



Australian Government

Department of the Environment and Energy

Assessment of the
Commonwealth Southern Bluefin Tuna Fishery

December 2016

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Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment and Energy on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment and Energy or the Australian Government.

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CONTENTS

Table 1: Summary of the Commonwealth Southern Bluefin Tuna Fishery 2

Table 1 contains a brief overview of the operation of the fishery, including: the gear used, species targeted, byproduct species, bycatch species, annual catch, management regime and ecosystem impacts.

Table 2: Progress in implementation of conditions and recommendations made in the 2013 assessment of the Commonwealth Southern Bluefin Tuna Fishery..... 9

Table 2 contains an update on the progress that has been made by the Australian Fisheries Management Authority in implementing the conditions and recommendations made in the 2013 assessment.

Table 3: The Department of the Environment and Energy's assessment of the Commonwealth Southern Bluefin Tuna Fishery against the requirements of the EPBC Act related to decisions made under Part 13 and Part 13A.....12

Table 3 contains the Department's assessment of the fishery's management arrangements against all the relevant parts of the *Environment Protection and Biodiversity Conservation Act 1999* that the Minister must consider before making a decision.

The Department of the Environment and Energy's final conditions and recommendations to the Australian Fisheries Management Authority for the Commonwealth Southern Bluefin Tuna Fishery 20

This section contains the Department's assessment of the fishery's performance against the Australian Government's *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition* and outlines the reasons the Department recommends that the fishery be declared an approved wildlife trade operation.

Table 4: The Commonwealth Southern Bluefin Tuna Fishery Assessment – Summary of Issues, Conditions and Recommendations, November 2016 21

Table 4 contains a description of the issues identified by the Department with the current management regime for the fishery and outlines the proposed conditions that would form part of the Minister's decision to declare the fishery an approved wildlife trade operation.

References 24

TABLE 1: SUMMARY OF THE COMMONWEALTH SOUTHERN BLUEFIN TUNA FISHERY

<p>Key documents relevant to the fishery</p>	<ul style="list-style-type: none"> • <u>Fisheries Management Act 1991</u> • <u>Fisheries Management Regulations 1992</u> • <u>Southern Bluefin Tuna Fishery Management Plan 1995</u> • <u>Fisheries Management (Southern Bluefin Tuna Fishery) Regulations 1995</u> • <u>Australian Bureau of Agricultural and Resource Economics and Sciences – Fishery Status Reports 2016</u> • <u>Australian Bureau of Agricultural and Resource Economics and Sciences – Fishery Status Reports 2015</u> • <u>Australian Fisheries Management Authority Submission – EPBC Act Reassessment Southern Bluefin Tuna Fishery, April 2016</u> • Fisheries Research and Development Corporation, <u>Final Report - Project 2012/022.20 - Developing robust and cost-effective methods for estimating the national recreational catch of Southern Bluefin Tuna in Australia</u> • <u>Rapid quantitative risk assessment for fish species in seven Commonwealth fisheries April 2009</u> • <u>Residual risk assessment of the level 2 ecological risk assessment species results report for the Southern Bluefin Tuna Fishery December 2009</u> • <u>Ecological risk management report for the Southern Bluefin Tuna Fishery December 2009</u> • Commission for the Conservation of Southern Bluefin Tuna: <ul style="list-style-type: none"> - <u>Management Procedure</u> - <u>Strategic Plan for the Commission for the Conservation of Southern Bluefin Tuna 2015–2020, October 2015</u> - <u>Report on Biology, Stock Status and Management of Southern Bluefin Tuna: 2015</u> - <u>Report of the twenty third annual meeting of the Commission October 2016</u> - <u>Report of the eleventh meeting of the Ecologically Related Species Working Group, March 2015</u> - <u>Report of the twentieth meeting of the Scientific Committee, September 2015</u> - <u>Report of the tenth meeting of the Compliance Committee, 8–10 October 2015</u> - <u>Monitoring, control and surveillance</u> - <u>Minimum performance requirements to meet CCSBT Obligations Compliance Policy Guideline 1</u> - <u>CCSBT Scientific Observer Program Standards</u> • <u>Marine bioregional plan for the South-west Marine Region, 2012</u> • <u>Marine bioregional plan for the Temperate East Marine Region, 2012</u>
<p>Area</p>	<p>The Commonwealth Southern Bluefin Tuna Fishery includes all commercial southern bluefin tuna fishing operations inside the Australian Fishing Zone (out to 200 nautical miles from the coastline) and by Australian boats on the high seas.</p> <p>More than 90 per cent of the southern bluefin tuna taken in the fishery is caught by the purse seine sector. This sector operates in the Great Australian Bight, catching fish for grow-out operations based in waters close to Port Lincoln (Figure 1). The remainder of the catch is either targeted or taken incidentally by pelagic longline boats that also operate in other Commonwealth-managed fisheries that target other species of tuna. The purse seine and longline fishing methods are detailed under the Gear section of Table 1.</p>

