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CONSACREES AU GERMON DU SUD**

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**LONGLINE, TROLL AND DRIFNET CATCH RATES OF SOUTH PACIFIC
ALBACORE**

Paper presented by

The Tuna and Billfish Assessment Programme
South Pacific Commission

LIST OF TABLES

1.	Longline catches of South Pacific albacore	3
2.	Surface fishery catches of South Pacific albacore	5
3.	Fleet size for countries fishing South Pacific albacore during recent years	7
4.	Longline catch rates for South Pacific albacore	8
5.	Surface fishery catch rates for South Pacific albacore	8

LIST OF FIGURES

1.	Longline catches of South Pacific albacore	9
2.	Surface fishery catches of South Pacific albacore	9
3.	Longline catch rates for South Pacific albacore	10
4.	Troll catch rates for South Pacific albacore	11
5.	Albacore catch by Australian longliners during 1991	12
6.	Albacore catch by Fijian longliners during 1991	12
7.	Albacore catch by Japanese longliners during 1990	12
8.	Albacore catch by New Caledonian longliners during 1991	13
9.	Albacore catch by the Tongan longliner during 1991	13
10.	Albacore catch by Taiwanese longliners during 1990	13
11.	Albacore catch by Australian trollers during the 1991/92 season	14
12.	Albacore catch by New Zealand trollers during the 1991/92 season	14
13.	Albacore catch by French Polynesian trollers during the 1991/92 season	14
14.	Albacore catch by American trollers during the 1991/92 season	15
15.	Distribution of longline catch rates for South Pacific albacore during 1990	16
16.	Distribution of troll catch rates for South Pacific albacore during the 1991/92 season .	16

INTRODUCTION

Estimates of annual catches of South Pacific albacore by longline, troll and driftnet fleets are presented in Tables 1 and 2 and are illustrated in Figures 1 and 2. Estimates of annual catches for the most recently available fishing period, the 1991 calendar year for longliners and the 1991/92 season for driftnet and troll vessels, are, in most cases, provisional.

The fleet size for countries fishing South Pacific albacore is presented in Table 3.

Catch rates for South Pacific albacore are given in Tables 4 and 5, and are illustrated in Figures 3a, 3b, 4a and 4b. The distribution of catch rates for the longline (1990) and troll fisheries (1991/92 season) are illustrated in Figures 15 and 16, respectively; a circle of 5° radius represents a catch rate of 4 fish per 100 hooks for longliners, and 375 fish per day for troll vessels. Catch rates were determined from data held in the SPAR Database (see Working Paper 1, SPAR 5).

The distribution of catches of South Pacific albacore by fishing fleet are illustrated in Figures 5—14. Catches for the most recent fishing period covered by data held in the SPAR Database are shown. Catches in numbers of fish, by calendar year for longliners and by season for troll vessels, are plotted by 5° square. A circle of 5° radius represents a catch of 50,000 fish or more for troll vessels, and 20,000 fish or more for longliners. The area of circles of less than 5° radius is proportional to the ratio of the catch in the 5° square to the catch represented by a circle of 5° radius.

Table 1. Longline catches (mt) of South Pacific albacore

YEAR	AUSTRALIA	FIJI	FRENCH POLYNESIA	JAPAN	KOREA	NEW CALEDONIA	NEW ZEALAND	TAIWAN	TONGA	TOTAL
1952				154						154
1953				803						803
1954				9,578						9,578
1955				8,625						8,625
1956				7,281						7,281
1957				8,757						8,757
1958				18,490	146					18,636
1959				17,385	456					17,841
1960				21,638	610					22,248
1961				23,412	330					23,742
1962				34,620	599					35,219
1963				29,120	1,367					30,487
1964				19,390	2,911					22,301
1965				17,793	6,405					24,198
1966				21,627	10,817					32,444
1967				15,104	13,717			11,751		40,572
1968				6,659	10,138			12,424		29,221
1969				4,894	9,963			9,595		24,452
1970			+	5,297	11,599			14,689		31,585
1971			+	3,472	14,482			15,887		33,841
1972			+	3,027	14,439			16,814		34,280
1973			+	2,550	17,452			17,742		37,744
1974			+	1,868	12,194			17,283		31,345
1975			+	1,333	9,015			17,071		27,419
1976			+	2,054	12,212			13,700		27,966
1977			+	2,328	13,176			21,932		37,436
1978			+	2,845	10,989			20,942		34,776
1979			+	2,274	8,682			15,086		26,042
1980			+	2,216	10,852			25,844		38,912
1981			+	4,203	14,793			14,595		33,591
1982			+	4,899	12,586			12,689	106	30,280
1983			+	5,723	6,669			12,119	143	24,666
1984			+	3,804	5,730	112		11,155	135	20,936
1985			+	3,868	14,267	131		9,601	174	28,041
1986	40		+	4,426	18,799	179		11,913	206	35,563
1987	200		+	4,490	8,646	563		15,009	252	29,160
1988	200		+	7,469	5,600	584		17,120	242	31,215
1989	(630)		(<100)	5,365	3,997	566	19	8,563	195	19,435
1990	(680)	(<300)	(<100)	6,428	2,586	1,053	46	9,546	191	20,930
1991	(680)	206	66	4,401	1,225	750	(14)	(9,546)	175	(17,063)

Provisional estimates are given in parentheses; "+" denotes small catches of unknown size

SOURCES

Australia	Bureau of Resource Sciences (Caton). Catches for 1986—1988 were derived by raising logbook data to take account of limited coverage prior to 1989. The 1989 and 1990 Australian catches includes an estimated 530 mt taken by Australia/Japan joint-venture vessels, and 100 mt in 1989 and 150 mt in 1990 from the domestic longline fishery.
Fiji	Fisheries Division (Sharma).
French Polynesia	EVAAM (Yen).
Japan	NRIFSF, Fisheries Agency of Japan (Uozumi).

Table 1 sources continued

Korea	NFRDA (Uk Lee). Estimates for 1958—1987 were taken from the report of SPAR 2; these estimates include some catch from the North Pacific. Catch estimates for 1988—1991 for the entire Pacific Ocean were provided by NFRDA (Uk Lee). These were adjusted to reflect the proportion of albacore catch taken annually in the South Pacific for 1984—1987.
New Caledonia	Marine Marchande (Etaix-Bonnin). The preliminary estimate for 1991 was determined from export data.
New Zealand	Ministry of Agriculture and Fisheries (Murray). The 1991 estimate was taken from the SPC Regional Tuna Fisheries Database.
Taiwan	National Taiwan University (Hsu, Wang). The 1990 estimate was used as the provisional estimate for 1991.
Tonga	Ministry of Fisheries (Latu). Albacore catch estimates were derived by applying the species composition determined from daily logsheet data held in the SPC Regional Tuna Fisheries Database to estimates of the total annual catch for all species combined provided by the Ministry of Fisheries. The 1991 estimate is the total albacore catch from the daily logsheet data held in the SPC Regional Tuna Fisheries Database.

Table 2. Surface fishery catches (mt) of South Pacific albacore

YEAR	AUSTRALIA	FR POL TROLL	JAPAN P/L	JAPAN DRIFTNET	KOREA DRIFTNET	TAIWAN DRIFTNET	NZ TROLL	USA TROLL	OTHER TROLL	TOTAL
1960			45							45
1961										0
1962										0
1963			16							16
1964										0
1965										0
1966										0
1967										0
1968										0
1969										0
1970	200									200
1971	200									200
1972	200									200
1973	200									200
1974	200						898			1,098
1975	200						646			846
1976	200						25			225
1977	200						621			821
1978	200						1,686			1,886
1979	200						814			1,014
1980	100		19				1,468			1,587
1981	100		8				2,085			2,193
1982	50		1				2,434			2,485
1983	50		2	32			744			828
1984	50			1,581			2,773			4,404
1985	50			1,928			3,253			5,231
1986	50			1,936			1,911	89		3,986
1987	50			919			1,227	859		3,055
1988	50			4,271		1,000	330	3,339	140	9,130
1989	50	90		13,263	172	8,520	5,161	3,563	162	30,981
1990	50	359		5,667	0	1,859	2,525	3,758	0	14,218
1991	50	451		0	0	(821)	2,464	5,494	103	(9,383)
1992	100	(451)	49	0	0	(0)	1,041	(3,016)	(103)	(4,760)

SOURCES

Australia	Bureau of Resource Sciences (Caton). Incidental catches of albacore in the Southern bluefin pole-and-line fishery declined after 1980. Recreational fishery catches from 1982 are estimated to be about 50 mt. Catches during 1992 include 55 mt taken by commercial trollers.
French Polynesia	U.S. - National Marine Fisheries Service (Sakagawa). The estimate for 1990/91 season has been used for 1991/92.
Japan	National Research Institute of Far Seas Fisheries (Uozumi).
Korea	National Fisheries Administration (Kim). The estimate presented for the 1989 calendar year represents the catch during the 1988/89 season, during which one vessel was active.
Other	U.S. - National Marine Fisheries Service (Sakagawa). "Other Troll" includes catches by Canadian and Fijian trollers. The estimate for 1991 has been used for 1992.

