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EIGHTH STANDING COMMITTEE ON TUNA AND BILLFISH

16-18 August 1995
Noumea, New Caledonia

**NATIONAL FISHERY REPORT
FEDERATED STATES OF MICRONESIA**

Oceanic Fisheries Programme (OFP)
South Pacific Commission
Noumea, New Caledonia

August 1995

RESOURCE MANAGEMENT ACTIVITIES

Fisheries Observer Program

The Authority's Fisheries Observer Program continued to expand in 1994 with a total of 58 observer trips completed on both domestic and foreign fishing vessels licensed to operate in the FSM EEZ (see Table ?).

The Program workforce currently stands at 9 full-time observers :

Observer	Home State	Year Employed	Accumulated Days at Sea
Paulino James	Chuuk	1987	713
Nery Feleichog	Yap	1989	689
Simon Lorenzo	Chuuk	1992	468
Julian Needlic	Kosrae	1994	201
Charles Lorenzo	Chuuk	1994	195
Steven Palik	Kosrae	1993	181
Pius Palui	Yap	1994	133
Dwight Olter	Pohnpei	1995	59
Binte Binios	Chuuk	1995	8
Marciano Yarofral	Yap	1995	0
Total			2647

The main objectives of the Observer Program are outlined below:

- To collect catch and effort data during fishing operations which can then be used to validate and/or update the information received from foreign vessel catch reports.
- To carry out biological sampling, for research purposes, which may include but is not limited to, length frequency measurements of landed catch, collection of gonad and stomach content samples, removal of hard parts for aging studies, etc.
- To report on the fishing activities and operations of the vessels with the aim of identifying unique gear and fishing strategies that may affect the efficiency and overall catch of the vessel.
- To document the levels of bycatch and discards for both target (tunas) and incidentally caught species (e.g. sharks, marlins, turtles).
- To collect information on the sightings and activities of other fishing vessels encountered at sea for compliance with current licensing agreements.

Funding for the Observer Program comes from obligatory contributions by the fishing companies licensed by the Authority and acceptance of MMA Observers on the vessels is a mandatory aspect of all the foreign fishing agreements the Authority currently manages.

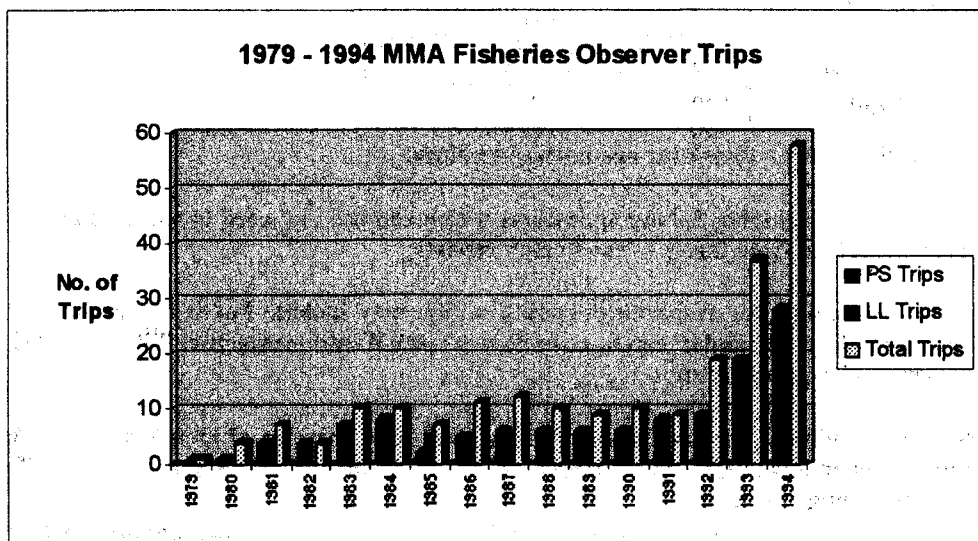
The data collected by the MMA observers is held in strict confidence and used mainly for resource management purposes. Fisheries observers are not surveillance officers and they are not empowered to enforce the laws. They do, however, report in detail all that takes place during their stay on the vessels which includes the accurate recording of fishing positions in and out of the FSM EEZ.

The Fishereis Observer Program has undergone some changes in the sampling design and formats for data collection with the aim of improving the quality and scope of data collected. These changes have come about as the result of a collaborative effort between the Authority and the South Pacific Commission's Oceanic Fisheries Program staff. A major benefit of this collaborative effort has been the development of a comprehensive Fishereis Observer Database which was implemented during 1994 utilizing the Authority's in-house computer network. One important aspect of the database has been the inclusion of report writing programs that now allow the Authority to query the accumulated records and produce timely reports on the such important topics as the levels of bycatch and discards in the various fisheries. Upon completion of routine debriefing and error checking procedures, the observers themselves have been entering their collected data onto the database which has allowed the Authority to utilize their services to the fullest.

