



**SCIENTIFIC COMMITTEE
SECOND REGULAR SESSION**

7-18 August 2006
Manila, Philippines

ESTIMATES OF ANNUAL CATCHES IN THE WCPFC STATISTICAL AREA

WCPFC-SC2-2006/ST IP-1

Paper prepared by

Oceanic Fisheries Programme
Secretariat of the Pacific Community

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Noumea, New Caledonia

July 2006

INTRODUCTION

Estimates of annual catches in the WCPFC Statistical Area (Figure 1) are presented for target tuna species, i.e., albacore (*Thunnus alalunga*) bigeye (*Thunnus obesus*), skipjack (*Katsuwonus pelamis*) and yellowfin (*Thunnus albacares*), and major billfish species, i.e., black marlin (*Makaira indica*), blue marlin (*Makaira mazara*), striped marlin (*Tetrapturus audax*) and swordfish (*Xiphias gladius*). Estimates of catches in recent years of other non-target fish species, determined from observer data, are also presented. Estimates of catches of southern bluefin tuna (*Thunnus maccoyii*), which are compiled by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT), and catches of small tunas in the domestic fisheries of Indonesia and the Philippines are not presented. Recent catches of tuna in the domestic fisheries of Vietnam may have amounted to about 19,000 tonnes of skipjack, 18,000 tonnes of yellowfin and 5,500 tonnes of bigeye, for a total of 42,500 tonnes (Lewis 2005); however, these catches have been ignored in the tables and figures presented below.

TARGET TUNA SPECIES

Tables 1 and 2 and Figures 2 and 3 present estimates of annual catches of target tunas in the WCPFC Statistical Area.

Tables 3–6 present estimates of annual catches of target tunas in the WCPO Area and the EPO Area (Figure 1) by gear type. Tables 7–9 present estimates of annual catches of target tunas for the WCPO, the EPO and the Pacific Ocean by species.

Table 10 and 11, and Figures 4 and 5, present global catches of target tunas, by species and ocean area respectively.

MAJOR BILLFISH SPECIES

Table 12 presents estimates of commercial catches of the four major billfish species by gear type. Table 13 and Figure 6 present estimates of the major billfish catches for all gear types combined.

OTHER NON-TARGET SPECIES AND SPECIES GROUPS

Estimates of other non-target species and species groups for the longline and purse-seine fisheries in the WCPFC Statistical Area, excluding the domestic fisheries of Australia, Indonesia, the Philippines and Chinese Taipei, were determined from observer data held by the SPC Oceanic Fisheries Programme. Table 14 presents observer coverage. No observer data are available for the domestic fisheries of Indonesia, the Philippines and Chinese Taipei; observer data covering the domestic longline fleet of Australia have not yet been imported into the OFP observer database.

For longline, observer coverage from 1993 to 2004 has been 0.65% of total effort. Coverage of the distant-water longline fleets by data held by the OFP is less than 0.1%.

For purse-seine, observer coverage from 1995 to 2004 has been 3.59%. Coverage rates have increased from 2002 onwards due to higher coverage of the fleets of the FSM Arrangement, including Federated States of Micronesia, Marshall Islands, Papua New Guinea, Solomon Islands and Vanuatu. Coverage rates for sets on unassociated and associated schools has been similar.

Catches for each species or species group were estimated using model-based predictors of the catch rate. For longline, the relationship between the natural logarithm of the catch rate (kilograms per 100 hooks) per trip and year, month, latitude, longitude and the number of hooks between floats (a proxy for depth) were examined with general additive models (GAM), using tensor splines. Variables that appeared not to be related were excluded from the predictive model, which was selected by varying the degrees of freedom for each remaining variable in a linear model of polynomial splines and comparing the Bayesian information criterion (BIC). The selected model was then applied to effort data raised to represent total fishing effort and stratified by sector (see Table 14), year, month, latitude, longitude and the number of hooks between floats. The 2.5%, 50% and 97.5% quantiles of catches estimated by taking 1,000 random samples from the posterior distributions of the model coefficients were used to derive a point estimate of the catch and a confidence interval. For purse seine, a similar procedure was followed, with the data stratified by school association (i.e., unassociated or associated), year, month, latitude and longitude.

Catch estimates for longline and purse-seine are presented in Tables 15 and 16 respectively. Figures 7 and 8 present catch estimates and confidence intervals for non-target species caught by longline and purse seine respectively.

The confidence intervals shown in Figures 7 and 8 are based entirely on sampling error and do not include other sources of uncertainty, such as measurement errors in the observer data (e.g., the misidentification of species by the observer), errors in the estimates of total effort, and, most importantly, model uncertainty. In regard to the latter, a number of simplifying assumptions have been made to allow estimates of catch rates to be made in strata where there are no observer data. For example, interaction effects, such as between latitude and longitude or between year and the other variables, have been ignored. While interaction effects are almost certainly important, incorporating them in the models would not have allowed the reliable interpolation of strata for which observer data are missing. For these reasons, the confidence intervals shown in Figures 7 and 8 underestimate the true uncertainty.

Figure 9 and 10 presents the species group composition in the WCPFC Statistical Area (excluding the domestic fisheries of Indonesia, the Philippines and Chinese Taipei) during 1995–2004 for longliners, and longliners and purse seiners combined, respectively. The catch of sharks and rays and other non-target species accounted for 35% and 1.8% of the total catch by longliners and purse seiners respectively.

REFERENCE

- Lewis, A.D. 2005. The Tuna Fisheries of Vietnam — An Overview of Available Information. Information paper ST IP-5. First Meeting of the Scientific Committee of the Western and Central Pacific Fisheries Commission, 8–19 August 2005, Noumea, New Caledonia. Oceanic Fisheries Programme, Secretariat of the Pacific Community, Noumea, New Caledonia.

ACKNOWLEDGEMENT

Dr Brian McArdle of the Department of Statistics, University of Auckland, developed the methodology for the estimation of catches of other non-target species and species groups.

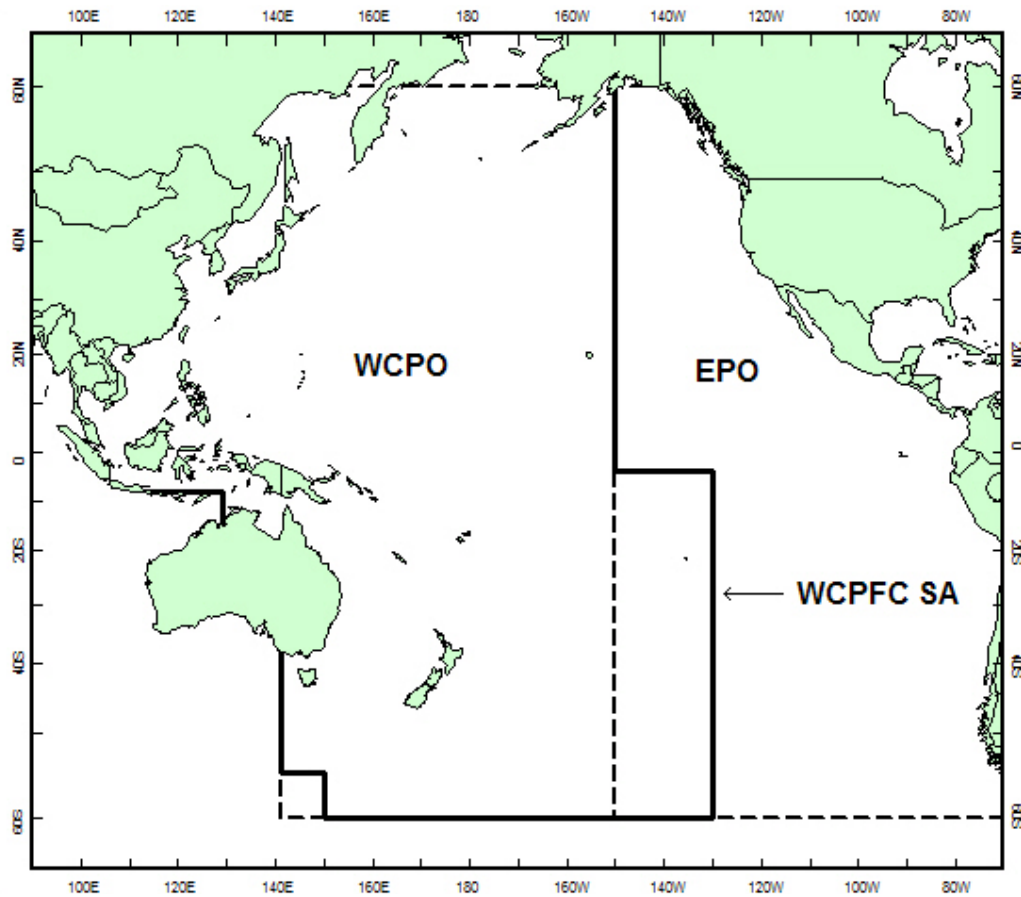


Figure 1. WCPFC Statistical Area (WCPFC SA), the Western and Central Pacific Ocean (WCPO) Area and the Eastern Pacific Ocean (EPO) Area