Table 2 sources continued

Taiwan	National Taiwan University (Hsu). Catch estimates are for the fishing season, e.g., the estimate presented for the 1988 calendar year represents the catch during the 1987/88 season. The catch estimate for the 1987/88 season was estimated by the TBAP and reported to SPAR 3. The estimate for 1988/89 was determined from catch and effort data processed by the National Taiwan University (Hsu). Estimates for the 1989/90 and 1990/91 seasons were reported to SPAR 4 by the National Taiwan University (Wang).
New Zealand	Ministry of Agriculture and Fisheries (Murray). Catch estimates are for the fishing season, e.g., the estimate for the 1974 calendar year is the catch during the 1973/74 season.
United States	National Marine Fisheries Service (Sakagawa). The estimate for the 1991/92 fishing season (3,016 mt) has been used as the estimate for the 1992 calendar year, which is not yet available.

Table 3. Fleet size for countries fishing South Pacific albacore during recent years.

SURFACE FISHERIES	1987/88	1988/89	1989/90	1990/91	1991/92
AUSTRALIA RECREATIONAL ¹	*	*	*	*	*
AUSTRALIA TROLL ²	*	*	*	*	(39)
CANADA TROLL	0	2	2	(1)	?
FIJI TROLL	1	0	0	2	2
FRENCH POLYNESIA TROLL	0	2	3	4	4
JAPAN DRIFTNET ³	21	65	20	0	0
KOREAN DRIFTNET	1	0	0	0	0
NEW ZEALAND TROLL	(25)	(200)	(125)	229	247
TAIWAN DRIFTNET ⁴	7	71	12	9	?
UNITED STATES TROLL	43	46	49	58	53

LONGLINE FISHERIES	1987	1988	1989	1990	1991
AUSTRALIA ⁵	56	47	84	85	84
FIJI ⁶	?	?	?	(15)	19
FRENCH POLYNESIA	?	?	?	?	5
JAPAN ⁷	307	404	464	406	351
KOREA ⁷	99	104	100	72	68
NEW CALEDONIA	3	4	4	7	6
NEW ZEALAND	0	0	3	9	11
TAIWAN	53	63	45	85	(85)
TONGA	1	1	1	1	1

Provisional estimates are given in parentheses

- 1 The Australian recreational fleet include an unspecified number of outboard-powered trailer boats.
- 2 The Australian troll fleet in 1991/92 season included 25 vessels targeting southern bluefin off the east coast of Tasmania, an estimated 12 multi-purpose vessels operating (opportunistic) off the south-east coast of New South Wales and 2 troll vessels targeting albacore in the coastal waters stretching from the south-east of NSW to the south-east of Tasmania.
- 3 The Japanese driftnet fleet includes 1 or 2 research vessels.
- 4 Estimates for the number of Taiwanese driftnet vessels represent the number of vessels licensed to fish.
- 5 Estimates for the Australian longline fleet include only domestic vessels(including 5 wholly Australian-owned ex-Japanese vessels in 1989 and 1990); Australian/Japanese joint-venture vessels are included under Japanese longliners.
- 6 The Fijian longline fleet includes vessels registered in Australia, Korea, Japan, Taiwan and the United States, but operated by Fijian residents.
- 7 Estimates for the Japanese and Korean fleets represent the number of vessels covered by the SPC Regional Tuna Fisheries Database.

Table 4. Longline catch rates for South Pacific albacore

YEAR	AUSTRALIA		FIJI	JAPAN	KOREA	NEW CALEDONIA		TAIWAN	TONGA
	DRIFTNET	TROLL				DRIFTNET	TROLL		
1962	-	-	-	2.272	-	-	-	-	-
1963	-	-	-	1.654	-	-	-	-	-
1964	-	-	-	1.409	-	-	-	-	-
1965	-	-	-	1.420	-	-	-	-	-
1966	-	-	-	1.442	-	-	-	-	-
1967	-	-	-	1.482	-	-	-	-	-
1968	-	-	-	0.800	-	-	-	-	-
1969	-	-	-	0.485	-	-	-	-	-
1970	-	-	-	0.596	-	-	-	-	-
1971	-	-	-	0.399	-	-	-	-	-
1972	-	-	-	0.269	-	-	-	-	-
1973	-	-	-	0.246	-	-	-	-	-
1974	-	-	-	0.211	-	-	-	-	-
1975	-	-	-	0.132	0.229	-	-	-	-
1976	-	-	-	0.132	0.833	-	-	0.468	-
1977	-	-	-	0.129	0.906	-	-	3.327	-
1978	-	-	-	0.146	1.752	-	-	3.785	-
1979	-	-	-	0.141	1.043	-	-	2.761	-
1980	-	-	-	0.103	0.753	-	-	2.903	-
1981	-	-	-	0.202	-	-	-	2.345	-
1982	-	-	-	0.232	-	-	-	2.650	0.874
1983	-	-	-	0.281	1.168	0.720	-	3.202	1.438
1984	-	-	-	0.217	0.838	1.904	-	2.315	1.488
1985	0.078	-	-	0.223	0.891	1.190	-	2.918	1.882
1986	0.257	-	-	0.209	0.979	1.383	-	4.055	3.757
1987	0.737	-	-	0.179	0.439	1.599	-	3.015	3.358
1988	0.681	-	-	0.265	-	3.730	-	2.852	3.064
1989	1.097	-	0.560	0.252	-	1.944	-	1.752	2.100
1990	0.906	-	0.862	0.255	-	1.969	1.630	1.630	2.659
1991	1.073	-	0.837	0.229	-	1.735	...	...	2.379

Units: number of fish per 100 hooks

Table 5. Surface fishery catch rates for South Pacific albacore

SEASON	JAPAN		TAIWAN DRIFTNET	AU TROLL	NZ		NZ TROLL (AUNZ) ²	NZ TROLL (STCZ) ³	USA TROLL
	DRIFTNET	TROLL			TROLL (NZ) ¹	TROLL			
1982/83	-	-	-	-	280	-	-	-	-
1983/84	-	-	-	-	149	-	-	-	-
1984/85	-	-	-	-	238	-	-	-	-
1985/86	-	-	-	-	248	9	-	-	117
1986/87	-	-	-	-	374	19	-	-	339
1987/88	-	-	-	-	349	34	-	-	238
1988/89	621	-	99	-	520	44	220	236	236
1989/90	697	-	...	-	267	97	330	262	195
1990/91	-	-	...	-	174	29	256	178	132
1991/92	-	-	...	35	...	21	178	178	132

Units: Australia, Japan, NZ (AUNZ), NZ (STCZ), Taiwan, USA - fish per day
NZ (NZ) - kg per day

- 1 Catch data available in metric tonnes only (MAF); data are for New Zealand waters (i.e. east of 165°E and west of 175°W).
- 2 Logsheet data provided to SPC from observer and port sampling activities for the area west of 170°W of the South Pacific.
- 3 Logsheet data provided to SPC from observer and port sampling activities for the area east of 170°W of the South Pacific.