The catch reports submitted by the foreign fishing vessels operating in the region do not typically include information on the bycatch of incidental species and the discards of this bycatch and/or target tunas. The MMA Observer Program data has been one of the few sources of this data and our Program has been recognized throughout the region as being of great importance in this regard.

Other uses of the Observer Program data have included reports to local fisheries development entities such as the Pohnpei Fisheries Corporation, the National Fisheries Corporation and various public and private entities that have requested data to aid in their development plans. In addition, internal MMA reports on the compliance of foreign fishing vessels to the various regulations set out in the agreements are routinely prepared for access negotiations using observer data.

Figure 2. 1979 - 1994 MMA Fisheries Observer Trips by Gear Type



The majority of the MMA Observer workforce has received purse seine (PS) observer training from the South Pacific Forum Fisheries Agency (FFA) and are now available to make trips on the United States PS fleet under the U.S. MultiLateral Fisheries Treaty (USMFT) Observer Program. During 1994, a total of 4 MMA Observers boarded U.S. PS vessels under the FFA Observer Program. Costs for observer placement these U.S. PS vessels operating under the USMFT are paid for by funds allocated from the USMFT. The data gathered by our observers from these trips are handed over to FFA and processed by their staff. The Authority then receives annual reviews of the USMFT that incorporates the observer data into the reviews.

The Authority assisted the National Fisheries Corporation during the latter half of 1994 by arranging placement of three NFC fishermen to board selected Taiwanese longline vessels as MMA Observers. In addition to collecting the required Observer data, these NFC fishermen were able to gather invaluable at-sea experience in the longlining operation with the goal of transferring these skills for the benefit of our expanding domestic longline fleet.

As reported earlier, observer trips made prior to 1992 were carried out on Japanese fishing vessels. The Observer Program underwent an expansion beginning mid-1992 aimed at covering all fleets licensed by the Authority.

Table 2. 1994 MMA Fisheries Observer Trips

Observer	Vessel	Flag	Gear Type	Departur e Date	Departure Port	Arrival Date	Arrival Port
S. Lorenzo	Fong Kuo 817	TW	PS	Jan. 4	Guam	Jan. 31	Chuuk
P. James	Fu Chi Hsiang 737	TW	PS	Jan. 3	Guam	Jan. 28	Chuuk
N. Feleichog	Union 8	TW	LL	Jan. 31	Pohnpei	Feb. 12	Pohnpei
S. Palik	Ocean Kim	KR	PS	Jan. 29	Chuuk	Feb. 26	Honiara
C. Hedson	Matsuichi Maru	JP	LL	Feb. 3	Pohnpei	Feb. 14	Pohnpei
P. Mailfil	Miya M. 88	JP	PS	Feb. 5	Guam	Mar. 15	Pohnpei
L Ychiro	Nambug Pioneer	KR	PS	Feb. 5	Guam	Mar. 12	Chuuk
S. Lorenzo	Gapimogol	FSM	PS	Feb. 17	Pago Pago	Apr. 30	Chuuk
P. James	Soleil Z.	USA	PS	Feb. 14	Guam	Apr. 6	Guam
J. Tipmai	Zhong Yuan Yu 805	CH	LL	Feb. 15	Chuuk	Feb. 27	Chuuk
C. Heberer	Yu I Hsiang 611	TW	PS	Feb. 19	Chuuk	Mar. 4	Chuuk(a)
N. Feleichog	Dongwon 201	KR	LL	Mar. 4	Tinian	Mar. 10	High Seas
N. Feleichog	Olympus Kim	KR	PS	Mar. 9	High Seas	Apr. 6	Honiara
D. David	Suwa M. 58	JP	GPS	Mar. 14	Guam	Apr. 7	Tinian
C. Lorenzo	Hong Shnen Tsai	TW	LL	Mar. 24	Kosrae	Mar. 31	Kosrae
J. Needlic	Daitoku M. 31	JP	PL	Mar. 26	Guam	Apr. 28	Pohnpei
J. Tipmai	Kuang Hsing 116	TW	LL	Mar. 29	Pohnpei	Apr. 7	Pohnpei
P. Mailfil	Jaiwon Master	KR	PS	Apr. 13	Guam	May 25	Honiara
L Ychiro	Yolanda Z.	USA	PS	May 9	Guam	July 2	Majuro
L. Ismael	Ching Feng 867	TW	PS	May 1	Chuuk	June 2	Chuuk
P. James	Utoku M. 23	JP	LL	May 5	Guam	June 1	Guam
N. Feleichog	Win Far 636	TW	PS	May 2	Guam	May 27	Chuuk
C. Lorenzo	Yue Yuan Yu 165	CH	LL	May 11	Chuuk	May 21	Chuuk
S. Lorenzo	Nanshin M. 88	JP	LL	May 19	Pohnpei	June 1	Pohnpei
J. Nedlic	Dongwon 801	KR	LL	May 31	Chuuk	July 9	Guam
C. Lorenzo	Fukuichi M. 85	JP	PS	June 1	Guam	June 21	Chuuk

