	0	3,555		
US	2006	18	0	0	0	18		
TOTAL EEZ	2002	34,330	6,349	139	0	40,818		
	2003	140,472	13,478	1,255	1	155,207		
	2004	85,054	16,135	1,157	9	102,355		
	2005	88,471	20,944	565	75	110,055		
	2006	113,742	7,833	632	7	122,214		

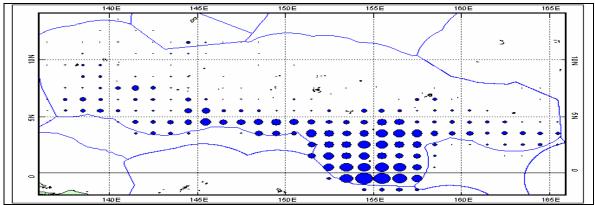


Figure 4. Annual Distribution of Effort by the Main Foreign Purse Seine Fleets Active in the FSM EEZ, 2006

### 1.2.2 Longline Catch in FSM Waters

In the year 2006 there were four longline fleets operating within the FSM EEZ, Japan, Chinese Taipei, FSM domestic fleet, and China. The Japan longline fleet predominantly fished with the most effort for 5,155 mt (85%) of the two target species, YFT and BET. The Guam-based Taiwan longline fleet fished 9% of the total, and domestic based Chine flagged longliners indicated only 4% catch of the total.

Loghseet records indicated the most fishing effort by the Japan longline fleet in both the upper and lower mid area within the EEZ, whereas the Taiwan longline fleet focused with the most effort towards the mid-western section of the EEZ. The domestic based China flagged longline fleet obviously fished a very close range to their home base area, (Pohnpei area) similarly with the FSM flagged longline fleet.

Table 7 Longline Catches by Flag and Species, 2006

I table /			COLLEGE K	<i>y</i> =8		ecres, 2	-000								
Year	Flag	Days	ALB	BET	SKJ	YFT	BLM	BUM	MLS	SFA	SSP	swo	SHK	отн	TOTAL
2006	CN	697	2	151	0	86	0	13	0	0	0	2	2	2	259
2006	FM	82	0	15	0	11	0	0	0	0	0	0	0	1	27
2006	JP	5,945	128	2,333	1	2,225	6	263	3	1	0	54	124	18	5,155
2006	TW	2,435	0	237	0	128	43	49	0	0	0	64	43	0	564
TOTAL	L	9,159	130	2,737	1	2,450	49	325	3	1	0	120	168	20	6,005

Source: Logsheets

Table 8. Longline Annual Catches by Flag and Species in the FSM EEZ, 2002-6

bie 8. Longime Ann			tch (metr		· · · · · · · · · · · · · · · · · · ·
Fleet	YEAR	BET	YFT	ОТН	TOTAL
China	2002	376	116	82	574
	2003	381	135	145	661
	2004	112	29	38	179
	2005	10	8	3	21
	2006	151	86	21	257
FSM	2002	226	50	22	299
	2003	267	118	76	460
	2004	38	17	12	67
	2005	14	12	2	28
	2006	15	11	1	27
Japan	2002	933	563	73	1,569
	2003	2,510	2,181	367	5,058
	2004	1,978	1,261	276	3,515
	2005	1,705	2,072	329	4,105
	2006	2,333	2,225	598	4,576
Chinese Taipei	2002	371	181	264	816
	2003	648	378	801	1,827
	2004	83	46	92	221
	2005	30	23	37	90
	2006	237	128	199	365
TOTAL EEZ	2002	1,906	909	442	3,257
	2003	3,807	2,812	1,388	8,007
	2004	2,211	1,352	418	3,982
	2005	1,759	2,114	371	4,244
	2006	2,737	2,450	817	6,004

(Source: Unraised logsheet data collected by NORMA)