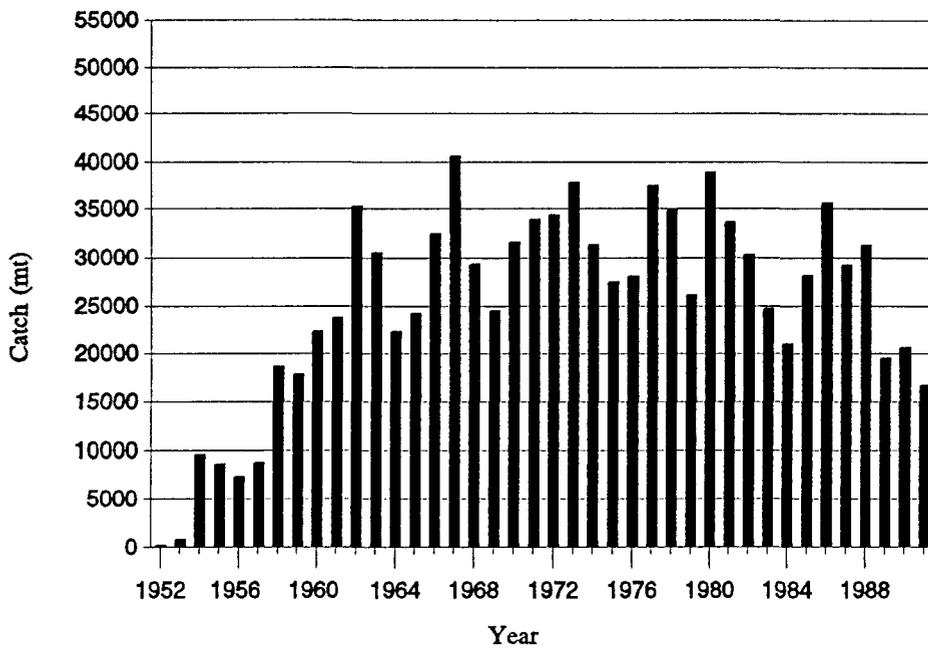


Figure 1. Longline catches of South Pacific albacore

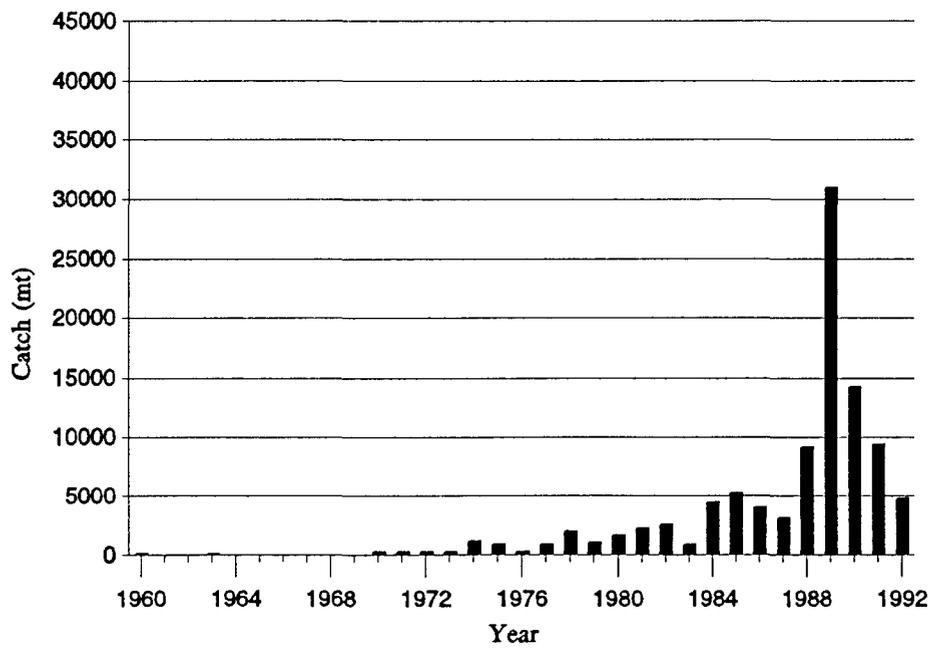


Figure 2. Surface fishery catches of South Pacific albacore

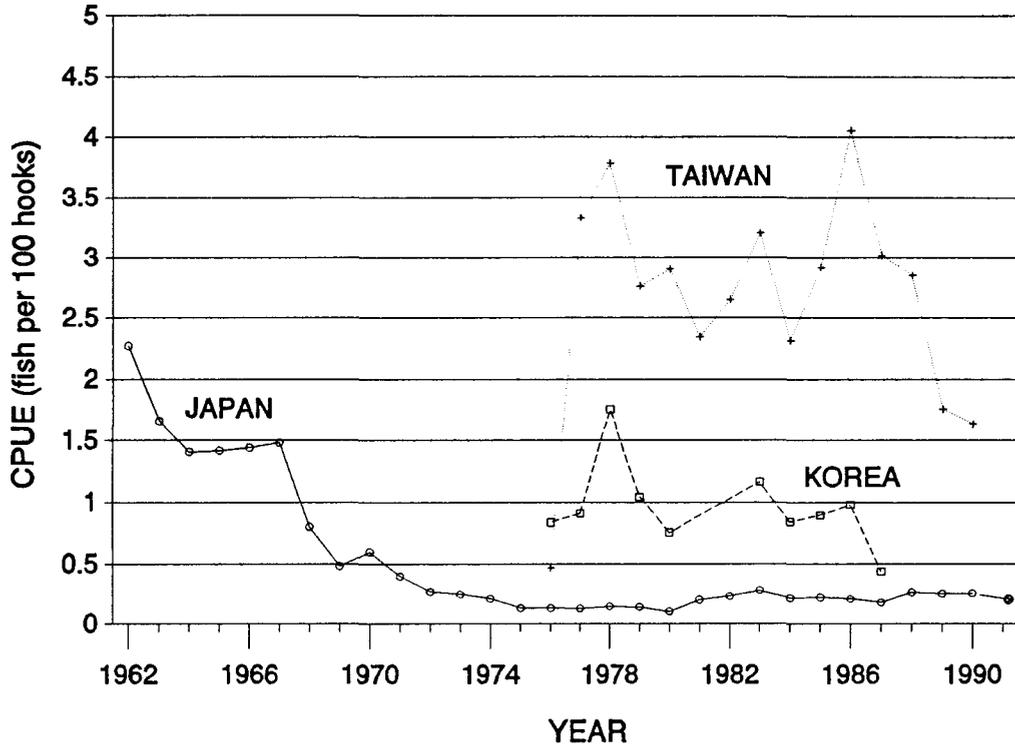


Figure 3a. Longline catch rates for South Pacific albacore

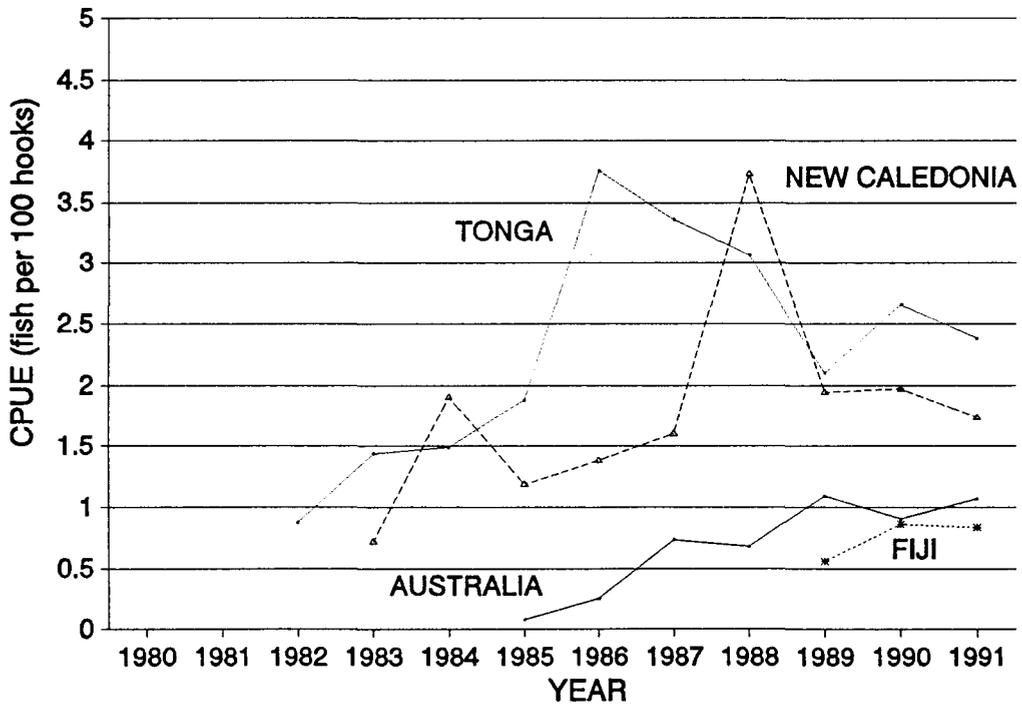


Figure 3b. Longline catch rates for South Pacific albacore

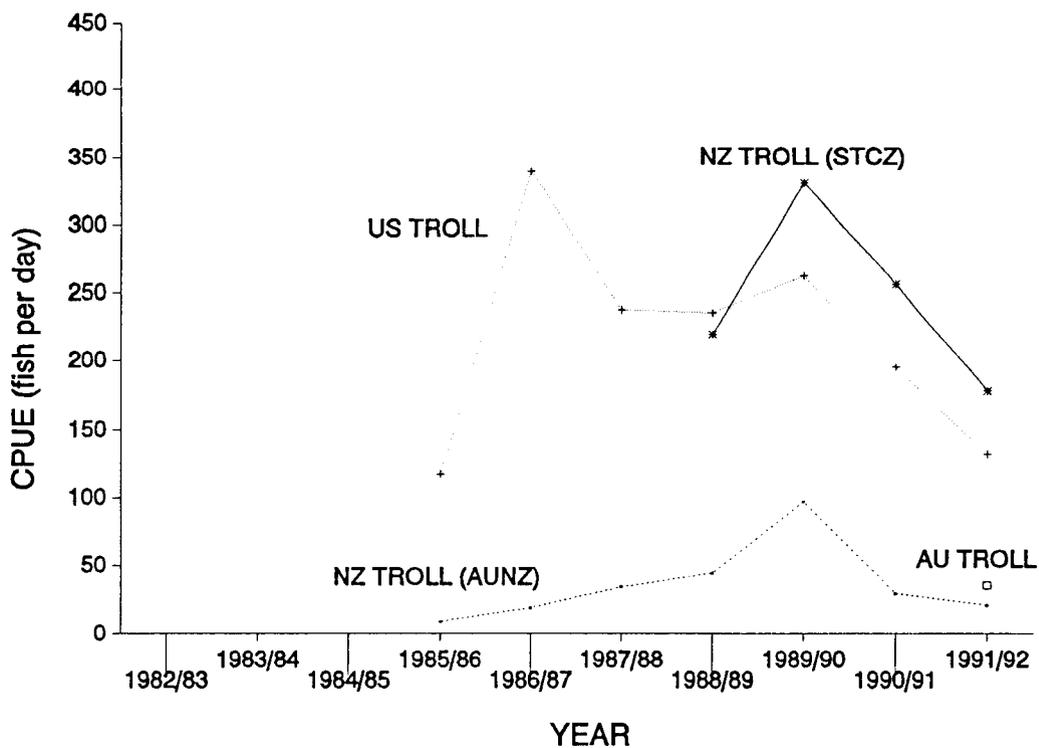


Figure 4a. Troll fishery catch rates for South Pacific albacore

