Commission for the Conservation of
Southern Bluefin Tuna

みなみまぐろ保存委員会

REPORT ON BIOLOGY, STOCK STATUS AND MANAGEMENT OF SOUTHERN BLUEFIN TUNA

A review of fisheries indicators was conducted by the CCSBT Stock Assessment Group during 2005, results of which are summarised below. This report also updates description of fisheries and state of stock, and provides fishery and catch information.

1. Biology

Southern bluefin tuna (*Thunnus maccoyii*) are found in the southern hemisphere, mainly in waters between 30° and 50° S, but only rarely in the eastern Pacific. The only known breeding area is in the Indian Ocean, south-east of Java, Indonesia. Spawning takes place from September to April in warm waters south of Java and juvenile SBT migrate south down the west coast of Australia. During the summer months (December-April), they tend to congregate near the surface in the coastal waters off the southern coast of Australia and spend their winters in deeper, temperate oceanic waters. Results from recaptured conventional and archival tags show that young SBT migrate seasonally between the south coast of Australia and the central Indian Ocean. After age 5, SBT are seldom found in nearshore surface waters, and extend their distribution over the southern circumpolar area throughout the Pacific, Indian and Atlantic Oceans.

SBT can attain a length of over 2m and a weight of over 200kg. Direct ageing using otoliths indicates that a significant number of fish bigger than 160cm are older than 25 years, and the maximum age obtained from otolith readings has been 42 years. Analysis of tag returns and otoliths indicate that, in comparison with the 1960s, growth rate has increased since about 1980 as the stock has been reduced. There is some uncertainty about the size and age when SBT mature, but available data indicate that SBT do not mature younger than 8 years (155cm fork length). SBT exhibit age-specific natural mortality, with M being higher for young fish and lower for old fish.

Given that SBT have only one known spawning ground, and that no morphological differences have been found between fish from different areas, SBT are considered to constitute a single stock for management purposes.

2. Description of Fisheries

Historically, the SBT stock has been exploited by Australian and Japanese fisheries for more than 50 years, with total catches peaking at 81,605t in 1961 (Figure 1). The current (2004) total catch is about 13,490t (preliminary data), continuing a declining trend in total catches from a recent peak of 19,529t in 1999, 16,026t in 2001, 15,212t in 2002 and 14,042t in 2003. Over the period 1952 - 2003, 79% of the catch has been made by longline and 21% using surface gears, primarily purse-seine and pole&line (Figure 1). The proportion of catch made by surface fishery peaked at 50% in 1982, dropped to 11-12 % in 1992 and 1993 and increased again to average 30% since 1996. (Figure 1). The Japanese longline fishery (taking a wide age range of fish) recorded its peak catch of 77,927t in 1961 and the Australian surface fishery catches of young fish peaked at 21,501t in 1982 (Figure 3). New

Zealand, the Fishing Entity of Taiwan and Indonesia have also exploited southern bluefin tuna since the 1970s - 1980s, and Korea started a fishery in 1991.

On average 73% of the SBT catch has been made in the Indian Ocean, 21% in the Pacific Ocean and 6% in the Atlantic Ocean (Figure 2). The Atlantic Ocean catch has varied widely between about 300t and 8,200t since 1968 (Figure 2), averaging about 1,000t over the past two decades. This variation in catch reflecting shifts in longline effort between the Atlantic and Indian Oceans. Fishing in the Atlantic occurs primarily off the southern tip of South Africa (Figure 4). The Indian Ocean catch has declined from about 54,000t to 11,000t, averaging about 14,600t, and the Pacific Ocean catch has ranged from about 1,200t to 19,000t, averaging about 2,100t, over the same periods.

3. Summary of Stock Status

SBT stock status was reviewed at the 10th meeting of the CCSBT Scientific Committee in 2005. Assessments using the SBT Operating Model suggest that the SBT spawning biomass is at a low fraction of its original biomass and well below the 1980 level. The stock is estimated to be well below the level that could produce maximum sustainable yield. Rebuilding the spawning stock biomass would almost certainly increase sustainable yield and provide security against unforeseen environmental events that might affect recruitment or productivity. Assessments estimate that recruitment in the 1990s fluctuated with no overall trend. Recruitments in the last decade are estimated to be well below the levels in the period 1950-1980.

Analysis of several independent data sources and the operating model indicate very low recruitments in 2000 and 2001. There is some evidence that the 1999 cohort is relatively weak and that the 2002 cohort is unlikely to be as strong as the average of those estimated during the 1990s. Other indicators show that the Indonesia longline fishery on spawning fish catches fewer older individuals. One plausible interpretation is that the spawning stock has declined in average age and may have declined appreciably in abundance. The decline in average age may be due to the disappearance of older fish, a pulse of younger fish entering the spawning stock, or a combination of the two factors. A pulse of younger fish entering the spawning stock is consistent with the assessment model output which suggests that the spawning stock has been largely stable over the last decade and has increased slightly over the last four years.

Given all the evidence, it seems highly likely that current levels of catch will result in further declines in spawning stock and exploitable biomass, particularly because of recent low recruitments.

4. Current Management Measures

SBT were managed by means of quota limits agreed at tri-partite meetings between Australia, Japan and New Zealand from 1985 through to the establishment of the CCSBT in 1994. The global quota was reduced several times after the initial level of 38,650t for the 1984/85 season. The combined quota for these three countries was maintained at 11,750t from the 1989/90 season through to 2002/03. Following increases in membership of the CCSBT (Republic of Korea, and the Fishing Entity of Taiwan joined in 2001 and 2002 respectively), the CCSBT extended the following national catch limits for 2003/04 to 2004/05:

Japan	6,065 tons
Australia	5,265 tons
Republic of Korea	1,140 tons
Fishing Entity of Taiwan	1,140 tons
New Zealand	420 tons
Total	14,030 tons

An additional catch limit of 900 tonnes has also been set in 2004/05 for cooperating non-members, of which 50 tonnes was allocated to the Philippines (which was recently admitted as a cooperating non-member) and 800 tonnes set aside for Indonesia should it become a cooperating non-member

The CCSBT has also implemented a Trade Information Scheme (TIS) for SBT. This requires all members of the CCSBT to ensure that all imports of SBT are to be accompanied by a completed CCSBT TIS Document, endorsed by an authorised competent authority in the exporting country, and including details of the name of fishing vessel, gear type, area of catch, dates, etc. Shipments not accompanied by this form must be denied entry by members and cooperating non-members. Completed forms are lodged with the CCSBT Secretariat and are used to maintain a database for monitoring catches and trade. As markets for SBT are now developing outside CCSBT member countries, the TIS scheme was recently amended to require the document to be issued for all exports, and to include the country of destination,

At its annual meeting in October 2003, the CCSBT agreed to establish a list of vessels over 24 metres in length which are approved to fish for SBT, to be completed by 1 July 2004. The list included vessels from CCSBT members and cooperating non-members. At its annual meeting in October 2004, the CCSBT agreed to expand the list to include all of the vessels, regardless of size, that are authorised to catch SBT. Members and cooperating non-members are required to refuse the import of SBT caught by vessels not on the list.

5. CCSBT Management Procedure

The 10th meeting of the CCSBT Scientific Committee held in 2005 finalised the development and evaluation of candidate management procedures for SBT, and has recommended a final management procedure, implementation schedule and initial catch reduction for consideration by the Commission.

SOUTHERN BLUEFIN TUNA SUMMARY (global stock)		
Maximum Sustainable Yield	Not estimated	
Current (2004) Yield	13,490t (preliminary)	
Current Replacement Yield	Less than 15,000 t	
Relative Biomass	SSB_{2004}/SSB_{1980}	0.14 - 0.33[1]
	SSB_{2004} / SSB_{K}	0.05 - 0.12
Current Management Measures	Global quota of 14,030t (Australia, Fishing Entity of Taiwan, Republic of Korea, Japan, and New Zealand) plus 900t provision for cooperating non-members	

[1] Estimates calculated using the reference set operating model adopted for the development of the CCSBT management procedure; ranges indicated refer to 90% probability intervals.