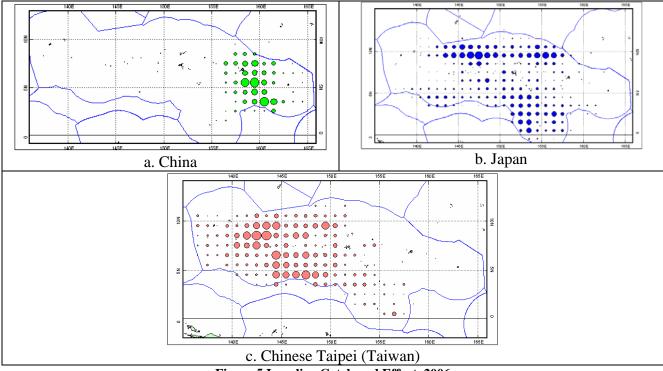


Figure 5 Longline Catch and Effort, 2006

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

The only pole and line fleet operating in the FSM EEZ consisted of 26 Japan flagged vessels. Table 9 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. In 2006, a catch of 1,359 mt was recorded,

dominantly of skipjack and <1% of yellowfin tuna. There is 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).

Table 9 Annual Pole and Line Catches by Flag and Species in the FSM EEZ, 2002-2006

		Catch (metric tones)						
Fleet	YEAR	SKJ	YFT	OTH	TOTAL			
Japan	2002				_			
	2003	1,729	4	0	1,733			
	2004	83	0	0	83			
	2005	1,045	4	0	1,049			
	2006	1,357	1	1	1,359			

(Source: Unraised logsheet data collected by NORMA)

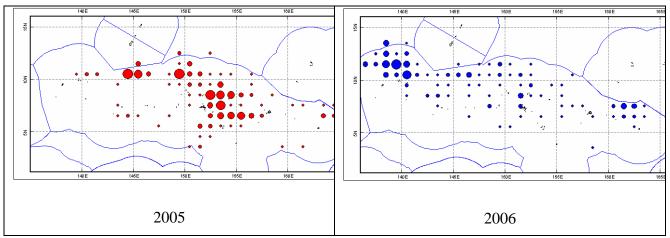


Figure 6 Japan Pole and Line Catch and Effort, 2004-2006

#### 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 to 1999, FOP has been operating with 10-12 observers under contractual services of six-month with the Authority.

The NORMA FOP in 2005 was running at the pool of 7 active fisheries observers on one-year contract with the Authority. In 2005 NORMA FOP made 28 trips making 1,021 sea-days on the three main fishing gear types operating. The observer placement coverage represents a mere 2.4%, which is 0.4% lower than the 2004 coverage. However this need to be viewed cautiously as the logsheets are incomplete and some observer trips did not enter FSM's waters.

In 2006, the NORMA FOP made a total of 31 trips with a total of 780 observed seadays. Thirteen observer trips were made on longline for 223 seadays, 18 observed trips on purse seine for 337 observed seadays, and 122 observed seadays on purse seine vessels under the FSM Arrangement on FFA arranged trips.

Table 10 Observer Trip Coverage per Flag and Gear-type, 2006

Gear	Flag	Obsvd.Seadays	EEZ F. days	Coverage%
Longline				
Trips- 3	China	61	697	8.8
2	FSM	27	82	32.9
4	Chinese Taipei	47	2,435	1.9
4	Japan	88	5,945	1.5
Purse Seine				
Trips- 0	China	0	15	0.0
4	FSM	108	70	154.3
2	Japan	70	1,258	5.6
4	Korea	165	770	21.4
4	Chinese Taipei	92	1,189	7.7
4	FSMA	122	17	717.6
Longline	Total	223	9,159	2.4
Purse Seine	Total	557	3,319	16.8
<b>Grand Total</b>		780	12,478	6.3

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 2006, the coverage was at slightly above 6%, although it needs to be reviewed carefully as some of the observed trips may not actually enter FSM waters.

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 72%, while longline sampling coverage is indicating a much higher coverage of 83%.

## 2.3 Purse Seine Transshipment in FSM

Pohnpei port has been the most active purse seine port of transshipments during the last five years. Tables 11 and 12 present summaries of the purse seine transshipment activities in FSM for years 2005 and 2006.

