



**SCIENTIFIC COMMITTEE
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**NATIONAL TUNA FISHERY REPORT
FEDERATED STATES OF MICRONESIA**

WCPFC-SC2-2006

1. Annual Fisheries Information

1.1 Flag-state reporting

The Federated States of Micronesia (FSM) employed 26 FM flagged fishing vessels operated by four different domestic-based fishing companies. The 26 vessels were comprised of two gear types; 20 longline, and six purse seine vessels. The total catch of target tuna in the by the 26 FSM flagged vessels for the year 2005 within the WCPFC Convention Area is estimated to 27,837.9 mt. hence the longline catch total is still an under estimate.

1.1.1 FSM Purse Seine Catch in the WCPFC Convention Area

There were six domestic purse seine vessels for FSM from three companies with catch records (derived from submitted logsheet sources) of 27,504 mt in the Convention Area. Submitted logsheets indicated that the 2005 purse seine catch comprised of 92% of the combined total catch. The purse seine total catch is dominantly composed of SKJ, 94%, YFT 5.3%, and BET 0.7%.

The six vessels dominantly fished with the most effort in the upper equatorial region of FSM waters and disbursed in the highseas pocket adjacent and into Nauru and PNG waters. Submitted logsheets indicated a total of 1,115 fishing days by the domestic fleet. More fishing effort is shown in the FSM EEZ for this period compared with the last three years by the domestic purse seine fleet.

Table 1. Annual catch and effort estimates for the FSM purse-seine fleet, by species in the WCPFC Convention Area, 2001-2005. (Source : Raised logsheet data; Data for 2005 are unraised and provisional, but coverage is "HIGH")

Year	Effort			Catch (metric tones)				
	Days Fishing & Searching	UnAss. Sets	Assoc. sets	SKJ	YFT	BET	OTH	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

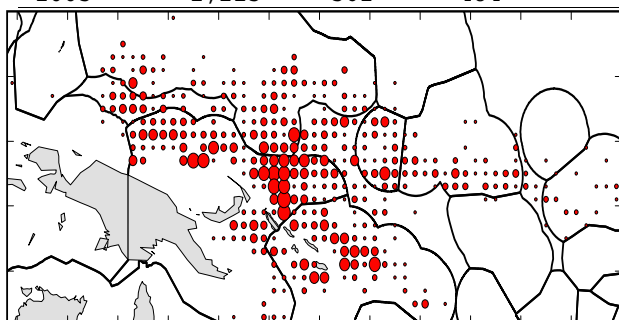


Figure.1.a

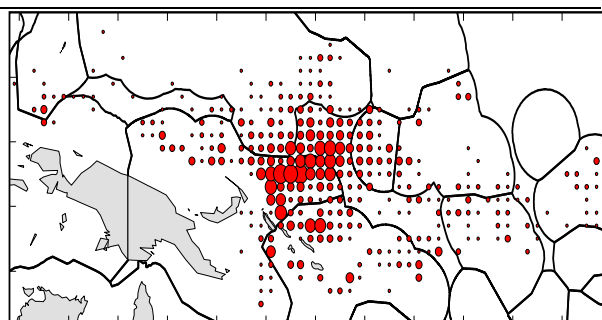


Figure. 1.b

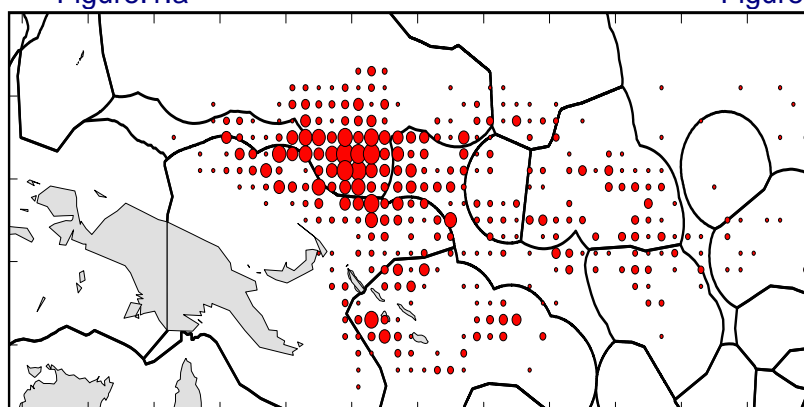


Figure 1.C Annual distribution of effort (days fishing and searching) for the FSM purse seine fleet throughout the WCPFC Convention Area for 2003 (Fig 1.a), 2004 (Fig 1.b) and 2005 (Fig 1.c)