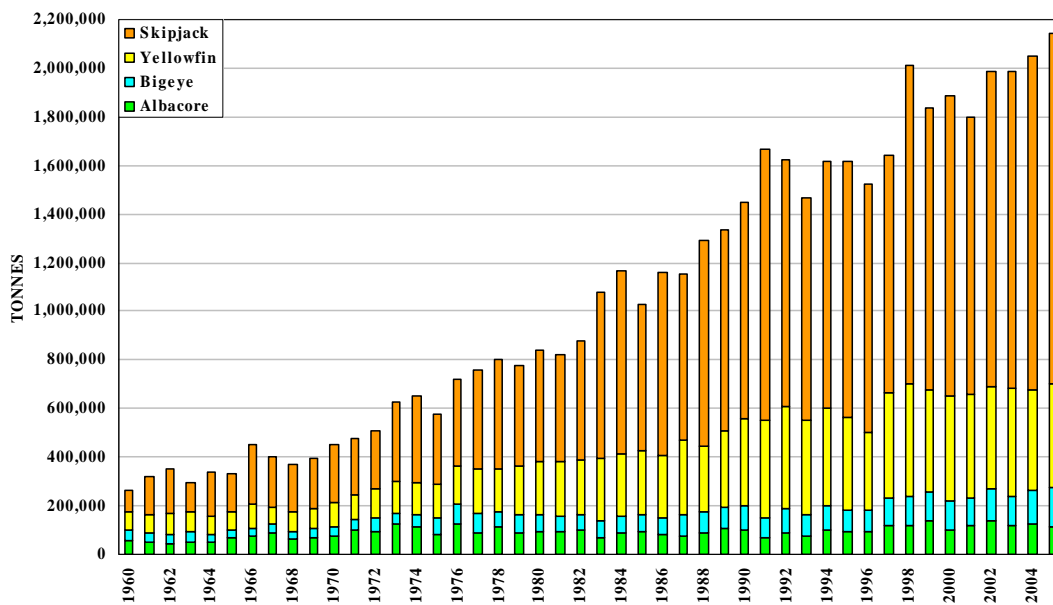


Figure 2. Catches of tuna in the WCPFC Statistical Area, by species

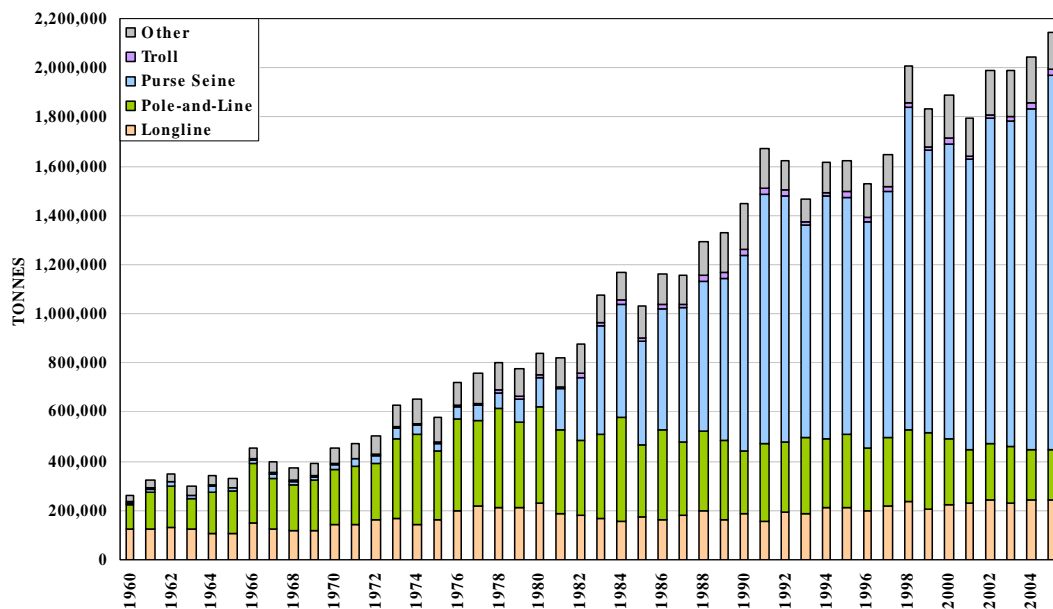


Figure 3. Catches of tuna in the WCPFC Statistical Area, by gear type

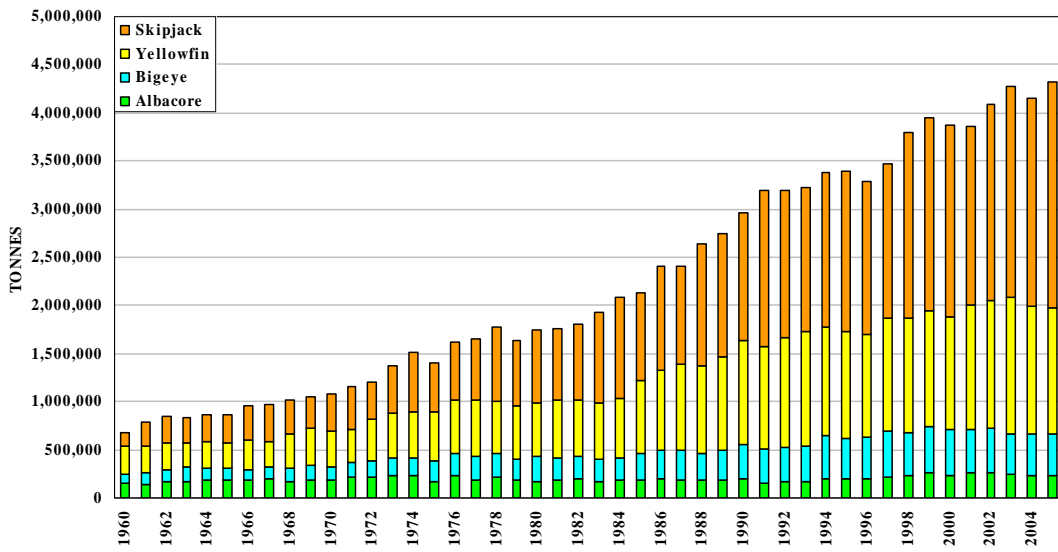


Figure 4. Global catches of tuna, by species

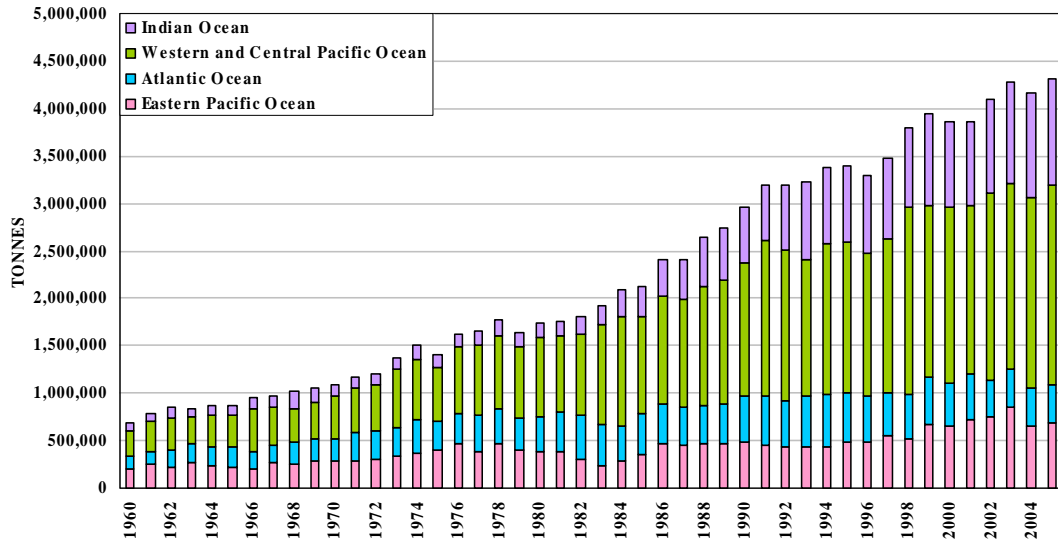


Figure 5. Global catches of tuna, by ocean area

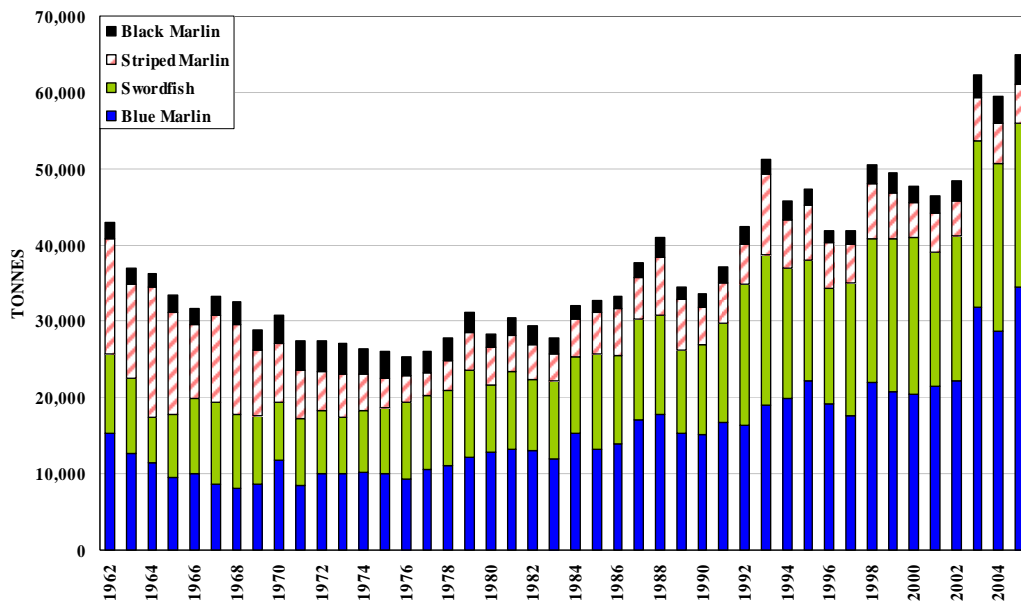


Figure 6. Commercial catches of major billfish species in the WCPFC Statistical Area

Figure 7. Catches of non-target species by longliners in the Statistical Area (excluding the domestic fleets of Indonesia, the Philippines and Chinese Taipei)

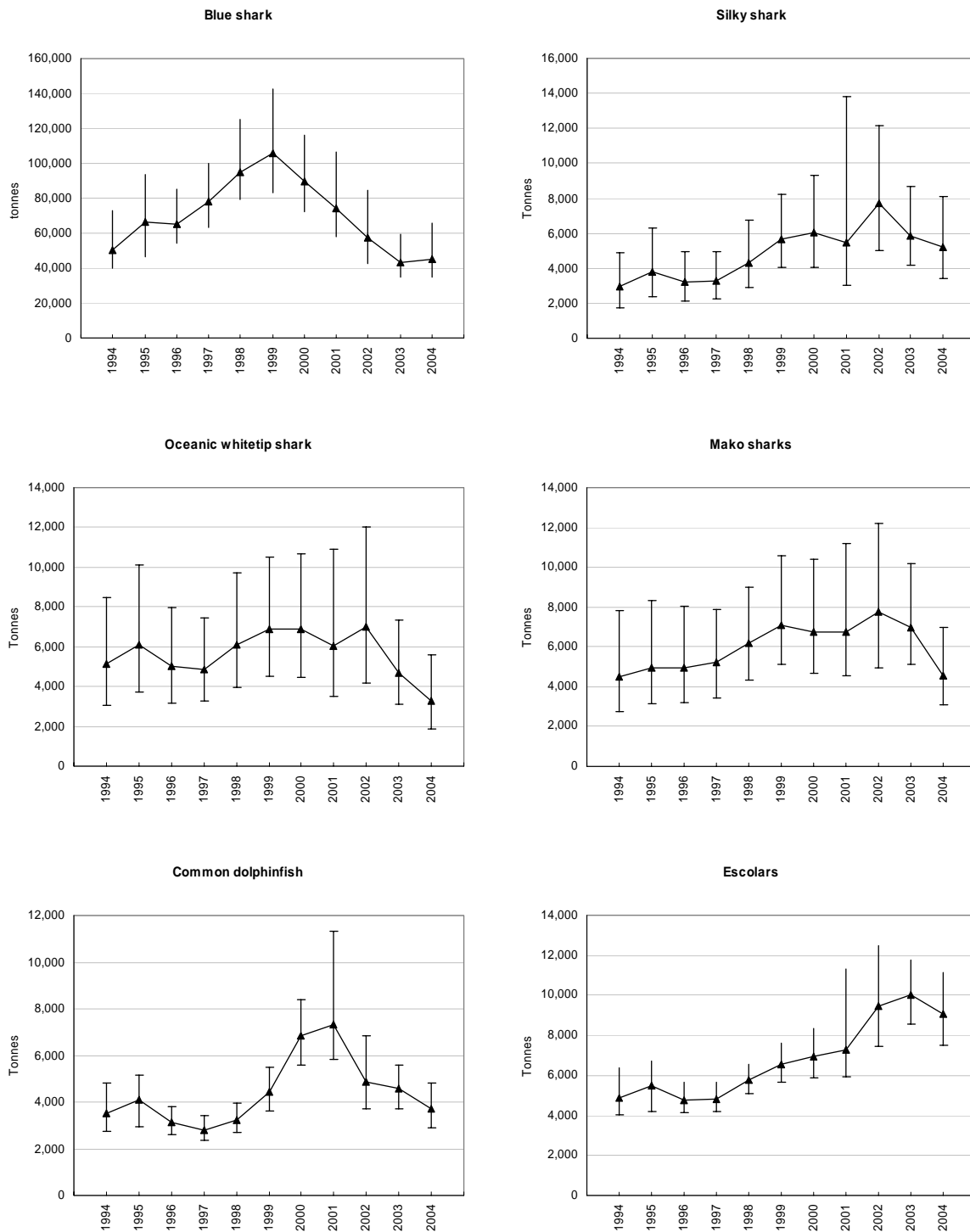


Figure 7 (continued)