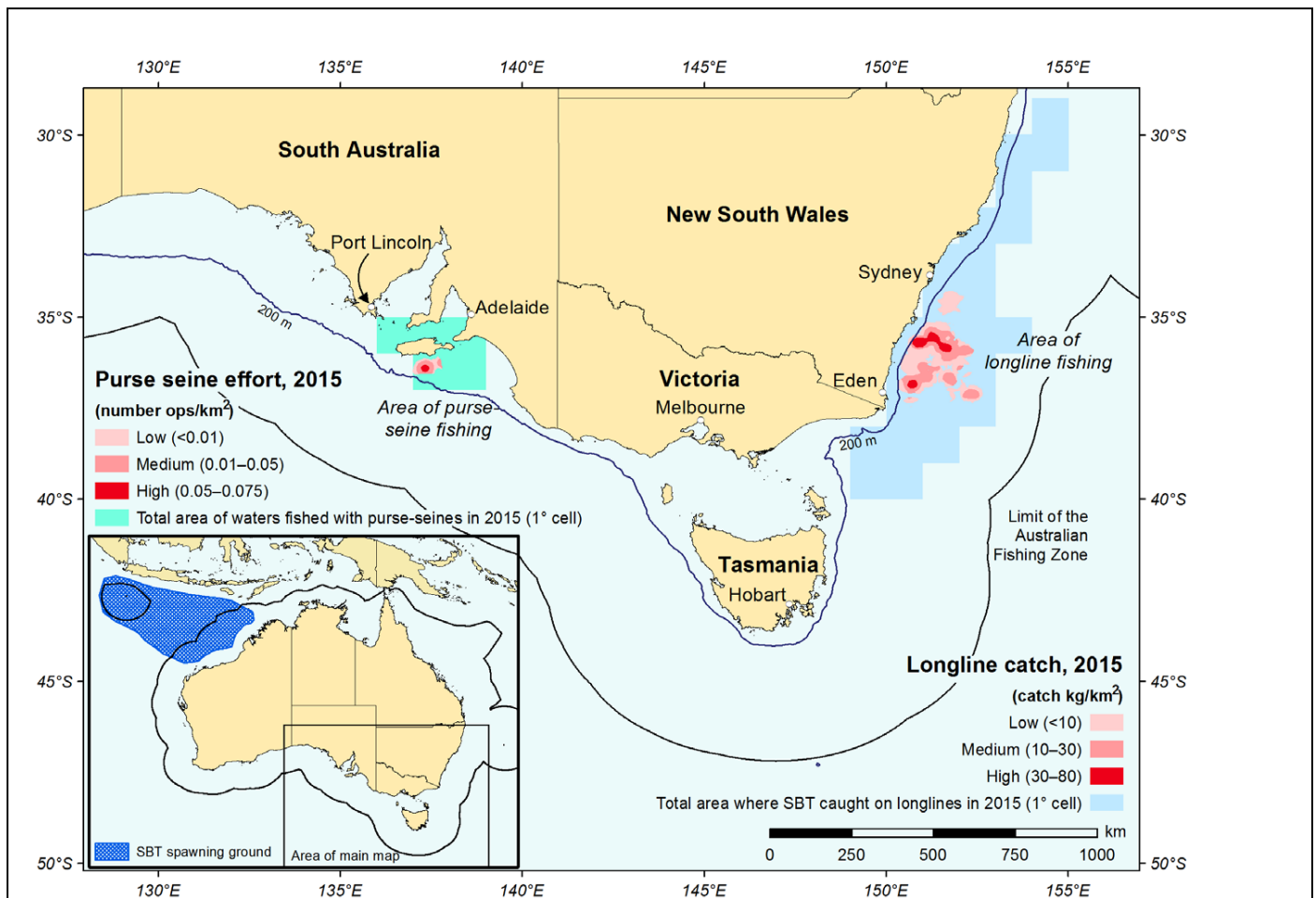


Figure 1. Purse-seine effort and longline catch in the Southern Bluefin Tuna Fishery, 2015. ([Patterson et al. 2016](#))

Target Species

Southern bluefin tuna (*Thunnus maccoyii*) is a slow growing, highly migratory species with a single, widely distributed population in temperate southern oceans. They are mainly found in the eastern Indian Ocean and in the south-western Pacific Ocean between 30 and 50 degrees south (Evans et al. 2012; Patterson and Hormis 2012).

Southern bluefin tuna are long-lived (up to 40 years), can weigh more than 200 kilograms and measure more than two metres in length. Although there is uncertainty about the average size and age for the onset of sexual maturity, the best available information suggests it occurs around 1.5 metres total length and no younger than eight years of age.

The species has a single known spawning ground in the Indian Ocean, between Java and northern Western Australia (Figure 2). Spawning occurs between September and April each year. It remains unclear whether all mature southern bluefin tuna spawn each year, every few years or even only once in their lifetime. When they do spawn, a single female can release up to 15 million eggs.

In April, juvenile southern bluefin tuna (one to four years of age) move from the spawning ground southwards along the Western Australian coast using the Leeuwin Current (Honda et al. 2010). Surface-schooling juveniles can be seen congregating in summer months in the continental-shelf region of southern Australia to northern New South Wales coastal waters (Patterson and Hormis 2012). In winter months, juvenile fish inhabiting southern Australian waters disperse widely into deeper, oceanic waters of the Tasman Sea and southern Indian Ocean (Bestley et al. 2009). Evidence suggests the majority of juveniles return to the Great Australian Bight in the austral summer, but it is unclear what proportion returns ([Basson et al. 2012](#)).

Southern bluefin tuna continue to live off southern and south-eastern Australia until six to nine years of age and then disperse into the deeper waters of the south Atlantic, Indian and southwest Pacific Oceans.

The purse seine sector of the Commonwealth Southern Bluefin Tuna Fishery targets juvenile southern bluefin tuna between two and five years of age in the Great Australian Bight ([Patterson et al. 2015](#)). The longline sector harvests fish of all ages (Patterson et al. 2011).

In waters off the coast of South Australia, southern bluefin tuna statutory fishing rights also authorise the take of unlimited amounts of live bait, and up to three tonnes of dead bait¹. This is for the operators own use as bait and not for sale or use as tuna farm feed.