1.1.2 FSM Longline Catch in the WCPFC Convention Area

The 2005 FSM longline total catch for all species in the WCPFC Convention Area by submitted logsheets was reported to be 333.9 mt, hence the total is still an under estimate. The total reported catch is comprised of 181.7 mt of bigeye (~60%), 98 mt of yellowfin (~30%), 36.5 mt (<10%) of billfish, and 17 mt (~0.7%) of other species caught as bi-catch. Total FSM longline catch for 2005 in the WCPO is approximately ~62% of 2004 catch.

For this period, (2005) most of the fishing effort is concentrated in the republic of the Marshall Islands (RMI) EEZ by the Clearwater longline fleet, since the closure of the of one locally based longline fishing companies, Micronesian Fishing Venture, (MFV) and Micronesian Longline Fishing Company (MLFC).

Tables 2. Annual catch and effort estimates for the FSM longline fleet, by species in the WCPFC Convention Area, 2001-2005 (Source : Raised logsheet data; Data for 2005 are unraised and provisional)

Year	Effort	Catch (metric tonnes)							
	(100s of hooks)	BET	YFT	BLM	BUM	MLS	SWO	OTH	TOTAL
2001	49,282.1	650.6	337.5	67.4	5.2	0.1	22.5	20.9	1,104.3
2002	60,469.3	759.4	163.5	44.8	5.6	0.1	21.1	7.6	1,002.0
2003	51,543.9	656.1	275.9	45.7	8.4	0.0	11.3	83.8	1,081.2
2004	42,377.8	541.8	185.4	5.6	50.4	1.3	8.5	48.7	841.7
2005*	17,887.5	181.7	98.8	0.3	33.3	0.1	2.8	17.0	333.9