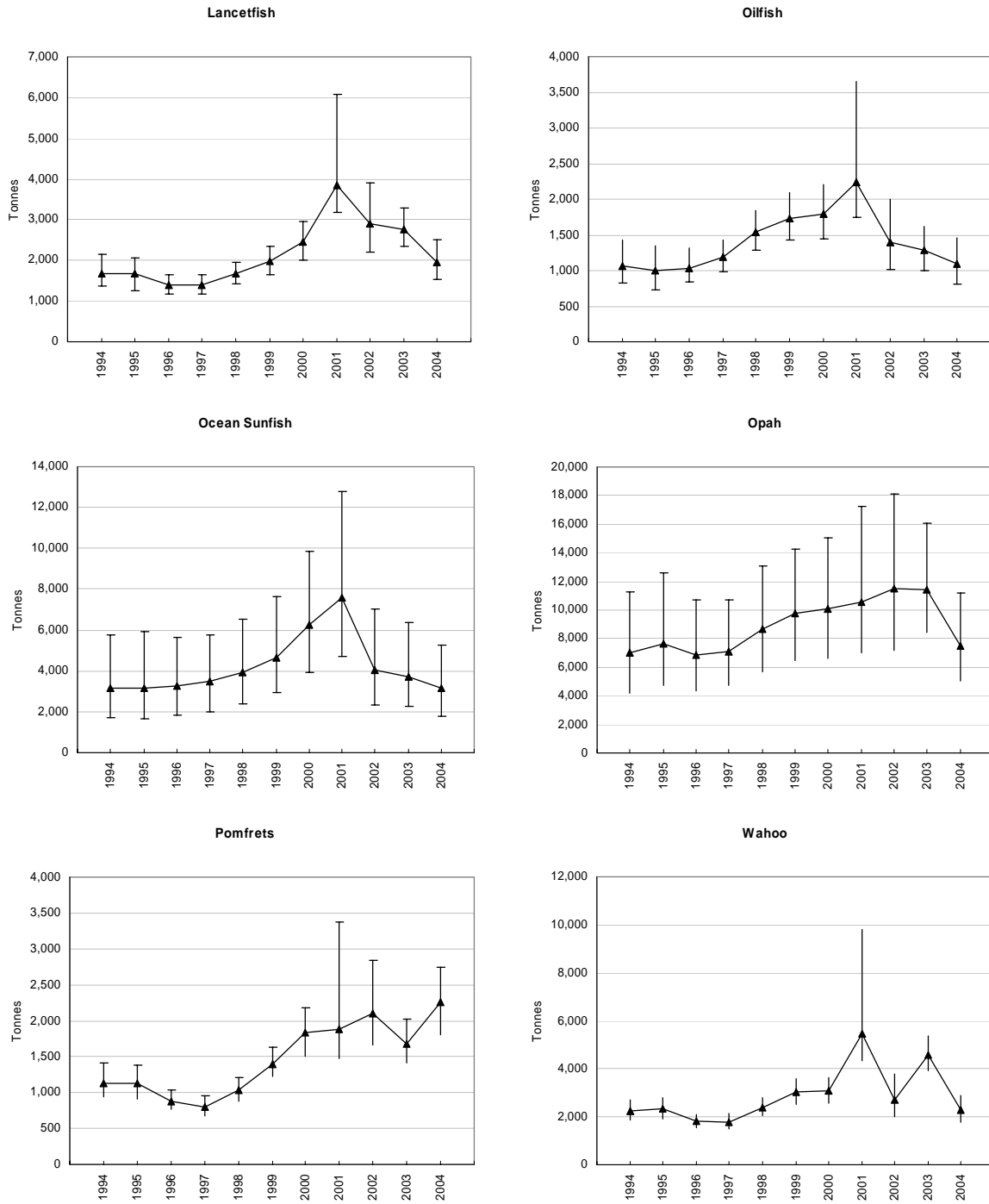


Figure 8. Catches of non-target species by purse seiners in the Statistical Area (excluding the domestic fleets of Indonesia and the Philippines)

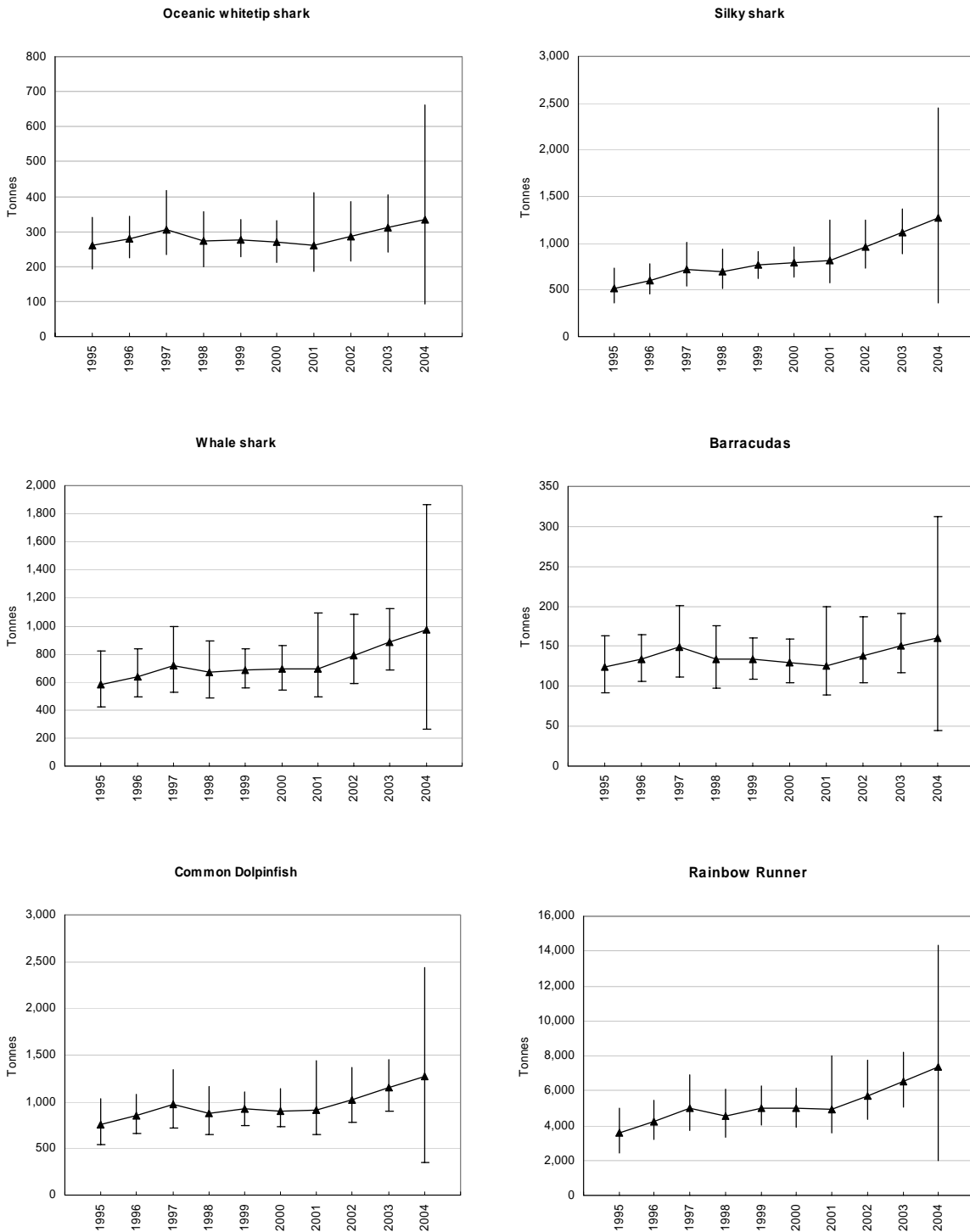


Figure 8 (continued)

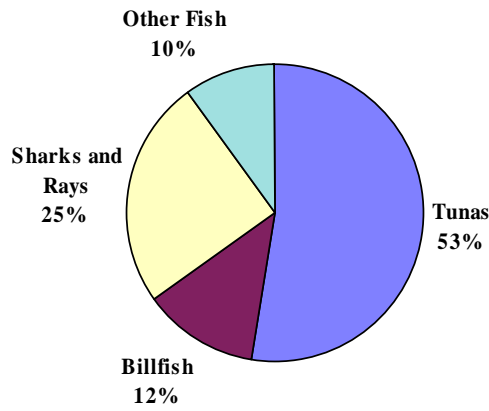
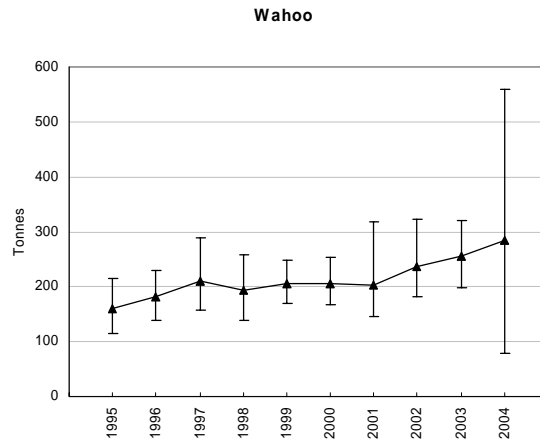


Figure 9. Composition of species groups in the catch by longliners in the WCPFC Statistical Area (excluding the domestic fisheries of Indonesia, the Philippines and Chinese Taipei) during 1995–2004

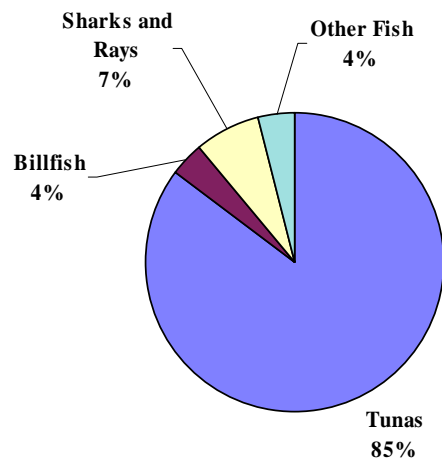


Figure 10. Composition of species groups in the catch by longliners and purse seiners in the WCPFC Statistical Area (excluding the domestic fisheries of Indonesia, the Philippines and Chinese Taipei) during 1995–2004

Table 1. Total catches of target tunas in the WCPFC Statistical Area, by species.
Estimates for 2005 are preliminary.

YEAR	ALBACORE		BIGEYE		SKIPJACK		YELLOWFIN		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	56,608	22	43,705	17	89,938	34	72,264	28	262,515
1961	51,513	16	37,998	12	156,736	49	74,989	23	321,236
1962	46,252	13	35,179	10	181,624	52	86,446	25	349,501
1963	53,067	18	42,533	14	122,703	41	78,244	26	296,547
1964	50,245	15	30,741	9	182,919	54	76,907	23	340,812
1965	69,954	21	29,877	9	155,221	47	77,380	23	332,432
1966	74,732	16	31,951	7	249,514	55	97,418	21	453,615
1967	88,909	22	35,349	9	204,831	51	69,655	17	398,744
1968	63,464	17	28,357	8	194,978	53	83,364	23	370,163
1969	71,496	18	32,055	8	203,341	52	85,122	22	392,014
1970	72,830	16	40,093	9	242,230	54	97,224	21	452,377
1971	99,848	21	43,192	9	228,618	48	102,676	22	474,334
1972	95,119	19	57,164	11	237,818	47	116,148	23	506,249
1973	123,087	20	48,966	8	328,784	52	128,375	20	629,212
1974	111,220	17	52,800	8	356,484	55	131,269	20	651,773
1975	80,332	14	69,088	12	288,788	50	141,185	24	579,393
1976	127,046	18	82,183	11	358,389	50	152,498	21	720,116
1977	86,851	11	82,622	11	404,368	53	183,272	24	757,113
1978	111,843	14	64,956	8	451,461	56	175,847	22	804,107
1979	89,613	12	72,890	9	413,569	53	198,420	26	774,492
1980	94,881	11	70,404	8	459,494	55	215,219	26	839,998
1981	97,099	12	57,605	7	438,163	53	227,478	28	820,345
1982	101,492	12	61,983	7	490,169	56	222,038	25	875,682
1983	71,365	7	63,754	6	682,095	63	259,108	24	1,076,322
1984	85,521	7	69,580	6	755,952	65	255,605	22	1,166,658
1985	91,273	9	74,816	7	602,722	59	261,384	25	1,030,195
1986	80,392	7	72,840	6	755,407	65	253,123	22	1,161,762
1987	74,958	6	87,730	8	687,702	59	305,997	26	1,156,387
1988	90,834	7	85,305	7	849,161	66	267,073	21	1,292,373
1989	105,245	8	87,061	7	823,473	62	316,817	24	1,332,596
1990	98,297	7	100,444	7	890,150	62	358,056	25	1,446,947
1991	65,958	4	84,709	5	1,117,849	67	400,908	24	1,669,424
1992	86,809	5	103,923	6	1,014,574	62	419,700	26	1,625,006
1993	76,380	5	87,646	6	915,950	62	389,418	27	1,469,394
1994	101,390	6	97,894	6	1,015,023	63	400,528	25	1,614,835
1995	95,507	6	87,953	5	1,056,563	65	379,403	23	1,619,426
1996	95,110	6	88,315	6	1,027,392	67	315,317	21	1,526,134
1997	118,716	7	116,251	7	976,957	59	432,366	26	1,644,290
1998	118,501	6	119,109	6	1,305,016	65	466,468	23	2,009,094
1999	135,926	7	123,383	7	1,158,448	63	417,073	23	1,834,830
2000	100,807	5	119,185	6	1,237,950	66	430,441	23	1,888,383
2001	116,395	6	116,293	6	1,139,088	63	424,115	24	1,795,891
2002	138,115	7	133,346	7	1,295,646	65	418,728	21	1,985,835
2003	118,944	6	118,432	6	1,302,670	66	446,279	22	1,986,325
2004	122,476	6	137,922	7	1,371,746	67	414,869	20	2,047,013
2005	115,353	5	163,419	8	1,443,127	67	423,468	20	2,145,367

Table 2. Total catches of target tunas in the WCPFC Statistical Area, by gear type. Estimates for 2005 are preliminary.