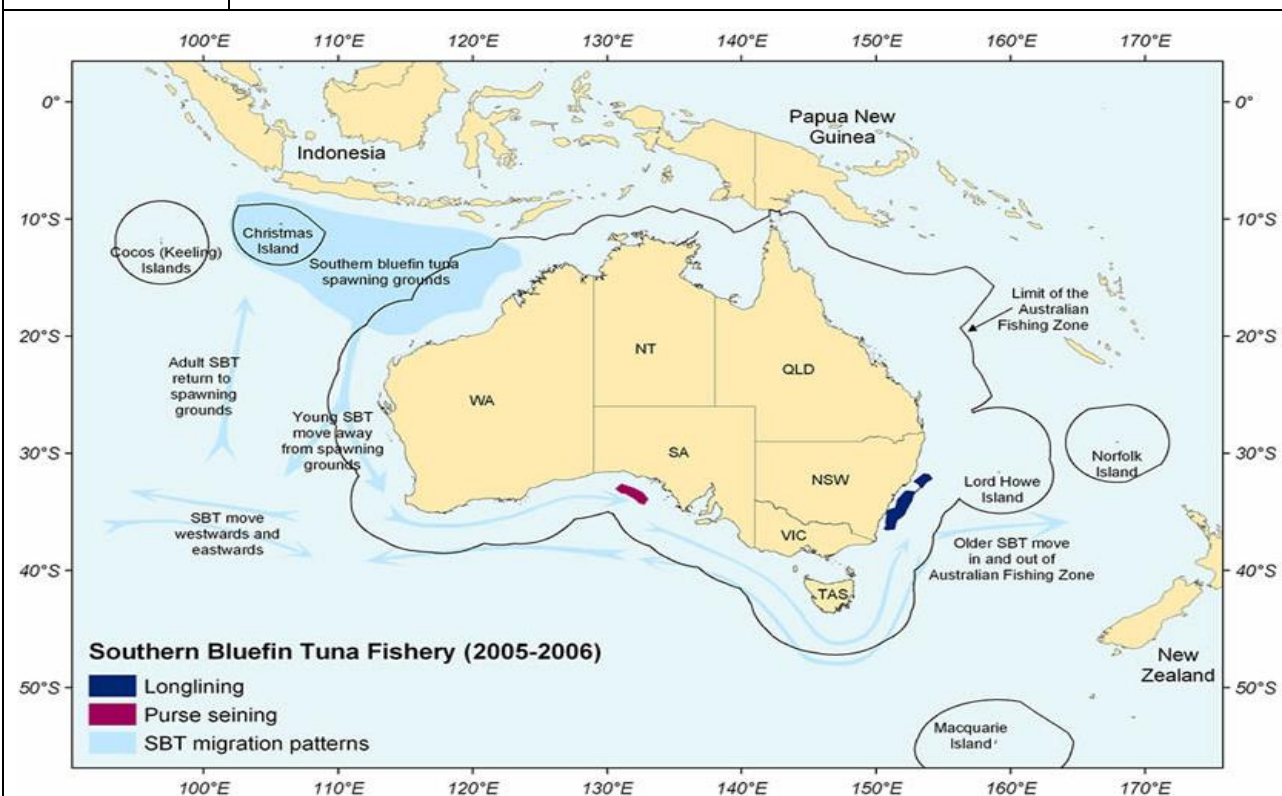


Figure 2: Movement patterns of southern bluefin tuna and Australian fishing grounds ([AFMA 2016c](#)).

Fishery status

The Australian Bureau of Agricultural and Resource Economics and Sciences has classified the Commonwealth Southern Bluefin Tuna Fishery as 'overfished' and 'uncertain' whether overfishing is occurring ([Patterson et al. 2016](#)).

Since 1994, southern bluefin tuna has been managed as a single international stock through the Commission for the Conservation of Southern Bluefin Tuna (CCSBT).

The CCSBT's 2014 stock assessment estimated the spawning stock of the species to be nine per cent of its unfished level. This is up slightly from the 2011 assessment but still critically low and well below the level required for maximum sustainable yield ([CCSBT 2016b](#)). The long time between southern bluefin tuna generations (16 to 18 years) means that stock recovery may not be evident for some time (Patterson and Hormis 2012). More detailed information on the status of the global southern bluefin tuna stock is available in the [2014 CCSBT stock assessment](#).

In 2010 the Threatened Species Scientific Committee found southern bluefin tuna to be eligible for listing as 'critically endangered' under the EPBC Act. The Committee, however, recommended that listing the species in the 'conservation dependent' category would be more appropriate while the CCSBT continued to manage the species' recovery. In the 'conservation dependent category', some limited fishing of the species is allowed to occur while the CCSBT is effective in halting further decline and supporting recovery of southern bluefin tuna. CCSBT is working to rebuild the spawning stock to 20% of its original biomass by 2035, with a 70% probability ([CCSBT 2015a](#)).

Byproduct Species

There are no incidentally caught and retained (byproduct) species in the fishery. If a licence holder incidentally catches a species other than southern bluefin tuna they must hold appropriate licences to retain those species.

Data reported by fishers in their daily fishing logbooks as well as by AFMA's independent scientific observers shows that purse seine fishing is very selective and results in low bycatch or

¹ *Emmelichthyes, Trachurus, Sardinops, Clupea, Scomber australasicus* and *Engraulis* species.

