



Honolulu, Hawaii
June 17-24, 1992

**WESTERN PACIFIC YELLOWFIN TUNA
RESEARCH GROUP WORKSHOP**

AND

**SPC STANDING COMMITTEE ON TUNA AND
BILLFISH PROGRAM MEETING :**

Doc. No.3

**CENTRAL AND WESTERN PACIFIC YELLOWFIN TUNA FISHERIES
CATCHES AND VESSEL PARTICIPATION**

by

Atilio L. Coan, Jr

Southwest Fisheries Science Center
8604 La Jolla Shores Drive
La Jolla, California

Working paper for
Western Pacific Yellowfin Tuna Research Group Workshop
Honolulu, Hawaii
June 17-24, 1992

NOT TO BE CITED WITHOUT AUTHOR'S PERMISSION

CENTRAL AND WESTERN PACIFIC YELLOWFIN TUNA FISHERIES
CATCHES AND VESSEL PARTICIPATION

by

Atilio L. Coan, Jr.

Southwest Fisheries Science Center
8604 La Jolla Shores Drive
La Jolla, California

Working paper for
Western Pacific Yellowfin Tuna Research Group Workshop
Honolulu, Hawaii
June 17-24, 1992

NOT TO BE CITED WITHOUT AUTHOR'S PERMISSION

TO: Data Correspondents

FROM: Al Coan

Attached are tables of total catches of yellowfin tuna for various fisheries in the central and western Pacific Ocean and for number of vessels participating in those fisheries. The values are for data received from you as of June 8, 1992. The tables are divided by longline, surface and unclassified fishing gears and for the 1970-90 and pre-1970 periods. For some of the fisheries, I had to obtain values from other sources. Those sources are listed in the notes at the bottom of each table. Please check the values for each of your fisheries and be prepared to submit corrections, additions, etc. to me on June 17.

2

CATCHES OF WESTERN PACIFIC YELLOWFIN, PRE 1970

YEAR	JAPAN LL	USA LL	USA OTHER
1952	18,481.0	0.0	0.0
1953	27,578.0	0.0	0.0
1954	31,114.0	169.0	71.0
1955	21,725.0	141.0	59.0
1956	24,269.0	99.0	41.0
1957	42,172.0	120.0	50.0
1958	37,481.0	127.0	53.0
1959	34,110.0	175.0	81.0
1960	46,297.0	137.0	24.0
1961	50,881.0	152.0	57.0
1962	52,500.0	110.0	70.0
1963	45,195.0	118.0	57.0
1964	39,478.0	133.0	93.0
1965	35,369.0	153.0	73.0
1966	57,775.0	159.0	69.0
1967	29,915.0	141.0	87.0
1968	29,904.0	99.0	89.0
1969	31,016.0	106.0	85.0

- 1) 1954-58 USA LL and OTHER estimated from the 1959-63 ratios of LL to OTHER.
- 2) OTHER includes troll, handline and baitboat.