YEAR	LONGLINE		POLE-AND-LINE		PURSE SEINE		TROLL		OTHER		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	127,140	48	98,956	38	5,224	2	3,119	1	28,076	11	262,515
1961	121,451	38	150,709	47	14,540	5	4,479	1	30,057	9	321,236
1962	129,538	37	166,141	48	18,875	5	3,050	1	31,897	9	349,501
1963	122,770	41	125,048	42	11,934	4	2,820	1	33,975	11	296,547
1964	103,413	30	167,181	49	29,012	9	4,168	1	37,038	11	340,812
1965	105,983	32	176,112	53	8,621	3	2,805	1	38,911	12	332,432
1966	148,090	33	241,730	53	16,913	4	3,830	1	43,052	9	453,615
1967	127,059	32	205,255	51	14,508	4	4,491	1	47,431	12	398,744
1968	118,992	32	183,954	50	15,143	4	3,036	1	49,038	13	370,163
1969	120,223	31	204,646	52	9,442	2	6,592	2	51,111	13	392,014
1970	139,878	31	226,632	50	20,912	5	6,726	1	58,229	13	452,377
1971	141,886	30	238,162	50	30,501	6	2,317	0	61,468	13	474,334
1972	158,630	31	231,302	46	34,374	7	6,517	1	75,426	15	506,249
1973	166,271	26	323,959	51	41,539	7	10,808	2	86,635	14	629,212
1974	145,108	22	366,385	56	36,786	6	7,128	1	96,366	15	651,773
1975	163,795	28	275,438	48	35,276	6	6,305	1	98,579	17	579,393
1976	197,448	27	376,183	52	48,030	7	7,082	1	91,373	13	720,116
1977	218,112	29	348,608	46	60,832	8	7,822	1	121,739	16	757,113
1978	211,781	26	405,250	50	58,872	7	12,005	1	116,199	14	804,107
1979	211,115	27	345,648	45	98,617	13	9,052	1	110,060	14	774,492
1980	227,204	27	392,523	47	120,770	14	10,013	1	89,488	11	839,998
1981	188,353	23	342,392	42	162,325	20	9,740	1	117,535	14	820,345
1982	177,244	20	309,705	35	254,617	29	14,178	2	119,938	14	875,682
1983	169,872	16	337,080	31	441,787	41	13,287	1	114,296	11	1,076,322
1984	156,601	13	422,837	36	459,120	39	17,075	1	111,025	10	1,166,658
1985	172,541	17	293,838	29	422,549	41	10,950	1	130,317	13	1,030,195
1986	163,959	14	366,813	32	487,831	42	18,166	2	124,993	11	1,161,762
1987	180,182	16	298,117	26	545,766	47	14,822	1	117,500	10	1,156,387
1988	198,771	15	326,101	25	605,637	47	23,070	2	138,794	11	1,292,373
1989	163,586	12	320,381	24	660,841	50	23,009	2	164,779	12	1,332,596
1990	183,901	13	255,857	18	796,906	55	25,456	2	184,827	13	1,446,947
1991	157,159	9	314,815	19	1,013,169	61	27,803	2	156,478	9	1,669,424
1992	193,442	12	284,616	18	1,003,843	62	21,894	1	121,211	7	1,625,006
1993	188,270	13	309,227	21	863,259	59	15,542	1	93,096	6	1,469,394
1994	213,916	13	276,949	17	988,768	61	14,511	1	120,691	7	1,614,835
1995	208,916	13	300,670	19	964,362	60	24,310	2	121,168	7	1,619,426
1996	198,635	13	257,028	17	920,047	60	18,401	1	132,023	9	1,526,134
1997	215,454	13	279,963	17	1,003,711	61	18,797	1	126,365	8	1,644,290
1998	234,177	12	292,970	15	1,314,285	65	19,678	1	147,984	7	2,009,094
1999	203,949	11	313,096	17	1,145,785	62	13,755	1	158,245	9	1,834,830
2000	223,117	12	268,735	14	1,196,564	63	25,746	1	174,221	9	1,888,383
2001	232,448	13	213,480	12	1,180,845	66	16,407	1	152,711	9	1,795,891
2002	245,335	12	224,966	11	1,326,184	67	14,985	1	174,365	9	1,985,835
2003	229,834	12	226,990	11	1,325,722	67	18,815	1	184,964	9	1,986,325
2004	242,759	12	202,440	10	1,390,764	68	22,816	1	188,234	9	2,047,013
2005	242,059	11	205,872	10	1,523,373	71	22,009	1	152,054	7	2,145,367

Table 3. Total catches of albacore in the Pacific Ocean. Symbols: ‘-’ = no effort, hence no catch; ‘0’ = effort, but no catch. Estimates for 2005 are preliminary.

YEAR	SOUTH PACIFIC OCEAN					NORTH PACIFIC OCEAN					TOTAL
	LONGLINE	POLE-AND-LINE	TROLL	OTHER	SUBTOTAL	LONGLINE	POLE-AND-LINE	TROLL	OTHER	SUBTOTAL	
1960	22,248	45	-	-	22,293	17,373	25,156	20,105	769	63,403	85,696
1961	23,742	0	-	-	23,742	17,442	21,476	12,059	1,631	52,608	76,350
1962	35,219	0	-	-	35,219	15,771	9,814	19,753	1,926	47,264	82,483
1963	31,095	16	-	-	31,111	13,471	28,852	25,145	1,438	68,906	100,017
1964	22,824	0	-	-	22,824	15,488	27,269	18,391	1,271	62,419	85,243
1965	25,455	0	-	-	25,455	13,965	41,908	16,557	863	73,293	98,748
1966	38,661	0	-	-	38,661	25,329	24,430	15,377	1,285	66,421	105,082
1967	43,952	0	5	-	43,957	29,516	34,594	17,975	1,316	83,401	127,358
1968	32,368	0	14	-	32,382	24,670	21,503	21,462	2,327	69,962	102,344
1969	24,805	0	0	-	24,805	18,654	34,908	20,192	1,814	75,568	100,373
1970	34,734	100	50	-	34,884	17,747	28,679	21,422	1,595	69,443	104,327
1971	38,519	100	0	-	38,619	13,123	55,028	22,272	3,234	93,657	132,276
1972	39,122	122	268	-	39,512	16,094	52,876	27,521	1,448	97,939	137,451
1973	46,699	141	484	-	47,324	16,843	64,121	17,053	919	98,936	146,260
1974	33,033	812	898	-	34,743	13,862	73,527	21,509	1,615	110,513	145,256
1975	22,844	105	646	-	23,595	14,164	51,170	19,043	1,364	85,741	109,336
1976	28,952	100	25	-	29,077	17,787	81,592	16,183	4,312	119,874	148,951
1977	38,014	100	621	-	38,735	17,158	36,782	10,022	2,879	66,841	105,576
1978	32,888	100	1,686	-	34,674	13,400	58,595	16,636	11,240	99,871	134,545
1979	26,157	100	814	-	27,071	14,557	45,814	7,302	7,044	74,717	101,788
1980	30,967	101	1,468	-	32,536	15,513	43,902	7,768	7,679	74,862	107,398
1981	32,693	0	2,085	5	34,783	18,557	26,983	12,837	21,824	80,201	114,984
1982	28,347	1	2,434	6	30,788	17,664	29,942	6,713	26,411	80,730	111,518
1983	24,309	0	744	39	25,092	15,988	20,604	9,584	14,424	60,600	85,692
1984	20,340	2	2,773	1,589	24,704	15,564	27,369	9,354	27,693	79,980	104,684
1985	27,138	0	3,253	1,937	32,328	14,564	22,844	6,471	26,054	69,933	102,261
1986	32,637	0	2,003	1,946	36,586	13,047	14,611	4,738	18,799	51,195	87,781
1987	21,969	9	2,134	930	25,042	15,285	19,423	2,870	18,413	55,991	81,033
1988	28,284	0	4,296	5,283	37,863	15,316	8,110	4,367	27,987	55,780	93,643
1989	18,224	0	8,370	21,968	48,562	13,878	11,262	2,000	26,949	54,089	102,651
1990	19,366	245	6,975	7,538	34,124	16,173	14,114	2,905	32,178	65,370	99,494
1991	23,385	14	7,805	1,489	32,693	17,498	6,563	1,984	15,058	41,103	73,796
1992	30,592	11	6,578	65	37,246	19,423	15,029	4,934	19,954	59,340	96,586
1993	30,230	74	4,296	70	34,670	30,549	12,845	6,748	3,157	53,299	87,969
1994	34,286	67	7,164	89	41,606	30,742	30,524	13,134	3,910	78,310	119,916
1995	29,380	139	7,708	104	37,331	32,877	23,084	10,758	2,083	68,802	106,133
1996	23,862	57	7,367	156	31,442	39,289	22,623	21,849	808	84,569	116,011
1997	27,178	21	4,679	133	32,011	47,893	35,115	18,674	3,074	104,756	136,767
1998	37,828	47	6,258	85	44,218	47,831	27,878	20,074	2,871	98,654	142,872
1999	31,939	138	3,391	74	35,542	46,061	55,044	13,853	11,097	126,055	161,597
2000	33,980	102	6,120	139	40,341	40,869	21,853	15,245	4,754	82,721	123,062
2001	48,662	37	5,747	199	54,645	36,290	29,411	16,738	3,107	85,546	140,191
2002	60,990	18	4,311	152	65,471	23,078	49,956	16,323	6,261	95,618	161,089
2003	55,709	12	5,010	138	60,869	29,787	34,707	21,886	3,693	90,073	150,942
2004	60,181	175	4,537	59	64,952	22,751	35,037	22,173	9,115	89,076	154,028
2005	50,718	104	2,861	9	53,692	23,520	35,037	19,141	2,612	80,310	134,002

Table 4. Total catches of bigeye in the Pacific Ocean. Symbols: '...' = missing data; '-' = no effort, hence no catch; '0' = effort, but no catch. Estimates for 2005 are preliminary.