1994 MMA Fisheries Observer Trips (Con't)

Observer	Vessel	Flag	Gear Type	Departure Date	Departure Port	Arrival Date	Arrival Port
P. Mailfil	Shun Tien 606	TW	PS	June 13	Chuuk	Aug. 8	Chuuk
S. Lorenzo	Kuang Hsing 119	TW	LL	June 25	Pohnpei	July 2	Pohnpei
S. Palik	Gwo Shin	TW	LL	July 7	Kosrae	July 15	Kosrae
P. Palui	Sea Chase	KR	PS	July 1	Chuuk	Aug. 14	Chuuk
P. James	Lim Discoverer	KR	PS	July 2	Honiara	Aug. 13	Honiara
N. Feleichog	Hai Hsaing 91	TW	LL	July 1	Yap	July 20	Kosrae
C. Lorenzo	Taisei M. 8	JP	LL	July 7	Guam	Aug. 15	Guam
S. Lorenzo	Hai Hsaing 89	TW	LL	July 24	Chuuk	Aug. 4	Chuuk
L. Ismael	Tokiwa M. 18	JP	PS	July 30	Pohnpei	Aug. 19	Guam
S. Lorenzo	Fair Well 707	TW	PS	Aug 21	Guam	Sept. 17	Chuuk
N. Feleichog	Yutaka M. 7	JP	LL	Sept. 1	Pohnpei	Sept. 21	Pohnpei
P. James	Yue Yuan Yu 146	CH	LL	Sept. 5	Yap	Sept. 15	Yap
J. Needlic	Hayabusa M. 7	JP	PS	Sept. 22	Guam	Oct. 23	Guam
P. James	Hai Hsiang 68	TW	LL	Sept. 20	Chuuk	Oct. 9	Chuuk
C. Lorenzo	Sea Hawk No. 1	KR	PS	Sept. 26	Chuuk	Oct. 23	Chuuk
P. Mailfil	Judith Carol	KR	PS	Oct. 7	Guam	Nov. 5	Chuuk
S. Lorenzo	Hai Hsiang 39	TW	LL	Oct. 1	Kosrae	Oct. 11	Kosrae
N. Feleichog	Zhong Yuan Yu 632	CH	LL	Oct. 19	Yap	Oct. 29	Yap
P. James	Valerie	US	PS	Nov. 3	Pago Pago	Feb. 10	Pago Pago
J. Simms	Omi Maru	JP	RCH	Oct. 25	Japan	Nov. 4	Palau
P. Mailfil	Sajo Victoria	KR	PS	Nov. 12	Chuuk	Nov. 21	Chuuk
C. Lorenzo	Jin Jiann Lih 22	TW	LL	Nov. 12	Chuuk	Nov. 24	Chuuk
P. Palui	Mathawsuw	FM	PS	Nov. 17	Guam	Dec. 19	Pago Pago
S. Palik	Tehno M. 7	JP	PS	Nov. 22	Guam	Dec. 12	Guam
S. James	Kuang Hsing 182	TW	LL	Nov. 19	Pohnpei	Nov. 30	Pohnpei
J. Needlic	Jih Yu 612	TW	PS	Nov. 22	Guam	Dec. 15	Chuuk
N. Feleichog	Union 9	TW	LL	Nov. 20	Pohnpei	Nov. 30	Pohnpei
S. Lorenzo	Zhong Yuan Yu 610	CH	LL	Nov. 22	Pohnpei	Dec. 1	Pohnpei
L. Ychiro	Tifiamona	US	PS	Dec. 5	Pago Pago		
P. Mailfil	NFC Kosrae	FSM	LL	Dec. 6	Chuuk	Dec. 16	Chuuk
R. Melander (NFC)	Hong Shnen Yu	TW	LL	Dec. 9	Kosrae	Dec. 19	Kosrae
R. Edwin (NFC)	Hai Hsiang 91	TW	LL	Dec. 9	Kosrae	Dec. 21	Kosrae

