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**TAIWAN FISHERIES FOR YELLOWFIN TUNA IN THE CENTRAL AND
WESTERN PACIFIC, 1993-95, AND SPECIES COMPOSITION OF LOG-
ASSOCIATED SETS BY TAIWAN TUNA PURSE SEINERS, 1983-94**

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**Taiwan Fisheries for Yellowfin Tuna in the
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Introduction

As we reported during the previous three WPYRG meetings, Taiwan has three main fisheries for yellowfin tuna in the central and western Pacific Ocean. These are the distant-water longline fishery, the distant-water purse seine fishery and the offshore longline fishery. This paper briefly reviews the landings and vessel participation data from these fisheries for the period 1993-1995. Also reviewed are the yearly nominal catch rate data for the distant-water longline and purse seine fisheries. Finally, the species composition of log-associated sets by Taiwan purse seiners during 1983-1994 is also reviewed.

The Distant-Water Tuna Longline Fishery

The numbers of distant-water tuna longliners operating in the Pacific Ocean in 1993, 1994 and 1995 were 119, 70 and 70, respectively (Table 1). The total yearly yellowfin catches for the two years 1993-1994 in the central and western Pacific were 681 and 6,000 MT, respectively (Table 2). In 1992, most of catch (78% of total catch) was from the WPYF-3 area. By contrast, 78% of the catch in 1993 was from both area WPYF-3 and area WPYF-4 (Table 3). The yearly nominal catch rate increased from 0.65 fish/1000 hooks in 1992 to 0.80 fish/1000 hooks in 1993.

The Distant-Water Tuna Purse Seine Fishery

The numbers of distant-water purse seiners operating in the western Pacific Ocean during 1993, 1994 and 1995 were 43, 43 and 43, respectively (Table 1). The landings of yellowfin tuna decreased from 62,241 MT in 1993 to 45,840 MT in 1994. The yearly nominal catch rate decreased from 10.64 MT/day in 1993 to 8.6 MT/day in 1994. The purse seine fleet is currently operating in the Exclusive Economic Zones (EEZ) of the Federated States of Micronesia and Papua New Guinea as well as the adjacent high seas (i.e. WPYF-3 and WPYF-4 areas). Of the total catch in 1993, 98% (44,760 MT) was from WPYF-3 area and 2% (1,080 MT) from WPYF-4 area.

Tuna Longline Fishery

The number of Taiwanese offshore tuna vessels participating in the fishery decreased slightly from 1,791 in 1993 to 1,753 in 1994. The landings of yellowfin tuna decreased from 8,450 MT to 8,136 MT over the same period (Table 2). Most of the offshore fleets are currently operating in the WPYF-3 area.

Total Yellowfin Tuna Catch

The total annual catch of yellowfin tuna decreased from 71,690 MT in 1993 to 60,028 MT in 1994. The decrease in yellowfin catch was attributable to the overall decrease in landings by purse seine fishery.

Species Composition of Log-Associated Sets

The log-associated sets mentioned here include sets on natural logs/debris, free floating raft/payao, anchored rafts and animals (whales and sharks). More than 96% of the log-associated sets were on natural logs during 1983 to 1994, except for 1991 when 91% were on natural logs. Table 4 shows the species composition of the log-associated sets by Taiwan purse seiners from 1983 to 1994. Skipjack is the dominant species, contributing to over 80% of the total catch during

1983-1990 and around 78-80% during 1991-1993. In 1994, the skipjack catch accounted for 85% of the total log-associated catch. Yellowfin tuna is the only other important species. Bigeye tuna appear to be caught in negligible quantities.

Table 1. Annual number of Taiwan tuna boats operating in the central and western Pacific, 1993-95.

Type of boat	1993	1994	1995
Longliner			
Distant-water	119	70	70*
Offshore	1,791	1,753	NA
Purse seiner	43	43	43*

* up to July 1995
 NA data not available

Table 2. Taiwan yellowfin tuna catch (in MT) by type of fishery in the central and western Pacific, 1993-95.

Type of fishery	1993	1994	1995
Longline			
Distant-water	681	6,000*	NA
Offshore	8,450	8,136	NA
Purse seine	62,241	45,840	NA
Other**	318	52	NA
Total	71,690	60,028	NA

* preliminary estimate
 ** includes catches by troll, pole and line, etc.
 NA data not available

Table 3. Taiwan distant-water longline catches of Yellowfin tuna in metric tons in the central and western pacific by month and by WPYF area, 1993.

Month	WPYF area							Total
	1	2	3	4	5	6	7	
1	-	-	40.0	1.8	0.2	0.2	1.2	43.4
2	-	-	60.2	2.6	8.3	0	1.6	72.7
3	-	-	71.2	5.8	0	0.1	1.8	78.9
4	-	-	53.3	1.1	0.2	3.2	0.5	58.3
5	-	-	24.7	1.9	0	3.9	2.4	32.9
6	-	-	4.7	0.6	1.5	2.7	11.3	20.8
7	-	-	5.5	3.3	8.8	1.4	27.1	46.1
8	-	-	12.3	23.3	3.6	3.1	31.4	73.7
9	-	-	9.0	25.9	1.0	7.1	18.8	61.8
10	-	-	21.0	24.4	0	1.8	0.6	47.8
11	-	-	101.0	20.0	0	2.9	0	123.9
12	-	-	10.1	4.9	4.4	0	1.1	20.5
Total	-	-	413.0	115.6	28.0	26.4	97.8	680.8

'-' no data

'0' no yellowfin catch

Table 4. Species composition of the log-associated sets by Taiwan Tuna Purse Seiners, 1983-1994.

Year	Skipjack	Yellowfin	Bigeye
83	81.75	18.03	0.22
84	83.65	16.35	0.00
85	85.27	14.73	0.00
86	85.23	14.77	0.00
87	85.19	14.81	0.00
88	87.42	12.51	0.00
89	85.43	14.57	0.00
90	81.88	18.12	0.00
91	79.23	20.77	0.00
92	78.02	21.94	0.00
93	79.66	20.34	0.00
94	84.73	15.24	0.00