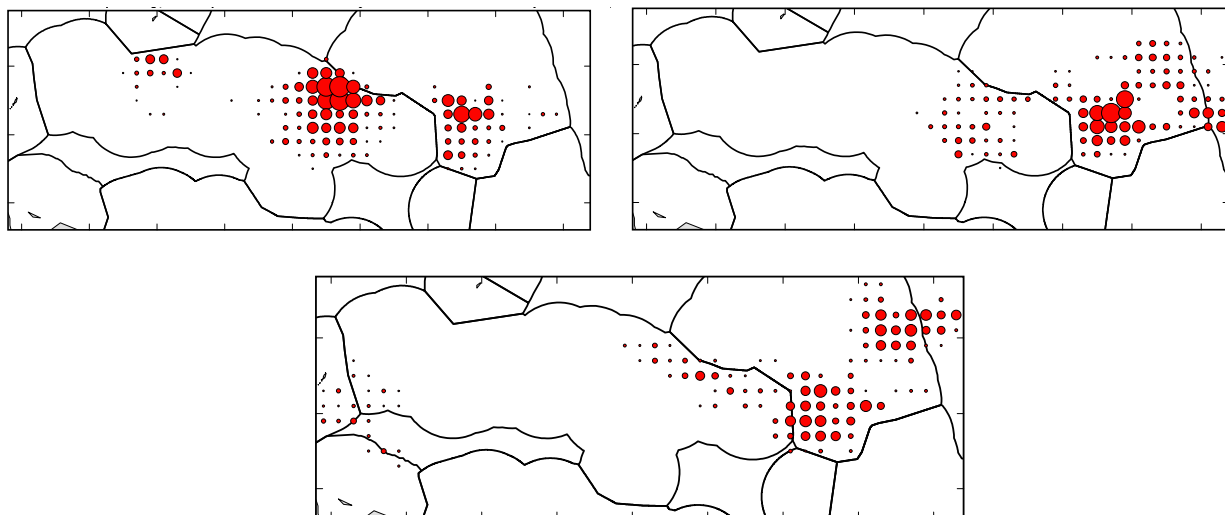


Figure 2. Annual distribution of effort (100s of hooks) for the FSM longline fleet throughout the WCPFC Convention Area for 2003 (top left), 2004 (top right) and 2005 (bottom)

1.2 Coastal-state reporting

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.

The 2005 catch by the tuna fishery in the FSM EEZ by logsheets is estimated to be 115,348 mt, though it is still an underestimate. The three gear types comprise the total catch in the target tuna catch in the following order: purse seine 110,055; longline 4,244 mt; and pole and line 1,049 mt. This is only 66% of the 2004 total catch, 207,514 mt..

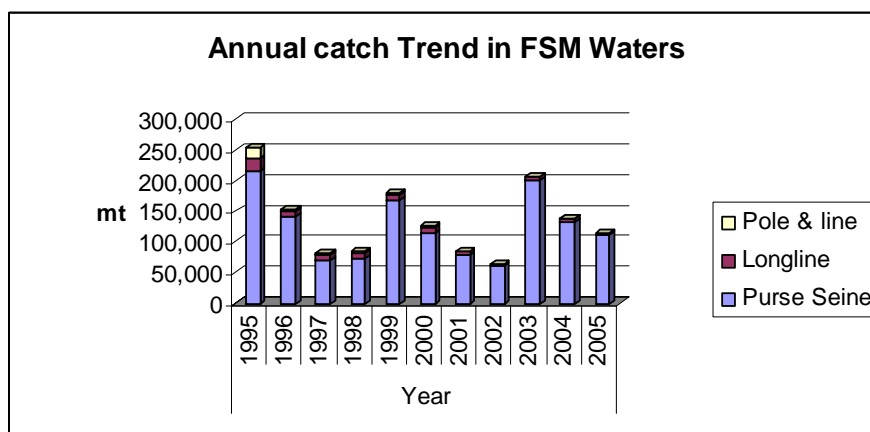


Figure 3. Annual Catch trend by all gear types in FSM Waters

The number of both domestic and foreign fishing vessels licensed annually to fish within the EEZ from 13 flagged 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 in the fishery. For this period (2005), the total count of vessels licensed is 330, less than 2004 of 399 vessels and 2003 of 384 vessels.

Table 3. Number of foreign fleet vessels licensed to fish in the FSM EEZ by year, flag and gear type

Country	Longline			Pole & Line			Purse Seine		
	2003	2004	2005	2003	2004	2005	2003	2004	2005
Chinese, Taipei	71	69	31	-	-	-	36	34	33
South Korea	-	-	-	-	-	-	26	28	27
United States	-	-	-	-	-	-	26	22	14
Japan	81	88	104	37	30	37	33	34	34
Peoples Republic of China	24	27	-	-	-	-	4	8	8
Vanuatu	-	9	-	-	-	-	-	11	8
Papua New Guinea	-	-	-	-	-	-	8	9	2
Belize	2	2	2	-	-	-	-	-	-
Kiribati	-	-	-	-	-	-	1	1	-
FSM	20	22	20	-	-	-	11	6	6
Rep. of Marshall Islands	-	-	-	-	-	-	1	3	1
New Zealand	-	-	-	-	-	-	-	4	-
Philippines	-	-	1	-	-	-	1	1	-
Total	199	208	159	37	30	37	148	161	134

1.2.1 Longline Catch in FSM waters

The total catch by the four longline fleets in the FSM waters for the 2004 period (3,747mt) is ~ 47% of the 2003 total catch (7,892mt). The Japanese longline fleet has been the most dominant fleet in catch for the last seven years within the FSM waters. Currently, their total catch is still an underestimate as logsheets are yet to be processed hence, making the total catch still an underestimate for the 2004 period. All four fleets have declined in total catch from the last two years. The very low catch by the FSM domestic fleet resulted ever since the Clearwater vessels migrated from the FSM waters into RMI waters in early 2002.