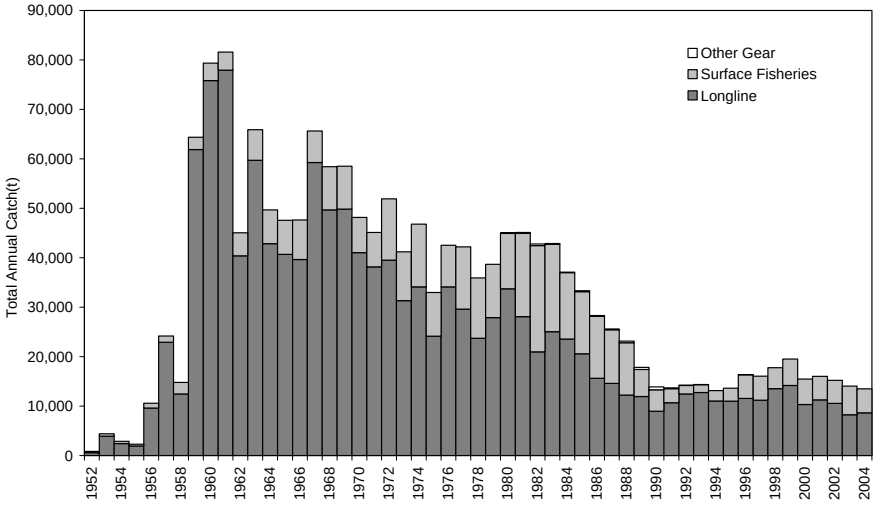

Figure 1. Global southern bluefin tuna catches by fishing gear (t), 1952 to 2004.

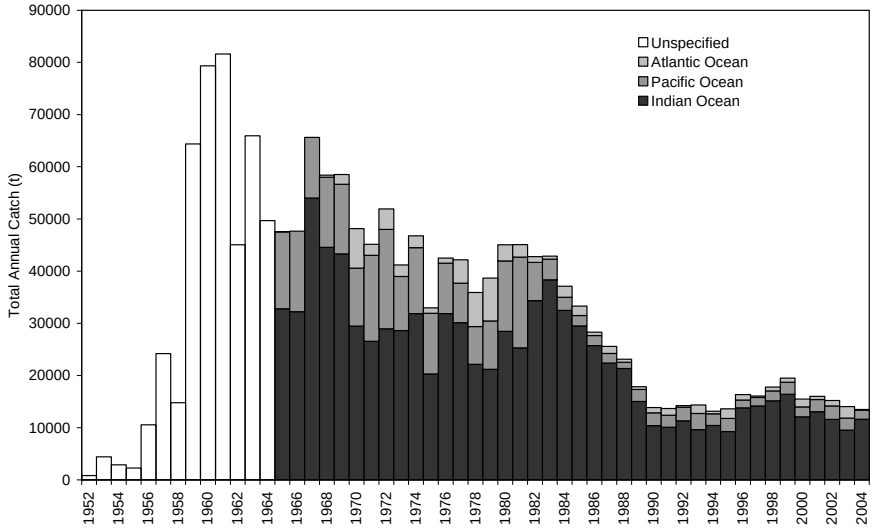

Figure 2. Southern bluefin tuna catches by ocean (t), 1952 to 2004.

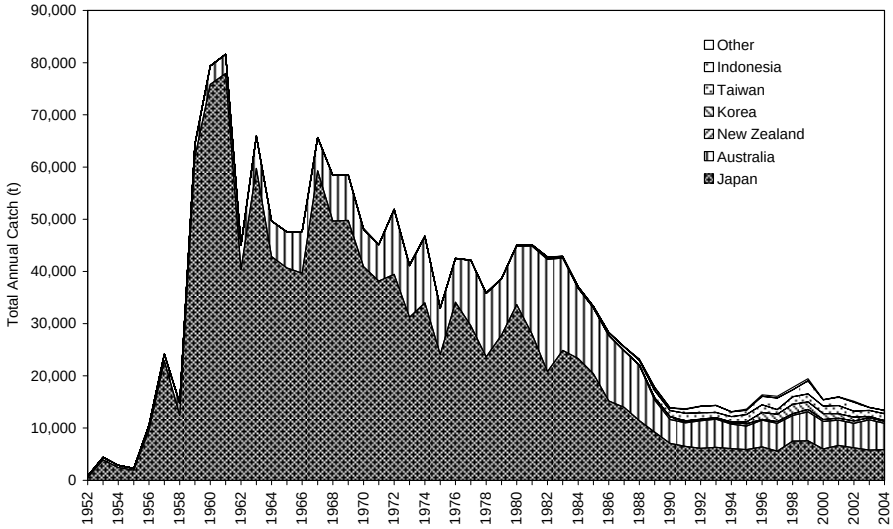

Figure 3. Total annual southern bluefin tuna catch (t) by flag, 1952 to 2004.

