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Australia's annual review of the Southern Bluefin Tuna Fishery

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Executive Summary

The 2009 update	The 2009 Fishing Season Report summarises catches and fishing activities in the Australian Southern Bluefin Tuna (SBT) Fishery up to and including the 2007–08 quota year (December–November) and some preliminary results for the 2008–09 season.
The fishing season	A total of 22 commercial fishing vessels landed SBT in Australian waters in 2007–08 for a total catch of 5234 t. A total of 99.6% of the catch was taken by purse seine with the remainder taken by longline. Seven purse seiners fished during the 2007–08 quota year, but live bait, pontoon-towing and feeding vessels were also involved. Purse seine fishing commenced in early December 2007 and finished in early March 2008. The 2007–08 quota year catch was 5234 t, the same as in the previous quota year (5234 t in 2006–07).
Observers	In the 2008–09 quota year, observers monitored 7.9% of purse seine sets where fish were retained and 15.3% of the estimated SBT catch. In 2008, observers also monitored 47.9% of longline hook effort in the Eastern Tuna and Billfish Fishery during the months and in the areas of the SBT migration through that fishery. Observers monitored 16.7% of longline sets in the entire Western Tuna and Billfish Fishery, where only one vessel operated in the fishery during this period.
Additional reporting requirements	Additional information required under resolutions and recommendations adopted at CCSBT16 in 2008, relating to vessel monitoring systems (VMS), transshipment and Ecologically Related Species, are included as appendices.

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1. Introduction

This report summarises catches and fishing activities in the 2007–08 quota year¹ of the Australian Southern Bluefin Tuna (*Thunnus maccoyii*; SBT) Fishery. It also provides preliminary data on the 2008–09 surface fishery and a summary of the history of the Australian SBT Fishery. Caton *et al.* (1995) provides a more detailed historical description of the fishery.

The Australian domestic SBT catches for the 2007 and 2008 calendar years were 4813 t and 5051 t, respectively. By quota year, the Australian domestic SBT catch was 5234 t in both 2006–07 and 2007–08 (Table 1).

Table 1. Total domestic catch of SBT for calendar years and quota years

Calendar Year	Catch (t)	Quota Year	Catch (t)
1990	4586	1989–90	4849
1991	4489	1990–91	4316
1992	5248	1991–92	4894
1993	5373	1992–93	5212
1994	4700	1993–94	4937
1995	4508	1994–95	5080
1996	5128	1995–96	5188
1997	5316	1996–97	4978
1998	4897	1997–98	5097
1999	5552	1998–99	5232
2000	5257	1999–00	5257
2001	4853	2000–01	5247
2002	4711	2001–02	5262
2003	5827	2002–03	5391
2004	5062	2003–04	5120
2005	5244	2004–05	5248
2006	5635	2005–06	5308
2007	4813	2006–07	5234
2008	5051	2007–08	5234

¹ Various time periods, such as ‘calendar years’, ‘fishing seasons’ and ‘quota years’, can be used when describing Australia’s SBT fishery. Unless otherwise indicated, we have used quota years in this report, but note that fishing seasons of the various fishery components often span quota years. The start and end dates of Australian quota years have varied and are presented in Appendix 1.

2. Operational Constraints on Effort

Regulatory Measures

Domestic operations are managed through individual transferable quotas (ITQs) granted as Statutory Fishing Rights (SFRs) under the *Southern Bluefin Tuna Management Plan 1995*.

The Australian Fisheries Management Authority (AFMA) uses a risk-based compliance strategy in the SBT purse seine and longline fisheries. This includes targeted compliance operations to check fishing vessels at sea and at landing ports; a comprehensive audit trail from the time SBT are caught to the time they are exported, including random audits of fishing companies and export establishments; and an annual review of compliance risks leading to refined strategies for the following fishing season.

Australia has continued to use a combination of area restrictions, minimum quota holdings, fishery observers, and mandatory Vessel Monitoring Systems (VMS) to reduce the incidental catch and mortality of SBT caught in the domestic longline fishery. A SBT habitat model incorporating archival tag and observer data with sea surface and sub-surface temperatures is used to predict likely areas of high SBT abundance in the longline fishery off the east coast, and hence the location of restricted access zones. In the Eastern Tuna and Billfish Fishery (ETBF), areas with a high probability of SBT interactions have been determined and are referred to as the Core Zone and Buffer Zone (see www.afma.gov.au/fisheries/tuna/etbf/mgt/zones.htm). Observer requirements have been modified as of the 2005–06 season so that the level of observer coverage depended on the amount of quota carried. To access the Core and Buffer zones, a minimum holding of 500 kg of SBT quota is now required. Requirements applicable to 2008 longline catches of SBT are given in Tables 2 and 3.