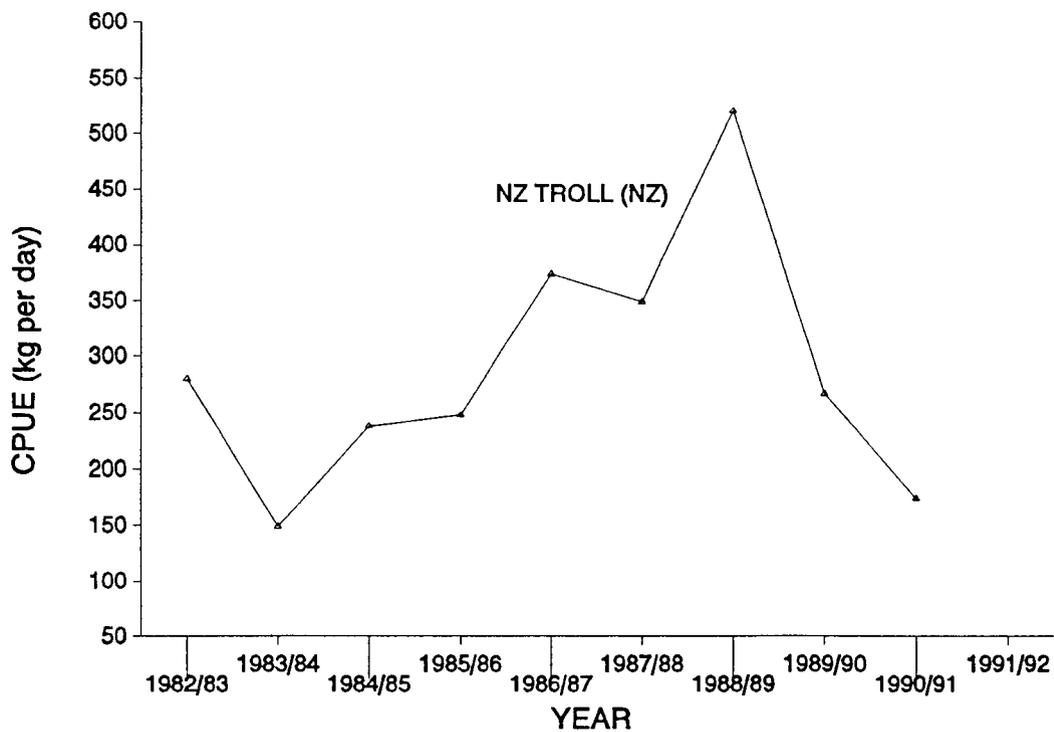


Figure 4b. Troll fishery catch rates for South Pacific albacore

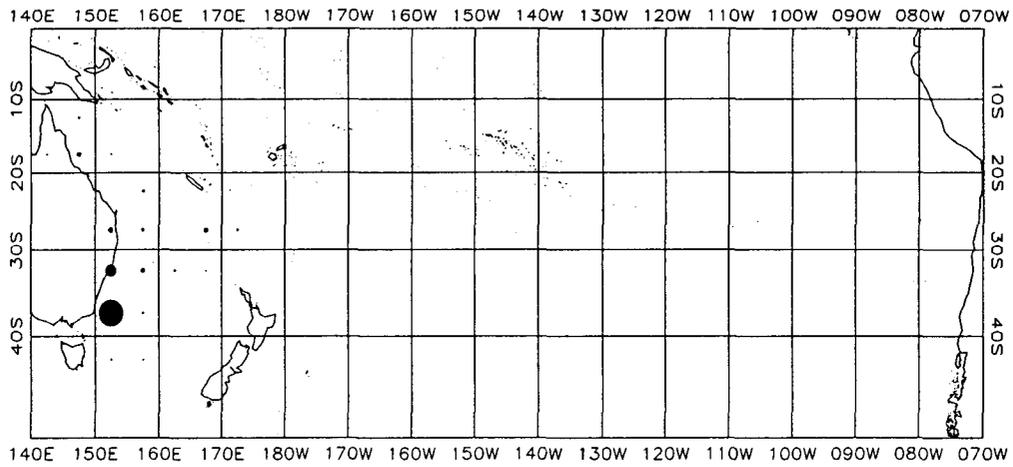


Figure 5. Albacore catch by Australian longliners during 1991

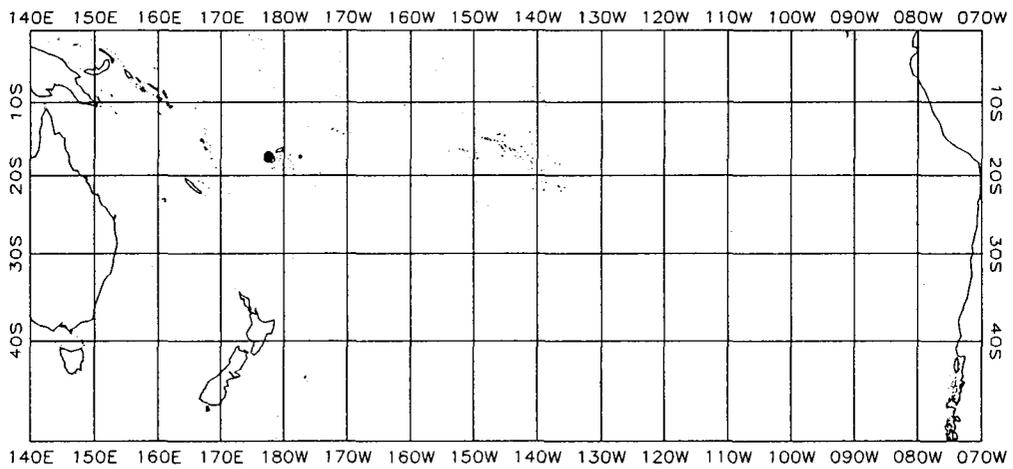


Figure 6. Albacore catch by Fijian longliners during 1991

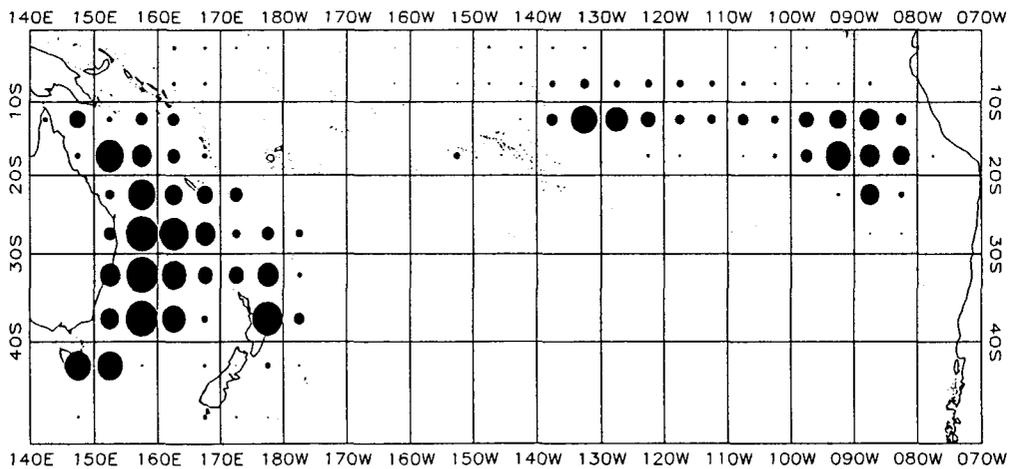


Figure 7. Albacore catch by Japanese longliners during 1990

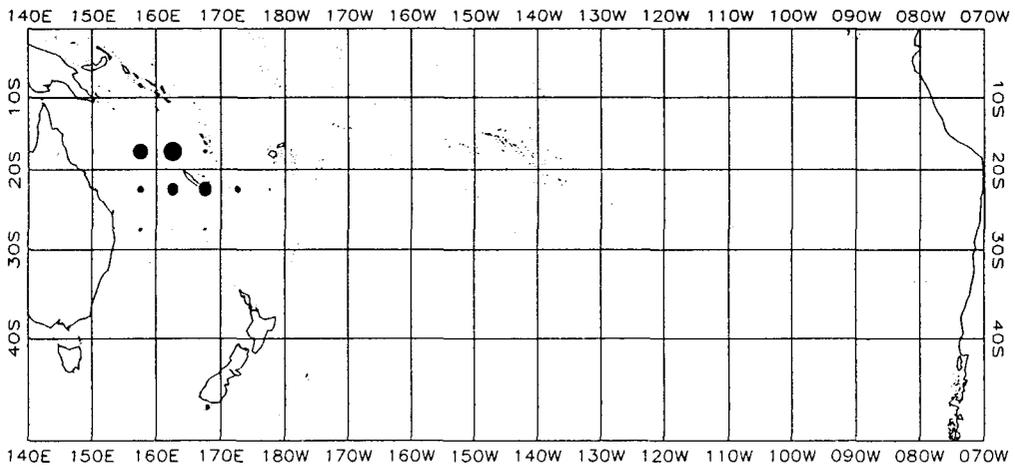