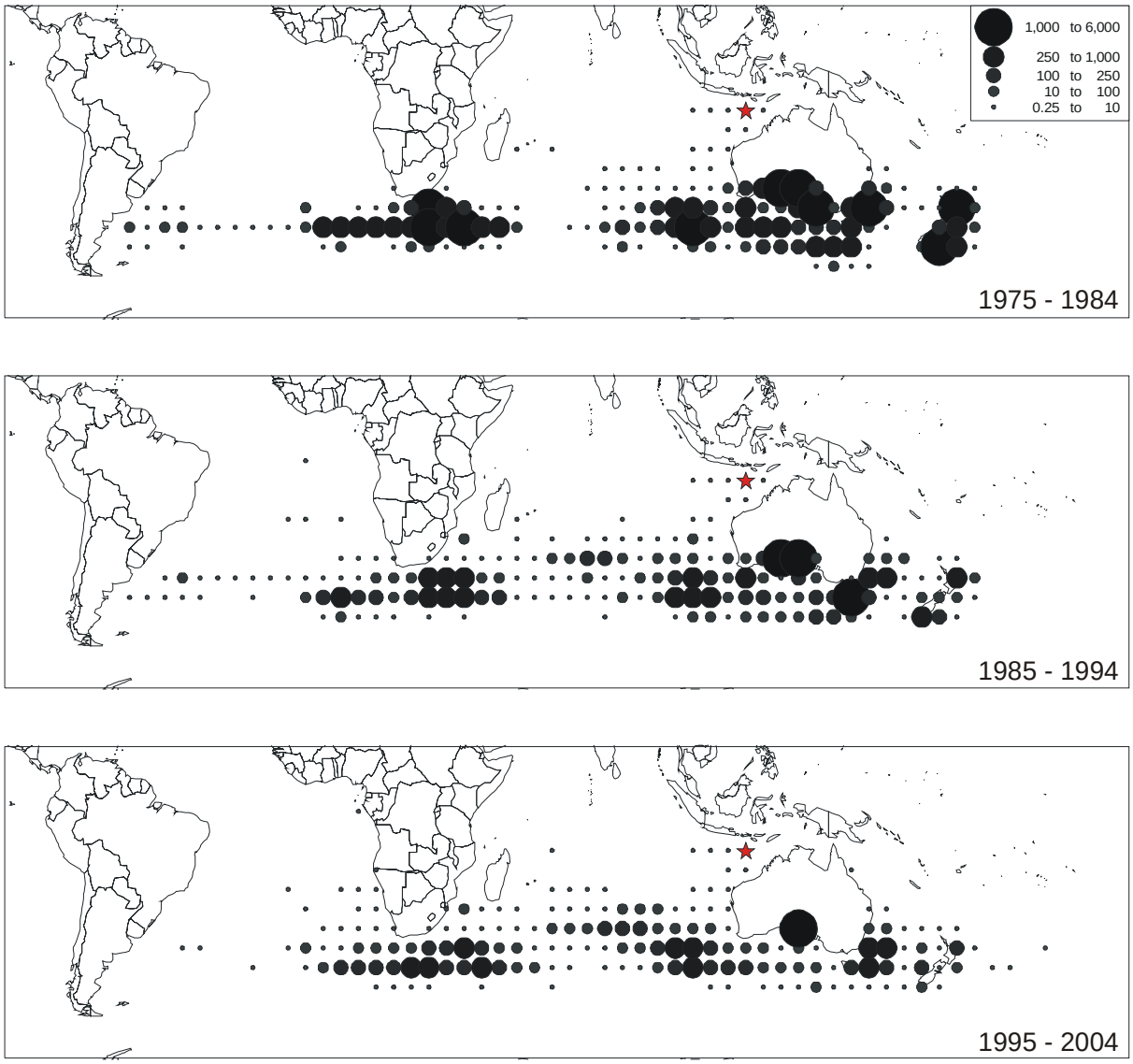

Figure 4. Geographical distribution of average annual southern bluefin tuna catches (t) by CCSBT members and cooperating non-members over the decades 1975-1984, 1985-1994 and 1995-2004 per 5° block by oceanic region. The area marked with a star is an area of significant non-member catch. Block catches averaging less than 0.25 tons per year are not shown.

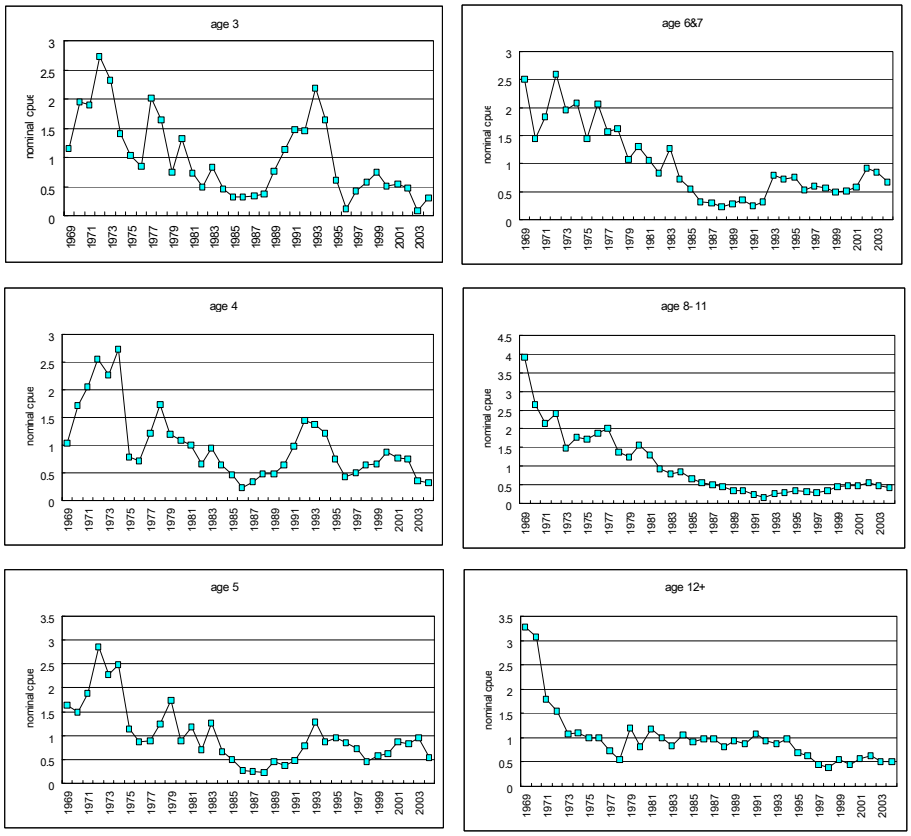

Figure 5. Trends in nominal catch rates (numbers per 1000 hooks) of SBT by age group (ages 3, 4, 5, 6-7, 8-11 and 12+) caught by Japanese longliners operating in CCSBT statistical areas 4-9 in months 4-9.

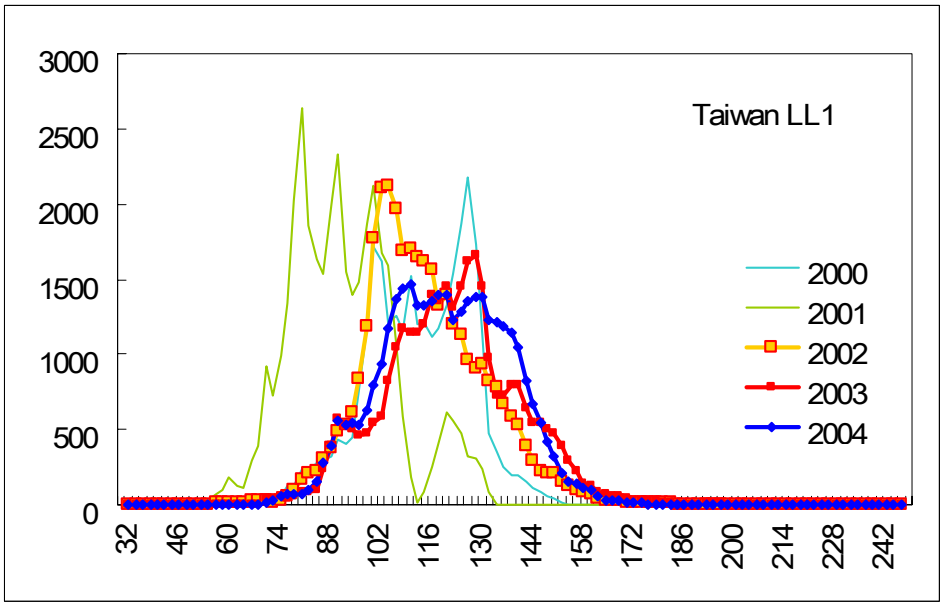

Figure 6. Changes in the size composition of the seasonal Taiwanese SBT longline target fishery (This figure may be revised in the future due to a new criteria for subdividing Taiwan's catch into LL1 and LL2).