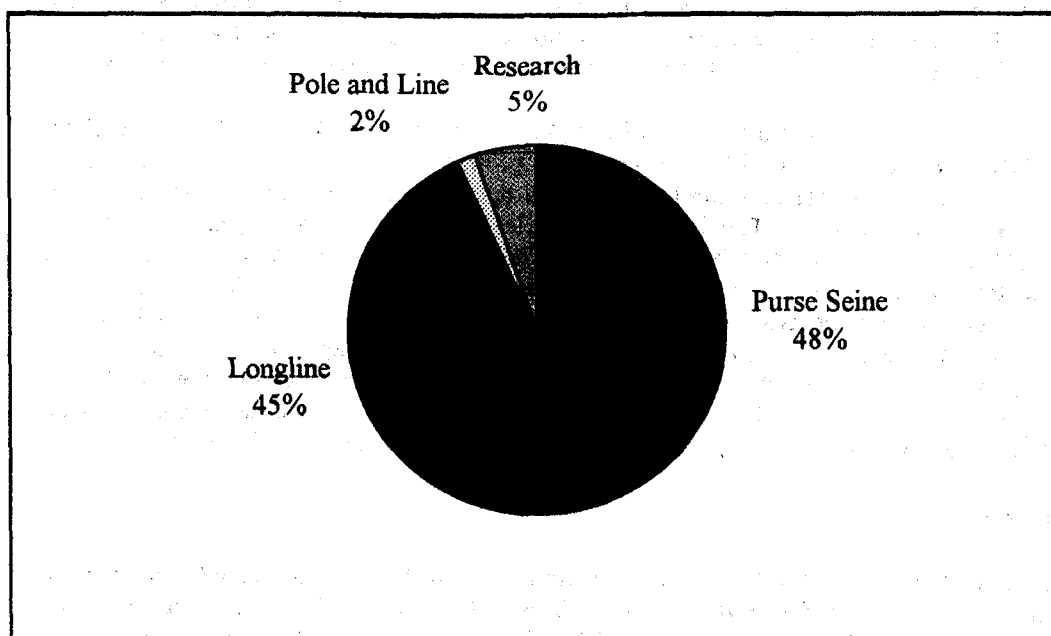


Figure 2. 1994 MMA Fisheries Observer Trips by Gear Type.

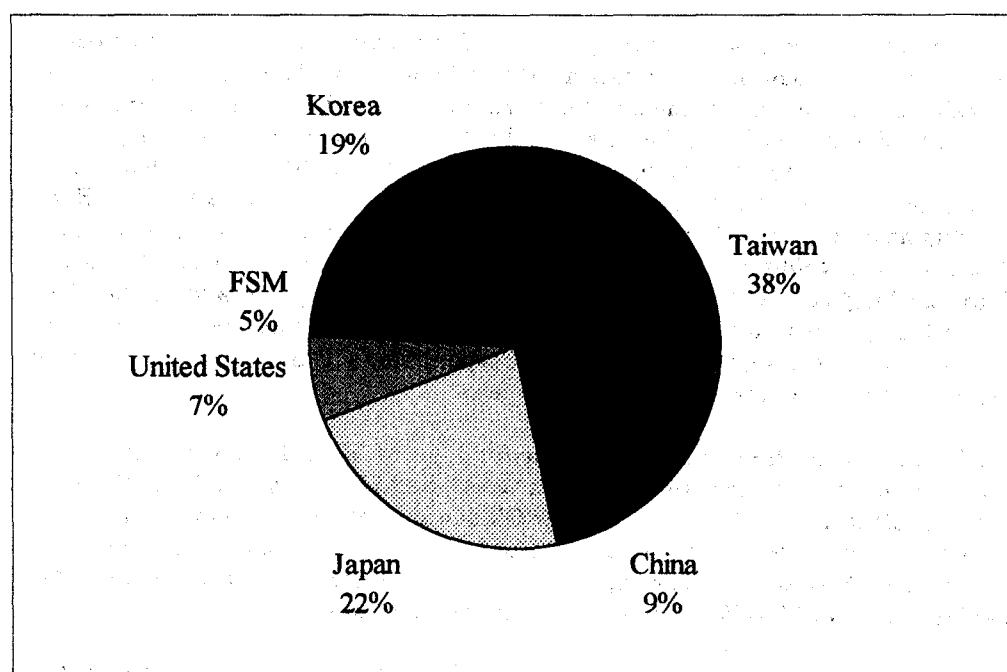


Figure 3. 1994 MMA Fisheries Observer Trips by Flag.