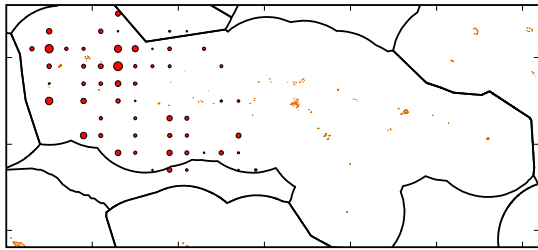


Figure 4. a. Chinese Taipei Catch and effort 2005.



Figure 4. b. Japan longline Catch and Effort 2005

Tables 4 (a). Annual catches by foreign longline fleets in the FSM EEZ, by flag and species, 2001-2005
(Source : Unraised logsheet data collected by NORMA)

Fleet	YEAR	Catch (metric tonnes)				TOTAL
		BET	YFT	OTH		
China	2001	939	499	94	1,533	
	2002	376	116	82	574	
	2003	381	135	145	661	
	2004	112	29	38	179	
	2005	10	8	3	21	
FSM	2001	381	195	71	646	
	2002	226	50	22	299	
	2003	267	118	76	460	
	2004	38	17	12	67	
	2005	14	12	2	28	
Japan	2001	1,336	761	124	2,221	
	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	
Chinese Taipei	2001	598	471	423	1,491	
	2002	371	181	264	816	
	2003	648	378	801	1,827	
	2004	83	46	92	221	
	2005	30	23	37	90	
TOTAL EEZ	2001	3,254	1,926	711	5,891	
	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	

1.2.2 Pole and Line Catch in the FSM Waters

The pole and line fleet of 37 licensed Japan Flagged vessels indicated a catch record for this period of 1,049 mt, dominantly of skipjack and <1% of yellowfin tuna. Although the catch total may not include all the 37 vessels' catches, the total still needs review to confirm the actual number of vessels actively fished for the accumulated harvest total within the FSM EEZ for this period.

Tables 4 (b). Annual catches by foreign pole-and-line fleets in the FSM EEZ, by flag and species, 2001-2005
(Source : Unraised logsheet data collected by NORMA)

Fleet	YEAR	Catch (metric tonnes)			TOTAL
		SKJ	YFT	OTH	
Japan	2001	685	2	1	688
	2002				
	2003	1,729	4	0	1,733
	2004	83	0	0	83
	2005	1,045	4	0	1,049

1.2.3 Purse Seine catch in FSM Waters

A total of 140 vessels of 10 different flags fished in the FSM waters for 2005 period. A record of over 110,055 mt of the three target species (skipjack >83%, yellowfin ~14%, and < 2%) of tuna was harvested.

The Japanese purse seine fleet of 34 active vessels dominantly fished with the most catch of 39,331 mt of target catch. The Chinese Taipei purse seine fleet of 33 active vessels fished a total of 38,878 mt. The Korean purse seine fleet of 27 vessels showed a much lesser catch of 25,216 mt. These are the three dominant fleets with the most catches of over 20,000 mt of the target species.

Tables 4 (c). Annual catches by foreign purse seine fleets in the FSM EEZ, by flag and species, 2001-2005
(Source : Unraised logsheet data collected by NORMA)

Fleet	YEAR	Catch (metric tonnes)				TOTAL
		SKJ	YFT	BET	OTH	
China	2001					
	2002	440	15	0	0	455
	2003	4,319	509	0	0	4,828
	2004					
	2005	655	105	0	0	760
FSM	2001	180	211	0	0	391
	2002	904	279	0	0	1,183
	2003	0	0	0	0	0
	2004					
	2005	2,935	475	0	0	3,410
Japan	2001	14,826	3,507	495	10	18,838
	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
Korea	2001	20,082	1,808	0	0	21,890
	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
New Zealand	2001					
	2002					
	2003	1,101	56	0	0	1,157
	2004					
	2005					
PNG	2001					
	2002					
	2003	290	431	183	0	905
	2004	540	0	0	0	540
	2005					
Chinese Taipei	2001	35,114	4,078	40	2	39,234
	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
Vanuatu	2001					
	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
TOTAL EEZ	2001	70,202	9,604	535	12	80,353
	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