	<p>take of byproduct species. Skipjack tuna are sometimes associated with schools of southern bluefin tuna and are occasionally taken in low numbers.</p> <p>Southern bluefin tuna are also caught in the longline sector of the fishery by boats that also operate in the Eastern Tuna and Billfish Fishery. Pelagic longline is a less selective method of fishing and the take of bycatch and byproduct species is managed through management arrangements for the Eastern Tuna and Billfish Fishery.</p>																												
Gear	<p>Over 90 per cent of Australia's commercial catch of southern bluefin tuna is taken by purse seine boats fishing in the Great Australian Bight. The majority of purse-seine fishing occurs from December to March.</p> <p>Fishers use small aircraft or elevated spotting platforms on the fishing boats to locate schools of southern bluefin tuna where individual fish are between 13 and 25 kilograms each (two and five years of age). Purse seine nets are then deployed by the fishing boat, one end of the net is attached to a large buoy or to a small boat before the main boat encircles the school of fish with the net. Once the school is encircled and both ends of the net are aboard the main boat, the purse line is winched in or 'tightened', closing the bottom of the net and creating the 'purse' to trap the fish within.</p> <p>The fish are then transferred to 'towing pontoons', and towed back to 'grow out pontoons' located just offshore from Port Lincoln in South Australia. Fish are grown out in these near-shore aquaculture operations for up to six months to achieve a larger size and higher market price.</p> <p>A small proportion of fish are also taken by pelagic longline fishing (Table 1a). Pelagic longline fishing involves the use of a 'mainline', off which branch lines or 'snoods' are attached. The mainline is suspended near to the surface in the water column by multiple floats. This fishing occurs primarily in winter months in Commonwealth waters off southern New South Wales. The catch varies from year to year but has accounted for an increasing component of the total catch in recent years.</p> <p>Very small amounts of southern bluefin tuna are also taken commercially by pole and line fishing, and trolling lures.</p>																												
Season	The fishing season runs from 1 December to 30 November in the following year.																												
Commercial harvest	<p>Commercial harvest in the past two seasons has been increasing (Table 1a).</p> <p>Table 1a. Commercial harvest of southern bluefin tuna per fishing season (catch in tonnes).</p> <table><tr><th>Fishing season</th><th>2009-2010</th><th>2010-2011</th><th>2011-2012</th><th>2012-2013</th><th>2013-2014</th><th>2014-2015</th></tr><tr><td>Total catch - all methods</td><td>4091</td><td>3958</td><td>4543</td><td>4539</td><td>5420</td><td>5519</td></tr><tr><td colspan="4">Line methods (proportion of total catch)</td><td>341</td><td>381</td><td>572</td></tr><tr><td colspan="4">Purse seine (proportion of total catch)</td><td>4198</td><td>5039</td><td>4947</td></tr></table>	Fishing season	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	Total catch - all methods	4091	3958	4543	4539	5420	5519	Line methods (proportion of total catch)				341	381	572	Purse seine (proportion of total catch)				4198	5039	4947
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Value of commercial harvest	The value of farmed southern bluefin tuna exports in 2014–2015 (after ranching) was \$131 million																												
Take by other sectors	<p>It is not clear how much southern bluefin tuna is taken by the Australian recreational, charter or Indigenous sectors.</p> <p><i>Recreational fishing</i></p> <p>Recreational fishing for southern bluefin tuna occurs primarily off south-east Tasmania, New South Wales, South Australia and western Victoria. There is also some catch of small southern bluefin tuna off south-west Western Australia. Fishing for southern bluefin tuna has been popular among game fishers for many years, but has become increasingly popular with the general recreational fishing sector in recent years (Rowsell et al. 2008; Moore et al. 2015).</p> <p>Recreational fishing for southern bluefin tuna is managed by the relevant states fisheries management agencies. South Australia, Victoria, Tasmania and New South Wales have recreational fishing bag limits for southern bluefin tuna (number of fish that can be retained). South Australia also limits the number of southern bluefin tuna that can be taken per boat, and in Queensland, retention of any southern bluefin tuna by recreational fishers is banned.</p>																												

	<p>Several recent recreational surveys in individual Australian states present a snapshot of an area in time, but cannot be extrapolated. Consequently no estimates of total Australian recreational southern bluefin tuna catch are available.</p> <p><i>International fishing outside the Australian Fishing Zone - not part of the Commonwealth Southern Bluefin Tuna Fishery (provided for context only)</i></p> <p>The global southern bluefin tuna stock is managed by CCSBT and total allowable catch limits are set in three year blocks (Tables 1d and 1e).</p> <p>Table 1d. Total allowable catch limits (CCSBT 2016c).</p> <table><tr><th>Total allowable catch period</th><th>2014</th><th>2015-2017</th><th>2018-2020</th></tr><tr><td>Tonnes</td><td>12,449</td><td>14,647</td><td>17,647</td></tr></table> <p>Table 1e. Global total allowable catch allocations (tonnes, CCSBT 2016c).</p> <table><tr><th></th><th>2015</th><th>2016-2017</th><th>2018-2020</th></tr><tr><td>Australia</td><td>5665</td><td>5665</td><td>6165</td></tr><tr><td>Japan</td><td>4847</td><td>4737</td><td>6117*</td></tr><tr><td>Republic of Korea</td><td>1140</td><td>1140</td><td>1240.5</td></tr><tr><td>Fishing Entity of Taiwan</td><td>1140</td><td>1140</td><td>1240.5</td></tr><tr><td>New Zealand</td><td>1000</td><td>1000</td><td>1088</td></tr><tr><td>Indonesia</td><td>750</td><td>750</td><td>1023*</td></tr><tr><td>South Africa</td><td>40</td><td>150</td><td>450*</td></tr><tr><td>European Union</td><td>10</td><td>10</td><td>11</td></tr><tr><td>Philippines (Cooperating Non-Member)</td><td>45</td><td>45</td><td>0</td></tr><tr><td>Research Mortality Allowance</td><td>10 per year</td><td>10 per year</td><td>6 per year</td></tr></table> <p>* Reflects Japan's voluntary transfer of 21 tonnes to Indonesia and 27 tonnes to South Africa for the 2018-2020 quota block. Japan, Indonesia and South Africa's starting point for considering allocations from 2021 will be 6165, 1002, and 423 tonnes respectively.</p> <p>All Members are required to account for all southern bluefin tuna fishing mortality (including commercial fishing, discards, recreational catches, artisanal fishing etc.) from within their 2018–2020 allocation. An allowance of 306 tonnes has also been set aside in the 2018–2020 block to account for illegal, unreported and unregulated catch by Non-Members (CCSBT 2016c).</p>	Total allowable catch period	2014	2015-2017	2018-2020	Tonnes	12,449	14,647	17,647		2015	2016-2017	2018-2020	Australia	5665	5665	6165	Japan	4847	4737	6117*	Republic of Korea	1140	1140	1240.5	Fishing Entity of Taiwan	1140	1140	1240.5	New Zealand	1000	1000	1088	Indonesia	750	750	1023*	South Africa	40	150	450*	European Union	10	10	11	Philippines (Cooperating Non-Member)	45	45	0	Research Mortality Allowance	10 per year	10 per year	6 per year
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Commercial licences issued	<p>Details of all current licences (statutory fishing rights and carrier boat permits), their holders and relevant conditions are published on the Australian Fisheries Management Authority (AFMA) website.</p> <p>The latest available records (2 September 2016) show there are 5,324,422 statutory fishing rights in the fishery, owned by 86 persons. The number of owners has been slowly declining for a number of years, from 94 in the 2011–2012 fishing season to 86 in the 2015–2016 fishing season. There were also 26 carrier boat permits held by 13 holders in the fishery.</p> <p>The number of purse seine boats has been relatively stable, ranging from five to eight since the 1994–1995 fishing season.</p> <p>The number of longline boats has been more variable over time, with effort in the longline sector largely dependent on available quota. Although still making up a very small proportion of the total catch, east coast longline catches increased from about 30 tonnes three to four years ago, to almost 600 tonnes in 2016 (Australian Southern Bluefin Tuna Association chief executive Brian Jeffries in Becker 2016).</p>																																																				
Management arrangements	<p>The global stock of southern bluefin tuna is managed under the 1994 Convention for the Conservation of Southern Bluefin Tuna. The Department of Agriculture and Water Resources leads Australia's negotiations in the CCSBT and AFMA is responsible for the management of the Australian fishery, including implementing relevant CCSBT decisions through Australian legislation.</p> <p>In 2011 the CCSBT adopted a management procedure, analogous to a harvest strategy, which has been used to set global total allowable catch limits since 2012. The Management Procedure, also referred to as the 'Bali Procedure', aims to achieve rebuilding of the southern</p>																																																				