LONGLINE FISHERY CATCHES OF WESTERN PACIFIC YELLOWFIN, 1970-1990

YEAR	TAIWAN		KOREA	JAPAN	USA	AUSTRALIA	TONGA	SOLOMON ISLANDS	INDONESIA	NEW CALEDONIA	PHILIPPINES
	LL(1) DEEP SEA	LL INSHORE	LL(1,4)	LL	LL	LL(3)	LL	LL	LL	LL	LL(2)
1970	3,963.8	6,132.0	0.0	23,631.0	251.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	8,960.0	5,080.0	5,300.0	26,632.0	191.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	9,713.6	3,323.0	11,800.0	26,262.0	160.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	8,412.3	10,373.0	12,000.0	33,314.0	98.0	0.0	0.0	91.0	0.0	0.0	0.0
1974	4,594.2	7,778.0	15,104.0	29,318.0	130.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	2,902.2	13,539.0	10,366.0	33,747.0	102.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	3,667.4	12,425.0	15,613.0	36,635.0	111.0	0.0	0.0	146.0	0.0	0.0	1,232.0
1977	3,457.2	16,471.0	16,580.0	39,980.0	176.0	0.0	0.0	198.0	0.0	0.0	0.0
1978	3,559.9	19,165.0	14,072.0	56,719.0	172.0	0.0	0.0	207.0	1,216.0	0.0	874.0
1979	3,009.3	22,629.0	18,726.0	45,478.0	84.0	0.0	0.0	493.0	1,274.0	0.0	0.0
1980	6,024.3	18,265.0	23,594.0	53,974.0	72.0	0.0	0.0	564.0	1,478.0	0.0	0.0
1981	1,641.7	17,778.0	10,591.0	47,751.0	59.0	0.0	0.0	146.0	1,806.0	0.0	1,073.0
1982	767.3	16,508.0	9,588.0	40,794.0	35.0	0.0	81.0	306.0	3,605.0	0.0	1,897.0
1983	541.2	16,260.0	8,606.0	40,443.0	66.0	0.0	48.0	443.0	1,048.0	7.0	0.0
1984	592.3	16,107.0	7,030.0	29,623.0	77.0	0.0	55.0	213.0	1,670.0	25.0	1,284.0
1985	612.9	13,554.0	8,642.0	36,189.0	51.0	0.0	44.0	151.0	2,466.0	119.0	1,819.0
1986	338.5	10,844.0	10,707.0	26,132.0	92.0	0.0	33.0	0.0	2,347.0	151.0	2,411.0
1987	450.3	14,061.0	11,707.0	23,493.0	272.0	1,293.0	32.0	0.0	905.0	449.0	3,774.0
1988	1,291.3	14,337.0	10,982.0	32,257.0	590.0	1,000.0	26.0	0.0	576.0	436.0	0.0
1989	866.8	11,933.0	9,000.0	25,128.0	998.0	678.0	7.0	0.0	5,124.0	248.0	0.0
1990	1,390.9	7,848.0	13,900.0	0.0	1,134.0	662.0	28.0	0.0	5,508.0	551.0	214.0

- 1) Estimates for the total Pacific.
- 2) Estimates from FAO.
- 3) Estimates raised to coverage of 50%, 1987, 1988, 75%, 1989 and 85%, 1990
- 4) 1990 estimate from FAO Expert Consultation paper by Park.

6

SURFACE FISHERY CATCHES OF WESTERN PACIFIC YELLOWFIN, 1970-1990

YEAR	TAIWAN PS	KOREA PS(2)	JAPAN PS(3) BB(3)	USA		PAPUA NEW GUINEA	PALAU BB	SOLOMON ISLANDS		INDONESIA PS	NEW CALEDONIA		PHILIPPINES		OTHER(1,6)	
				PS	OTHER(4)	BB		BB	PS		BB	HL	BB	PS(1,5)		GILL
1970	0.0	0.0	0.0	0.0	69.0	74.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1971	0.0	0.0	379.0	345.0	0.0	197.0	112.0	10.0	141.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1972	0.0	0.0	0.0	294.0	0.0	214.0	1,345.0	56.0	237.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1973	0.0	0.0	412.0	55.0	0.0	252.0	916.0	41.0	195.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1974	0.0	0.0	728.0	0.0	0.0	393.0	1,416.0	161.0	310.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1975	0.0	0.0	1,664.0	55.0	0.0	677.0	1,744.0	298.0	215.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1976	0.0	0.0	3,304.0	0.0	200.0	728.0	8,563.0	412.0	476.0	0.0	507.0	0.0	0.0	0.0	9.0	3,158.0
1977	0.0	0.0	4,989.0	1,676.0	200.0	756.0	4,009.0	420.0	363.0	0.0	591.0	0.0	0.0	0.0	10,373.0	1,885.0
1978	0.0	0.0	7,654.0	769.0	200.0	791.0	3,099.0	303.0	524.0	0.0	1,160.0	0.0	0.0	0.0	5,207.0	6,134.0
1979	0.0	0.0	10,671.0	773.0	559.0	896.0	2,881.0	1.0	714.0	0.0	1,907.0	0.0	0.0	0.0	12,301.0	2,027.0
1980	0.0	125.0	9,607.0	6,143.0	1,059.0	1,124.0	3,018.0	996.0	658.0	449.0	2,269.0	2,177.0	0.0	0.0	12,463.0	2,301.0
1981	0.0	400.0	21,730.0	2,706.0	12,973.0	1,219.0	4,205.0	2,480.0	265.0	1,342.0	2,015.0	2,275.0	0.0	3.0	18,182.0	2,655.0
1982	0.0	2,000.0	28,774.0	1,531.0	22,011.0	786.0	0.0	615.0	237.0	1,444.0	1,887.0	1,428.0	0.0	41.0	17,676.0	1,386.0
1983	0.0	1,000.0	26,191.0	1,030.0	49,599.0	853.0	0.0	0.0	660.0	2,530.0	1,900.0	2,013.0	0.0	25.0	20,779.0	1,260.0
1984	251.9	400.0	30,836.0	1,275.0	45,090.0	834.0	274.0	0.0	397.0	2,397.0	2,282.0	2,108.0	2,250.0	0.0	22,989.0	2,161.0
1985	1,007.4	1,600.0	34,730.0	3,229.0	29,012.0	1,033.0	930.0	0.0	183.0	2,882.0	2,344.0	2,107.0	2,540.0	0.0	21,591.0	2,040.0
1986	2,869.2	2,500.0	39,724.0	1,827.0	36,608.0	1,623.0	0.0	0.0	358.0	2,258.0	2,278.0	1,650.0	2,737.0	0.0	17,591.0	2,137.0
1987	4,579.3	17,500.0	40,392.0	1,590.0	66,359.0	1,270.0	0.0	0.0	2,965.0	3,385.0	2,323.0	1,683.0	2,793.0	0.0	18,087.0	2,161.0
1988	6,238.0	15,000.0	24,928.0	1,112.0	25,211.0	1,225.0	0.0	0.0	2,251.0	4,068.0	2,439.0	1,767.0	2,899.0	0.0	0.0	0.0
1989	10,603.5	34,500.0	33,500.0	1,074.0	41,241.0	517.0	0.0	0.0	1,475.0	4,410.0	3,553.0	2,520.0	2,726.0	0.0	0.0	0.0
1990	13,693.6	0.0	41,244.0	0.0	57,132.0	562.0	0.0	0.0	2,309.0	3,825.0	4,433.0	2,665.0	3,196.0	0.0	0.0	0.0