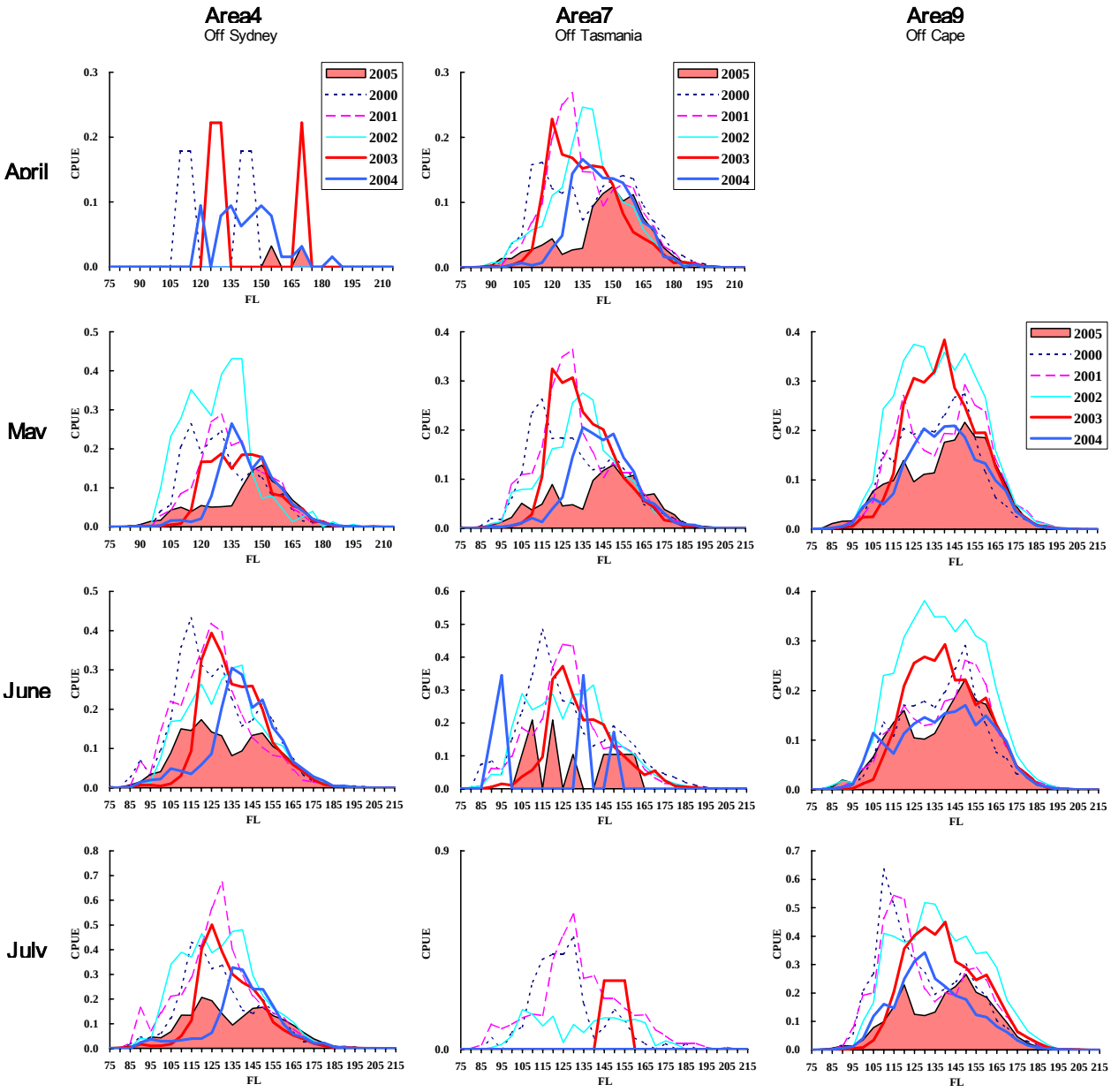

Figure 7. Size composition of nominal CPUE of Real Time Monitoring Program data for the Japanese longline fishery for five recent years by month and area.

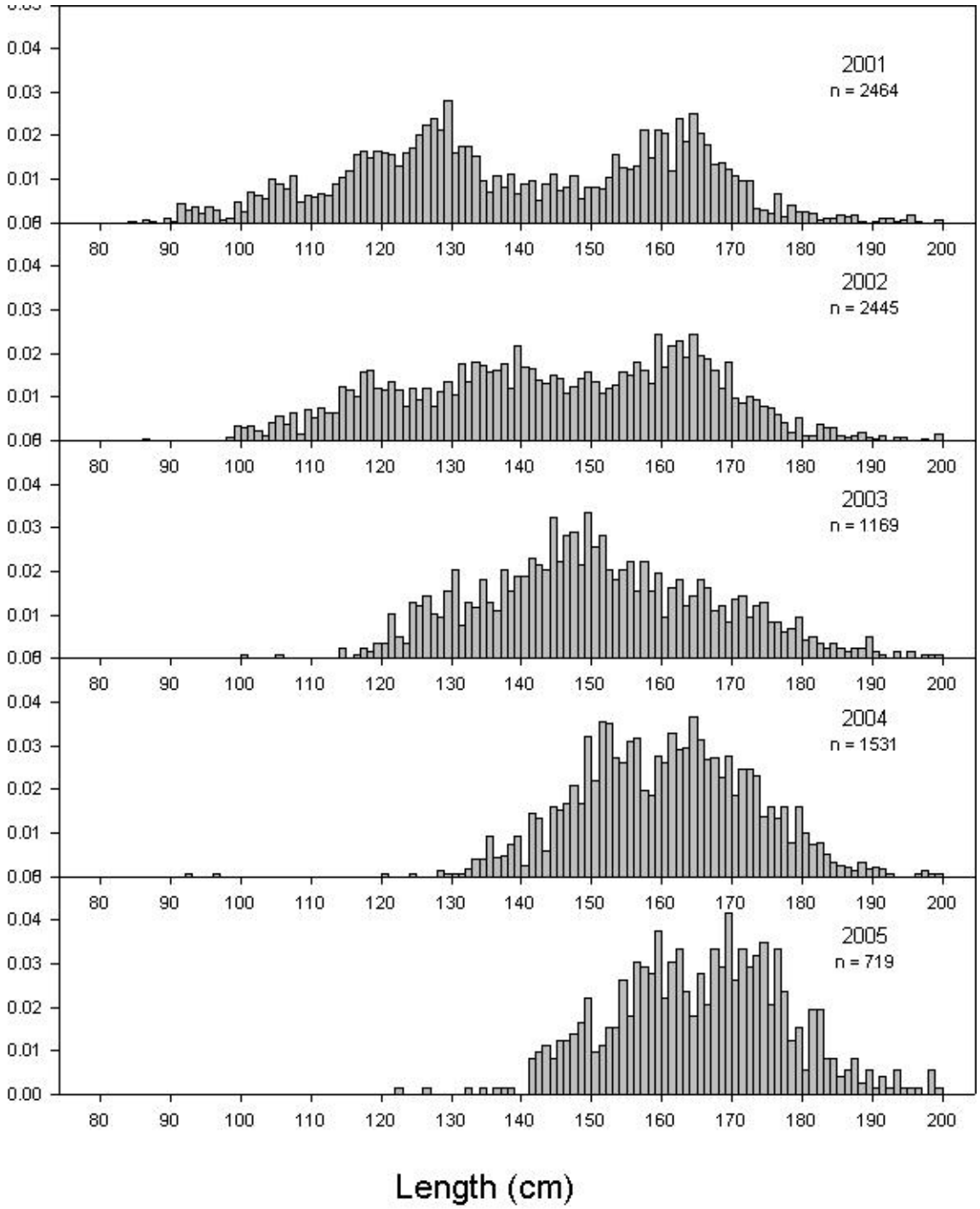

Figure 8. Proportion at length of SBT from the New Zealand charter fleet for 2001 to 2005. Data for 2005 is based on about 75% of the catch.