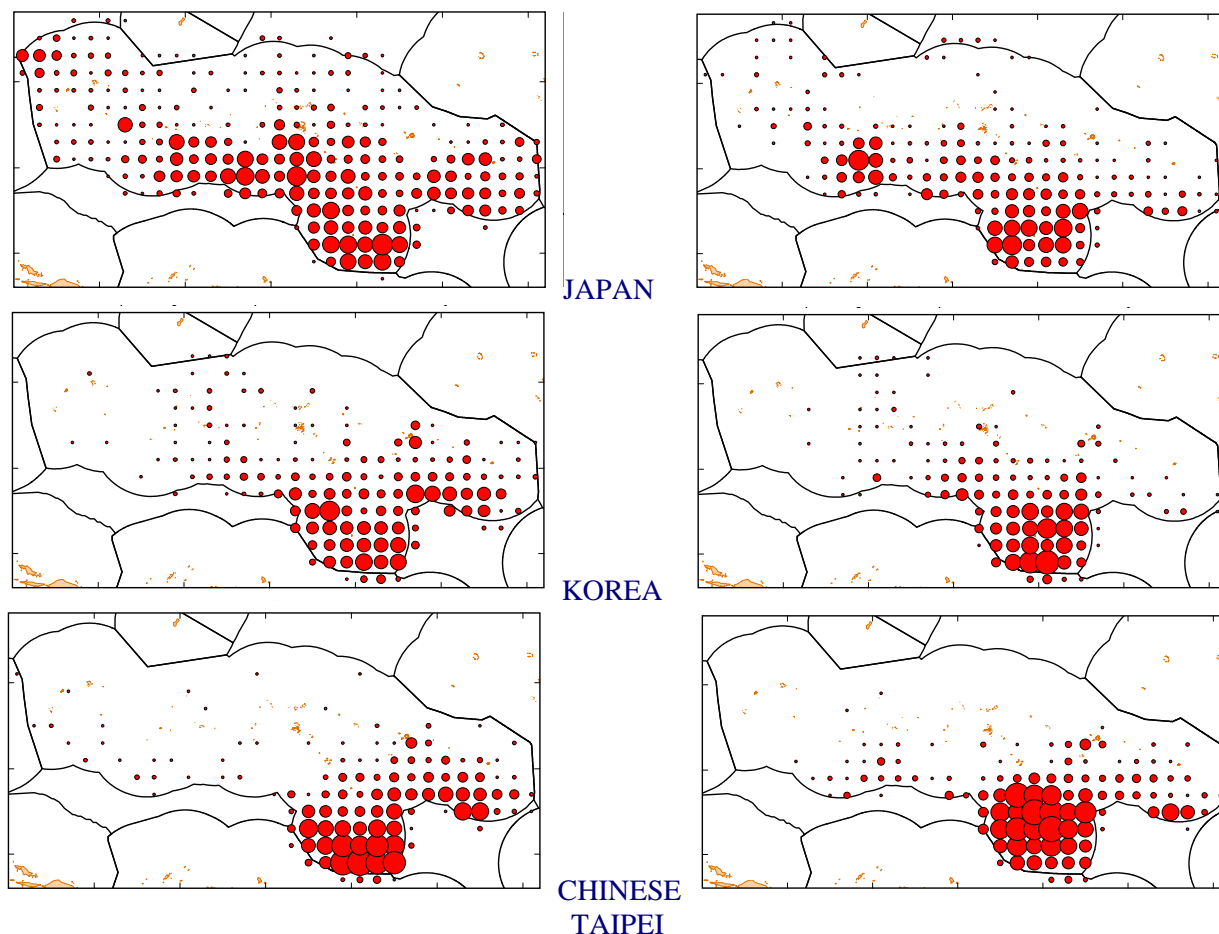


Figure 5. Annual distribution of effort by the main foreign purse seine fleets active in the FSM EEZ for 2004 (left) and 2005 (right)