- 1) Estimates from FAO.
- 2) Data from FAO Expert Consultation paper by Park.
- 3) Data from FAO Expert Consultation paper by Suzuki.
- 4) OTHER includes handline, troll and baitboat.
- 5) Includes catches of ring net fisheries.
- 6) Includes seine net, hook and line and bag fisheries. The majority is hook and line.

Greenkeepers

UNCLASSIFIED GEAR CATCHES OF WESTERN PACIFIC YELLOWFIN, 1970-1998

YEAR	JAPAN		INDONESIA		FIJI		PHILIPPINES		KIRIBATI		NEW ZEALAND		VANUATU	
	UNCL(2)	UNCL	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	UNCL(1)	
1970	0.0	5,500.0	0.0	32,000.0	2,400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1971	0.0	5,700.0	0.0	35,800.0	2,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1972	0.0	9,000.0	0.0	37,200.0	2,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1973	0.0	10,200.0	0.0	44,500.0	2,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1974	0.0	10,165.0	12.0	51,732.0	2,608.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1975	0.0	11,062.0	11.0	52,793.0	2,657.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1976	0.0	7,530.0	74.0	32,323.0	2,706.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1977	0.0	10,268.0	151.0	50,801.0	2,771.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1978	6,231.0	8,225.0	540.0	230.0	2,930.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1979	0.0	11,482.0	361.0	281.0	3,000.0	16.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1980	4,041.0	11,626.0	800.0	432.0	3,148.0	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1981	3,609.0	15,793.0	846.0	953.0	3,000.0	26.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1982	4,014.0	17,393.0	1,157.0	1,055.0	3,000.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1983	3,892.0	15,239.0	1,586.0	3,661.0	2,135.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1984	2.0	18,140.0	1,771.0	649.0	4,036.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1985	4,995.0	20,130.0	1,128.0	1,325.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1986	4,021.0	25,226.0	995.0	824.0	100.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1987	3,935.0	24,732.0	1,199.0	866.0	350.0	7.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1988	4,312.0	26,377.0	628.0	57,060.0	395.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1989	3,987.0	31,345.0	617.0	62,146.0	385.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1990	0.0	32,285.0	0.0	46,874.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	

1) Estimates from FAO.

2) Estimates from FAO Expert Consultation paper by Suzuki.