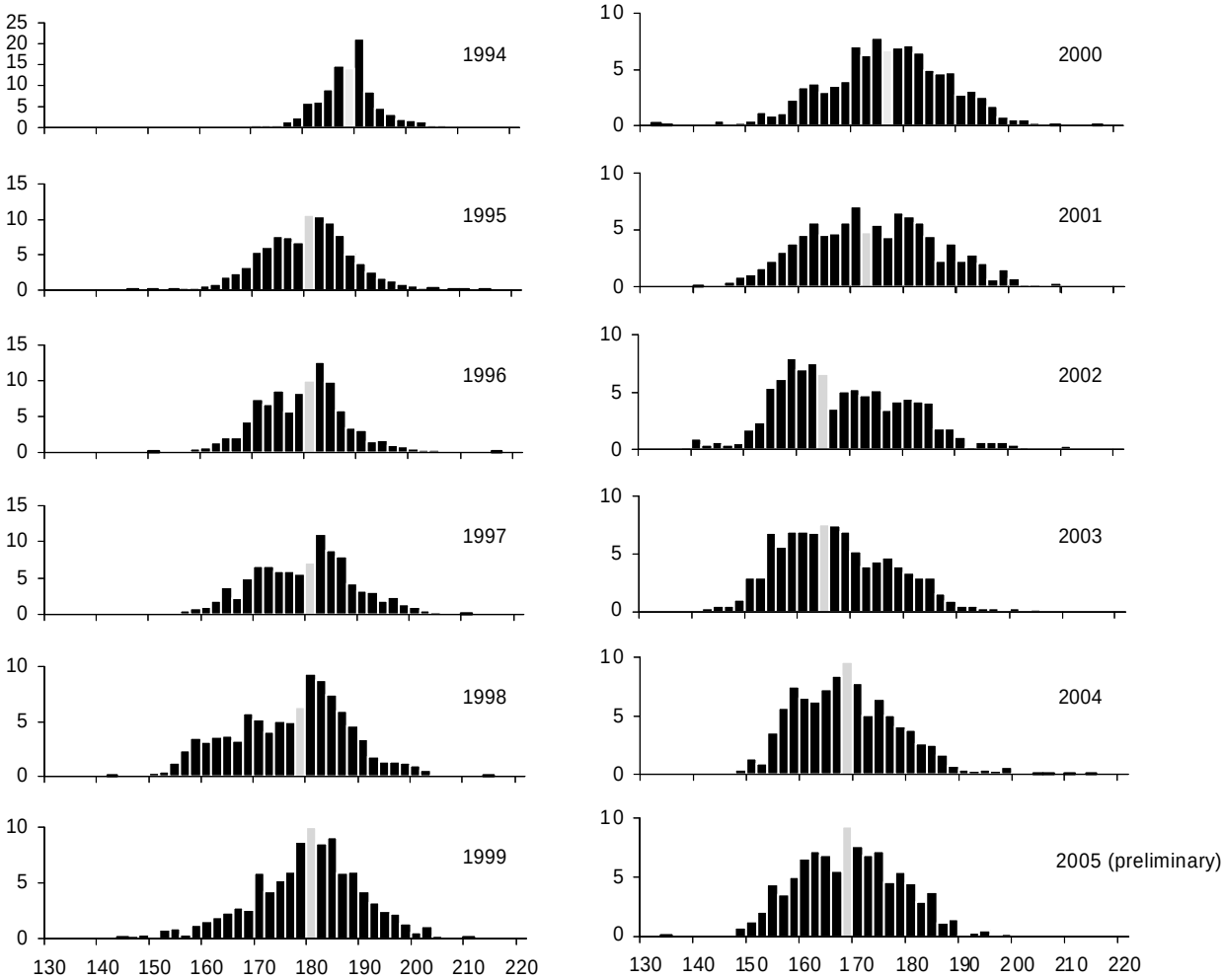

Figure 9. Length frequency (2cm intervals) of SBT by spawning season from the Indonesian spawning ground longline fishery. The grey bar shows the median length class. A spawning season is defined as July 1 of the previous year to June 30 of the given year. The pale bar represents the median length.

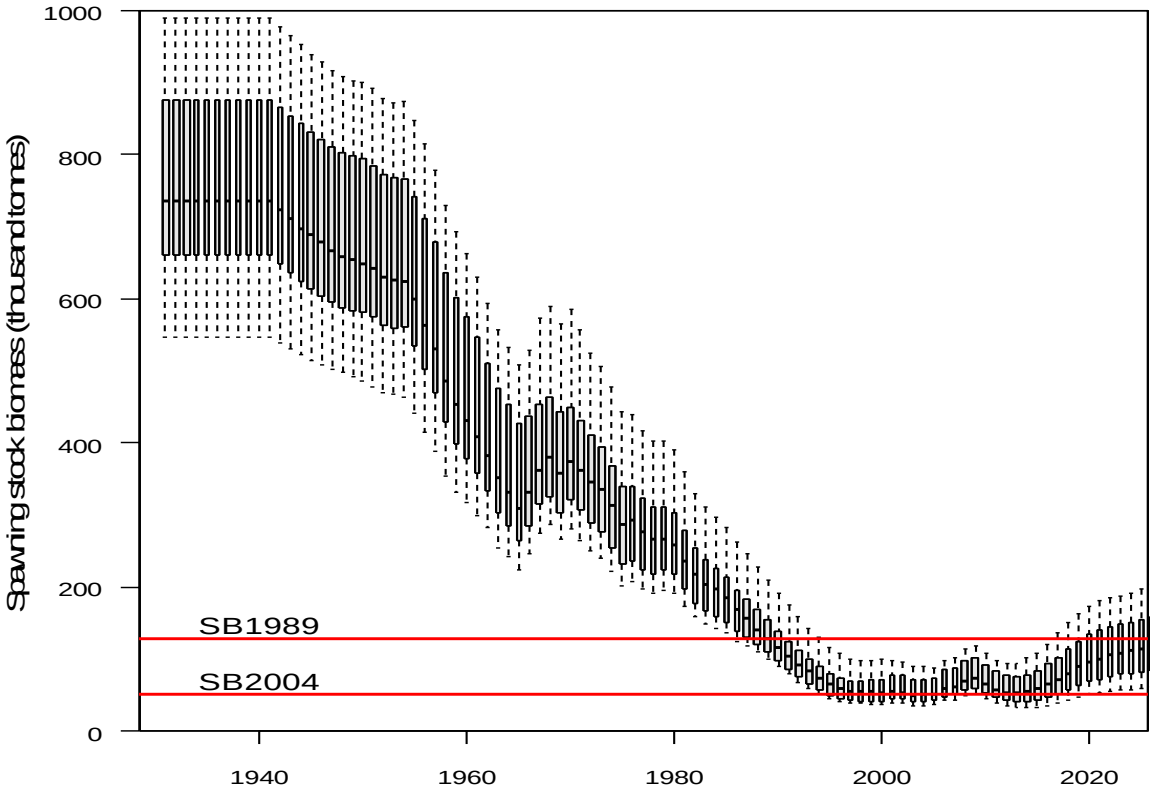

Figure 10. Historic and projected spawning biomass under the recommended SBT management procedure and implementation schedule. Lines indicate the median spawning biomass in 1989 and in 2004.

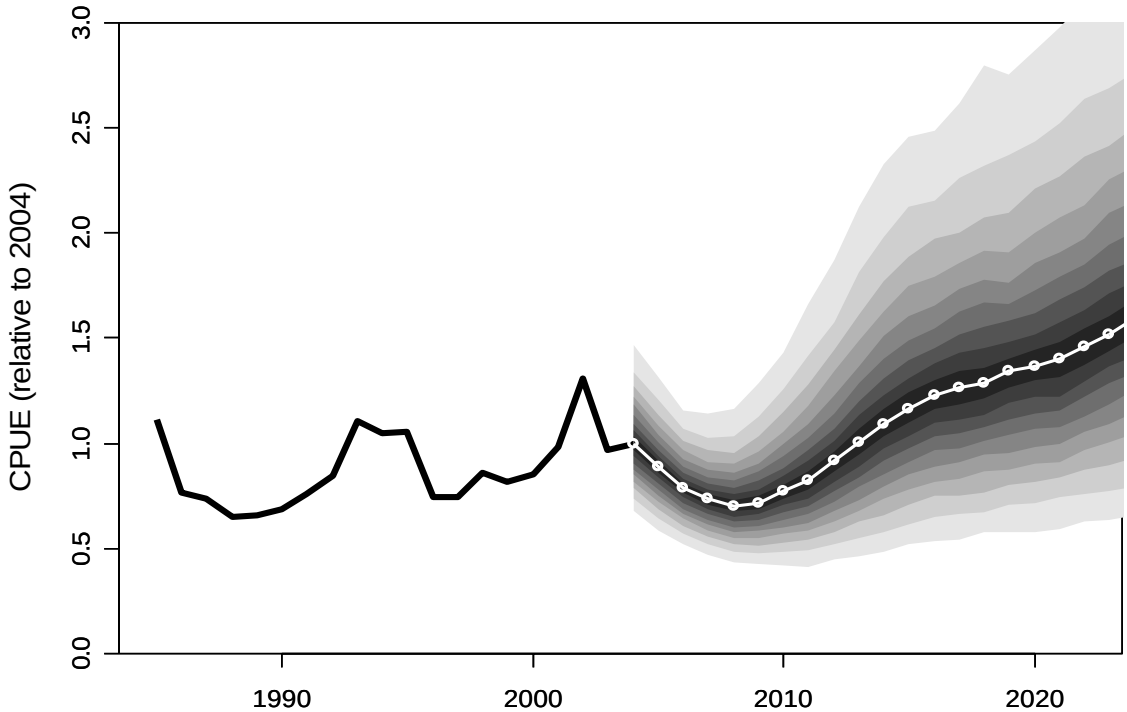

Figure 11: SBT Historical (solid line) and projected CPUE (relative to the median value in 2004) for the recommended SBT management procedure, implementation schedule and 5000t catch reduction in 2006.