Table 2. Observer coverage requirements in the Core Zone, 2008

Initial quota holding	Uncaught quota remaining				
	1 kg–2 t	>2 t–4 t	>4 t–6 t	>6 t–10 t	>10 t
500 kg–2 t	100%				
>2 t–4 t	100%	75%			
>4 t–6 t	100%	50%	50%		
>6 t–10 t	100%	25%	25%	25%	
>10 t	100%	10%	10%	10%	10%

Table 3. Observer coverage requirements in the Buffer Zone, 2008

Initial quota holding	Uncaught quota remaining				
	1 kg–2 t	>2 t–4 t	>4 t–6 t	>6 t–10 t	>10 t
500 kg–2 t	25%				
>2 t–4 t	25%	25%			
>4 t–6 t	25%	25%	25%		
>6 t–10 t	25%	25%	25%	25%	
>10 t	25%	10%	10%	10%	10%

To improve compliance and management outcomes for its domestic fishery, and to better meet international management obligations, Australia implemented a range of amendments to its *Southern Bluefin Tuna Management Plan 1995* in February 2008. These included:

- multi-year national catch allocations for the Australian SBT Fishery to be set by AFMA in line with decisions made by the CCSBT;
- an amendment to allow AFMA to use any decision made under Article 8(3) of the Convention for the Conservation of Southern Bluefin Tuna for the purposes of determining the national catch allocation;
- a mechanism for any excess take of fish to be repaid in subsequent years by fishers and to broaden the basis for fishers to legally release live fish;
- the frequency of reviewing the monitoring arrangements to be changed from annually to no more than every five years; and
- AFMA's contact details and the economic efficiency objective to be updated.

3. Catch and Effort

In the 2007–08 quota year, 99.6% of the Australian catch of SBT was taken by purse seine with the remainder taken by longline (Table 4). Purse seine catch by fishing season with number of vessels and vessel search hours is given in Table 5. Australian catch by gear and State for the quota years 1988–89 to 2007–08 is shown in Table 6. The Australian catch of SBT for the calendar years 2007 and 2008 is shown in Figure 1 and Figure 2, respectively.

Table 4. Catch of SBT by fishing method in 2006–07 and 2007–08 seasons

2006–07		
Purse seine	South Australia	5230 t
Longline	New South Wales	4 t
2007–08		
Purse seine	South Australia	5211 t
Longline	New South Wales	23 t

Insufficient data were available to provide an estimate of the recreational catch.

Discards

During the 2007–08 quota year, no discarding of SBT was observed or reported in logbooks collected in the purse seine fishery in the Great Australian Bight.

In 2008, in the ETBF, south of 30°S and during the months of May to September, 31 observers monitored 404,000 hooks of a season total of 844,000, representing 47.9% observer coverage of longline effort during the SBT migration. The total catch number of SBT caught while observers were on board was 486 of which 102 were retained, 384 were discarded (375 of which were released alive) and none were tagged. Individual retained fish ranged from 62 to 230 cm in length. ETBF logbooks for 2008 showed 19.0 t (434 fish) of SBT were retained in the ETBF and 331 SBT (43.3%) were discarded.

During 2008, AFMA observers monitored 16.7% of longline operations in the Western Tuna and Billfish Fishery (WTBF). There were no SBT observed caught or recorded in logbooks in the 2007–08 quota year.

4. Historical Catch and Effort

Australian catch and effort (number of search hours and number of vessels) by season in the purse seine fishery, for seasons 1994–95 to 2008–09, are shown in Table 5. Catch by gear and state for the quota years 1988–89 to 2007–08 is shown in Table 6.

Table 5. Purse seine catch and effort for seasons 1994–95 to 2008–09

Season	Estimated catch (t)	Actual catch (t)	No. catcher vessels	Vessel search hours	No. sets	No. 1° squares fished
1994–95	2179	2009	5	526	104	5
1995–96	2859	3442	6	631	89	11
1996–97	3134	2505	7	769	118	13
1997–98	3916	3629	7	671	143	8
1998–99	4418	4991	7	972	129	3
1999–00	4746	5131	8	764	107	5
2000–01	5100	5162	8	799	129	2
2001–02	5400	5234	7	1309	159	3
2002–03	5188	5375	7	1276	150	5
2003–04	5299	4874	6	1202	160	4
2004–05	5225	5215	8	1168	139	4
2005–06	5463	5302	7	1304	156	6
2006–07	5091	5230	6	1459	160	8
2007–08	4530	5211	7	1217	134	2
2008–09	4348	5015	7	1156	139	7

Note that the 2008–09 figures provided are preliminary because the fishing season does not finish until November 2009.

Overall, the data available on recreational catch of SBT is extremely limited, but an initial review revealed high year-to-year variability in catches and the locations in which SBT were taken (Rowse *et al.* 2008). Between 1998 and 2002, indicative estimates of annual recreational catches ranged between 3 t and 85 t with the highest catches occurring around Tasmania (Table 7). These data are indicative estimates only and are based on a range of different data sources. No estimates of recreational catches of SBT have been available since 2003.

5. Annual fleet size and distribution

In the 2007–08 quota year, a total of 22 commercial fishing vessels landed SBT in Australian waters.

South Australia

The one- to five-year-old SBT, which school from late spring to autumn in surface waters of the eastern Great Australian Bight, South Australia, were fished by seven purse seiners during the 2007–08 quota year, but various live bait, pontoon-towing and feeding vessels were also involved. Fishing commenced in early December 2007 and finished in early March 2008 for the season.