	<p>bluefin tuna stock to 20 per cent of its initial unfished biomass (the interim rebuilding target) by 2035, with 70 per cent probability. The global total allowable catch is set for three-year periods and allocated to members and cooperating non-members as agreed by the CCSBT under the 2011 CCSBT Resolution on the Allocation of the Global Total Allowable Catch. AFMA sets the total allowable catch for the Australian fishery taking into account Australia's allocation. The Southern Bluefin Tuna Fishery Management Plan requires that the amount of Australia's national catch allocation for each season does not exceed the CCSBT allocation to Australia.</p> <p>The Commonwealth Southern Bluefin Tuna Fishery is managed under the Southern Bluefin Tuna Fishery Management Plan 1995 in force under the <i>Fisheries Management Act 1991</i>, the Fisheries Management (Southern Bluefin Tuna Fishery) Regulations 1995, the Fisheries Management Regulations 1992 and other legislative instruments and amendments relevant to the fishery.</p> <p>Prior to each season AFMA determines the Australian total allowable catch taking into account the national allocation set by CCSBT. The Australian total allowable catch is then allocated to holders of statutory fishing rights in the fishery through individual transferable quotas. These individual transferable quotas give fishers flexibility to use input combinations that result in the most efficient operation.</p> <p>Statutory fishing rights and carrier boat permits are subject to a broad range of conditions which are published on the AFMA website.</p>
Export	The majority of product is exported fresh or frozen to Japan. Small markets also exist in the United States of America, European Union, China and Republic of Korea.
Bycatch	Data reported by fishers in their daily fishing logbooks as well as by AFMA's independent scientific observers shows that purse seine fishing is very selective and results in very little accidentally caught fish (bycatch). Pelagic longline fishing is less selective but is managed through arrangements in place for the Eastern Tuna and Billfish Fishery, which has been assessed and approved under the EPBC Act until 22 August 2019.
Interaction with Protected Species²	<p>No interactions with protected species were reported for the fishery in the period 1 January 2012 to 30 June 2016 (AFMA 2016d).</p> <p>Interactions with protected species that occur while fishers are using longline gear are reported as part of the Eastern Tuna and Billfish Fishery, which has been assessed and approved separately under the EPBC Act until 22 August 2019.</p> <p>Ecological risk assessments have been completed for the fishery. Of the 182 protected species³ that occur within the area of the fishery, none were found to be at high risk from</p>
Ecosystem Impacts	<p><i>Marine Bioregional Plans</i></p> <p>Over 90 per cent of the Australian commercial catch of southern bluefin tuna is taken in the Great Australian Bight using the purse seine method. The method is highly selective, resulting in minimal bycatch, and it has minimal disturbance to the seafloor because the fishing gear does not make contact with it.</p> <p>The ecosystem impact from removal of the target species, southern bluefin tuna, a high trophic level predator, is largely unknown.</p> <p>The Great Australian Bight is located within the South-west Marine Region. The <i>Marine Bioregional Plan for the South-west Marine Region 2012</i> identifies three key ecological features within the proximity of where purse seine fishing effort is concentrated, including:</p> <ol style="list-style-type: none"> 1. the 'ancient coastline at 90–120 m depth' 2. 'Kangaroo Island Pool, canyons and adjacent shelf break, and Eyre Peninsula upwellings', and 3. 'meso-scale eddies'. <p>The 'extraction of living resources' of commercial fishing was a pressure identified as 'of potential concern' for the above features. As these key ecological features represent unique seafloor features with ecological properties of regional significance, the impact of near or at surface purse seine netting is likely to be minimal. 'Bycatch' of commercial fishing was a</p>

² 'Protected species' means all species listed under Part 13 of the EPBC Act, including whales and other cetaceans and listed threatened, listed marine and listed migratory species.

³ Includes 73 seabirds, 56 teleosts (bony fish), 47 marine mammals, three reptiles and three chondrichthyans (cartilaginous fish).

pressure also identified as 'of potential concern' for 'Kangaroo Island Pool, canyons and adjacent shelf break, and Eyre Peninsula upwellings'. Bycatch is minimal in the purse seine sector, so the contribution of this fishery to the 'bycatch' is likely to be minimal. The plan notes that these assessments are conservative in the context of active fisheries management.

The majority of pelagic longline effort off the eastern coast of Australia occurs within the Temperate East Marine Region. The *Marine Bioregional Plan for the Temperate East Marine Region* identifies a number of key ecological features within the area where pelagic longlining effort for southern bluefin tuna is concentrated. These include:

1. the 'canyons on the eastern continental slope'
2. 'shelf rocky reefs' and
3. 'Tasman Front and eddy field'.

The 'extraction of living resources' and 'bycatch' of commercial fishing were pressures identified as 'of potential concern' for these key ecological features. However the relatively low level of pelagic longline fishing for southern bluefin tuna in the Temperate East Marine Region compared to other commercial fishing activities in the region, suggests this fishery's contribution to these pressures is minimal.

Ecological Risk Management

AFMA has completed ecological risk assessments for the fishery and found no species to be at high risk.