Figure 8. Albacore catch by New Caledonian longliners during 1991

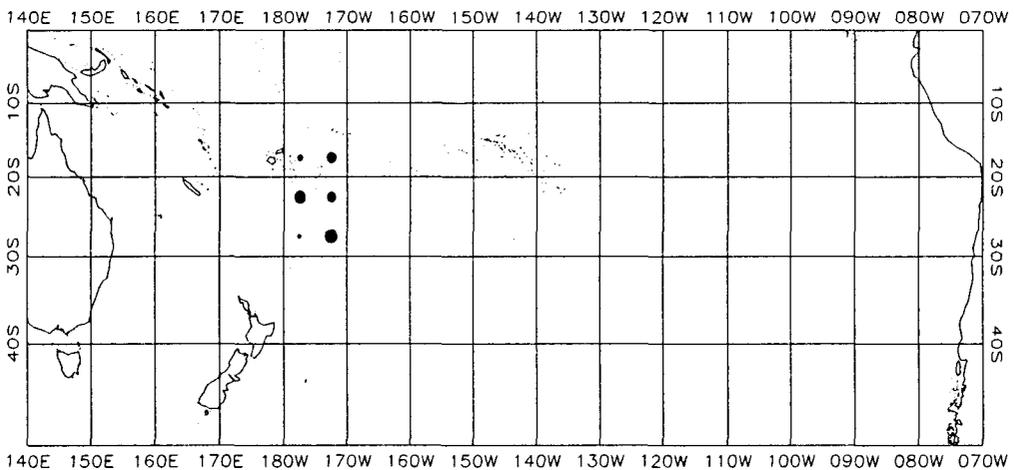


Figure 9. Albacore catch by the Tongan longliner during 1991

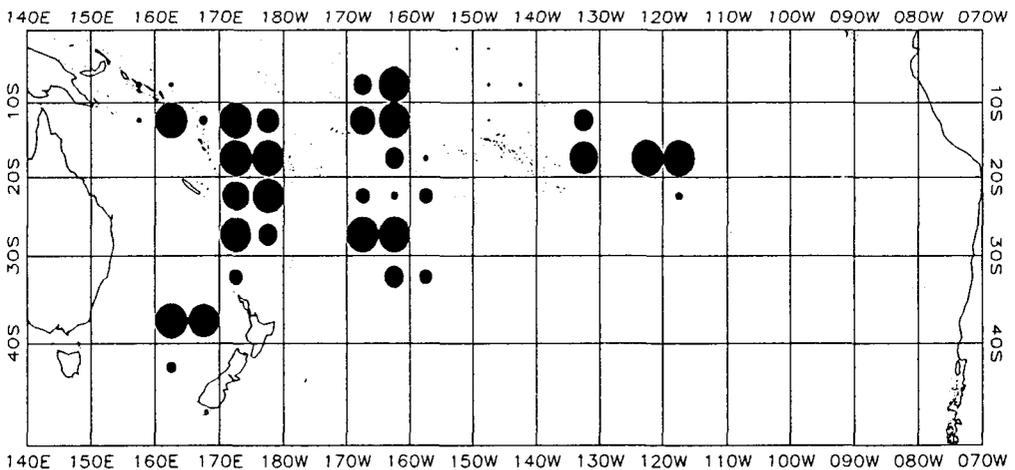


Figure 10. Albacore catch by Taiwanese longliners during 1990

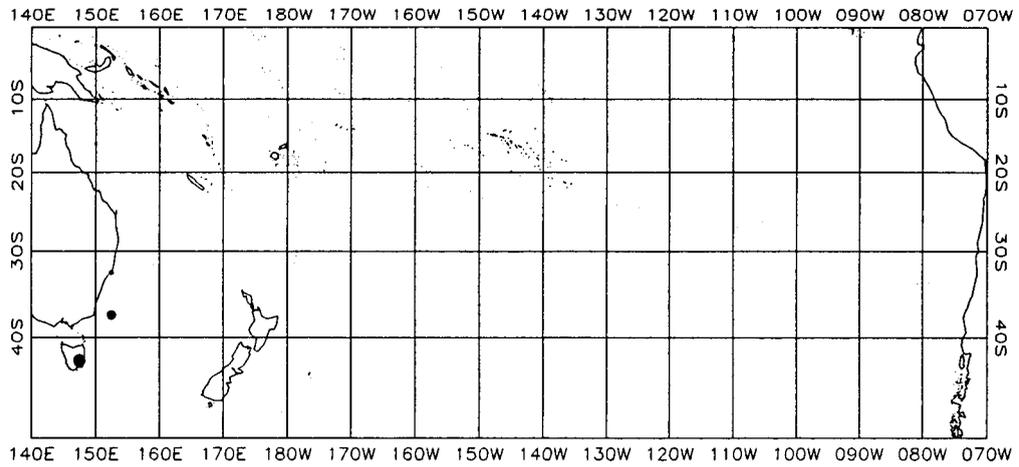


Figure 11. Albacore catch by Australian trollers during the 1991/92 season

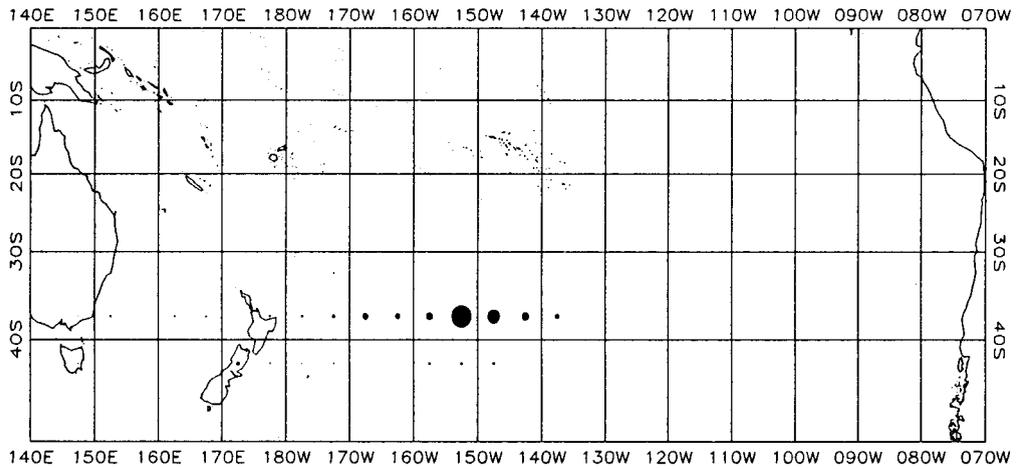


Figure 12. Albacore catch by New Zealand trollers during the 1991/92 season, based on logsheets submitted to SPC