Western Australia

There were no SBT caught off Western Australia in the 2007–08 quota year.

New South Wales

During the 2007–08 quota year, 15 domestic longliners reported landing SBT from the area of the fishery for older juveniles and adults in deeper waters off NSW.

Tasmania

There was no SBT caught off Tasmania in the 2007–08 quota year.

Queensland

There was no SBT caught off Queensland in the 2007–08 quota year.

Figure 1. Australian SBT catch in the 2007 calendar year

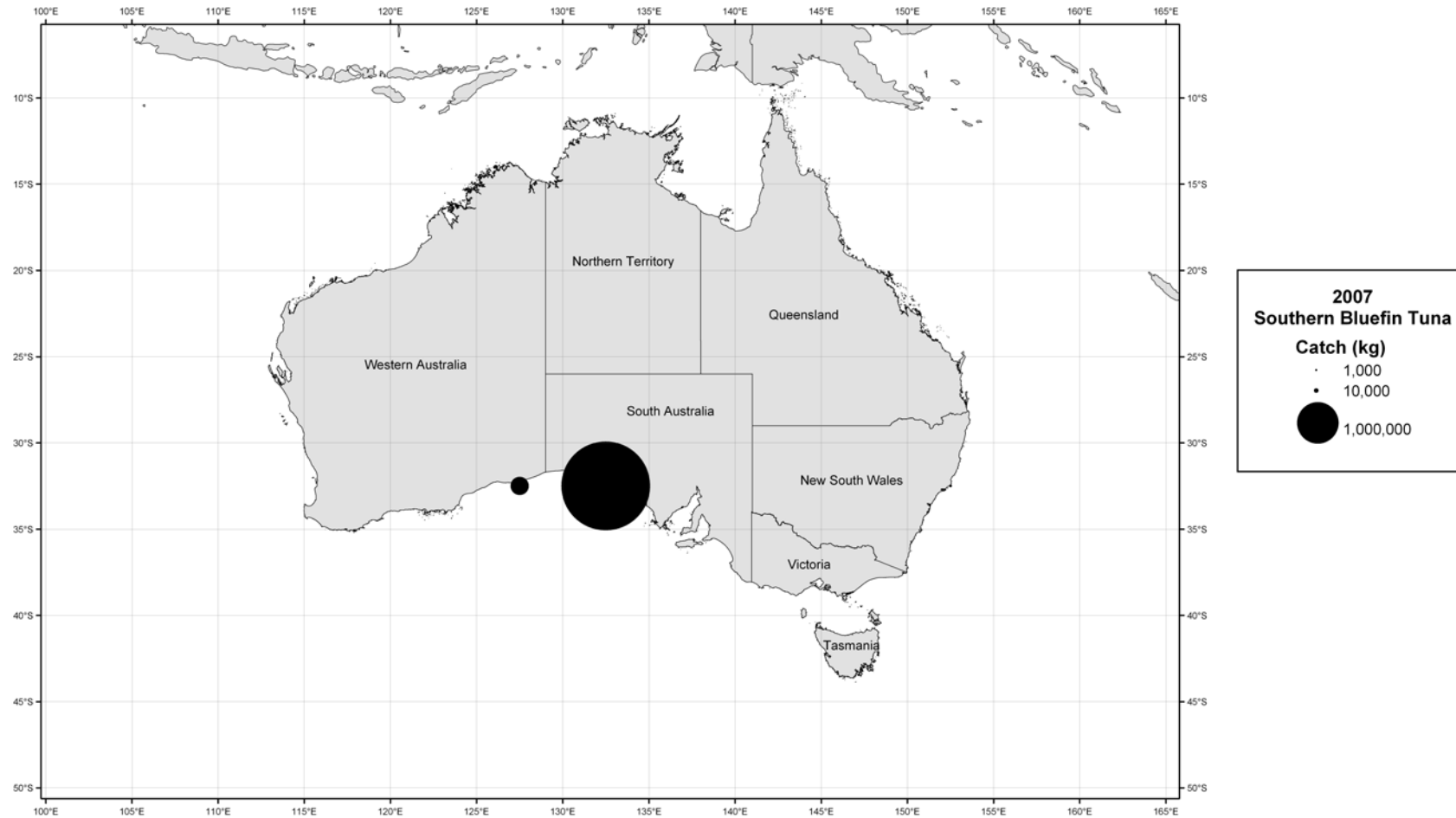


Figure 2. Australian SBT catch in the 2008 calendar year

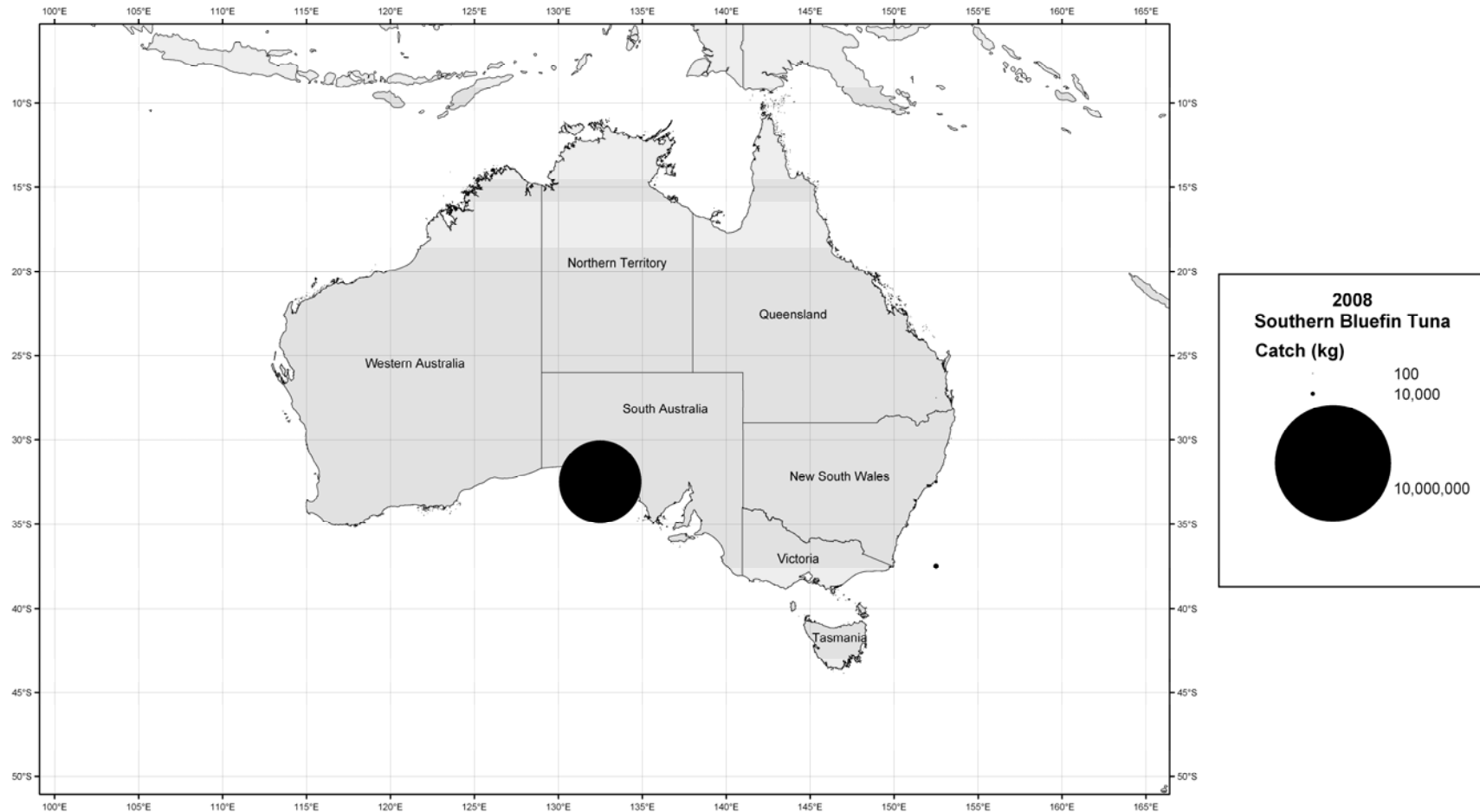


Table 6. Australian catch by gear and state for quota years 1988–89 to 2007–08

Quota	Western Australia			South Australia			New South Wales			Tasmania		Large Longliners			Australia Total			Total				
Year	Albany Pole	Esperance Pole	Long-line	Total	Pole & Purse Seine	Ranch Cages	Long-line	Total	Pole & Purse Seine	Long-line	Total	Troll	Long-line	Total	Aust. Charter	Joint-venture	Total	Domestic Surface	Domestic Long-line	Total Long-line	RTMP	All Gears
1988–89	204	221	0	425	4872	0	0	4872	0	1	1	2	0	2	0	684	684	5299	1	685	0	5984
1989–90	133	97	0	230	4199	0	0	4199	0	6	6	14	0	14	0	400	400	4443	6	406	0	4849
1990–91	175	45	0	220	2588	0	0	2588	0	15	15	57	0	57	255	881	1136	2865	15	1151	300 ^a	4316