Port Sampling Program

The Authority is the main fisheries licensing and monitoring agency for the National Government. As part of its monitoring mandate, the Authority has operated a port sampling program aimed at collecting biological data (species composition, length/weight frequencies, etc.) from the foreign and domestic fishing vessels that off-load their catches in FSM ports. The MMA has received funding for its port

sampling programs from the South Pacific Commission's Oceanic Fisheries Program (formerly known as the Tuna and Billfish Assessment Program) and from the South Pacific Forum Fisheries Agency (FFA) under the Economic Development Fund (EDF) of the United States Multilateral Treaty on Fisheries.

For 1994, the Authority once again maintained a full complement of port samplers in all 4 states of the FSM. Chuuk State continued to receive a substantial proportion of the regional purse seine transshipment activity and for the first time the longline fresh tuna transshipment operations were being conducted in all 4 states of the FSM. The National Fisheries Corporation, in conjunction with the respective states, successfully inaugurated during 1994 the Chuuk Fresh Tuna Inc. and the Yap Fresh Tuna Inc. longline transshipment bases. These bases will serve as the foundation for the continued development of the domestic tuna infrastructure in the various states of the FSM. Each of the bases has the capacity to handle in the neighborhood of 100-120 longline vessels providing key services such as ice, fuel, and packaging for air transshipment of fresh sashimi grade fish product. The monitoring of these transshipments by MMA port samplers will continue to provide the necessary information from which the Authority hopes to manage our valuable pelagic fisheries on a more reliable and sustainable basis.

Longline Transshipments

All of the foreign longline vessels currently off-loading their catches in the FSM are small scale iceboats that provide sashimi grade fish for the Japan and Hawaii export markets. These boats range in size from about 47 GRT (Taiwanese/Japanese) up to 169 GRT (Mainland Chinese). On a typical trip, these vessels will set between 650 (Chinese LL) to 2,500 (Japanese LL) hooks and stay out fishing for up to two weeks at a time. The target species are bigeye tuna, *Thunnus obesus*, and yellowfin tuna, *Thunnus albacares*, with appreciable amounts of shark and billfish caught incidentally.

The largest of these foreign companies is the Ting Hong Oceanic Enterprises Corporation which began utilizing FSM ports during 1991 and now has operations in all four States of the FSM. During 1994, the Ting Hong operation scaled back considerably the number of Taiwanese longliners operating under their umbrella. The Mainland Chinese longliners became the dominant component of the Ting Hong operation with the majority of the vessels operating out of Chuuk and Pohnpei bases. Ting Hong leases two Boeing 727-100 jet planes for air transshipment of their tuna to Japan. Early in 1994, Ting Hong brought in a large transshipment barge to Pohnpei State for the purpose of increasing the available dock space and associated facilities (e.g. coldstore freezer rooms and ice making machines). The bycatch and reject fish captured by the longline vessels are stored in the Ting Hong barge as well as the EDA shoreside freezers before being transported in bulk back to Taiwan by ship. Some reject and bycatch product was also purchased from the vessels by the Union Corporation, a Pohnpei based Taiwanese longline company, and carried back to Taiwan on their supply ship.

The Japanese longline fleet comprises three distinct components: A group of small ice/slurry boats that are based in Guam and tranship their catches from that port; vessels based in Japan that fish in the FSM EEZ and return to Japan to off-load their catches; and a few Okinawan boats that are based in the FSM and tranship their catch at FSM bases. The MMA has a unique licensing system for the Japanese longline fleet that caters for each vessel on a per trip basis. For this reason, the number of Japanese longline vessels licensed to fish in the FSM EEZ can vary from month to month.

A large component of the regional Taiwanese longline fleet have relocated their operations to Guam and unofficial estimates indicate in excess of 4,500 metric tons of Western Pacific caught longline fish having been transhipped from Guam to Japan during 1994.

An expanding domestic longline fleet has been developing in the FSM under the guidance of the National Fisheries Corporation (NFC) and the respective FSM State governments. Currently, the NFC has 10 longline vessels operating in the various ports of the FSM and there are plans to increase the fleet size on an annual basis by at least two vessels per year.