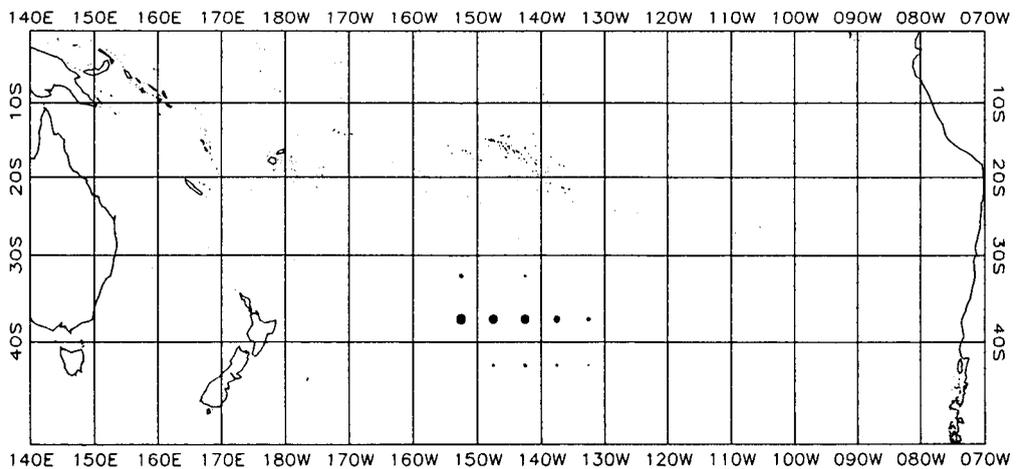


Figure 13. Albacore catch by French Polynesian trollers during the 1991/92 season, based on logsheets submitted to SPC

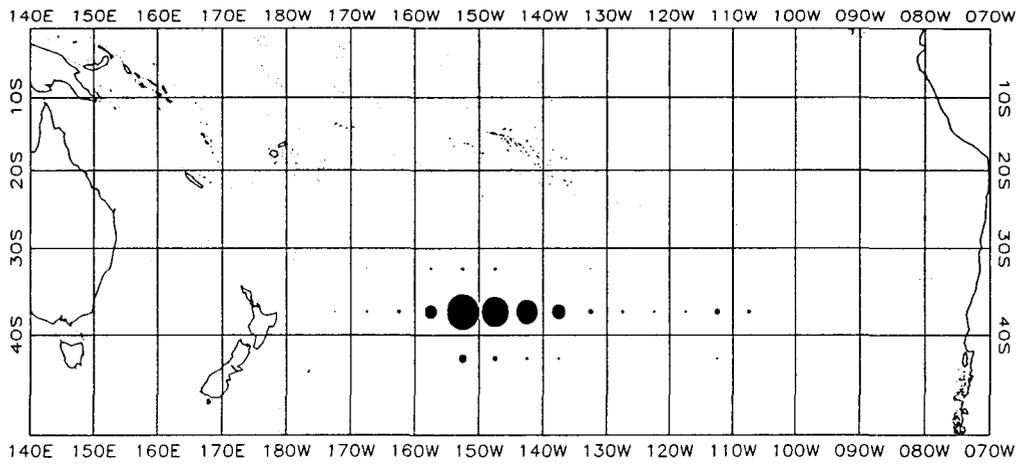


Figure 14. Albacore catch by American trollers during the 1991/92 season, based on logsheets submitted to SPC

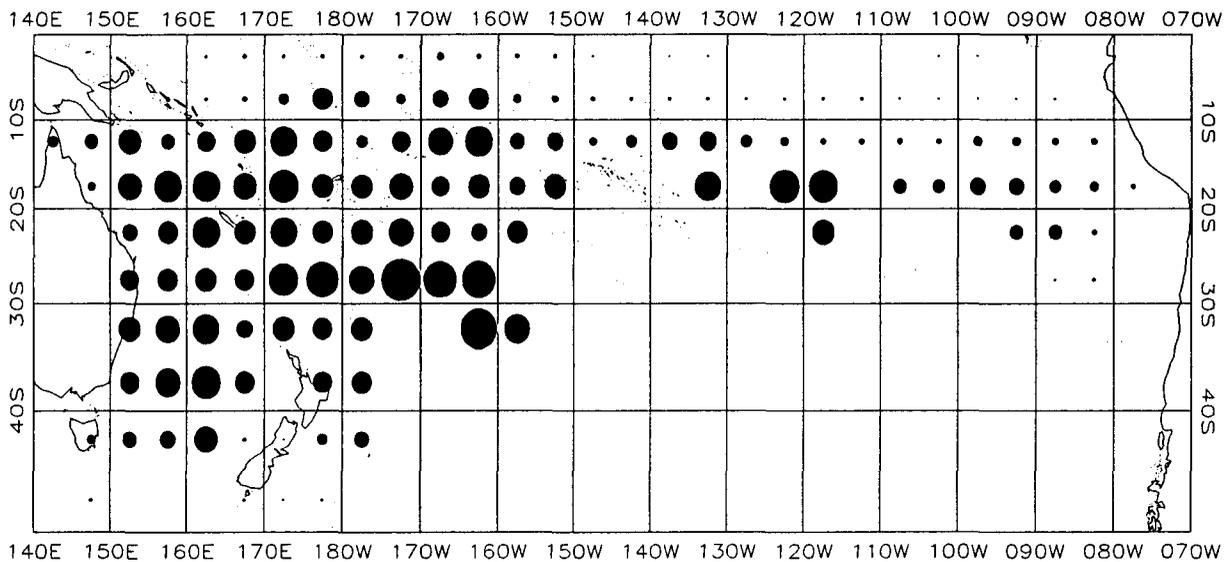


Figure 15. Distribution of longline catch rates (no./100 hooks) for South Pacific albacore during 1990