AFMA is currently reviewing its ecological risk assessment and risk management framework to increase the effectiveness of risk identification, mitigation and management in all AFMA-managed fisheries. AFMA is also developing an ecological risk management guide for fisheries managers which will allow the revised framework to be implemented in a consistent manner across all Commonwealth fisheries.

Table 2: Progress in implementation of conditions and recommendations made in the previous assessment of the Commonwealth Southern Bluefin Tuna Fishery (July 2013).

<p>Condition 1</p> <p>Operation of the Australian Southern Bluefin Tuna Fishery will be carried out in accordance with the Southern Bluefin Tuna Fishery Management Plan 1995, in force under the <i>Fisheries Management Act 1991</i>.</p>	<p>Achieved.</p> <p>AFMA continues to manage the Southern Bluefin Tuna fishery consistent with the provisions of the Southern Bluefin Tuna Fishery Management Plan 1995.</p>	<p>The Department of the Environment and Energy considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery specify a similar condition (see Condition 1, Table 4).</p>
<p>Condition 2</p> <p>The Australian Fisheries Management Authority (AFMA) to inform the Department of the Environment of any intended change to the Southern Bluefin Tuna Fishery's management arrangements that could affect the assessment of the fishery against the criteria on which <i>Environment Protection and Biodiversity Conservation Act 1999 (EPBC) Act</i> decisions are based.</p>	<p>Achieved.</p> <p>AFMA has informed the Department of any proposed amendments to the management arrangements. No amendments were undertaken during the current accreditation period.</p>	<p>The Department considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery specify a similar condition (see Condition 2, Table 4).</p>
<p>Condition 3</p> <p>AFMA to produce and present reports to the Department of the Environment annually as per Appendix B to the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i></p>	<p>Achieved.</p> <p>AFMA submitted the last Annual Status report to the Department in October 2015.</p>	<p>The Department considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery should specify a similar condition (see Condition 3, Table 4).</p>

<p>Condition 4</p> <p>The management arrangements for the Australian Southern Bluefin Tuna Fishery to include implementation of appropriate catch monitoring technologies which provide a high degree of confidence in the estimates of Southern Bluefin Tuna catch in the purse seine sector.</p>	<p>In progress.</p> <p>In 2011 stereo-video technology was demonstrated to be a more reliable means of accounting for southern bluefin tuna caught by the purse seine method.</p> <p>A research project is currently underway into automation of stereo-video monitoring. Australia will continue to use the 100 fish sampling methodology, growth rate information and analysis, to assess southern bluefin tuna catch against its national allocation until stereo video technology is cost effective and automated.</p>	<p>The Department considers that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery should specify a similar condition (see Condition 4, Table 4).</p>
<p>Condition 5</p> <p>The management arrangements for the Australian Southern Bluefin Tuna Fishery to take account of all sources of mortality of southern bluefin tuna as part of management of the species in Australian waters. This should include a reliable estimate of recreational and charter fishing catch of the species in Australian waters.</p>	<p>Not met.</p> <p>The management arrangements for the commercial fishing of southern bluefin tuna in Australian waters are yet to fully account for all sources of fishing mortality, notably recreational fishing.</p> <p>The Australian Bureau of Agricultural and Resource Economics and Sciences, has completed a project to obtain a method for determining a statistically robust estimate of recreational and charter fishing catch of southern bluefin tuna in Australian waters - Final Report - Project 2012/022.20 - Developing robust and cost-effective methods for estimating the national recreational catch of Southern Bluefin Tuna in Australia.</p> <p>The Department of Agriculture and Water Resources is working with AFMA and relevant States and Territories on options to account for the recreational catch of SBT.</p>	<p>The Department considers that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery should specify a similar condition (see Condition 5, Table 4).</p>
<p>Condition 6</p> <p>The management arrangements for the Australian Southern Bluefin Tuna Fishery to continue to implement all relevant measures agreed by the Commission for the Conservation of Southern Bluefin Tuna in the Commonwealth Southern Bluefin Tuna Fishery, to support the recovery of the southern bluefin tuna stock to ecologically sustainable levels.</p>	<p>Achieved.</p> <p>All measures agreed at CCSBT are implemented in the Australian domestic fishery through the <i>Southern Bluefin Tuna Fishery Management Plan 1995</i> and associated legislative instruments.</p>	<p>The Department considers that this condition has been met.</p> <p>The Department considers that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery should specify a similar condition (see Condition 6, Table 4).</p>

<p>Condition 7</p> <p>The management arrangements for the Australian Southern Bluefin Tuna Fishery to include statistically robust levels of scientific observer coverage for all sectors to validate:</p> <ul style="list-style-type: none"> • Southern Bluefin Tuna commercial catch • Mortalities, discarding and high-grading of Southern Bluefin Tuna, and • Interactions with bycatch and EPBC Act listed protected species, especially white sharks (<i>Carcharodon carcharias</i>). 	<p>Achieved.</p> <p>AFMA continues to monitor interactions with protected species and records bycatch and discards in all sectors of the fishery through the scientific observer program and the introduction of electronic monitoring,</p> <p>No increases in interactions have been detected to date.</p>	<p>The Department considers that this condition has been met.</p>
<p>Recommendation 1</p> <p>The Department of Agriculture to work with the relevant state agencies to refine and implement the methodology for obtaining reliable estimates of recreational and charter fishing catch of southern bluefin tuna in Australian waters.</p>	<p>The Australian Bureau of Agricultural and Resource Economics and Sciences has completed a project to obtain a method for determining a statistically robust estimate of recreational and charter fishing catch of southern bluefin tuna in Australian waters.</p> <p>The project provided three primary recommendations and the Department of Agriculture and Water Resources is now considering the outcomes of the project.</p> <p>A copy of the report can be found here: Final Report - Project 2012/022.20 - Developing robust and cost-effective methods for estimating the national recreational catch of Southern Bluefin Tuna in Australia.</p>	<p>The Department considers the issues covered by this recommendation to be partially met but are ongoing. The Department recommends that a new approved wildlife trade operation declaration for the Commonwealth Southern Bluefin Tuna Fishery should specify a similar condition (see Condition 5, Table 4).</p>

Table 3: The Department of the Environment and Energy's assessment of the Commonwealth Southern Bluefin Tuna Fishery against the requirements of the EPBC Act related to decisions made under Part 13A.