1.2.4 Trends in Target Species Catch in FSM Waters

The trend of the catch per unit of effort (CPUE) for yellowfin tuna by the four fleets in the FSM waters fluctuated in the early 90s and declined continuously during the last 12 years by all fleet. The inclining total catch of yellowfin tuna by the longline fishery may include several contributing factors resulting in the declining CPUE in the FSM waters in the last decade. One known and reasonable factor is a step forward in the fishing patterns and gear technology. Most longliners have been aiming to increase the catch of bigeye tuna over yellowfin tuna by setting their hooks deeper than usual. The trend indicate a slow change in fishing strategy as more of the domestic vessel are shifting from the shallow sets with fewer hooks to the deep sets with over 1,800 hooks per set.

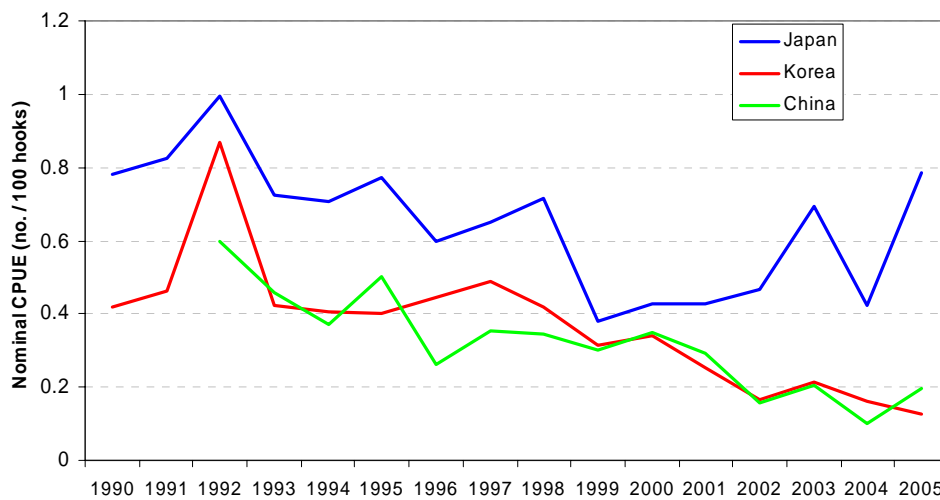


Figure 6 (a). Trends in nominal catch rates of YELLOWFIN TUNA taken by longline fleets operating in the FSM EEZ, 1990-2005

The trend in the longline catch (by the four fleets) of the bigeye tuna in the FSM waters have known to be constant over the last decade. The catch of bigeye tuna by all fleets during the early 90s was remarkably high and began to slope downward towards the mid 90s. It remained constant in the late 90s towards the year 2000. Recently during the last two years, the CPUE of bigeye tuna in the longline fishery in FSM waters has dropped drastically.