YEAR	WESTERN AND CENTRAL PACIFIC OCEAN					EASTERN PACIFIC OCEAN					TOTAL
	LONGLINE	POLE-AND-LINE	PURSE	OTHER	SUBTOTAL	LONGLINE	POLE-AND-LINE	PURSE	OTHER	SUBTOTAL	
1960	42,147	1,500	58	...	43,705	17,722	0	24	...	17,746	61,451
1961	36,135	1,800	63	...	37,998	52,431	106	105	-	52,642	90,640
1962	34,206	800	173	...	35,179	45,050	318	302	-	45,670	80,849
1963	40,727	1,800	6	...	42,533	66,617	140	...	-	66,757	109,290
1964	29,328	1,143	231	28	30,730	46,279	127	...	-	46,406	77,136
1965	28,388	1,254	201	30	29,873	29,164	231	...	-	29,395	59,268
1966	30,713	1,108	9	86	31,916	34,800	292	210	-	35,302	67,218
1967	31,392	2,803	60	253	34,508	35,878	1,305	1,697	-	38,880	73,388
1968	25,140	2,272	183	204	27,799	35,233	116	4,618	-	39,967	67,766
1969	30,045	1,700	48	62	31,855	52,071	0	1,093	-	53,164	85,019
1970	34,348	1,600	726	2,802	39,476	33,341	0	2,410	-	35,751	75,227
1971	36,798	900	876	3,057	41,631	29,804	75	4,359	18	34,256	75,887
1972	49,334	1,762	865	3,497	55,458	36,128	126	3,972	-	40,226	95,684
1973	40,285	1,258	1,078	4,218	46,839	50,777	236	3,342	-	54,355	101,194
1974	41,787	1,039	1,389	4,719	48,934	36,961	0	1,554	-	38,515	87,449
1975	57,623	1,334	1,328	4,938	65,223	41,733	36	6,574	-	48,343	113,566
1976	68,514	3,423	1,312	4,123	77,372	54,290	75	17,214	7	71,586	148,958
1977	66,249	3,325	1,587	5,627	76,788	74,086	2	11,162	-	85,250	162,038
1978	50,375	3,337	1,151	4,231	59,094	70,659	0	18,539	-	89,198	148,292
1979	57,186	2,540	2,031	4,615	66,372	55,435	0	12,097	1	67,533	133,905
1980	56,520	2,278	2,160	4,142	65,100	64,335	0	21,939	130	86,404	151,504
1981	41,564	2,596	4,268	4,918	53,346	53,416	0	14,922	2	68,340	121,686
1982	45,204	4,108	5,251	4,738	59,301	53,365	42	6,939	0	60,346	119,647
1983	41,412	4,055	9,442	4,987	59,896	60,043	39	4,575	97	64,754	124,650
1984	46,429	3,465	9,055	5,171	64,120	46,394	2	8,860	17	55,273	119,393
1985	51,261	4,326	6,944	6,110	68,641	66,325	2	6,056	21	72,404	141,045
1986	46,741	2,865	7,712	6,459	63,777	102,425	0	2,685	9	105,119	168,896
1987	59,133	3,134	11,215	5,563	79,045	100,121	0	1,177	16	101,314	180,359
1988	48,934	4,125	8,220	6,439	67,718	72,758	5	1,535	6	74,304	142,022
1989	52,854	4,298	12,629	7,137	76,918	70,963	0	2,031	0	72,994	149,912
1990	65,229	3,918	12,413	8,851	90,411	98,871	0	5,920	15	104,806	195,217
1991	46,027	1,991	13,750	10,783	72,551	104,194	31	4,870	21	109,116	181,667
1992	61,825	1,757	20,209	8,184	91,975	84,800	0	7,179	21	92,000	183,975
1993	55,905	2,330	14,150	7,043	79,428	72,473	0	9,657	59	82,189	161,617
1994	65,282	2,951	10,904	9,287	88,424	71,359	0	34,900	808	107,067	195,491
1995	54,902	3,776	11,957	9,286	79,921	58,256	0	45,319	1,381	104,956	184,877
1996	45,047	3,864	21,888	10,434	81,233	46,957	0	61,312	746	109,015	190,248
1997	59,780	3,611	37,294	9,786	110,471	52,571	0	64,270	23	116,864	227,335
1998	72,563	2,446	23,548	11,685	110,242	46,347	0	44,128	617	91,092	201,334
1999	64,059	2,176	38,198	12,523	116,956	36,405	0	51,158	541	88,104	205,060
2000	59,766	2,988	32,624	13,411	108,789	47,506	0	94,115	269	141,890	250,679
2001	62,699	2,349	29,097	12,289	106,434	68,698	0	61,404	47	130,149	236,583
2002	77,997	2,805	28,686	13,762	123,250	74,396	0	57,457	12	131,865	255,115
2003	68,663	1,778	26,156	14,430	111,027	60,272	0	54,137	21	114,430	225,457
2004	79,841	4,323	28,883	14,728	127,775	40,614	0	67,179	189	107,982	235,757
2005	81,363	8,440	41,502	25,797	157,102	32,082	0	70,294	0	102,376	259,478

Table 5. Total catches of skipjack in the Pacific Ocean. Estimates for 2005 are preliminary.

YEAR	WESTERN AND CENTRAL PACIFIC OCEAN					EASTERN PACIFIC OCEAN				TOTAL
	LONGLINE	POLE-AND-	PURSE	OTHER	SUBTOTAL	POLE-AND-	PURSE	OTHER	SUBTOTAL	
1960	0	70,428	3,728	12,663	86,819	28,929	16,649	481	46,059	132,878
1961	0	127,011	11,693	13,553	152,257	28,995	45,706	428	75,129	227,386
1962	4	152,387	11,674	14,509	178,574	17,660	58,939	503	77,102	255,676
1963	0	94,757	9,592	15,534	119,883	17,138	82,404	2,389	101,931	221,814
1964	5	137,106	25,006	16,634	178,751	10,306	51,759	3,609	65,674	244,425
1965	11	129,933	4,657	17,815	152,416	19,867	64,056	1,046	84,969	237,385
1966	52	215,600	10,949	19,083	245,684	14,083	50,264	1,960	66,307	311,991
1967	101	168,846	10,931	20,444	200,322	18,016	104,928	5,041	127,985	328,307
1968	60	162,379	7,587	21,907	191,933	7,339	59,642	10,130	77,111	269,044
1969	124	168,084	5,057	23,478	196,743	6,970	46,019	11,917	64,906	261,649
1970	1,595	197,873	10,585	25,488	235,541	7,470	47,467	7,257	62,194	297,735
1971	1,440	180,945	17,034	26,847	226,266	11,680	94,502	6,703	112,885	339,151
1972	1,524	172,827	21,664	35,534	231,549	6,555	29,804	1,144	37,503	269,052
1973	1,838	253,217	23,299	40,083	318,437	9,135	39,248	638	49,021	367,458
1974	2,088	289,202	15,630	43,298	350,218	7,629	79,416	510	87,555	437,773
1975	1,893	218,271	18,409	44,530	283,103	13,848	120,358	527	134,733	417,836
1976	2,056	276,582	28,495	44,159	351,292	11,256	124,958	713	136,927	488,219
1977	3,107	294,641	40,125	59,274	397,147	7,521	84,606	1,984	94,111	491,258
1978	3,219	331,401	43,183	63,325	441,128	6,048	172,293	1,334	179,675	620,803
1979	2,175	285,859	65,091	52,202	405,327	6,345	133,695	1,463	141,503	546,830
1980	630	333,457	82,586	34,283	450,956	5,226	130,912	1,971	138,109	589,065
1981	754	294,292	94,889	40,587	430,522	5,906	119,165	931	126,002	556,524
1982	1,013	262,244	173,826	41,394	478,477	3,760	100,498	411	104,669	583,146
1983	2,143	299,762	323,310	44,387	669,602	4,387	56,851	911	62,149	731,751
1984	867	379,474	331,330	30,043	741,714	2,884	59,859	870	63,613	805,327
1985	1,100	250,010	308,047	35,929	595,086	946	50,829	226	52,001	647,087
1986	1,434	336,695	368,138	33,034	739,301	1,921	65,635	192	67,748	807,049
1987	2,320	262,466	375,079	35,188	675,053	2,233	64,019	214	66,466	741,519
1988	1,930	301,031	497,052	30,443	830,456	4,325	87,113	689	92,127	922,583
1989	2,502	289,706	482,785	33,909	808,902	2,941	94,935	1,055	98,931	907,833
1990	1,290	224,592	603,347	42,503	871,732	824	74,370	1,926	77,120	948,852
1991	1,539	293,326	776,974	26,060	1,097,899	1,717	62,229	1,949	65,895	1,163,794
1992	1,148	252,594	724,257	21,356	999,355	1,956	84,283	1,115	87,354	1,086,709
1993	1,032	281,280	607,565	14,964	904,841	3,772	83,829	2,333	89,934	994,775
1994	1,463	229,665	758,401	18,230	1,007,759	3,240	70,127	799	74,166	1,081,925
1995	1,349	258,701	763,268	18,901	1,042,219	5,253	127,045	1,992	134,290	1,176,509
1996	4,684	215,016	780,764	19,039	1,019,503	2,555	103,976	1,563	108,094	1,127,597
1997	4,758	228,927	714,300	18,516	966,501	3,260	153,456	223	156,939	1,123,440
1998	4,782	249,568	1,020,580	19,831	1,294,761	1,684	140,631	296	142,611	1,437,372
1999	4,097	241,981	883,089	21,405	1,150,572	2,044	261,564	1,494	265,102	1,415,674
2000	5,317	230,116	960,409	25,018	1,220,860	231	205,130	135	205,496	1,426,356
2001	5,410	169,659	935,925	18,677	1,129,671	448	144,059	1,682	146,189	1,275,860
2002	4,009	159,208	1,102,836	21,378	1,287,431	616	153,394	550	154,560	1,441,991
2003	4,407	178,608	1,084,225	24,083	1,291,323	638	275,042	3,435	279,115	1,570,438
2004	4,682	151,116	1,174,604	24,833	1,355,235	528	198,067	1,653	200,248	1,555,483
2005	4,941	147,500	1,249,711	24,825	1,426,977	1,039	244,320	1,434	246,793	1,673,770

Table 6. Total catches of yellowfin in the Pacific Ocean. Symbols: ‘...’ = missing data; ‘-’ = no effort, hence no catch; ‘0’ = effort, but no catch. Estimates for 2005 are preliminary.

YEAR	WESTERN AND CENTRAL PACIFIC OCEAN					EASTERN PACIFIC OCEAN					TOTAL
	LONGLINE	POLE-AND-LINE	PURSE	OTHER	SUBTOTAL	LONGLINE	POLE-AND-LINE	PURSE	OTHER	SUBTOTAL	
1960	53,617	1,872	1,438	15,337	72,264	5,934	22,151	79,425	458	107,968	180,232
1961	52,717	3,259	2,777	16,236	74,989	12,500	15,220	80,058	949	108,727	183,716
1962	58,049	4,225	6,975	17,197	86,446	10,211	11,052	56,271	706	78,240	164,686
1963	55,673	2,071	2,277	18,223	78,244	18,973	7,041	48,004	688	74,706	152,950
1964	47,994	5,074	3,647	20,186	76,901	16,975	3,989	78,318	738	100,020	176,921
1965	49,232	3,434	3,752	20,956	77,374	15,620	6,983	65,348	312	88,263	165,637
1966	65,942	2,192	5,844	23,409	97,387	9,097	5,302	68,982	507	83,888	181,275
1967	36,436	3,125	3,428	26,303	69,292	9,286	4,511	65,441	1,491	80,729	150,021
1968	46,969	2,706	7,106	26,085	82,866	14,986	4,306	86,541	3,223	109,056	191,922
1969	51,684	2,714	3,857	26,612	84,867	15,329	7,194	113,664	1,869	138,056	222,923
1970	55,481	2,674	9,322	29,422	96,899	12,643	4,260	139,386	4,856	161,145	258,044
1971	56,927	2,866	10,840	31,204	101,837	8,013	5,301	104,863	2,496	120,673	222,510
1972	60,251	7,465	11,759	35,749	115,224	16,859	6,059	164,297	1,060	188,275	303,499
1973	61,818	7,458	16,900	41,726	127,902	11,697	3,933	194,200	659	210,489	338,391
1974	57,490	6,582	19,574	46,997	130,643	7,190	8,188	191,625	1,230	208,233	338,876
1975	68,416	7,801	15,386	48,536	140,139	10,640	5,630	183,029	568	199,867	340,006
1976	76,363	17,186	17,076	40,666	151,291	15,632	3,280	215,106	353	234,371	385,662
1977	92,680	15,257	18,509	55,092	181,538	12,355	1,841	184,922	263	199,381	380,919
1978	108,555	12,767	14,260	38,491	174,073	10,188	3,887	158,800	1,120	173,995	348,068
1979	105,065	11,638	31,364	46,375	194,442	11,473	4,790	170,648	225	187,136	381,578
1980	119,942	13,168	35,701	43,897	212,708	13,477	1,480	143,042	849	158,848	371,556
1981	93,125	19,269	62,922	50,606	225,922	7,999	1,477	168,235	805	178,516	404,438
1982	84,014	13,835	74,989	48,172	221,010	10,961	1,538	114,754	283	127,536	348,546
1983	83,662	13,266	108,811	50,793	256,532	10,894	4,007	83,928	1,182	100,011	356,543
1984	70,258	13,558	115,313	53,631	252,760	10,345	2,991	135,785	357	149,478	402,238
1985	73,818	18,156	106,020	61,022	259,016	13,198	1,069	211,460	308	226,035	485,051
1986	62,609	13,074	110,362	64,611	250,656	22,807	2,537	260,512	293	286,149	536,805
1987	73,975	13,243	158,027	57,984	303,229	18,911	5,107	262,007	335	286,360	589,589
1988	84,169	13,433	99,169	65,628	262,399	14,659	3,723	277,293	958	296,633	559,032
1989	65,089	15,169	163,307	69,794	313,359	17,032	4,145	277,995	564	299,736	613,095
1990	71,098	13,103	179,193	90,170	353,564	34,634	2,675	263,251	1,724	302,284	655,848
1991	57,368	12,921	218,927	106,695	395,911	30,729	2,856	231,257	1,247	266,089	662,000
1992	69,961	15,225	254,613	76,493	416,292	18,526	3,789	228,121	3,276	253,712	670,004
1993	64,490	12,698	239,864	69,545	386,597	23,808	4,950	219,494	3,700	251,952	638,549
1994	72,692	13,742	217,241	91,725	395,400	29,545	3,625	208,409	1,978	243,557	638,957
1995	81,135	15,050	187,858	91,350	375,393	20,054	1,268	215,434	2,570	239,326	614,719
1996	76,804	15,492	117,139	101,177	310,612	16,426	3,761	238,606	1,356	260,149	570,761
1997	69,761	12,362	251,018	95,452	428,593	21,448	4,418	244,878	2,004	272,748	701,341
1998	63,488	13,110	269,117	114,635	460,350	14,196	5,084	253,959	2,183	275,422	735,772
1999	58,743	13,817	217,948	122,622	413,130	10,642	1,783	281,920	3,617	297,962	711,092
2000	74,624	13,745	201,370	134,652	424,391	22,771	2,431	254,928	2,034	282,164	706,555
2001	71,357	12,163	214,844	120,782	419,146	28,475	3,916	382,023	1,326	415,740	834,886
2002	71,368	13,357	191,590	137,430	413,745	23,873	950	412,389	1,604	438,816	852,561
2003	71,167	11,944	214,489	144,787	442,387	22,462	470	380,582	4,295	407,809	850,196
2004	71,807	11,914	180,253	147,372	411,346	(22,462)	1,884	269,918	3,436	297,700	709,046
2005	73,833	14,841	231,241	100,129	420,044	(22,462)	2,067	268,156	1,555	294,240	714,284