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).

The transshipped total for 2006 is still an estimate as some unloading data are still pending.

Table 11. Purse Seine Transshipment Activities in FSM, 2005

able 11. Turse Seme Transsimplifient Activities in F5Wi, 2005								
			Records in MT					
Port	Flag	BET	SKJ	YFT	Mixed	Total	unloading	
Pohnpei	AU	0	0	0	250	250	1	
	CN	0	1,915	478	0	2,393	7	
	FM	0	160	110	0	270	2	
	KI	0	575	0	125	700	1	
	KR	0	2,780	530	2,005	5,315	10	
	PG	0	8,350	820	0	9,170	12	
	TW	82	25,101	5,941	1,123	32,247	54	
	US	0	755	755	0	1,510	2	
	VU	0	2,230	310	0	2,540	4	
Total		82	41,866	8,944	3,503	54,395	93	

Source: NORMA Records

Table 12 Purse Seine Transshipment Activities in FSM, 2006

			Records 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	
	TW	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	

Source: NORMA Records

## 2.4 Longline Unloading in FSM

Pohnpei hosted 10 of (all FSM domestic-based vessels') unloading activities. Table 13 shows that a total catch of 46.9 mt were offloaded. Approximately 56% of the total unloaded volume was reported as yellowfin tuna, 42% as bigeye tuna, and approximately 2% was reported as billfish and other species.

Of the total volume unloaded, 88% was exported to Japan as sashimi (high graded) quality, and the other was reported as processed locally and marketed. Total unloading volume for the year 2006 has increased over the last two years.

Table 13 Longline Unloading in FSM, 2005

Table 13 Longini	Species	Flag	No of Unloading
	•	FM	3
Port		(mt)	10
POHNPEI	ALB	0.303	
	BET	19.758	
	BLM	0.862	
	BUM	2.176	
	DOL	1.046	
	MLS	0.059	
	SWO	0.545	
	WAH	0.594	
	YFT	21.555	
POHNPEI			
Total		46.898	10

Source: NORMA Records

Table 14 Longline Unloading in FSM, 2006

Table 14 Longine Umbading in FSW, 2000						
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

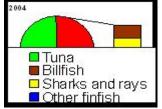
## **Attachments**

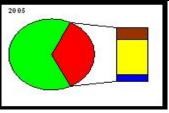
#### **Attachment 1 Longline Species Catch Composition Summary**

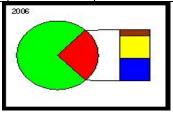
Total Tuna Catch Estimate

2004	2005	2006
3,720	4,354	5,322
6	3	3

	6	3	3		
			Species Composition		
			2004	2005	2006
Category		Species	%	%	%
Target Tuna	Albacore		1.8818%	0.0000%	0.2131%
-		Yellowfin	10.8240%	28.9377%	28.5649%
		Bigeye	37.0231%	35.7448%	45.0888%
Billfish	Blue marlin		7.2512%	5.0977%	2.3982%
	Bla	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%	0.0000%	0.0292%
Sharks and					
Rays	E	Blue shark	21.1536%	18.8034%	8.0343%
	Ma	ako sharks	1.1762%	0.4426%	0.4220%
	Oceanic whitetip shark		0.2352%	0.0000%	0.0000%
	Silky shark		2.2193%	3.6325%	1.2367%
	Other sharks and rays		2.3625%	0.3510%	1.4122%
Other finfish	Bullet/Frigate tunas		0.0000%	0.0000%	0.0000%
		Kawakawa	0.0000%	0.0000%	0.0000%
	Raink	oow Runner	0.0136%	0.0000%	0.0000%
	Wahoo		0.6580%	1.5263%	0.5557%
	Common dolphinfish		0.1432%	0.9768%	0.7938%
	Tı	riggerfish	0.0000%	0.0000%	0.0084%
	E	Barracudas	0.0511%	0.4579%	0.0836%
		Escolars	0.4432%	0.0000%	4.5415%
	Lá	nctfishes	1.6807%	0.1832%	0.3217%
	Ocea	n sunfish	1.0364%	0.0000%	0.0000%
		Oilfish	0.4364%	0.2442%	0.0209%
		Opah	3.2762%	0.0000%	1.0612%
		Pomfrets	1.0466%	0.2289%	0.5055%
		baitfish	0.0000%	0.0000%	0.0000%
	(	other fish	0.7534%	0.4579%	3.6724%
		Tuna	49.7290%	64.6825%	73.8667%
		Billfish	13.5854%	8.0128%	3.4635%
	Sharks	and rays	27.1469%	23.2295%	11.1051%
	Other	finfish	9.5387%	4.0751%	11.5647%
	Total no	on-target	50.2710%	35.3175%	26.1333%
	Billfi	sh (non-			
	Sv	9.0956%	7.3413%	2.9288%	
2004	20 05			2006	