1994 Longline Transshipment and Reject Totals

Port	YFT		BET		Billfish		Others	
	Export	Reject	Export	Reject	Export	Reject	Export	Reject
	Weight*	Weight	Weight	Weight	Weight	Weight	Weight	Weight
Chuuk	1,057,449	331,193	1,882,548	521,664	6,793	315,000	0	126,655
Pohnpei	861,534	261,371	1,784,114	272,328	53,301	92,967	592	15,897
Kosrae	352,250	199,013	792,371	108,134	10,317	222,080	3,594	88,038
Yap	486,416	157,062	841,768	93,260	0	204,405	0	43,286

footnote: *weight in kg

Purse Seine Transshipments

As part of a region-wide initiative to capture more of the economic benefits of purse seine transshipment operations and to enhance the monitoring capabilities of island nations, a ban on all high seas transshipment of purse seine caught tuna was put into effect on June 15, 1993. This ban was instituted as part of the minimum terms and conditions for all foreign purse seine vessels seeking access to the fishing zones of FFA member nations. A list of designated transshipment ports were provided by member countries and the foreign fleets were given the option to choose any of the available ports for transshipment operations. For the FSM the following ports were designated as official transshipment sites:

- Chuuk Lagoon, Chuuk State
- Okat Harbor, Kosrae State
- Kolonia Harbor, Pohnpei State
- Colonia Harbor, Yap State

Currently, only Chuuk State has attracted appreciable amounts of purse seine transshipment activity. The Authority employs two full time port samplers in Chuuk to monitor this regionally important hub of purse seine transshipment activity.

The port samplers monitoring the purse seine activities have two main tasks:

1. To collect accurate and timely information on vessel movements, total amounts transhipped by species and the destination of transhipped fish.
2. To collect length frequency and species composition data from the fish being off-loaded to the fish carrier vessels.

In addition, they provide logistical support for the MMA Fisheries Observer program and coordinate the logistics for the Yellowfin Tuna Reproduction Study that is taking place throughout the region on foreign fishing vessels (see Research section).

Table ? : 1994 Chuuk Purse Seine Transshipment Data.
Data Source: MMA Port Sampling Records.

Month Transhipped	Tons of SKJ (m/t)	Tons of YFT (m/t)	Flag / No. of Deliveries
January	6,040	1,475	TW(11), KR(1), FM(1)
February	14,083	3,087	TW(23), KR(16)
March	31,351	4,273	TW(36), KR(8), FM(6)
April	18,678	4,347	TW(26), KR(24), FM(3)
May	16,228	4,087	TW(32), KR(10), FM(2), US(1)
June	20,043	4,788	TW(29), KR(22), FM(3), AU(1)
July	10,068	2,690	TW(27), KR(4), FM(3)
August	13,445	1,990	TW(17), KR(11), FM(1)
September	10,145	1,165	TW(17), KR(11), FM(1)
October	10,487	7,451	TW(28), KR(13), FM(5)
November	7,241	2,766	TW(7), KR(11), AU(3), FM(1)
December	20,412	4,472	TW(18), KR(24), FM(7), VA(1)
1994 Sub Totals	178,221	42,591	Deliveries: TW (271), KR (155), FM (33), US (1), VA (1), AU (4)
1994 Totals	220,812		Avg. per vessel = 474.86 m/t

Table footnotes:

Some tonnages listed as mixed skj/yft were broken down to species level using .80/.20 skj/yft ratio. Monthly estimates reflect departures of fish carrier vessels within the month in question.

FISHERIES REVIEW - FEDERATED STATES OF MICRONESIA

1994 Tuna Catches in the FSM Exclusive Economic Zone (EEZ)

The total 1994 catch for the principal market species of tuna harvested in the EEZ of the FSM is approximately 117,070 metric tons (m/t). This represents a decrease of 32% over the 1993 total of 173,011 m/t. The 1994 total shows a 18% decrease over the five year average of 142,042 m/t dating from 1989-1993 (see Table ?). This decrease is attributed almost exclusively to the higher purse seine catch as longline catches have risen only slightly while pole and line catches have decreased markedly.

Skipjack tuna accounted for 60% (~100,000 m/t) of the 1993 total with yellowfin next at 35% (~59,000 m/t). Bigeye tuna, harvested primarily by the longline fishery, contributed an additional 6% (~8,000 m/t) to the total. A small amount of juvenile bigeye tuna (~5-6%) is captured by the purse seine fishery and reported as yellowfin tuna in the catch records.