Table 7. Total catches of albacore, bigeye, skipjack and yellowfin in the WCPO.
Estimates for 2005 are preliminary.

YEAR	ALBACORE		BIGEYE		SKIPJACK		YELLOWFIN		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	56,608	22	43,705	17	86,819	33	72,264	28	259,396
1961	51,513	16	37,998	12	152,257	48	74,989	24	316,757
1962	46,252	13	35,179	10	178,574	52	86,446	25	346,451
1963	53,067	18	42,533	14	119,883	41	78,244	27	293,727
1964	50,210	15	30,730	9	178,751	53	76,901	23	336,592
1965	69,943	21	29,873	9	152,416	46	77,374	23	329,606
1966	74,628	17	31,916	7	245,684	55	97,387	22	449,615
1967	85,490	22	34,508	9	200,322	51	69,292	18	389,612
1968	60,630	17	27,799	8	191,933	53	82,866	23	363,228
1969	70,527	18	31,855	8	196,743	51	84,867	22	383,992
1970	69,976	16	39,476	9	235,541	53	96,899	22	441,892
1971	95,236	20	41,631	9	226,266	49	101,837	22	464,970
1972	92,160	19	55,458	11	231,549	47	115,224	23	494,391
1973	121,476	20	46,839	8	318,437	52	127,902	21	614,654
1974	108,885	17	48,934	8	350,218	55	130,643	20	638,680
1975	79,545	14	65,223	11	283,103	50	140,139	25	568,010
1976	125,719	18	77,372	11	351,292	50	151,291	21	705,674
1977	83,115	11	76,788	10	397,147	54	181,538	25	738,588
1978	106,453	14	59,094	8	441,128	57	174,073	22	780,748
1979	88,484	12	66,372	9	405,327	54	194,442	26	754,625
1980	93,848	11	65,100	8	450,956	55	212,708	26	822,612
1981	95,389	12	53,346	7	430,522	53	225,922	28	805,179
1982	98,843	12	59,301	7	478,477	56	221,010	26	857,631
1983	69,490	7	59,896	6	669,602	63	256,532	24	1,055,520
1984	84,433	7	64,120	6	741,714	65	252,760	22	1,143,027
1985	90,246	9	68,641	7	595,086	59	259,016	26	1,012,989
1986	79,680	7	63,777	6	739,301	65	250,656	22	1,133,414
1987	71,938	6	79,045	7	675,053	60	303,229	27	1,129,265
1988	85,187	7	67,718	5	830,456	67	262,399	21	1,245,760
1989	101,684	8	76,918	6	808,902	62	313,359	24	1,300,863
1990	95,438	7	90,411	6	871,732	62	353,564	25	1,411,145
1991	64,108	4	72,551	4	1,097,899	67	395,911	24	1,630,469
1992	74,863	5	91,975	6	999,355	63	416,292	26	1,582,485
1993	70,630	5	79,428	6	904,841	63	386,597	27	1,441,496
1994	96,560	6	88,424	6	1,007,759	63	395,400	25	1,588,143
1995	93,613	6	79,921	5	1,042,219	66	375,393	24	1,591,146
1996	92,828	6	81,233	5	1,019,503	68	310,612	21	1,504,176
1997	115,607	7	110,471	7	966,501	60	428,593	26	1,621,172
1998	113,426	6	110,242	6	1,294,761	65	460,350	23	1,978,779
1999	132,313	7	116,956	6	1,150,572	63	413,130	23	1,812,971
2000	98,551	5	108,789	6	1,220,860	66	424,391	23	1,852,591
2001	112,856	6	106,434	6	1,129,671	64	419,146	24	1,768,107
2002	132,993	7	123,250	6	1,287,431	66	413,745	21	1,957,419
2003	110,869	6	111,027	6	1,291,323	66	442,387	23	1,955,606
2004	117,377	6	127,775	6	1,355,235	67	411,346	20	2,011,733
2005	113,622	5	157,102	7	1,426,977	67	420,044	20	2,117,745

Table 8. Total catches of albacore, bigeye, skipjack and yellowfin in the EPO.
Estimates for 2005 are preliminary.

YEAR	ALBACORE		BIGEYE		SKIPJACK		YELLOWFIN		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	23,292	12	17,746	9	46,059	24	107,968	55	195,065
1961	15,862	6	52,642	21	75,129	30	108,727	43	252,360
1962	22,659	10	45,670	20	77,102	34	78,240	35	223,671
1963	29,799	11	66,757	24	101,931	37	74,706	27	273,193
1964	22,586	10	46,406	20	65,674	28	100,020	43	234,686
1965	17,939	8	29,395	13	84,969	39	88,263	40	220,566
1966	17,938	9	35,302	17	66,307	33	83,888	41	203,435
1967	22,524	8	38,880	14	127,985	47	80,729	30	270,118
1968	26,249	10	39,967	16	77,111	31	109,056	43	252,383
1969	22,646	8	53,164	19	64,906	23	138,056	50	278,772
1970	26,809	9	35,751	13	62,194	22	161,145	56	285,899
1971	24,517	8	34,256	12	112,885	39	120,673	41	292,331
1972	29,548	10	40,226	14	37,503	13	188,275	64	295,552
1973	18,763	6	54,355	16	49,021	15	210,489	63	332,628
1974	25,257	7	38,515	11	87,555	24	208,233	58	359,560
1975	23,051	6	48,343	12	134,733	33	199,867	49	405,994
1976	20,577	4	71,586	15	136,927	30	234,371	51	463,461
1977	13,455	3	85,250	22	94,111	24	199,381	51	392,197
1978	19,961	4	89,198	19	179,675	39	173,995	38	462,829
1979	6,777	2	67,533	17	141,503	35	187,136	46	402,949
1980	7,451	2	86,404	22	138,109	35	158,848	41	390,812
1981	15,525	4	68,340	18	126,002	32	178,516	46	388,383
1982	6,441	2	60,346	20	104,669	35	127,536	43	298,992
1983	9,905	4	64,754	27	62,149	26	100,011	42	236,819
1984	17,766	6	55,273	19	63,613	22	149,478	52	286,130
1985	8,750	2	72,404	20	52,001	14	226,035	63	359,190
1986	5,378	1	105,119	23	67,748	15	286,149	62	464,394
1987	3,907	1	101,314	22	66,466	15	286,360	63	458,047
1988	5,447	1	74,304	16	92,127	20	296,633	63	468,511
1989	3,002	1	72,994	15	98,931	21	299,736	63	474,663
1990	3,842	1	104,806	21	77,120	16	302,284	62	488,052
1991	4,157	1	109,116	25	65,895	15	266,089	60	445,257
1992	6,268	1	92,000	21	87,354	20	253,712	58	439,334
1993	6,013	1	82,189	19	89,934	21	251,952	59	430,088
1994	12,105	3	107,067	25	74,166	17	243,557	56	436,895
1995	9,589	2	104,956	22	134,290	28	239,326	49	488,161
1996	11,328	2	109,015	22	108,094	22	260,149	53	488,586
1997	11,003	2	116,864	21	156,939	28	272,748	49	557,554
1998	16,715	3	91,092	17	142,611	27	275,422	52	525,840
1999	19,310	3	88,104	13	265,102	40	297,962	44	670,478
2000	23,273	4	141,890	22	205,496	31	282,164	43	652,823
2001	33,296	5	130,149	18	146,189	20	415,740	57	725,374
2002	30,128	4	131,865	17	154,560	20	438,816	58	755,369
2003	45,344	5	114,430	14	279,115	33	407,809	48	846,698
2004	38,578	6	107,982	17	200,248	31	297,700	46	644,508
2005	38,471	6	102,376	15	246,793	36	294,240	43	681,880

Table 9. Total catches of albacore, bigeye, skipjack and yellowfin in the Pacific Ocean. Estimates for 2005 are preliminary.

YEAR	ALBACORE		BIGEYE		SKIPJACK		YELLOWFIN		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	79,900	18	61,451	14	132,878	29	180,232	40	454,461
1961	67,375	12	90,640	16	227,386	40	183,716	32	569,117
1962	68,911	12	80,849	14	255,676	45	164,686	29	570,122
1963	82,866	15	109,290	19	221,814	39	152,950	27	566,920
1964	72,796	13	77,136	14	244,425	43	176,921	31	571,278
1965	87,882	16	59,268	11	237,385	43	165,637	30	550,172
1966	92,566	14	67,218	10	311,991	48	181,275	28	653,050
1967	108,014	16	73,388	11	328,307	50	150,021	23	659,730
1968	86,879	14	67,766	11	269,044	44	191,922	31	615,611
1969	93,173	14	85,019	13	261,649	39	222,923	34	662,764
1970	96,785	13	75,227	10	297,735	41	258,044	35	727,791
1971	119,753	16	75,887	10	339,151	45	222,510	29	757,301
1972	121,708	15	95,684	12	269,052	34	303,499	38	789,943
1973	140,239	15	101,194	11	367,458	39	338,391	36	947,282
1974	134,142	13	87,449	9	437,773	44	338,876	34	998,240
1975	102,596	11	113,566	12	417,836	43	340,006	35	974,004
1976	146,296	13	148,958	13	488,219	42	385,662	33	1,169,135
1977	96,570	9	162,038	14	491,258	43	380,919	34	1,130,785
1978	126,414	10	148,292	12	620,803	50	348,068	28	1,243,577
1979	95,261	8	133,905	12	546,830	47	381,578	33	1,157,574
1980	101,299	8	151,504	12	589,065	49	371,556	31	1,213,424
1981	110,914	9	121,686	10	556,524	47	404,438	34	1,193,562
1982	105,284	9	119,647	10	583,146	50	348,546	30	1,156,623
1983	79,395	6	124,650	10	731,751	57	356,543	28	1,292,339
1984	102,199	7	119,393	8	805,327	56	402,238	28	1,429,157
1985	98,996	7	141,045	10	647,087	47	485,051	35	1,372,179
1986	85,058	5	168,896	11	807,049	51	536,805	34	1,597,808
1987	75,845	5	180,359	11	741,519	47	589,589	37	1,587,312
1988	90,634	5	142,022	8	922,583	54	559,032	33	1,714,271
1989	104,686	6	149,912	8	907,833	51	613,095	35	1,775,526
1990	99,280	5	195,217	10	948,852	50	655,848	35	1,899,197
1991	68,265	3	181,667	9	1,163,794	56	662,000	32	2,075,726
1992	81,131	4	183,975	9	1,086,709	54	670,004	33	2,021,819
1993	76,643	4	161,617	9	994,775	53	638,549	34	1,871,584
1994	108,665	5	195,491	10	1,081,925	53	638,957	32	2,025,038
1995	103,202	5	184,877	9	1,176,509	57	614,719	30	2,079,307
1996	104,156	5	190,248	10	1,127,597	57	570,761	29	1,992,762
1997	126,610	6	227,335	10	1,123,440	52	701,341	32	2,178,726
1998	130,141	5	201,334	8	1,437,372	57	735,772	29	2,504,619
1999	151,623	6	205,060	8	1,415,674	57	711,092	29	2,483,449
2000	121,824	5	250,679	10	1,426,356	57	706,555	28	2,505,414
2001	146,152	6	236,583	9	1,275,860	51	834,886	33	2,493,481
2002	163,121	6	255,115	9	1,441,991	53	852,561	31	2,712,788
2003	156,213	6	225,457	8	1,570,438	56	850,196	30	2,802,304
2004	155,955	6	235,757	9	1,555,483	59	709,046	27	2,656,241
2005	152,093	5	259,478	9	1,673,770	60	714,284	26	2,799,625

Table 10. Global catches of albacore, bigeye, skipjack and yellowfin. Estimates for 2005 are preliminary.