#### **Attachment 2 Purse Seine Species Catch Composition Summary**

All purse seine activities in FSM EEZ

Total Tuna Catch Estimate

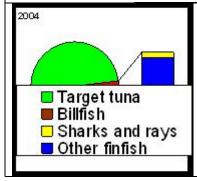
	2004	2005	2006
Catch	133,509	172,481	171,934
Trips	7	5	3

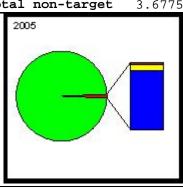
Species Composition

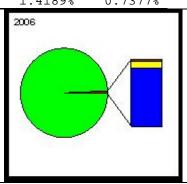
			2005	
1		2004	2005	2006
Category	Species	%	%	%
Target Tuna	Skipjack	66.5410%	69.4071%	65.4466%
	Yellowfin	22.8133%	26.6495%	23.2596%
	Bigeye	6.9682%	2.5245%	10.5562%
Billfish	Blue marlin	0.0150%	0.0591%	0.0130%
	Black marlin	0.0131%	0.0045%	0.0207%
	Other Billfish	0.0070%	0.0073%	0.0043%
Sharks and				
Rays	Blue shark	0.0000%	0.0000%	0.0000%
	Mako sharks	0.0000%	0.0000%	0.0000%
	Oceanic whitetip shark	0.0056%	0.0000%	0.0000%
	Silky shark	0.1699%	0.1192%	0.0708%
	Other sharks and rays	0.0796%	0.0090%	0.0000%
Other finfish	Bullet/Frigate tunas	0.2356%	0.0112%	0.1209%
	Kawakawa	0.0001%	0.0000%	0.0000%
	Rainbow Runner	1.4676%	0.4979%	0.1507%
	Wahoo	0.0707%	0.0324%	0.0049%
	Common dolphinfish	0.2956%	0.1851%	0.0057%
	Triggerfish	0.5701%	0.2150%	0.0371%
	Barracudas	0.0044%	0.0010%	0.0016%
	Escolars	0.0000%	0.0000%	0.0000%
	Lanctfishes	0.0000%	0.0000%	0.0000%
	Ocean sunfish	0.0000%	0.0008%	0.0000%
	Oilfish	0.0000%	0.0000%	0.0000%
	Opah	0.0000%	0.0000%	0.0000%
	Pomfrets	0.0000%	0.0000%	0.0000%
	Small baitfish	0.4344%	0.2147%	0.0044%
	Other fish	0.3087%	0.0616%	0.3035%

Target tuna	96.3225%	98.5811%	99.2623%
Billfish	0.0351%	0.0709%	0.0380%
Sharks and rays	0.2552%	0.1282%	0.0708%
Other finfish	3.3871%	1.2198%	0.6289%

**Total non-target** 3.6775% 1.4189% 0.7377%







#### 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

	Species Composition				
		2004	2005		
Category	Species	%	%		
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%		

98.8577%	98.7480%
0.0699%	0.0654%
0.1495%	0.4727%
0.9230%	0.7139%
	0.0699%