Please Note – the table below is not a complete or exact representation of the EPBC Act. It is intended as a summary of relevant sections and components of the EPBC Act to provide advice on the fishery in relation to decisions under Part 13 and Part 13A. A complete version of the EPBC Act can be found at <http://www.comlaw.gov.au/>.

Part 13A

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (a) to ensure that Australia complies with its obligations under CITES⁴ and the Biodiversity Convention; (b) to protect wildlife that may be adversely affected by trade; (c) to promote the conservation of biodiversity in Australia and other countries; (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way; (e) to promote the humane treatment of wildlife; (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife. 	
Section 303DC Minister may amend list	
<p>(1) The Minister may, by instrument published in the <i>Gazette</i>, amend the list referred to in section 303DB [list of exempt native specimens] by:</p> <ul style="list-style-type: none"> (a) including items in the list; or (b) deleting items from the list; or (c) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; or (d) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (e) correcting an inaccuracy or updating the name of a species. 	<p>The Department recommends that specimens derived from species harvested in the Commonwealth Southern Bluefin Tuna Fishery, other than specimens that belong to species listed under Part 13 of the EPBC Act, be included in the list of exempt native specimens while the Commonwealth Southern Bluefin Tuna Fishery is subject to a declaration as an approved wildlife trade operation.</p> <p>The instrument amending the list of exempt native specimens will be registered as a legislative instrument and will be made available on the Department's web site.</p>

⁴ Convention on International Trade in Endangered Species of Wild Fauna and Flora

<p>(1A) In deciding whether to amend the list referred to in section 303DB to include a specimen derived from a commercial fishery, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.</p>	<p>The Commonwealth Southern Bluefin Tuna Fishery was assessed under Part 10 of the EPBC Act in August 2004. In conducting that assessment, the Department considered that actions taken in the fishery would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area while AFMA and the then Department of Agriculture Fisheries and Forestry implemented recommendations to improve the management of the fishery. Consequently, the Southern Bluefin Tuna Fishery Management Plan 1995 was accredited under section 33 of the EPBC Act.</p> <p>Subsequently amendments to the management plan have been considered by the Department to be minor and unlikely to result in impacts that are significantly greater on the environment in a Commonwealth area than those previously strategically assessed.</p>
<p>(1C) Subsection (1A) does not limit the matters that may be taken into account in deciding whether to amend the list referred to in section 303DB to include a specimen derived from a commercial fishery.</p>	<p>It is not possible to list exhaustively the factors that you may take into account in amending the list of exempt native specimens. The objects of Part 13A, which are set out above this table, provide general guidance in determining factors that might be taken into account. A matter that is relevant to determining whether an amendment to the list is consistent with those objects is likely to be a relevant factor.</p> <p>The Department considers that the amendment of the list of exempt native specimens to include product taken in the Commonwealth Southern Bluefin Tuna Fishery wildlife trade operation would be consistent with the provisions of Part 13A as:</p> <ul style="list-style-type: none"> • the fishery will not harvest any CITES listed species • there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) • the operation of the Commonwealth Southern Bluefin Tuna Fishery is unlikely to be unsustainable and threaten biodiversity within the next three years, and • the Environment Protection and Biodiversity Conservation Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens.

<p>(3) Before amending the list referred to in section 303DB....the Minister:</p> <ul style="list-style-type: none"> (a) must consult such other Minister or Ministers as the Minister considers appropriate; and (b) must consult such other Minister or Ministers of each State and self-governing Territory as the Minister considers appropriate; and (c) may consult such other persons and organisations as the Minister considers appropriate. 	<p>The Department considers that the consultation requirements have been met.</p> <p>On 10 August 2004, the then Minister for the Environment and Heritage wrote to all fisheries ministers seeking their views on inclusion of product derived from commercial fisheries in the list of exempt native specimens, while subject to declaration as approved wildlife trade operations. Responses in support of the proposal were received from all state and territory fisheries ministers and the Commonwealth minister.</p> <p>The application from AFMA was also released for public comment from 22 April until 20 May 2016. The public comment notice sought comment on AFMA's submission and the Department's proposal to:</p> <ul style="list-style-type: none"> • declare the Commonwealth Southern Bluefin Tuna Fishery as an approved wildlife trade operation under section 303FN of the EPBC Act, and • include in the list of exempt native specimens, specimens harvested in the Commonwealth Southern Bluefin Tuna Fishery under the provisions of the <i>Fisheries Management Act 1991</i> and the Fisheries Management Regulations 1992. <p>Two comments were received and have been considered as part of the Department's assessment, and advice to amend the list of exempt native specimens.</p>
<p>Section 303FN Approved wildlife trade operation</p>	
<p>(2) The Minister may, by instrument published in the <i>Gazette</i>, declare that a specified wildlife trade operation is an approved wildlife trade operation for the purposes of this section.</p>	<p>The instrument for the Commonwealth Southern Bluefin Tuna Fishery made under section 303FN and the conditions under section 303FT will be registered and made available on the Department's website.</p>