YEAR	ALBACORE		BIGEYE		SKIPJACK		YELLOWFIN		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	154,996	23	86,651	13	151,233	22	291,831	43	684,711
1961	137,277	17	122,600	16	247,052	31	283,614	36	790,543
1962	165,128	19	122,393	14	282,757	33	277,073	33	847,351
1963	174,481	21	148,575	18	259,975	31	251,284	30	834,315
1964	182,504	21	118,434	14	282,416	33	279,898	32	863,252
1965	191,623	22	117,569	14	286,981	33	269,264	31	865,437
1966	183,033	19	115,989	12	365,331	38	295,563	31	959,916
1967	204,854	21	122,940	13	385,698	40	255,273	26	968,765
1968	177,063	17	128,568	13	350,211	34	363,084	36	1,018,926
1969	189,923	18	150,765	14	326,471	31	381,111	36	1,048,270
1970	180,473	17	142,846	13	390,206	36	372,611	34	1,086,136
1971	215,127	19	152,479	13	457,841	39	336,797	29	1,162,244
1972	217,055	18	161,119	13	381,499	32	439,257	37	1,198,930
1973	238,707	17	174,058	13	489,210	36	470,976	34	1,372,951
1974	236,122	16	178,148	12	607,332	40	486,214	32	1,507,816
1975	173,107	12	210,951	15	511,075	36	505,347	36	1,400,480
1976	238,569	15	222,019	14	604,205	37	553,043	34	1,617,836
1977	184,515	11	251,351	15	640,194	39	576,818	35	1,652,878
1978	217,782	12	250,249	14	767,262	43	539,147	30	1,774,440
1979	187,673	11	213,250	13	679,962	41	559,924	34	1,640,809
1980	176,864	10	249,454	14	752,573	43	557,695	32	1,736,586
1981	185,434	11	223,795	13	742,209	42	608,868	35	1,760,306
1982	203,297	11	236,009	13	795,674	44	572,610	32	1,807,590
1983	166,425	9	233,360	12	937,584	49	588,357	31	1,925,726
1984	178,971	9	233,673	11	1,045,901	50	624,350	30	2,082,895
1985	185,640	9	271,177	13	907,346	43	766,881	36	2,131,044
1986	203,524	8	291,430	12	1,079,777	45	830,007	35	2,404,738
1987	187,681	8	300,595	12	1,025,173	43	896,930	37	2,410,379
1988	188,025	7	281,367	11	1,263,645	48	909,701	34	2,642,738
1989	192,401	7	296,856	11	1,269,645	46	980,379	36	2,739,281
1990	196,833	7	352,744	12	1,317,552	45	1,090,110	37	2,957,239
1991	153,671	5	353,809	11	1,618,549	51	1,061,009	33	3,187,038
1992	171,263	5	353,935	11	1,524,948	48	1,148,720	36	3,198,866
1993	168,637	5	374,541	12	1,495,883	46	1,190,848	37	3,229,909
1994	204,880	6	437,434	13	1,599,207	47	1,136,459	34	3,377,980
1995	193,777	6	430,224	13	1,671,190	49	1,100,501	32	3,395,692
1996	194,643	6	437,661	13	1,591,736	48	1,066,060	32	3,290,100
1997	213,565	6	480,556	14	1,604,936	46	1,179,381	34	3,478,438
1998	226,994	6	452,195	12	1,924,134	51	1,192,381	31	3,795,704
1999	256,454	7	476,696	12	2,004,590	51	1,207,441	31	3,945,181
2000	230,935	6	481,806	12	1,988,135	51	1,170,151	30	3,871,027
2001	256,941	7	447,160	12	1,851,383	48	1,305,288	34	3,860,772
2002	256,227	6	465,856	11	2,046,042	50	1,323,326	32	4,091,451
2003	242,386	6	428,712	10	2,191,683	51	1,412,236	33	4,275,017
2004	231,470	6	435,263	10	2,172,615	52	1,318,708	32	4,158,056
2005	224,207	5	445,846	10	2,341,134	54	1,309,277	30	4,320,464

Table 11. Catches of albacore, bigeye, skipjack and yellowfin by ocean area (Western and Central Pacific Ocean, Eastern Pacific Ocean, Atlantic Ocean and Indian Ocean). Estimates for 2005 are preliminary; estimates for the Atlantic Ocean for 2005 have been carried over from 2004.

YEAR	WCPO		EPO		ATLANTIC		INDIAN		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	259,396	38	195,065	28	145,384	21	84,866	12	684,711
1961	316,757	40	252,360	32	135,231	17	86,195	11	790,543
1962	346,451	41	223,671	26	169,697	20	107,532	13	847,351
1963	293,727	35	273,193	33	188,394	23	79,001	9	834,315
1964	336,592	39	234,686	27	201,987	23	89,987	10	863,252
1965	329,606	38	220,566	25	222,199	26	93,066	11	865,437
1966	449,615	47	203,435	21	181,817	19	125,049	13	959,916
1967	389,612	40	270,118	28	184,929	19	124,106	13	968,765
1968	363,228	36	252,383	25	228,018	22	175,297	17	1,018,926
1969	383,992	37	278,772	27	236,695	23	148,811	14	1,048,270
1970	441,892	41	285,899	26	237,191	22	121,154	11	1,086,136
1971	464,970	40	292,331	25	290,960	25	113,983	10	1,162,244
1972	494,391	41	295,552	25	301,937	25	107,050	9	1,198,930
1973	614,654	45	332,628	24	306,180	22	119,489	9	1,372,951
1974	638,680	42	359,560	24	360,996	24	148,580	10	1,507,816
1975	568,010	41	405,994	29	301,679	22	124,797	9	1,400,480
1976	705,674	44	463,461	29	316,953	20	131,748	8	1,617,836
1977	738,588	45	392,197	24	372,569	23	149,524	9	1,652,878
1978	780,748	44	462,829	26	368,658	21	162,205	9	1,774,440
1979	754,625	46	402,949	25	338,014	21	145,221	9	1,640,809
1980	822,612	47	390,812	23	367,603	21	155,559	9	1,736,586
1981	805,179	46	388,383	22	414,704	24	152,040	9	1,760,306
1982	857,631	47	298,992	17	467,020	26	183,947	10	1,807,590
1983	1,055,520	55	236,819	12	427,425	22	205,962	11	1,925,726
1984	1,143,027	55	286,130	14	371,660	18	282,078	14	2,082,895
1985	1,012,989	48	359,190	17	429,527	20	329,338	15	2,131,044
1986	1,133,414	47	464,394	19	422,657	18	384,273	16	2,404,738
1987	1,129,265	47	458,047	19	397,709	16	425,358	18	2,410,379
1988	1,245,760	47	468,511	18	409,025	15	519,442	20	2,642,738
1989	1,300,863	47	474,663	17	418,852	15	544,903	20	2,739,281
1990	1,411,145	48	488,052	17	482,619	16	575,423	19	2,957,239
1991	1,630,469	51	445,257	14	524,778	16	586,534	18	3,187,038
1992	1,582,485	49	439,334	14	487,680	15	689,367	22	3,198,866
1993	1,441,496	45	430,088	13	536,347	17	821,978	25	3,229,909
1994	1,588,143	47	436,895	13	549,697	16	803,245	24	3,377,980
1995	1,591,146	47	488,161	14	507,074	15	809,311	24	3,395,692
1996	1,504,176	46	488,586	15	481,346	15	815,992	25	3,290,100
1997	1,621,172	47	557,554	16	445,445	13	854,267	25	3,478,438
1998	1,978,779	52	525,840	14	462,115	12	828,970	22	3,795,704
1999	1,812,971	46	670,478	17	493,444	13	968,288	25	3,945,181
2000	1,852,591	48	652,823	17	447,566	12	918,047	24	3,871,027
2001	1,768,107	46	725,374	19	475,578	12	891,713	23	3,860,772
2002	1,957,419	48	755,369	18	390,071	10	988,592	24	4,091,451
2003	1,955,606	46	846,698	20	413,489	10	1,059,224	25	4,275,017
2004	2,011,733	48	644,508	16	401,395	10	1,100,420	26	4,158,056
2005	2,117,745	49	681,880	16	(401,395)	9	1,119,444	26	4,320,464

Table 12. Commercial catches of billfish in the WCPFC Statistical Area, by gear type and species