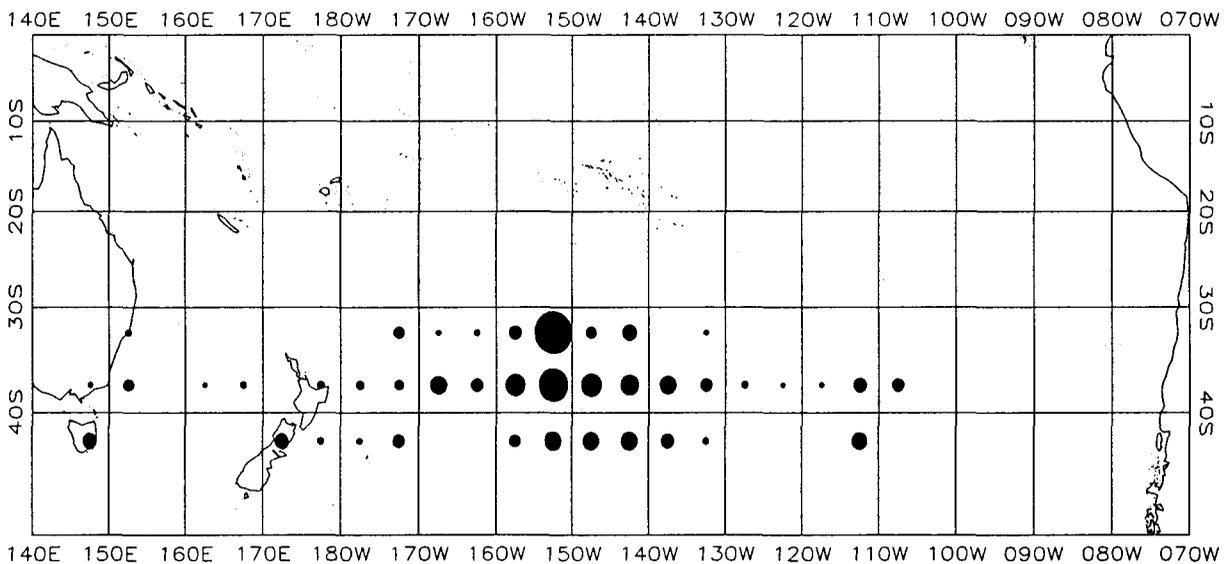


Figure 16. Distribution of troll catch rates (no./day) for South Pacific albacore during the 1991/92 season

Update to
WP2
Tuesday 30/3/93.

Table 1. Longline catches (mt) of South Pacific albacore

YEAR	AUSTRALIA	FIJI	FRENCH POLYNESIA	JAPAN	KOREA	NEW CALEDONIA	NEW ZEALAND	TAIWAN	TONGA	TOTAL
1952				154						154
1953				803						803
1954				9,578						9,578
1955				8,625						8,625
1956				7,281						7,281
1957				8,757						8,757
1958				18,490	146					18,636
1959				17,385	456					17,841
1960				21,638	610					22,248
1961				23,412	330					23,742
1962				34,620	599					35,219
1963				29,120	1,367					30,487
1964				19,390	2,911					22,301
1965				17,793	6,405					24,198
1966				21,627	10,817					32,444
1967				15,104	13,717			11,751		40,572
1968				6,659	10,138			12,424		29,221
1969				4,894	9,963			9,595		24,452
1970			+	5,297	11,599			14,689		31,585
1971			+	3,472	14,482			15,887		33,841
1972			+	3,027	14,439			16,814		34,280
1973			+	2,550	17,452			17,742		37,744
1974			+	1,868	12,194			17,283		31,345
1975			+	1,333	9,015			17,071		27,419
1976			+	2,054	12,212			13,700		27,966
1977			+	2,328	13,176			21,932		37,436
1978			+	2,845	10,989			20,942		34,776
1979			+	2,274	8,682			15,086		26,042
1980			+	2,216	10,852			25,844		38,912
1981			+	4,203	14,793			14,595		33,591
1982			+	4,899	12,586			12,689		30,280
1983			+	5,723	6,669	12		12,119	106	24,666
1984			+	3,804	5,730	112		11,155	135	20,936
1985			+	3,868	14,267	131		9,601	174	28,041
1986	40		+	4,426	18,799	179		11,913	206	35,563
1987	200		+	4,490	8,646	563		15,009	252	29,160
1988	200		+	7,469	5,600	584		17,120	242	...
1989	(630)	5	(<100)	5,365	3,997	566	19	8,563	195	...
1990	(680)	263	156	6,428	2,586	1,053	249	9,546	191	...
1991	(680)	416	146	4,401	1,225	750	325	9,840	175	...
1992	...	310	300	...	...	(500)	706	..	...	...

Provisional estimates are given in parentheses; ** denotes small catches of unknown size

SOURCES

Australia	Bureau of Resource Sciences (Caton). Catches for 1986–1988 were derived by raising logbook data to take account of limited coverage prior to 1989. The 1989 and 1990 Australian catches includes an estimated 530 mt taken by Australia/Japan joint-venture vessels, and 100 mt in 1989 and 150 mt in 1990 from the domestic longline fishery.
Fiji	Fisheries Division (Sharma). Catches have been raised to account for non-reporting from some vessels.
French Polynesia	EVAAM (Yen).
Japan	NRIFSF, Fisheries Agency of Japan (Uozumi).

Table 1 sources continued

Korea	NFRDA (Uk Lee). Estimates for 1958–1987 were taken from the report of SPAR 2; these estimates include some catch from the North Pacific. Catch estimates for 1988–1991 for the entire Pacific Ocean were provided by NFRDA (Uk Lee). These were adjusted to reflect the proportion of albacore catch taken annually in the South Pacific for 1984–1987.
New Caledonia	Marine Marchande (Etaix-Bonnin). The preliminary estimate for 1991 was determined from export data.
New Zealand	Ministry of Agriculture and Fisheries (Murray). The 1991 estimate was taken from the SPC Regional Tuna Fisheries Database.
Taiwan	National Taiwan University (Hsu, Wang). The 1990 estimate was used as the provisional estimate for 1991.
Tonga	Ministry of Fisheries (Latu). Albacore catch estimates were derived by applying the species composition determined from daily logsheet data held in the SPC Regional Tuna Fisheries Database to estimates of the total annual catch for all species combined provided by the Ministry of Fisheries. The 1991 estimate is the total albacore catch from the daily logsheet data held in the SPC Regional Tuna Fisheries Database.

Table 2. Surface fishery catches (mt) of South Pacific albacore

YEAR	AUSTRALIA	FR POL TROLL	JAPAN P/L	JAPAN DRIFTNET	KOREA DRIFTNET	TAIWAN DRIFTNET	NZ TROLL	USA TROLL	OTHER TROLL	TOTAL
1960			45							45
1961										0
1962										0
1963			16							16
1964										0
1965										0
1966										0
1967										0
1968										0
1969										0
1970	200									200
1971	200									200
1972	200									200
1973	200									200
1974	200						898			1,098
1975	200						646			846
1976	200						25			225
1977	200						621			821
1978	200						1,686			1,886
1979	200						814			1,014
1980	100		19				1,468			1,587
1981	100		8				2,085			2,193
1982	50		1				2,434			2,485
1983	50		2	32			744			828
1984	50			1,581			2,773			4,404
1985	50			1,928			3,253			5,231
1986	50			1,936			1,911	89		3,986
1987	50			919			1,227	859		3,055
1988	50			4,271		1,000	330	3,339	140	...
1989	50	90		13,263	172	8,520	5,161	3,563	162	...
1990	50	359		5,667	0	1,859	2,525	3,758	0	...
1991	50	326		0	0	821	2,464	5,494	103	...
1992	100	72	49	0	0	0	3,156	(3,016)	(103)	...