1991–92	17	0	0	17	1629	138	14	1781	34	90	124	36	20	56	59	2057	2116	1854	124	2240	800	4894
1992–93	0	0	0	0	716	722	68	1506	16	238	254	23	44	67	0	2735	2735	1477	350	3085	650	5212
1993–94	0	0	0	0	621	1294	55	1970	0	286	286	7	105	112	0	2299	2299	1922	446	2745	270	4937
1994–95	0	0	0	0	908	1954	2	2864	0	157	157	4	109	113	0	1295	1295	2866	268	1563	650	5080
1995–96	0	0	0	0	1447	3362	0	4809	28	89	117	0	262	262	0	0	0	4837	351	351	0	5188
1996–97	0	0	0	0	2000	2498	0	4497	7	229	236	2	242	244	0	0	0	4507	472	472	0	4978
1997–98	0	0	0 ^b	0	916	3488	0 ^b	4403	0 ^c	475	475	0 ^d	219	219	0	0	0	4433	664	664	0	5097
1998–99	0	0	0 ^b	0	28	4991	0 ^b	5018	0 ^c	97	97	0 ^d	116	116	0	0	0	5016	216	216	0	5232
1999–00	0	0	0 ^b	0	0	5130	13	5143	0	114	114	0	0 ^d	0	0	0	0	5130	127	127	0	5257
2000–01	0	0	0 ^b	0	0	5162	6	5168	0	32	32	0	0 ^d	0	0	0	0	5162	38	38	0	5247
2001–02	0	0	7	7	0	5234	0	5234	0	22 ^e	22 ^e	0	0 ^d	0	0	0	0	5234	29	29	0	5262
2002–03	0	0	0 ^f	0	0	5375	0	5375	0	17	17	0	0	0	0	0	0	5375	17	17	0	5391
2003–04	0	0	0 ^f	0	0 ^h	4874	0 ^g	4874	0	226 ^e	226 ^e	0	20	0	0	0	0	4874	247	247	0	5120
2004–05	0	0	0	0	0	5214	0	5214	0	35	35	0	0	0	0	0	0	5214	35	35	0	5248
2005–06	0	0	0	0	0	5302	0	5302	0	6	6	0	0	0	0	0	0	5302	6	6	0	5308
2006–07	0	0	0	0	0	5230	0	5230	0	4	4	0	0	0	0	0	0	5230	4	4	0	5234
2007–08	0	0	0	0	0	5211	0	5211	0	23	23	0	0	0	0	0	0	5211	23	23	0	5234