Global Catch by Country

Catches are presented as whole weights in tonnes. Numbers in **bold** font differ from those in Attachment 4 of the SC9 Report. ***All 2004 figures are to be considered preliminary.***

Calendar Year	Australia	Japan	New Zealand	Korea*	Taiwan	Philippines	Indo.	Misc	Total (excludes 'other')	Other
1952	264	565	0	0	0	0	0	0	829	
1953	509	3,890	0	0	0	0	0	0	4,399	
1954	424	2,447	0	0	0	0	0	0	2,871	
1955	322	1,964	0	0	0	0	0	0	2,286	
1956	964	9,603	0	0	0	0	0	0	10,567	
1957	1,264	22,908	0	0	0	0	0	0	24,172	
1958	2,322	12,462	0	0	0	0	0	0	14,784	
1959	2,486	61,892	0	0	0	0	0	0	64,378	
1960	3,545	75,826	0	0	0	0	0	0	79,371	
1961	3,678	77,927	0	0	0	0	0	0	81,605	
1962	4,636	40,397	0	0	0	0	0	0	45,033	
1963	6,199	59,724	0	0	0	0	0	0	65,923	
1964	6,832	42,838	0	0	0	0	0	0	49,670	
1965	6,876	40,689	0	0	0	0	0	0	47,565	
1966	8,008	39,644	0	0	0	0	0	0	47,652	
1967	6,357	59,281	0	0	0	0	0	0	65,638	
1968	8,737	49,657	0	0	0	0	0	0	58,394	
1969	8,679	49,769	0	0	80	0	0	0	58,528	
1970	7,097	40,929	0	0	130	0	0	0	48,156	
1971	6,969	38,149	0	0	30	0	0	0	45,148	
1972	12,397	39,458	0	0	70	0	0	0	51,925	
1973	9,890	31,225	0	0	90	0	0	0	41,205	
1974	12,672	34,005	0	0	100	0	0	0	46,777	
1975	8,833	24,134	0	0	15	0	0	0	32,982	
1976	8,383	34,099	0	0	15	0	12	0	42,509	
1977	12,569	29,600	0	0	5	0	4	0	42,178	
1978	12,190	23,632	0	0	80	0	6	0	35,908	
1979	10,783	27,828	0	0	53	0	5	4	38,673	
1980	11,195	33,653	130	0	64	0	5	7	45,054	
1981	16,843	27,981	173	0	92	0	1	14	45,104	
1982	21,501	20,789	305	0	182	0	2	9	42,788	
1983	17,695	24,881	132	0	161	0	5	7	42,881	
1984	13,411	23,328	93	0	244	0	11	3	37,090	
1985	12,589	20,396	94	0	241	0	3	2	33,325	
1986	12,531	15,182	82	0	514	0	7	3	28,319	
1987	10,821	13,964	59	0	710	0	14	7	25,575	
1988	10,591	11,422	94	0	856	0	180	2	23,145	
1989	6,118	9,222	437	0	1,395	0	568	103	17,843	
1990	4,586	7,056	529	0	1,177	0	517	4	13,870	
1991	4,489	6,477	164	246	1,460	0	759	97	13,691	
1992	5,248	6,121	279	41	1,222	0	1,232	73	14,217	
1993	5,373	6,318	217	92	958	0	1,370	17	14,344	
1994	4,700	6,063	277	137	1,020	0	904	54	13,154	
1995	4,508	5,867	436	365	1,431	0	829	201	13,637	
1996	5,128	6,392	139	1,320	1,467	0	1,614	295	16,356	
1997	5,316	5,588	334	1,424	872	0	2,210	333	16,076	
1998	4,897	7,500	337	1,796	1,446	5	1,324	471	17,776	
1999	5,552	7,554	461	1,462	1,513	80	2,504	403	19,529	
2000	5,257	6,000	380	1,135	1,448	17	1,203	31	15,472	
2001	4,853	6,674	358	845	1,580	43	1,632	41	16,026	4
2002	4,711	6,192	450	746	1,137	82	1,691	203	15,212	17
2003	**5,827**	5,762	**390**	254	**1,128**	68	**564**	**48**	14,042	17
2004	*5,062*	*5,846*	*393*	*131*	*1,298*	*80*	*677*	*3*	13,490	*17*

Misc: SBT catch other than those listed. For years up to and including 2002, these were obtained from Japanese import statistics (JIS). The 2003 figure was from both JIS and a report from Spain on bycatch form surveys outside its normal fishing grounds in 2003. From 2004, the higher value of Japanese import and CCSBT Trade Information Scheme statistics was used. In 2004, the "Misc" catch was from China and further bycatch from Spanish fishing surveys.

Other: Mortality of SBT from other sources that have not been included in country figures. This includes mortality that occurred during research programs including the CCSBT Scientific Research Program. This information has yet to be compiled for years prior to 2001.

*: Japanese Import Statistics for 1993, 1994, and 1998 are higher than these official statistics and are: 117, 147, and 1897 respectively. Assessments would normaly used the higher of these values.

Attachment B

Global Catch by Gear

Catches are presented as whole weights in tonnes. **All 2004 figures are to be *considered preliminary.***

Catches from Indonesia and the "Misc" category of countries were assigned to the longline fishery. Catches from other line fisheries not listed below (such as "minor line") were also assigned to the longline fishery.

		Surface Fisheries				
Calendar Year	Longline	Purse Seine	Pole and Line	Trol	Handline	Gill Net
1952	565	264			0	0
1953	3,890	509			0	0
1954	2,447	424			0	0
1955	1,964	322			0	0
1956	9,603	964			0	0
1957	22,908	1,264			0	0
1958	12,462	2,322			0	0
1959	61,892	2,486			0	0
1960	75,826	3,545			0	0
1961	77,927	3,678			0	0
1962	40,397	4,636			0	0
1963	59,724	6,199			0	0
1964	42,838	6,832			0	0
1965	40,689	6,876			0	0
1966	39,644	8,008			0	0
1967	59,281	6,357			0	0
1968	49,657	8,737			0	0
1969	49,849	8,679			0	0
1970	41,059	7,097			0	0
1971	38,179	6,969			0	0
1972	39,528	12,397			0	0
1973	31,315	9,890			0	0
1974	34,105	12,672			0	0
1975	24,149	8,833	0	0	0	0
1976	34,126	3,155	5,228	0	0	0
1977	29,609	1,550	11,019	0	0	0
1978	23,718	3,577	8,613	0	0	0
1979	27,890	2,097	8,686	0	0	0
1980	33,729	2,036	9,159	0	130	0
1981	28,088	6,752	10,091	0	173	0
1982	20,971	6,831	14,670	0	305	11
1983	25,042	5,872	11,823	0	132	12
1984	23,586	4,444	8,967	0	93	0
1985	20,575	5,179	7,410	0	94	67
1986	15,625	6,376	6,155	0	82	81
1987	14,609	5,411	5,409	0	59	87
1988	12,227	2,820	7,770	0	94	234
1989	11,950	1,626	3,807	31	109	319
1990	8,968	2,511	1,803	21	263	305
1991	10,692	1,034	1,823	1	35	107
1992	12,467	22	1,673	4	48	3
1993	12,770	536	1,018	0	20	0
1994	11,036	1,269	844	0	4	0
1995	10,979	1,840	795	8	15	0
1996	11,564	3,121	1,659	3	8	0
1997	11,200	2,998	1,843	31	5	0
1998	13,537	3,584	640	13	2	0
1999	14,177	5,325	22	3	2	0
2000	10,339	5,132	0	1	0	0
2001	11,259	4,767	0	0	0	0
2002	10,528	4,683	0	1	0	0
2003	**8,250**	**5,792**	0	**0**	**0**	0
2004	*8,654*	*4,834*	*0*	*1*	*1*	*0*