Table 2: Catches of Tuna by Gear Type in the FSM EEZ from 1989 - 1994.
Source: Vessel Catch reports

Year	Purse Seine Catch (m/t)	Longline Catch (m/t)	Pole and Line Catch (m/t)	Total Catch (m/t)
1989	92,167	13,031	20,472	125,670
1990	102,789	14,886	10,547	128,222
1991	107,713	10,278	23,410	141,401
1992	123,302	13,470	3,143	139,915
1993	149,881	16,557	6,573	175,004
Total	575,852	68,222	64,145	710,212
Average	115,170	13,622	12,829	142,042
1994	97,902	14,570	4,598	117,070

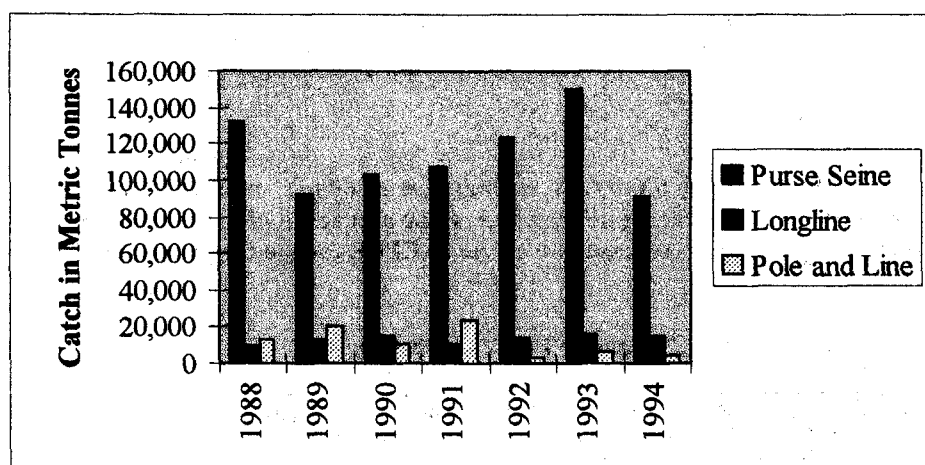


Figure 6. FSM EEZ Tuna Catches by Gear Type for the period 1988 - 1994.

Purse Seine Fishery

The majority of the FSM tuna catch for 1994, roughly 84%, was taken by foreign and domestic purse seine vessels licensed to operate in the FSM EEZ. The Japanese purse seine fleet, numbering 35 vessels, accounted for 50,364 m/t or 51% of the total purse seine harvest and 43% of the entire FSM harvest (see Table 14 and Figure 7). The previous five-year catch average (1989-1993) for the Japanese fleet was 87,180 m/t. The ban on high-seas transshipment of purse seine caught tuna remained in effect during 1994 with an estimated 15%-20% reduction of catch totals experienced by Korean and Taiwanese purse seiners versus the catch totals in pre-ban years.

The high seas transshipment ban did not have a major impact on the U.S. and Japanese purse seine catches as these fleets have not, as a rule, transhipped their catches on the high seas in previous years.

The domestic purse seine fleet harvested slightly over 3,524 m/t from the FSM EEZ during 1994, an increase of 64% over the 1993 harvest of 2,153 m/t. The FSM domestic fleet contribution to the overall 1994 purse seine catch was roughly 4%.

Longline Fishery

The 1994 FSM longline catch of 14,570 m/t represents a 12% decrease over the 1993 harvest of 16,557 m/t. The previous five year catch average (1989-1993) for the longline fleet was 13,622 m/t continuing a stable trend in terms of the overall catch. There has, however, been some dynamic changes in terms of the composition of the various foreign fleets fishing for the Japanese sashimi export market. Beginning

in 1992, Taiwanese and Mainland Chinese longliners began using FSM ports as transshipment bases to export their catches to Japan via Guam and/or Saipan.

The Japanese portion of the FSM longline catch for 1994, estimated at 4,942 m/t, about half of the 1993 catch of 10,072 m/t. There has, however, been a noticeable decline in CPUE for yellowfin and bigeye tuna. This could be a consequence of increased interaction with industrial purse seine fleets combined with the increased competition in the longline fishery from Taiwan and Mainland China. The evidence, however, is not conclusive to support either assumption at this point and research addressing this problem is currently underway.

Japanese Longline Catch and Effort in FSM EEZ. *Source: Vessel Catch Reports*

Year	Hooks x 100	Total Catch * (m/t)	YFT CPUE	BET CPUE
1991	235,096	10,178	0.83	0.54
1992	204,372	10,561	1.0	0.55
1993	237,117	10,071	0.73	0.48
1994	119,828	4,942	0.77	0.45

* Total Catch includes all species, e.g. billfish.

** CPUE = No. per one hundred hooks

The Taiwanese portion of the FSM longline catch for 1994, estimated at 2,960 m/t, represents a decrease of 2% over the 1993 catch of 3,010 m/t. This decrease, however, came as a result of a 4% decrease in the number of hooks set which reflects a slight increase in the overall CPUE for the target species of yellowfin and bigeye tuna.