^aNote that a further 700 t of Australian quota was 'frozen' (not allocated) in 1990–91.

^b1997–98 and 1998–99 WA and SA non-ranch catches are included in SA pole and purse seine catch, and in 1999–00 and 2000–01 WA longline catch is included in SA longline due to confidentiality guidelines.

^c1997–98 to 1998–99 NSW pole and purse seine catches are included in NSW longline catch due to confidentiality guidelines.

^d1997–98 and 1998–99 Tas troll catches are included in Tas longline, and in 1999–00, 2000–01 and 2001–02 Tas longline catch is included in NSW longline due to confidentiality guidelines.

^e2001–02 and 2003–04 NSW longline catch also includes QLD longline catch due to confidentiality guidelines.

^f2002–03 and 2003–04 WA longline catch is included in NSW longline due to confidentiality guidelines.

^g2003–04 SA longline catch is included in NSW longline due to confidentiality guidelines.

^h2003–04 additional SA purse seine catch that did not go into ranch cages is included in SA ranch cages catch due to confidentiality guidelines.

Table 7. Indicative estimates of recreational catch (t) by Australian recreational fishers, 1994 to 2008.

Year	Recreational Catch (t)
1994	16
1995	insufficient data
1996	insufficient data
1997	insufficient data
1998	38
1999	3
2000	10
2001	60
2002	85
2003	insufficient data
2004	insufficient data
2005	insufficient data
2006	insufficient data
2007	insufficient data
2008	insufficient data

6. Historical fleet size and distribution

Troll catches of SBT were reported as early as the 1920s off the east coast of Australia but significant commercial fishing for SBT commenced in the early 1950s with the establishment of a pole-and-live-bait fishery off New South Wales, South Australia and, later (1970s), Western Australia. Purse seine gear overtook pole as the main method and catches peaked at 21 500 t in 1982. The bulk of this early Australian catch of SBT was canned. Following quota reductions in 1983–84, the Western Australian pole fishery for very small juveniles closed down and the south-eastern fishery began to target larger juveniles to supply the Japanese sashimi market. Surface catches were further reduced between 1989 and 1995 when about half of the Australian total allowable catch (TAC) was taken by Australia–Japan joint venture longliners in the Australian Fishing Zone (AFZ). The joint venture ceased in late 1995. From 1992 to 1998, domestic longliners operating off Tasmania and New South Wales also took around 5–10% of the total Australian catch.

In 1990–91, about 20 t of SBT tuna were transferred to fattening cages in Port Lincoln, South Australia, to enhance their value. Utilisation of the Australian SBT TAC in ‘farming’ operations increased from 3% of the TAC in 1991–92 to 98% in 1999–2000 and it has remained at similar high levels since.

Following declaration of the AFZ in 1979, Japanese longliners fished under a range of bilateral conditions, real time monitoring program and joint-venture arrangements until 1997 when Japanese longliners were excluded from all AFZ fishing operations following failure to reach agreement on a global TAC within the CCSBT.

7. Fisheries monitoring

There are a series of logbooks and associated catch records that are required by law to be completed by fishers and fish receivers and sent to AFMA for the purposes of monitoring, compliance and research. The type of form used is dependent on the type of method used to catch

SBT in the fishery. All of the data provided from logbooks and catch disposal records must be supplied to AFMA within specified time periods specific to each record.

Catch disposal records

Catch disposal records for SBT are for recording SBT taken by fishers for the purposes other than farming and are signed by the fishing concession holder and the first receiver immediately after unloading the catch. Catch disposal records provide a means to verify logbook data.