YEAR	LONGLINE					PURSE SEINE			OTHER COMMERCIAL GEARS					TOTAL
	BLUE MARLIN	BLACK MARLIN	STRIPED MARLIN	SWORD-FISH	SUB-TOTAL	BLUE MARLIN	BLACK MARLIN	SUB-TOTAL	BLUE MARLIN	BLACK MARLIN	STRIPED MARLIN	SWORD-FISH	SUB-TOTAL	
1960	...	...	...	...	...	-	-	-	910	58	0	34	1,002	...
1961	...	...	...	...	...	-	-	-	965	61	0	36	1,062	...
1962	14,197	2,091	15,207	10,354	41,849	-	-	-	1,023	65	0	38	1,126	42,975
1963	11,583	2,100	12,384	9,741	35,808	-	-	-	1,084	69	0	41	1,194	37,002
1964	10,240	1,714	17,039	5,958	34,951	-	-	-	1,149	73	0	43	1,265	36,216
1965	8,303	2,253	13,334	8,213	32,102	-	-	-	1,218	77	0	46	1,341	33,443
1966	8,763	2,057	9,614	9,838	30,272	-	-	-	1,291	82	0	49	1,422	31,694
1967	7,287	2,362	11,506	10,643	31,798	0	0	0	1,369	87	0	52	1,508	33,306
1968	6,673	2,951	11,783	9,504	30,911	1	1	1	1,451	92	0	55	1,598	32,510
1969	7,091	2,619	8,500	8,945	27,155	0	0	1	1,538	98	0	58	1,694	28,850
1970	9,977	3,544	7,594	7,578	28,692	7	19	25	1,795	125	0	67	1,987	30,705
1971	6,450	3,776	6,373	8,615	25,215	35	46	81	2,008	140	0	75	2,223	27,518
1972	7,957	3,696	5,194	8,111	24,957	48	57	105	2,087	146	0	78	2,311	27,373
1973	7,483	3,794	5,550	7,304	24,131	53	72	125	2,496	174	0	93	2,763	27,019
1974	7,253	3,115	4,789	7,990	23,146	31	39	70	2,901	201	0	109	3,211	26,428
1975	7,078	3,280	3,764	8,518	22,640	35	39	74	2,961	206	0	111	3,278	25,992
1976	6,709	2,242	3,497	9,955	22,403	44	43	86	2,497	175	0	93	2,765	25,255
1977	7,020	2,426	2,948	9,583	21,976	42	44	86	3,534	243	0	132	3,909	25,971
1978	8,862	2,787	3,744	9,871	25,264	42	40	82	2,141	156	0	80	2,377	27,723
1979	9,415	2,395	5,059	11,178	28,047	58	59	117	2,741	196	0	102	3,039	31,203
1980	10,245	1,553	4,822	8,740	25,361	67	65	132	2,504	177	0	94	2,775	28,267
1981	10,331	2,010	4,773	10,111	27,224	111	108	219	2,763	195	0	103	3,061	30,504
1982	10,400	2,023	4,536	9,215	26,173	141	145	286	2,558	175	0	95	2,828	29,287
1983	9,004	1,740	3,476	10,109	24,329	171	196	367	2,788	194	0	104	3,086	27,782
1984	12,197	1,317	4,837	9,975	28,324	222	244	467	2,884	211	0	106	3,201	31,992
1985	9,667	1,047	5,510	12,416	28,640	193	203	396	3,311	257	0	122	3,690	32,726
1986	10,349	1,120	6,175	11,474	29,118	189	202	391	3,395	268	0	125	3,788	33,298
1987	14,403	1,533	5,559	12,936	34,432	198	220	418	2,541	195	0	94	2,830	37,680
1988	14,553	2,294	7,612	12,809	37,268	184	203	387	3,039	222	0	112	3,373	41,028
1989	11,893	1,208	6,645	10,694	30,440	186	226	412	3,284	241	0	121	3,646	34,498
1990	10,356	1,166	4,901	11,551	27,973	183	241	424	4,598	342	1	168	5,109	33,506
1991	11,036	1,507	5,278	12,811	30,632	210	307	517	5,455	388	1	200	6,044	37,193
1992	13,372	1,672	5,379	18,353	38,775	230	317	548	2,700	218	1	96	3,015	42,337
1993	15,912	1,447	10,615	19,663	47,638	227	300	527	2,774	222	1	100	3,097	51,261
1994	15,691	1,868	6,365	16,885	40,810	215	285	500	3,973	298	1	145	4,417	45,726
1995	18,115	1,355	7,372	15,558	42,400	222	287	509	3,879	324	1	139	4,343	47,253
1996	14,598	967	5,990	14,860	36,416	244	302	546	4,415	333	56	145	4,949	41,911
1997	12,630	990	5,092	17,307	36,019	309	468	776	4,568	345	40	151	5,104	41,899
1998	16,608	1,608	7,168	18,625	44,009	271	393	664	5,182	398	27	179	5,786	50,458
1999	14,742	1,982	6,039	19,739	42,502	203	269	472	5,849	431	30	201	6,511	49,486
2000	14,221	1,445	4,455	20,498	40,618	239	331	570	5,893	441	15	205	6,554	47,743
2001	15,750	1,590	4,966	17,481	39,786	215	297	511	5,486	408	45	189	6,128	46,426
2002	15,568	1,863	4,516	18,812	40,759	236	328	564	6,335	470	30	222	7,057	48,380
2003	23,949	2,166	5,524	21,594	53,233	233	308	542	7,601	572	31	269	8,473	62,247
2004	20,683	2,518	5,153	21,745	50,099	289	396	685	7,742	585	31	275	8,633	59,418
2005	26,409	2,891	5,063	21,307	55,670	261	335	595	7,742	585	32	275	8,634	64,899

Table 13. Commercial catches of billfish in the WCPFC Statistical Area, by species

YEAR	BLUE MARLIN		BLACK MARLIN		STRIPED MARLIN		SWORDFISH		TOTAL
	TONNES	%	TONNES	%	TONNES	%	TONNES	%	
1960	...	...	...	...	...	...	...	...	...
1961	...	...	...	...	...	...	...	...	...
1962	15,220	35	2,156	5	15,207	35	10,392	24	42,975
1963	12,667	34	2,169	6	12,384	33	9,782	26	37,002
1964	11,389	31	1,787	5	17,039	47	6,001	17	36,216
1965	9,521	28	2,330	7	13,334	40	8,259	25	33,443
1966	10,054	32	2,139	7	9,614	30	9,887	31	31,694
1967	8,656	26	2,449	7	11,506	35	10,695	32	33,306
1968	8,125	25	3,043	9	11,783	36	9,559	29	32,510
1969	8,630	30	2,717	9	8,500	29	9,003	31	28,850
1970	11,779	38	3,688	12	7,594	25	7,645	25	30,705
1971	8,493	31	3,962	14	6,373	23	8,690	32	27,518
1972	10,092	37	3,899	14	5,194	19	8,189	30	27,373
1973	10,032	37	4,040	15	5,550	21	7,397	27	27,019
1974	10,186	39	3,355	13	4,789	18	8,099	31	26,428
1975	10,074	39	3,526	14	3,764	14	8,629	33	25,992
1976	9,250	37	2,460	10	3,497	14	10,048	40	25,255
1977	10,595	41	2,713	10	2,948	11	9,715	37	25,971
1978	11,045	40	2,984	11	3,744	14	9,951	36	27,723
1979	12,214	39	2,650	8	5,059	16	11,280	36	31,203
1980	12,816	45	1,794	6	4,822	17	8,834	31	28,267
1981	13,206	43	2,312	8	4,773	16	10,214	33	30,504
1982	13,099	45	2,342	8	4,536	15	9,310	32	29,287
1983	11,963	43	2,130	8	3,476	13	10,213	37	27,782
1984	15,303	48	1,772	6	4,837	15	10,081	32	31,992
1985	13,170	40	1,507	5	5,510	17	12,538	38	32,726
1986	13,933	42	1,590	5	6,175	19	11,599	35	33,298
1987	17,142	45	1,948	5	5,559	15	13,030	35	37,680
1988	17,776	43	2,719	7	7,612	19	12,921	31	41,028
1989	15,364	45	1,675	5	6,645	19	10,815	31	34,498
1990	15,137	45	1,749	5	4,902	15	11,719	35	33,506
1991	16,701	45	2,202	6	5,279	14	13,011	35	37,193
1992	16,302	39	2,207	5	5,380	13	18,449	44	42,337
1993	18,913	37	1,969	4	10,616	21	19,763	39	51,261
1994	19,879	43	2,451	5	6,366	14	17,030	37	45,726
1995	22,216	47	1,966	4	7,373	16	15,697	33	47,253
1996	19,258	46	1,602	4	6,046	14	15,005	36	41,911
1997	17,507	42	1,802	4	5,132	12	17,458	42	41,899
1998	22,061	44	2,399	5	7,195	14	18,804	37	50,458
1999	20,794	42	2,683	5	6,069	12	19,940	40	49,486
2000	20,354	43	2,217	5	4,470	9	20,703	43	47,743
2001	21,451	46	2,294	5	5,011	11	17,670	38	46,426
2002	22,139	46	2,661	6	4,546	9	19,034	39	48,380
2003	31,783	51	3,047	5	5,555	9	21,863	35	62,247
2004	28,714	48	3,500	6	5,184	9	22,020	37	59,418
2005	34,412	53	3,810	6	5,095	8	21,582	33	64,899

Table 14. Coverage (%) of longline effort (hooks) and purse-seine effort (days fished or searched) by observer data held by the SPC Oceanic Fisheries Programme

LONGLINE													
Sector	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	1993-2004
Australia - Domestic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Australia - Japan	9.70	6.10	3.60	4.70	2.80	0.40	0.00	0.00	0.00	0.00	0.00	0.00	2.79
Distant-Water - Albacore	0.00	0.00	0.00	0.20	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.04
Distant-Water - Yellowfin & Bigeye	0.00	0.00	0.00	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.01
Hawaii	0.00	4.40	4.60	5.40	3.80	4.30	3.40	8.90	15.40	24.50	21.70	17.10	11.73
Indonesia - Domestic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
New Zealand - Domestic	0.00	0.60	2.70	4.70	5.30	3.60	0.50	0.50	4.50	1.70	6.90	0.00	2.74
New Zealand - Japan	15.10	26.40	51.80	0.00	42.90	23.90	43.30	38.40	33.30	114.40	24.70	0.00	26.39
Offshore - Albacore	0.00	0.10	0.70	1.10	0.60	0.40	0.40	0.10	0.10	0.20	0.10	0.30	0.26
Offshore - Tropical	0.30	0.40	0.30	0.30	1.00	0.70	0.40	0.60	0.10	0.10	0.00	0.00	0.30
Philippines - Domestic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Chinese Taipei - Domestic	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.72	0.56	0.49	0.49	0.63	0.51	0.41	0.52	0.55	0.87	1.01	0.77	0.65
PURSE SEINE													
School Association	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	1995-2004
Unassociated Schools	0.00	0.00	2.49	3.54	3.16	3.44	1.25	1.32	3.07	4.58	4.51	5.31	3.30
Associated Schools	0.00	0.00	1.50	2.55	2.29	2.74	2.13	2.91	2.84	5.42	6.15	7.41	3.78
Total	0.00	0.00	2.01	2.98	2.56	3.03	1.82	2.25	2.93	5.07	5.44	6.75	3.59

Table 15. Estimates of catches (tonnes) of non-target species of finfish by longliners in the WCPFC Statistical Area (excluding the domestic fleets of Indonesia, the Philippines and Chinese Taipei)

Species or Species Group	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Indo-Pacific sailfish	1,565	1,712	1,344	1,268	1,558	1,971	2,093	1,877	2,803	2,357	2,113
Shortbill spearfish	2,639	2,824	2,213	2,086	2,363	2,517	2,617	2,514	3,018	2,892	2,419
Blue shark	50,040	66,331	65,443	77,756	95,127	105,695	89,906	74,182	57,367	43,150	45,376
Mako sharks	4,504	4,972	4,932	5,227	6,161	7,075	6,762	6,734	7,771	6,962	4,555
Oceanic whitetip shark	5,142	6,115	5,011	4,851	6,117	6,893	6,896	6,032	7,027	4,689	3,270
Silky shark	2,979	3,783	3,210	3,304	4,336	5,631	6,061	5,488	7,696	5,844	5,200
Other sharks and rays	8,328	8,074	4,997	3,907	4,617	5,639	5,950	8,440	5,376	4,550	3,876
Barracudas	844	969	741	714	887	1,045	1,125	1,048	1,537	1,407	1,323
Common dolphinfish	3,514	4,085	3,113	2,806	3,235	4,434	6,827	7,315	4,858	4,573	3,693
Escolars	4,862	5,484	4,759	4,827	5,789	6,565	6,960	7,280	9,475	10,016	9,055
Lancetfishes	1,687	1,671	1,383	1,391	1,668	1,986	2,445	3,853	2,914	2,749	1,951
Ocean sunfish	3,152	3,179	3,255	3,509	3,946	4,658	6,251	7,597	4,053	3,689	3,131
Oilfish	1,058	1,001	1,026	1,183	1,546	1,735	1,798	2,235	1,395	1,292	1,088
Opah	6,975	7,609	6,836	7,080	8,669	9,802	10,068	10,564	11,501	11,408	7,485
Pomfrets	1,137	1,126	882	807	1,039	1,403	1,831	1,888	2,098	1,672	2,253
Wahoo	2,233	2,325	1,800	1,759	2,397	3,032	3,085	5,473	2,713	4,590	2,289
Other fish	2,295	3,011	3,030	3,514	4,985	6,122	5,494	3,623	2,366	2,241	1,370

Table 16. Estimates of catches (tonnes) of non-target species of finfish by purse seiners in the WCPFC Statistical Area (excluding the domestic fleets of Indonesia and the Philippines)

Species or Species Group	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Oceanic whitetip shark	259	280	307	274	276	269	261	286	311	334
Silky shark	513	603	724	697	764	789	813	954	1,112	1,278
Whale shark	584	633	717	667	689	692	694	790	885	973
Barracudas	124	134	150	133	134	129	125	138	150	161
Common dolphinfish	754	846	967	876	929	902	907	1,016	1,156	1,270
Rainbow runner	3,569	4,239	4,974	4,555	4,981	4,972	4,936	5,713	6,504	7,373
Wahoo	160	181	210	193	206	207	202	236	257	285
Other fish	7,562	8,373	9,439	8,502	8,918	8,756	8,637	9,613	10,772	11,874