NUMBER OF LONGLINE VESSELS TAKING WESTERN PACIFIC YELLOWFIN, 1970-1990

YEAR	TAIWAN		KOREA LL(1)	JAPAN LL	USA LL	AUSTRALIA LL	TONGA LL	SOLOMON ISLANDS LL	INDONESIA LL	NEW		PHILIPPINES LL(1)
	LL(1,3) DEEP SEA	LL INSHORE								CALEDONIA LL	LL	
1970	23,688	829	0			0	0	0	0	0	0	0
1971	36,191	863	0			0	0	0	0	0	0	0
1972	41,113	899	0			0	0	0	0	0	0	0
1973	54,692	1,255	222			0	0	2	0	0	0	0
1974	53,573	1,451	173			0	0	0	0	0	0	0
1975	38,163	1,411	185			0	0	0	0	0	0	0
1976	39,284	1,331	127			0	0	2	0	0	0	5
1977	48,374	1,382	165			0	0	2	0	0	0	8
1978	34,361	1,670	151			0	0	2	0	0	0	0
1979	29,611	1,840	174			0	0	2	0	0	0	0
1980	69,566	1,900	173			0	0	2	0	0	0	0
1981	38,080	1,846	142			0	0	2	0	0	0	0
1982	26,184	1,831	146			0	1	2	0	0	0	61
1983	17,235	1,872	115			0	1	2	0	1	1	62
1984	19,781	1,944	75			0	1	2	0	2	2	62
1985	14,210	2,129	62			0	1	2	286	3	3	55
1986	11,696	2,084	66			0	1	0	63	2	2	41
1987	17,506	2,207	81			64	1	0	79	3	3	62
1988	33,517	1,977	0			62	1	0	70	4	4	0
1989	37,033	1,671	0			93	1	0	138	4	4	0
1990	34,433	1,139	0			96	1	0	0	7	7	0

- 1) Estimates for the total Pacific.
- 2) Estimates from FAO.
- 3) Estimates in hooks*1,000

7

NUMBER OF SURFACE VESSELS TAKING WESTERN PACIFIC YELLOWFIN, 1970-1990

YEAR	TAIWAN		KOREA		JAPAN		USA		PAPUA NEW GUINEA		PALAU BB	SOLOMON ISLANDS		INDONESIA PS(1)	NEW CALEDONIA		PHILIPPINES		
	PS	PS(2)	PS	BB	PS	OTHER	PS	BB	BB	PS		BB	HL		BB	PS(3,4)	GILL(3)	OTHER(3,5)	
1970	0	0	0		0		0	5	10	0	0	0	0	0	0	0	0	0	0
1971	0	0	0		0		0	29	20	0	0	0	0	0	0	0	0	0	0
1972	0	0	0		0		0	45	11	0	0	0	0	0	0	0	0	0	0
1973	0	0	6		0		0	43	12	11	0	0	0	0	0	0	0	0	0
1974	0	0	7		0		0	47	24	11	0	0	0	0	0	0	0	0	0
1975	0	0	7		0		0	48	21	12	0	0	0	0	0	0	0	0	0
1976	0	0	10		3		3	40	33	14	0	0	0	0	0	396	23	721	
1977	0	0	13		1		1	51	23	20	0	0	0	0	0	334	0	554	
1978	0	0	16		2		2	48	26	20	0	0	0	0	0	484	18	697	
1979	0	0	16		8		8	45	21	23	0	0	0	0	0	551	18	720	
1980	0	2	14		14		14	50	31	22	1	0	0	0	0	570	23	747	
1981	0	3	24		14		14	44	36	23	1	0	0	0	1	697	0	731	
1982	0	10	33		24		24	0	20	25	1	0	0	0	3	785	9	664	
1983	0	11	34		62		62	0	0	27	1	0	0	0	3	686	3	653	
1984	5	12	41		61		61	0	0	30	1	1,271	1	0	0	712	7	772	
1985	5	11	33		40		40	0	0	33	1	1,115	0	0	0	724	5	706	
1986	11	13	34		36		36	0	0	35	1	1,287	0	0	0	685	2	656	
1987	15	20	32		35		35	0	0	34	1	1,170	0	39	0	813	3	786	
1988	24	23	33		32		32	0	0	34	5	1,577	0	358	0	0	0	0	
1989	22	30	33		34		34	0	0	33	4	921	0	428	0	0	0	0	
1990	31	0	32		41		41	0	0	33	4	0	0	259	0	0	0	0	

- 1) Indonesian BB and PS 1984 from ITP DATA SUMMARY 6.
- 2) Estimated from FAO Expert Consultation paper by Park.
- 3) Estimates from ITP and FAO.
- 4) Includes ring net vessels.
- 5) Includes bag net and hook and line vessels.