Australian daily fishing logbook and farm transit logbook

A logbook form is required to be completed by fishers when using pelagic longlining or when fishing with minor line methods. The Australian Pelagic Longline Daily Fishing Log is required to be completed for longline fishing. In the purse seine fishery, the master of the catcher vessel (with quota assigned) is required to complete the Australian Purse Seine and Pole Daily Fishing Log (for farmed SBT only). A specific permit called the Farm Transit Log is completed by the holder of the SBT carrier vessel permit or representative, and provided to the monitoring company which undertakes the fish count when fish are transferred from tow cages to farm cages.

Farm disposal record

A specific process has been designed to obtain data to allow for research and monitoring from farming operations. An independent company is contracted annually by AFMA to monitor the farming operations. All mortalities that occur during the capture and towing operations must be recorded on the appropriate form and must be available for inspection if requested by AFMA.

When SBT are transferred from tow cages to the fish farms, a video record must be carried out by the AFMA contracted monitoring company. The video recording is then used to undertake a count of the fish that are transferred into the fish farm. This count of captured fish is multiplied by the average fish weight (derived from a 40-fish sample) and decremented from quota using the Farm Disposal Record. AFMA compliance officers observed at sea operations during both the 2007–08 and 2007–08 seasons.

Observer program

Observer programs for the purse seine fishery have been in place since the 2002–03 season, and for the longline fishery (ETBF) since 2002.

The monitoring arrangements in the SBT fishery continue to be reviewed and refined in order to improve monitoring and compliance. Since 2000, in order to minimise the risk of non-quota take of SBT by longliners off New South Wales, access to the waters through which SBT migrate has been restricted to vessels holding SBT quota.

8. Other factors

Import/export statistics

The Trade Information Scheme (TIS) that records all exported Australian fish has been implemented and refined. A TIS form is completed by an authorised signatory from the export-registered establishment that is the last to handle the consignment before the product leaves Australia and validated by a government officer. The form is used for both farmed and non-farmed

SBT. This program provides a complete record of SBT exports that can be compared with the Japanese Import Statistics.

Markets

In the 2008 calendar year, Australia exported 7779.5 t of SBT. The great majority of Australian exports were received by Japan (7693.7 t, ~99% of exports). A further 37.4 t (0.5% of exports) were exported to the USA, 28.9 t (0.4% of exports) to destinations in Asia and the Middle East, and 19.5 t (0.3% of exports) to Europe. A small amount was consumed domestically.

Observer coverage

Purse Seine Fishery: Great Australian Bight 2008–09

The purse seine fishery observer program for the 2008–09 Australian SBT fishing season monitored fishing and tow operations at 33°20'–33°30'S and 131°57'–132°58'E in December 2008 and January, February, March and April 2009. One Australian and one South African observer monitored 11 purse seine sets where fish were retained and eight sets that were aborted and fish were released alive. This represents 7.9% of the total sets in which fish were taken in 2008–09. From these observations an estimated 667 t of SBT were caught during observed sets, representing 15.3% of the estimated tonnage caught for the 2008–09 season.

One observer also monitored and recorded SBT mortalities (n = 9) on a towing operation.

Longline Fishery

In 2008, in the ETBF, south of 30°S and during May to September (where SBT are usually caught), 31 observers monitored 404 000 hooks of a total of 844 000, representing 47.9% observer coverage of longline effort. For the fishery as a whole, 11.4% of hooks were observed in the fishing season. The total catch number of SBT caught while observers were on board was 486 of which 102 were retained, 384 were discarded (375 of which were released alive) and none were tagged. Individual retained fish ranged from 62–230 cm in length. ETBF logbooks for 2008 reported 19.0 t (434 fish) of SBT were retained in the ETBF and 331 (43.3%) were discarded. Note that Catch Disposal Records for 2008 reported 300 SBT retained and landed in the ETBF; misidentification of SBT in logbooks possibly accounts for this discrepancy.

In 2008, 16.7% of operations were observed in the WTBF. Only one vessel participated in this fishery in 2008, and no SBT were observed caught.

Fish release trials

In response to the operational characteristics of the SBT fishery, AFMA and the fishing industry agreed to undertake a trial encompassing two fishing seasons, commencing in the 2007–08 quota year, to investigate a mechanism to allow a single release of live fish to avoid exceeding Australia's national allocation of SBT. The first release of the trial was conducted on 6 April 2008.

Approximately 2000 SBT (39 t) were released at 35°14.5'S, 135°36.5'E. To select the release site, an aerial survey of three preferred release locations was conducted on 4 April 2008. These sites were selected because they were known as locations where wild SBT can be found. The final

release site was selected because it had a strong presence of wild SBT indicating that the area was suitable habitat for SBT.

The infrastructure to undertake the release and aerial spotting was provided by industry and observed by two government officials. No mortalities were recorded during the tow and release of fish.

No trial was undertaken in 2009. Under the 2008 *Southern Bluefin Tuna Plan Amendment (No. 1)*, 2010 is the last year that a single, end of season release of live fish can be trialled.