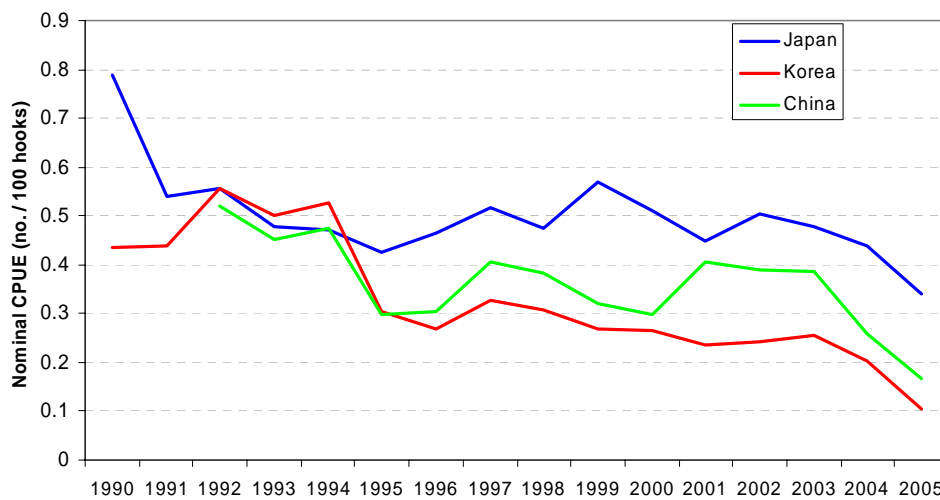


Figure 6 (b). Trends in nominal catch rates of BIGEYE TUNA taken by longline fleets operating in the FSM EEZ, 1990-2005

2. Research and Statistics

2.1 The FSM Observer Program

NORMA's Fisheries Observer Program has been operating since the Authority began in 1979. With the expansion and diversification of the fleets in the FSM, the program was expanded to the maximum pool of 12 personnel. Since 1995 to 1999, the program has been operating with 10-12 personnel under a six-month contract with the Authority.

In early 2001, the six-month contract was then amended and extended to a one-year contract due to some technical problems with the observer revolving fund with the FSM Finance. Since funding

restricts and limits the number of observers under the NORMA FOP, an increase in the fee is the only solution for a possible expansion of the NORMA FOP.

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 of 1,021 sea-days on the three main fishing gear types operating. If the number of observer trips are compared to the number of trips into the FSM EEZ reported on logsheets by vessels this equates to a coverage of 2.4 % overall for 2005, slightly lower than that of 2004, (2.8). However this need to be viewed cautiously as the logsheets are incomplete and some observer trips did not actually enter FSM.

The trend in coverage for the program has been positive with a general increase in coverage over the past few years. For 2005, the coverage is slightly lower, greatly affected by the 2.4.0% coverage on the Taiwanese Guam based longline vessels.

The observer coverage is restricted each year by observer program logistics such as the budget and by an M.O.U. that limits the number of trips made on Japanese vessels to 6 longline 5 purse seine and 2 pole and line trips per agreement year. The large Japanese and Taiwanese fleets that base in Guam also add difficulties and expense to placements.

2.2 The FSM Port Sampling Program

The NORMA port sampling program has been operating for approximately 8 years, employing one full time port sampler in each of the four states. The port sampling program has been operating with four personnel for the last four –five years and has reduced to only two at the current stage. As unloading and transshipment of both purse seine and longline has become dormant in the other two FSM ports for at least two years, the Authority has not renew the employment contracts particularly with the two port sampling officers from the inactive ports of unloading, until necessary.

Port sampling coverage of longline catch not landed in Guam has been falling a high of 50% in the recent years. Sampling coverage of the purse seine fleet remains fairly low.

2.3 Purse Seine Transshipment in FSM

Pohnpei port has been the most active purse seine port of transshipments during the last five years. For this period, it remained the only active port of transship among the other three ports, Chuuk, Kosrea, and Yap ports. The majority of the vessels were Chinese Taipei (TW) flagged (54 boats) that transshipped a total catch volume of 32,247 mt. There were 12 PNG registered vessels that transshipped a total volume of 9,170 mt, and 10 Korean flagged vessels of 5,315 mt. Chinese flagged of 7 vessels transshipped approximately 2,393 mt and with the other 5 fleets, an overall total of 54,395 mt was reported to be transshipped for this period in FSM.

Table 8. Purse Seine Transshipment Records by NORMA for the year 2005 (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

2.4 Longline Unloading in FSM

Pohnpei hosted the most unloading activities of only 10 vessels of all FSM domestic-based vessels of 46.9 mt of total catch volume. 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.

	Species	Flag	No of Unloading
Port		FM (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	
Total		46.898	