Attachment C

Global Catch by Country and Ocean

Catches are presented as whole weights in tonnes. **All 2004 figures are to be *considered preliminary.***

Catches have been assigned to the Indian Ocean where catch location information was not available. This includes catches from Indonesia, most of Misc, the Philippines (pre-2000 only), and Taiwan (pre-1981 only)

Ocean	Calendar Year	Australia	Japan	New Zealand	Korea	Taiwan	Philippines	Indonesia	Misc
Atlantic	1965	0	15	0	0	0	0	0	0
Atlantic	1968	0	411	0	0	0	0	0	0
Atlantic	1969	0	1,869	0	0	0	0	0	0
Atlantic	1970	0	7,575	0	0	0	0	0	0
Atlantic	1971	0	2,126	0	0	0	0	0	0
Atlantic	1972	0	3,928	0	0	0	0	0	0
Atlantic	1973	0	2,235	0	0	0	0	0	0
Atlantic	1974	0	2,266	0	0	0	0	0	0
Atlantic	1975	0	1,051	0	0	0	0	0	0
Atlantic	1976	0	1,009	0	0	0	0	0	0
Atlantic	1977	0	4,463	0	0	0	0	0	0
Atlantic	1978	0	6,528	0	0	0	0	0	0
Atlantic	1979	0	8,231	0	0	0	0	0	0
Atlantic	1980	0	3,086	0	0	0	0	0	0
Atlantic	1981	0	2,365	0	0	35	0	0	0
Atlantic	1982	0	1,104	0	0	9	0	0	0
Atlantic	1983	0	573	0	0	30	0	0	0
Atlantic	1984	0	2,082	0	0	1	0	0	0
Atlantic	1985	0	1,733	0	0	95	0	0	0
Atlantic	1986	0	434	0	0	216	0	0	0
Atlantic	1987	0	1,228	0	0	102	0	0	0
Atlantic	1988	0	573	0	0	28	0	0	0
Atlantic	1989	0	493	0	0	19	0	0	0
Atlantic	1990	0	987	0	0	17	0	0	0
Atlantic	1991	0	1,080	0	0	233	0	0	0
Atlantic	1992	0	253	0	0	46	0	0	0
Atlantic	1993	0	1,425	0	80	108	0	0	0
Atlantic	1994	0	420	0	7	56	0	0	0
Atlantic	1995	0	1,237	0	24	584	0	0	0
Atlantic	1996	0	1,015	0	0	24	0	0	0
Atlantic	1997	0	189	0	0	89	0	0	0
Atlantic	1998	0	649	0	47	42	0	0	0
Atlantic	1999	0	689	0	100	30	0	0	0
Atlantic	2000	0	1,203	0	242	24	0	0	0
Atlantic	2001	0	327	0	90	223	0	0	0
Atlantic	2002	0	909	0	116	16	0	0	0
Atlantic	2003	0	1,932	0	96	170	0	0	0
Atlantic	2004	0	59	0	5	18	23	0	0
Indian	1965	4,675	28,095	0	0	0	0	0	0
Indian	1966	5,882	26,358	0	0	0	0	0	0
Indian	1967	3,528	50,475	0	0	0	0	0	0
Indian	1968	3,140	41,426	0	0	0	0	0	0
Indian	1969	3,545	39,680	0	0	80	0	0	0
Indian	1970	2,808	26,551	0	0	130	0	0	0
Indian	1971	3,411	23,138	0	0	30	0	0	0
Indian	1972	5,838	23,064	0	0	70	0	0	0
Indian	1973	7,244	21,282	0	0	90	0	0	0
Indian	1974	7,563	24,196	0	0	100	0	0	0
Indian	1975	2,667	17,644	0	0	15	0	0	0
Indian	1976	7,440	24,395	0	0	15	0	12	0
Indian	1977	9,914	20,212	0	0	5	0	4	0
Indian	1978	8,509	13,550	0	0	80	0	6	0
Indian	1979	7,557	13,587	0	0	53	0	5	4
Indian	1980	7,860	20,526	0	0	64	0	5	7
Indian	1981	7,944	17,284	0	0	56	0	1	14

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Indian	1982	19,198	14,966	0	0	173	0	2	9
Indian	1983	16,781	21,391	0	0	131	0	5	7
Indian	1984	13,299	18,935	0	0	243	0	11	3
Indian	1985	12,589	16,780	0	0	146	0	3	2
Indian	1986	12,489	12,938	0	0	298	0	7	3
Indian	1987	10,805	10,946	0	0	608	0	14	7
Indian	1988	10,590	9,754	0	0	828	0	180	2
Indian	1989	5,438	7,536	0	0	1,376	0	568	103
Indian	1990	4,335	4,383	0	0	1,160	0	517	4
Indian	1991	3,876	4,137	0	15	1,227	0	759	97
Indian	1992	4,568	4,238	0	41	1,176	0	1,232	73
Indian	1993	4,513	2,869	0	12	850	0	1,370	17
Indian	1994	4,246	4,132	0	130	963	0	904	54
Indian	1995	3,362	3,684	0	341	848	0	829	201
Indian	1996	4,893	4,248	0	1,320	1,442	0	1,614	295
Indian	1997	4,910	4,500	0	1,424	783	0	2,210	333
Indian	1998	4,353	5,838	0	1,749	1,397	5	1,324	471
Indian	1999	5,448	5,126	0	1,361	1,483	80	2,504	403
Indian	2000	5,147	3,370	0	893	1,424	17	1,203	31
Indian	2001	4,792	4,453	0	754	1,357	43	1,632	41
Indian	2002	4,693	3,153	0	630	1,121	79	1,691	203
Indian	2003	5,813	1,926	0	155	957	65	564	48
Indian	2004	4,836	4,652	0	126	1,278	58	677	2
Pacific	1965	2,201	12,579	0	0	0	0	0	0
Pacific	1966	2,126	13,286	0	0	0	0	0	0
Pacific	1967	2,829	8,806	0	0	0	0	0	0
Pacific	1968	5,597	7,820	0	0	0	0	0	0
Pacific	1969	5,134	8,220	0	0	0	0	0	0
Pacific	1970	4,289	6,803	0	0	0	0	0	0
Pacific	1971	3,558	12,886	0	0	0	0	0	0
Pacific	1972	6,559	12,466	0	0	0	0	0	0
Pacific	1973	2,646	7,708	0	0	0	0	0	0
Pacific	1974	5,109	7,542	0	0	0	0	0	0
Pacific	1975	6,166	5,439	0	0	0	0	0	0
Pacific	1976	943	8,695	0	0	0	0	0	0
Pacific	1977	2,655	4,925	0	0	0	0	0	0
Pacific	1978	3,681	3,554	0	0	0	0	0	0
Pacific	1979	3,226	6,010	0	0	0	0	0	0
Pacific	1980	3,335	10,041	130	0	0	0	0	0
Pacific	1981	8,899	8,332	173	0	0	0	0	0
Pacific	1982	2,303	4,719	305	0	0	0	0	0
Pacific	1983	914	2,916	132	0	0	0	0	0
Pacific	1984	112	2,312	93	0	0	0	0	0
Pacific	1985	0	1,883	94	0	0	0	0	0
Pacific	1986	42	1,810	82	0	0	0	0	0
Pacific	1987	16	1,791	59	0	0	0	0	0
Pacific	1988	1	1,095	94	0	0	0	0	0
Pacific	1989	680	1,193	437	0	0	0	0	0
Pacific	1990	251	1,686	529	0	0	0	0	0
Pacific	1991	613	1,260	164	232	0	0	0	0
Pacific	1992	680	1,630	279	0	0	0	0	0
Pacific	1993	860	2,024	217	0	0	0	0	0
Pacific	1994	454	1,510	277	0	0	0	0	0
Pacific	1995	1,145	946	436	0	0	0	0	0
Pacific	1996	236	1,129	139	0	0	0	0	0
Pacific	1997	406	898	334	0	0	0	0	0
Pacific	1998	543	1,013	337	0	7	0	0	0
Pacific	1999	104	1,740	461	0	0	0	0	0
Pacific	2000	110	1,427	380	0	0	0	0	0
Pacific	2001	61	1,894	358	1	0	0	0	0
Pacific	2002	18.7977	2129.8	450.28	0	0	2.3	0	0
Pacific	2003	13.94	1903.8	389.57	2.92	1.531	2.852	0	0
Pacific	2004	225.835	1135.6	393.29	0	1.616	0	0	1

Global Catch by Gear and Ocean

Catches are presented as whole weights in tonnes. **All 2004 figures are to be *considered preliminary.***

Catches have been assigned to the Indian Ocean where catch location information was not available. This includes catches from Indonesia, most of Misc, the Philippines (pre-2000 only), and Taiwan (pre-1981 only). Catches from Indonesia and the "Misc" category of countries were assigned to the longline fishery. Catches from other line fisheries not listed below (such as "minor line") were also assigned to the longline fishery.