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Appendix 1. SBT fishing season dates 1988–89 to 2008–09

Quota Year	Start Date	End Date
1988–89	1 October 1988	30 September 1989
1989–90	1 October 1989	30 September 1990
1990–91	1 October 1990	30 September 1991
1991–92	1 October 1991	31 October 1992
1992–93	1 November 1992	31 October 1993
1993–94	1 November 1993	31 October 1994
1994–95	1 November 1994	15 December 1995
1995–96	16 December 1995	15 December 1996
1996–97	16 December 1996	30 November 1997
1997–98	1 December 1997	30 November 1998
1998–99	1 December 1998	30 November 1999
1999–00	1 December 1999	30 November 2000
2000–01	1 December 2000	30 November 2001
2001–02	1 December 2001	30 November 2002
2002–03	1 December 2002	30 November 2003
2003–04	1 December 2003	30 November 2004
2004–05	1 December 2004	30 November 2005
2005–06	1 December 2005	30 November 2006
2006–07	1 December 2006	30 November 2007
2007–08	1 December 2007	30 November 2008
2008–09	1 December 2008	30 November 2009

Appendix 2. Annual VMS summary

1. Description of the progress and implementation of Australia's VMS program

Since 1 July 2007 Australia has mandated that all vessels nominated to Commonwealth (flag state) concessions be fitted with approved and operational VMS systems. All flag state CCSBT Authorised Vessel List vessels comply with this mandate.

2. The number of flag vessels on the CCSBT Authorised Vessel List required to report to the national VMS system

All of Australia's CCSBT Authorised Vessel List vessels are required to report to AFMA's VMS system in accordance with flag state vessel concession conditions. Currently, 67 Australian vessels are included on the CCSBT Authorised Vessel List.

3. The number of flag vessels on the CCSBT Authorised Vessel List that actually reported to the national VMS system

In 2008–09, all 67 Australian vessels on the CCSBT Authorised Vessel List reported to AFMA's VMS system. On intermittent occasions, vessel masters had to report manually owing to technical issues (further details below).

4. Reasons for any non-compliance with VMS requirements and action by the flag state

A number of scenarios exist regarding potential non-compliance and actions taken by the flag state (Table 8). In 2008–09, all three 'Involuntary non-compliance' scenarios listed in Table 8 eventuated to varying degrees. There were no detected instances of intentional/direct non-compliance.

Table 8. VMS non-compliance type and flag state action

Non-compliance type	Flag state action
Involuntary non-compliance	
In port: power supply issues or vessel maintenance	The concession holder may apply for a Temporary Switch Off (TSO) approval for a specific timeframe and/or conditions by the flag state.
In port: unit malfunctions	The unit is required to be repaired before the vessel leaves port.
At sea: unit malfunctions	Manual reporting is required. In high risk fishing areas, vessels are ordered to return to port to repair the VMS unit. See Item 6 for further details.
Intentional/direct non-compliance	
Unit suspected of purposely being switched off or interfered with	Vessel is either ordered to port for further investigation or ordered to remain in port pending outcome of investigation. In either case, vessel is required to remain in port until the unit is fixed and validated.

5. Reporting of vessels' geographical position in the event of a technical failure of VMS

Australia maintains a historical record of all technical failures that have occurred including date, time and location (latitude, longitude) of the failure occurrence. Manual reporting requirements at sea and in port are described under Item 6.

6. Procedures used for manual reporting in the event of a VMS failure

AFMA has established clear procedures within existing concession conditions in the event that VMS fails at sea or in port:

- a) In the event of a VMS failure whilst at sea, the master of the vessel must contact the AFMA duty officer and comply with any instructions given by an AFMA authorised officer. These instructions may include a requirement for the master to submit accurate manual position reports, or for the master to immediately stow all fishing gear and take the vessel directly to port. Manual reports must include the vessel's name, the vessel's distinguishing symbol, the vessel's present latitude and longitude (in degrees and minutes), and the date and time. The standard reporting time for manual reports is 4 hourly.
- b) In the event of a VMS failure in port, the vessel must remain in port until the automatic location communicator (ALC) unit is inspected, repaired if necessary, and AFMA has received confirmation from an authorised technician that the ALC is again functioning normally. In addition, the ALC unit must be polling to AFMA before the vessel leaves port. In exceptional circumstances, e.g. where an ALC unit fails to poll correctly, the vessel may apply for a 'temporary switch off' (TSO) arrangement with AFMA. If the vessel's application is successful, it must report when the vessel will be leaving port and the ALC unit switched on, and when the vessel will return

to port and the ALC unit switched back off.

7. Description of any investigations initiated in accordance with paragraph 3(b) of the CCSBT VMS resolution, including progress to date and any action taken

During the period 2008–09 there have been no detected incidents prompting an investigation to be undertaken in accordance with paragraph 3(b) of the CCSBT VMS resolution

Appendix 3. Annual summary on transshipment

In 2008–09, there were no transshipments by Australian vessels required to be reported in accordance with the Resolution on Establishing a Program for Transshipment by Large-Scale Fishing Vessels.

Appendix 4. Annual summary of actions to mitigate the impact of fishing for SBT on Ecologically Related Species

Australia's national report to the eighth meeting of the Ecologically Related Species Working Group (ERSWG) (CCSBT-ERS/0909/SBT Fisheries—Australia) provides full details on Australian efforts to mitigate the impact of fishing for SBT on ERS. A summary is provided below.