Taiwanese Longline Catch and Effort in FSM EEZ. *Source: Vessel Catch Reports*

Year	Hooks x 100	Total Catch * (m/t)	YFT CPUE	BET CPUE
1991	4,668	343	0.57	0.54
1992	35,483	2,517	0.84	0.54
1993	62,212	3,010	0.42	0.50
1994	59,728	2,960	0.41	0.56

* Total Catch includes all species, e.g. billfish.

** CPUE = No. per one hundred hooks

The Mainland Chinese longline vessels began limited operations in the FSM EEZ during 1992 with assistance from a Taiwanese longline company. Fishing gear technology and knowledge of the fishing operation was transferred to the Chinese by the more experienced Taiwanese fishermen which greatly improved their initial catch rates and success in the FSM EEZ. During 1994 a certain segment of the Mainland Chinese longline fleet began operations independent of the Taiwanese company which may have resulted in a decreased CPUE as reflected in the overall 1993/1994 figures for the Chinese.

Mainland Chinese Longline Catch and Effort in FSM EEZ. *Source: Vessel Catch Reports*

Year	Hooks x 100	Total Catch * (m/t)	YFT CPUE	BET CPUE
1992	6,270	402	0.6	0.52
1993	71,128	3,384	0.46	0.45
1994	153,375	6,534	0.38	0.48

* Total Catch includes all species, e.g. billfish.

** CPUE = No. per one hundred hooks

Pole and Line Fishery

The 1994 Japanese pole and line catch in the FSM EEZ of 4,598 m/t represents a 30% decrease over the 1993 catch total of 6,573 m/t. It should be noted, however, that the previous five-year catch average for the Japanese pole and line fleet in the FSM EEZ was 12,829 m/t. The main reason for the declining trend in catch has been a reduction in the size of the pole and line fleet and the corresponding decrease in fishing effort. For example, the peak catch during the previous five-year period was 23,408 m/t harvested in 1991. A total of 2,599 fishing days were logged by the Japanese pole and line fleet during 1991 versus 664 fishing days for 1994. The Japanese pole and line fleet has faced rising operational costs in conjunction with falling tuna prices for their product.

Table 14: 1994 Catch of Tuna by Flag and Gear Type for the FSM EEZ.

Source: Vessel Catch reports

Flag	Purse Seine Catch (m/t)	No. of Boats	Longline Catch (m/t)	No. of Boats	Pole and Line Catch (m/t)	Total Catch by Flag	Total Boats by Flag
Japan	50,364	35	4,942	142	4,598 (43 vessels)	59,904	220
Taiwan	20,041	43	2,960	100	-----	23,001	143
Korea	17,738	32	9	7	-----	17,747	39
FSM	3,524	8	125	10	-----	3,649	18
USA	6,235	45	-----	-----	-----	6,235	45
China	-----	-----	6,534	174	-----	6,534	174
Totals	97,902	163	14,570	433	4,598	117,070	639

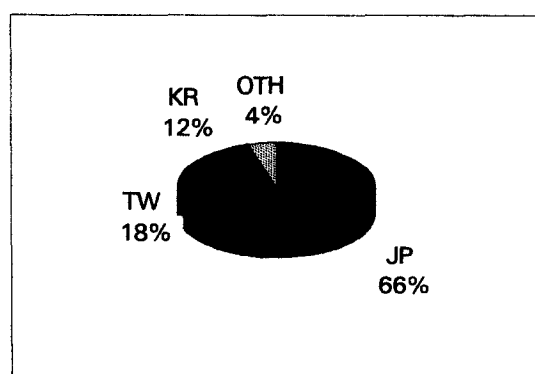


Figure 7. 1993 FSM EEZ Catch Composition by Flag
OTH = US (1.5%); FSM (1.5%); China (1%).

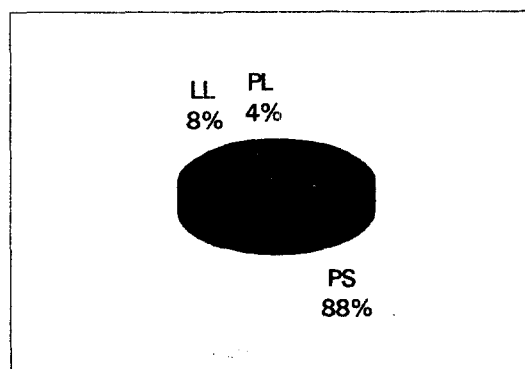


Figure 8. 1993 FSM EEZ Catch by Gear
PS = purse seine; LL = longline; PL = pole & line.