SOURCES

- Australia** Bureau of Resource Sciences (Caton). Incidental catches of albacore in the Southern bluefin pole-and-line fishery declined after 1980. Recreational fishery catches from 1982 are estimated to be about 50 mt. Catches during 1992 include 55 mt taken by commercial trollers.
- French Polynesia** EVAAM (Yen) provided catch estimates for 1990/91 and 1991/92 seasons. US - National Marine Fisheries Service (Sakagawa) provided estimates for years previous to these seasons.
- Japan** National Research Institute of Far Seas Fisheries (Uozumi).
- Korea** National Fisheries Administration (Kim). The estimate presented for the 1989 calendar year represents the catch during the 1988/89 season, during which one vessel was active.
- Other** U.S. - National Marine Fisheries Service (Sakagawa). "Other Troll" includes catches by Canadian and Fijian trollers. The estimate for 1991 has been used for 1992.

Table 2 sources continued

Taiwan	National Taiwan University (Hsu). Catch estimates are for the fishing season, e.g., the estimate presented for the 1988 calendar year represents the catch during the 1987/88 season. The catch estimate for the 1987/88 season was estimated by the TBAP and reported to SPAR 3. The estimate for 1988/89 was determined from catch and effort data processed by the National Taiwan University (Hsu). Estimates for the 1989/90 and 1990/91 seasons were reported to SPAR 4 by the National Taiwan University (Wang).
New Zealand	Ministry of Agriculture and Fisheries (Murray). Catch estimates are for the fishing season, e.g., the estimate for the 1974 calendar year is the catch during the 1973/74 season. The figure for 1991/92 season does not include catch from the STCZ, which is not currently available.
United States	National Marine Fisheries Service (Sakagawa). The estimate for the 1991/92 fishing season (3,016 mt) has been used as the estimate for the 1992 calendar year, which is not yet available.

Table 3. Fleet size for countries fishing South Pacific albacore during recent years.

SURFACE FISHERIES	1987/88	1988/89	1989/90	1990/91	1991/92	
AUSTRALIA RECREATIONAL ¹	*	*	*	*	*	
AUSTRALIA TROLL ²	*	*	*	*	(39)	
CANADA TROLL	0	2	2	(1)	?	
FIJI TROLL	1	0	0	2	2	
FRENCH POLYNESIA TROLL	0	2	3	4	2	
JAPAN DRIFTNET ³	21	65	20	0	0	
KOREAN DRIFTNET	1	0	0	0	0	
NEW ZEALAND TROLL	(25)	(200)	217	227	252	
TAIWAN DRIFTNET ⁴	7	71	12	9	(0)	
UNITED STATES TROLL	43	46	49	58	53	
LONGLINE FISHERIES	1987	1988	1989	1990	1991	1992
AUSTRALIA ⁵	56	47	84	85	84	
FIJI ⁶	?	?	5	10	18	23
FRENCH POLYNESIA	?	?	?	?	5	20
JAPAN ⁷	307	404	464	406	351	
KOREA ⁷	99	104	100	72	68	
NEW CALEDONIA	3	4	4	7	6	
NEW ZEALAND	0	0	3	13	14	20
TAIWAN	53	63	45	85	(85)	
TONGA	1	1	1	1	1	

Provisional estimates are given in parentheses

- 1 The Australian recreational fleet include an unspecified number of outboard-powered trailer boats.
- 2 The Australian troll fleet in 1991/92 season included 25 vessels targeting southern bluefin off the east coast of Tasmania, an estimated 12 multi-purpose vessels operating (opportunistic) off the south-east coast of New South Wales and 2 troll vessels targeting albacore in the coastal waters stretching from the south-east of NSW to the south-east of Tasmania.
- 3 The Japanese driftnet fleet includes 1 or 2 research vessels.
- 4 Estimates for the number of Taiwanese driftnet vessels represent the number of vessels licensed to fish.
- 5 Estimates for the Australian longline fleet include only domestic vessels(including 5 wholly Australian-owned ex-Japanese vessels in 1989 and 1990); Australian/Japanese joint-venture vessels are included under Japanese longliners.
- 6 The Fijian longline fleet includes vessels registered in Australia, Korea, Japan, Taiwan and the United States, but operated by Fijian residents.
- 7 Estimates for the Japanese and Korean fleets represent the number of vessels covered by the SPC Regional Tuna Fisheries Database.

Table 4. Longline catch rates for South Pacific albacore

YEAR	AUSTRALIA	FIJI	JAPAN	KOREA	NEW CALEDONIA	TAIWAN	TONGA
1962	-	-	2.272	-	-	-	-
1963	-	-	1.654	-	-	-	-
1964	-	-	1.409	-	-	-	-
1965	-	-	1.420	-	-	-	-
1966	-	-	1.442	-	-	-	-
1967	-	-	1.482	-	-	-	-
1968	-	-	0.800	-	-	-	-
1969	-	-	0.485	-	-	-	-
1970	-	-	0.596	-	-	-	-
1971	-	-	0.399	-	-	3.440	-
1972	-	-	0.269	-	-	3.381	-
1973	-	-	0.246	-	-	3.004	-
1974	-	-	0.211	-	-	2.619	-
1975	-	-	0.132	0.229	-	2.497	-
1976	-	-	0.132	0.833	-	3.039	-
1977	-	-	0.129	0.906	-	3.327	-
1978	-	-	0.146	1.752	-	3.785	-
1979	-	-	0.141	1.043	-	2.761	-
1980	-	-	0.103	0.753	-	2.903	-
1981	-	-	0.202	-	-	2.345	-
1982	-	-	0.232	-	-	2.650	0.874
1983	-	-	0.281	1.168	0.720	3.202	1.438
1984	-	-	0.217	0.838	1.904	2.315	1.488
1985	0.078	-	0.223	0.891	1.190	2.918	1.882
1986	0.257	-	0.209	0.979	1.383	4.055	3.757
1987	0.737	-	0.179	0.439	1.599	3.015	3.358
1988	0.681	-	0.265	...	3.730	2.852	3.064
1989	1.097	0.560	0.252	...	1.944	1.752	2.100
1990	0.906	0.862	0.255	...	1.969	1.630	2.659
1991	1.073	0.837	0.229	...	1.735	1.930	2.379
1992	...	...	...	...	...	...	...

Units: number of fish per 100 hooks

Table 5. Surface fishery catch rates for South Pacific albacore

SEASON	JAPAN DRIFTNET	TAIWAN DRIFTNET	AU TROLL	NZ TROLL (NZ) ¹	NZ TROLL (AUNZ) ²	NZ TROLL (SCTZ) ³	USA TROLL
1982/83	-	-	-	276	-	-	-
1983/84	-	-	-	149	-	-	-
1984/85	-	-	-	238	-	-	-
1985/86	-	-	-	248	9	-	117
1986/87	-	-	-	374	19	-	339
1987/88	-	-	-	349	34	-	238
1988/89	621	99	-	520	44	220	236
1989/90	697	...	-	436	97	330	262
1990/91	-	...	-	453	29	256	195
1991/92	-	-	35	725	21	178	132

Units: Australia, Japan, NZ (AUNZ), NZ (SCTZ), Taiwan, USA - fish per day
NZ (NZ) - kg per day

- 1 Catch data available in metric tonnes only (MAF); data are for New Zealand waters (i.e. east of 165°E and west of 175°W).
- 2 Logsheet data provided to SPC from observer and port sampling activities for the area west of 170°W of the South Pacific.
- 3 Logsheet data provided to SPC from observer and port sampling activities for the area east of 170°W of the South Pacific.