1. Implementation of IPOA-Seabirds, IPOA-Sharks, and FAO-Sea turtles

Australia endorsed the IPOA-Seabirds, and agreed to undertake a national assessment of longline fisheries to determine seabird bycatch rates. The Australian longline fisheries that principally interact with seabirds operate in Commonwealth waters, which generally refers to waters from 3 nautical miles offshore to the extent of Australia's EEZ. To manage these interactions, Australia has put in place the *Threat Abatement Plan (TAP) 2006 for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations*. The TAP is a legislative instrument that directs mandatory seabird bycatch management measures. It was first introduced in 1998 and was revised in 2006, and applies to all longline fisheries managed by the Australian Government. The 2006 TAP is Australia's key national measure for mitigating the impact of longline fisheries on seabird populations, and is consistent with the IPOA-Seabirds.

Australia produced a Shark-plan in 2004. The Australian Government Department of Agriculture, Fisheries and Forestry has responsibility for overseeing the implementation and review of the Shark-plan. The Shark-plan was supported by the findings of the Shark-plan Assessment Report, completed in 2001. The Shark-plan recognises that while Australia is not a major shark fishing nation, sharks are an important part of the total quantity of Australia's wild fish production and that Australian vessels regularly take sharks as target and non-target catch. See CCSBT-ERSWG/0909/SBT Fisheries—Australia for further details.

Australia considers that current sea turtle bycatch management and mitigation measure in place in its domestic longline fisheries (principally the ETBF and WTBF) fulfil Australia's obligations to FAO-Sea turtles. See CCSBT-ERSWG/0909/SBT Fisheries—Australia for further details.

2. Compliance with current measures adopted by IOTC and WCPFC

Australia complies with all current binding and recommendatory measures adopted by IOTC and WCPFC aimed at the protection of ERS species (including seabirds, sea turtles and sharks) from fishing.

Seabirds

Australia is compliant with the WCPFC Conservation and Management Measure (CMM) 2007-04, and IOTC Resolution 08/03. The following mitigation measures are prescribed for Australian longline vessels under the TAP:

1. AFMA will require all pelagic longline tuna fishers operating within the ETBF south of latitude 25°S to adopt one of two options:
 - a. a line-weighting strategy that enables the bait to be rapidly taken below the reach of most seabirds; or
 - b. set all hooks during the night
 - c. in both options, vessels will also employ at least one seabird scaring ('tori') line constructed to a specified standard, not use bait that is still frozen and retain all offal during line setting
2. AFMA will require all pelagic longline tuna fishers operating within the WTBF south of latitude 30°S to set all hooks during the night. In addition, vessels will also employ at least one seabird scaring line constructed to a specified standard, not use bait that is still frozen and retain all offal during line setting
3. AFMA will require domestic and foreign longline vessels in all demersal fisheries operating within Australian jurisdiction to adopt proven mitigation measures that ensure the performance criteria for each fishery are achieved in all areas and seasons
4. AFMA will implement an appropriate management response if data analysis indicates that the criteria defined in the 2006 TAP have not been met in any area, season and fishery, or that observer coverage has dropped below the performance criteria for each fishery (Anon 2006).

Sharks

Australia has been compliant with the WCPFC Conservation and Management Measure (CMM) 2006-05 and its replacement CMM 2008-06, and IOTC Resolution 05/05. The following mitigation measures are prescribed for Australian longline vessels:

- A ban on the use of wire leaders
- A limit of 20 sharks per trip, excluding school shark, gummy shark, elephantfish (*Callorhynchidae*), chimaerids (*Chimaeridae* and *Rhinochimaeridae*) and sawshark. This limit does not apply to great white sharks and grey nurse sharks, which are no-take TEP species
- Fishing permit holders are prohibited from carrying, retaining, or landing all shark dorsal, pectoral, caudal, pelvic and anal fins that are not attached to their carcass
- Fishing permit holders are prohibited from carrying, retaining and landing livers obtained from sharks unless the individual carcasses from which the livers were obtained are also landed

Sea turtles

Australia is compliant with IOTC Resolutions 05/08 and 09/06, and WCPFC CMM 2008-03. Regarding paragraph 7 of WCPFC CMM 2008-03, Australia has prepared an 'Eastern Tuna and Billfish Fishery Sea Turtle Mitigation Plan (TMP)', which has been reviewed by the WCPFC

Scientific Committee and will be presented to the Technical and Compliance Committee in October 2009 (WCPFC-TCC-2009/IP-05).

3. Collection and reporting of data on ERS

Australia collects data on ecologically related species and reports these on an annual basis to the scientific committees of the IOTC and WCPFC and to the Extended Commission of the CCSBT and or its subsidiary bodies as appropriate. Most recent reports are:

- CCSBT: CCSBT-ERS/0909/SBT Fisheries—Australia
- WCPFC: WCPFC-SC5-AR-CCM-01 (Australia)
- IOTC: IOTC-2008-SC-INF09 (Australia)