Ocean	Calendar Year	Longline	Purse Seine	Pole and Line	Trol	Unspecified Surface Fisheries	Handline	Gill Net
AO	1965	15	0	0	0	0	0	0
AO	1968	411	0	0	0	0	0	0
AO	1969	1,869	0	0	0	0	0	0
AO	1970	7,575	0	0	0	0	0	0
AO	1971	2,126	0	0	0	0	0	0
AO	1972	3,928	0	0	0	0	0	0
AO	1973	2,235	0	0	0	0	0	0
AO	1974	2,266	0	0	0	0	0	0
AO	1975	1,051	0	0	0	0	0	0
AO	1976	1,009	0	0	0	0	0	0
AO	1977	4,463	0	0	0	0	0	0
AO	1978	6,528	0	0	0	0	0	0
AO	1979	8,231	0	0	0	0	0	0
AO	1980	3,086	0	0	0	0	0	0
AO	1981	2,400	0	0	0	0	0	0
AO	1982	1,114	0	0	0	0	0	0
AO	1983	604	0	0	0	0	0	0
AO	1984	2,082	0	0	0	0	0	0
AO	1985	1,828	0	0	0	0	0	0
AO	1986	650	0	0	0	0	0	0
AO	1987	1,330	0	0	0	0	0	0
AO	1988	602	0	0	0	0	0	0
AO	1989	513	0	0	0	0	0	0
AO	1990	1,004	0	0	0	0	0	0
AO	1991	1,313	0	0	0	0	0	0
AO	1992	300	0	0	0	0	0	0
AO	1993	1,612	0	0	0	0	0	0
AO	1994	483	0	0	0	0	0	0
AO	1995	1,845	0	0	0	0	0	0
AO	1996	1,040	0	0	0	0	0	0
AO	1997	278	0	0	0	0	0	0
AO	1998	738	0	0	0	0	0	0
AO	1999	819	0	0	0	0	0	0
AO	2000	1,470	0	0	0	0	0	0
AO	2001	640	0	0	0	0	0	0
AO	2002	1,041	0	0	0	0	0	0
AO	2003	2,199	0	0	0	0	0	0
AO	2004	104	0	0	0	0	0	0
IO	1965	28,095	0	0	0	4,675	0	0
IO	1966	26,358	0	0	0	5,882	0	0
IO	1967	50,475	0	0	0	3,528	0	0
IO	1968	41,426	0	0	0	3,140	0	0
IO	1969	39,760	0	0	0	3,545	0	0
IO	1970	26,681	0	0	0	2,808	0	0
IO	1971	23,168	0	0	0	3,411	0	0
IO	1972	23,134	0	0	0	5,838	0	0
IO	1973	21,372	0	0	0	7,244	0	0
IO	1974	24,296	0	0	0	7,563	0	0
IO	1975	17,659	2,667	0	0	0	0	0
IO	1976	24,422	3,037	4,403	0	0	0	0
IO	1977	20,221	932	8,982	0	0	0	0
IO	1978	13,636	1,562	6,947	0	0	0	0
IO	1979	13,649	111	7,446	0	0	0	0

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IO	1980	20,602	107	7,754	0	0	0	0
IO	1981	17,355	420	7,524	0	0	0	0
IO	1982	15,139	5,489	13,708	0	0	0	11
IO	1983	21,522	5,083	11,698	0	0	0	12
IO	1984	19,192	4,339	8,960	0	0	0	0
IO	1985	16,864	5,179	7,410	0	0	0	67
IO	1986	13,165	6,342	6,147	0	0	0	81
IO	1987	11,489	5,411	5,393	0	0	0	87
IO	1988	10,530	2,820	7,770	0	0	0	234
IO	1989	9,281	1,626	3,794	0	0	0	319
IO	1990	5,781	2,511	1,803	0	0	0	305
IO	1991	7,146	1,034	1,823	0	0	0	107
IO	1992	9,664	22	1,639	0	0	0	3
IO	1993	8,077	536	1,018	0	0	0	0
IO	1994	8,319	1,269	841	0	0	0	0
IO	1995	6,629	1,840	795	0	0	0	0
IO	1996	9,064	3,099	1,649	0	0	0	0
IO	1997	9,343	2,991	1,826	0	0	0	0
IO	1998	10,942	3,555	640	0	0	0	0
IO	1999	11,059	5,325	22	0	0	0	0
IO	2000	6,953	5,132	0	0	0	0	0
IO	2001	8,304	4,767	0	0	0	0	0
IO	2002	6,887	4,683	0	0	0	0	0
IO	2003	3,737	5,792	0	0	0	0	0
IO	2004	6,795	4,834	0	0	0	0	0
PO	1965	12,579	0	0	0	2,201	0	0
PO	1966	13,286	0	0	0	2,126	0	0
PO	1967	8,806	0	0	0	2,829	0	0
PO	1968	7,820	0	0	0	5,597	0	0
PO	1969	8,220	0	0	0	5,134	0	0
PO	1970	6,803	0	0	0	4,289	0	0
PO	1971	12,886	0	0	0	3,558	0	0
PO	1972	12,466	0	0	0	6,559	0	0
PO	1973	7,708	0	0	0	2,646	0	0
PO	1974	7,542	0	0	0	5,109	0	0
PO	1975	5,439	6,166	0	0	0	0	0
PO	1976	8,695	118	825	0	0	0	0
PO	1977	4,925	617	2,037	0	0	0	0
PO	1978	3,554	2,015	1,666	0	0	0	0
PO	1979	6,010	1,986	1,240	0	0	0	0
PO	1980	10,041	1,929	1,405	0	0	130	0
PO	1981	8,333	6,332	2,567	0	0	173	0
PO	1982	4,719	1,342	961	0	0	305	0
PO	1983	2,916	790	125	0	0	132	0
PO	1984	2,312	105	6	0	0	93	0
PO	1985	1,883	0	0	0	0	94	0
PO	1986	1,810	34	8	0	0	82	0
PO	1987	1,791	0	16	0	0	59	0
PO	1988	1,095	0	0	0	0	94	0
PO	1989	2,157	0	13	31	0	109	0
PO	1990	2,183	0	0	21	0	263	0
PO	1991	2,233	0	0	1	0	35	0
PO	1992	2,503	0	33	4	0	48	0
PO	1993	3,082	0	0	0	0	20	0
PO	1994	2,234	0	3	0	0	4	0
PO	1995	2,505	0	0	8	0	15	0
PO	1996	1,460	22	10	3	0	8	0
PO	1997	1,579	7	16	31	0	5	0
PO	1998	1,857	29	0	13	0	2	0
PO	1999	2,300	0	0	3	0	2	0
PO	2000	1,917	0	0	1	0	0	0
PO	2001	2,314	0	0	0	0	0	0
PO	2002	2,601	0	0	1	0	0	0
PO	2003	2,314	0	0	0	0	0	0
PO	2004	1,755	0	0	1	0	1	0