<p>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that:</p> <p>(a) the operation is consistent with the objects of Part 13A of the Act; and</p> <p>(b) the operation will not be detrimental to:</p> <ol style="list-style-type: none"> the survival of a taxon to which the operation relates; or the conservation status of a taxon to which the operation relates; and <p>(ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and</p> <p>(c) if the operation relates to the taking of live specimens that belong to a taxon specified in the regulations – the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and</p> <p>(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.</p>	<p>The Department considers that the operation of the Commonwealth Southern Bluefin Tuna Fishery is consistent with objects of Part 13A (listed above) as:</p> <ul style="list-style-type: none"> the fishery will not harvest any CITES listed species there are management arrangements in place to ensure that the resource is being managed in an ecologically sustainable way (see Table 1) the operation of the Commonwealth Southern Bluefin Tuna Fishery is unlikely to be unsustainable and threaten biodiversity within the next three years, and the EPBC Regulations 2000 do not specify fish as a class of animal in relation to the welfare of live specimens. <p>The Department considers that the Commonwealth Southern Bluefin Tuna Fishery will not be detrimental to the survival or conservation status of a taxon to which it relates within the next three years, given the management measures currently in place, which include total allowable catch limits, individual transferable quotas and area restrictions to control incidental catches in the longline fishery.</p> <p>The Department considers that the Commonwealth Southern Bluefin Tuna Fishery will not threaten any relevant ecosystem within the next three years, given the management measures currently in place, which include individually transferrable quota, limited effort and gear limitations.</p> <p>The Department also considers that given the relatively selective nature of the predominant fishing method, purse seining, the impact on the ecosystem is likely to be low, and unlikely to threaten any relevant ecosystem.</p> <p>The Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) do not specify fish as a class of animal in relation to the welfare of live specimens.</p> <p>No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.</p>
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<p>(4) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and</p> <p>(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).</p>	<p>The Department considers that the operation of the Commonwealth Southern Bluefin Tuna Fishery will not have a significant impact on any relevant ecosystem within the next three years, given the management measures currently in place, which include total allowable catch limits, individual transferable quotas and area restrictions to control incidental catches in the longline fishery.</p> <p>The Department considers that the management arrangements that will be employed for the Commonwealth Southern Bluefin Tuna Fishery, as outlined in Table 1, are likely to be effective.</p> <p>Ecological risk assessment and risk management are integral to the Commonwealth fisheries management regime. These processes are ongoing for the Commonwealth Southern Bluefin Tuna Fishery and are also supported by work undertaken through the CCSBT.</p> <p>All Commonwealth boats are required to report all catch and fishing effort and each boat is also required to operate a vessel monitoring system and for longline fishers, an electronic monitoring system which includes video monitoring. Catch disposal is also recorded and used to manage compliance.</p>
<p>(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to:</p> <p>(a) whether legislation relating to the protection, conservation or management of the specimens to which the operation relates is in force in the State or Territory concerned; and</p> <p>(b) whether the legislation applies throughout the State or Territory concerned; and</p> <p>(c) whether, in the opinion of the Minister, the legislation is effective.</p>	<p>The Commonwealth Southern Bluefin Tuna Fishery will be managed under the Southern Bluefin Tuna Fishery Management Plan 1995, the <i>Fisheries Management Act 1991</i>, the Fisheries Management (Southern Bluefin Tuna Fishery) Regulations 1995, the Fisheries Management Regulations 1992 and other legislative instruments and amendments relevant to the fishery.</p> <p>The Commonwealth <i>Fisheries Management Act 1991</i> applies throughout Commonwealth waters.</p> <p>The Department considers that the legislation is likely to be effective.</p>
<p>(10) For the purposes of section 303FN, an operation is a wildlife trade operation if, and only if, the operation is an operation for the taking of specimens and:</p> <p>(d) the operation is a commercial fishery.</p>	<p>The Commonwealth Southern Bluefin Tuna Fishery is a commercial fishery.</p>

<p>(10A) In deciding whether to declare that a commercial fishery is an approved wildlife trade operation for the purposes of this section, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.</p>	<p>The Commonwealth Southern Bluefin Tuna Fishery was assessed under Part 10 of the EPBC Act in August 2004. In conducting this assessment, the Department considered that actions taken in the fishery would not have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area while the AFMA and the then Department of Agriculture Fisheries and Forestry implemented recommendations to improve the management of the fishery. Consequently, the Southern Bluefin Tuna Fishery Management Plan 1995 was accredited under section 33 of the EPBC Act.</p> <p>Subsequently amendments to the management plan have been considered by the Department to be minor and unlikely to result in impacts that are significantly greater on the environment in a Commonwealth area than those previously strategically assessed.</p>
<p>(10B) Subsection (10A) does not limit the matters that may be taken into account in deciding whether to declare that a fishery is an approved wildlife trade operation for the purposes of this section.</p>	
<p>Section 303FR Public consultation</p>	
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <ul style="list-style-type: none"> (a) setting out the proposal to make the declaration; and (b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and (c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal. 	<p>The Department considers that the consultation requirements of the EPBC Act for declaring a fishery an approved wildlife trade operation have been met. A public notice, which set out the proposal to declare the Commonwealth Southern Bluefin Tuna Fishery an approved wildlife trade operation and included AFMA's submission, was released for public comment which closed on 20 May 2016 with two public comments received.</p> <p>The application from AFMA was released for public comment from 22 April until 20 May 2016. The public comment notice sought comment on:</p> <ul style="list-style-type: none"> • the proposal to amend the list of exempt native specimens to include product derived from the Commonwealth Southern Bluefin Tuna Fishery, and • AFMA's application for the Commonwealth Southern Bluefin Tuna Fishery.
<p>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>A public notice, which set out the proposal to declare the Commonwealth Southern Bluefin Tuna Fishery an approved wildlife trade operation and included AFMA's submission was released for public comment on 22 April 2016 and closed on 20 May 2016, a total of 20 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>The public comments received on AFMA's submission are included at Attachment D of the brief. The Department's assessment has considered these public comments.</p>

Section 303FT Additional provisions relating to declarations	
(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.	A declaration for the Commonwealth Southern Bluefin Tuna Fishery will be made under section 303FN.
<p>(4) The Minister may make a declaration about a plan or operation even though he or she considers that the plan or operation should be the subject of the declaration only:</p> <p>(a) during a particular period; or</p> <p>(b) while certain circumstances exist; or</p> <p>(c) while a certain condition is complied with.</p> <p>In such a case, the instrument of declaration is to specify the period, circumstances or condition.</p>	<p>The standard conditions applied to commercial fishery wildlife trade operations include:</p> <ul style="list-style-type: none"> • operation in accordance with the management regime • notifying the Department of changes to the management regime, and • annual reporting in accordance with the requirements of the Australian Government <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. <p>The wildlife trade operation instrument for the Commonwealth Southern Bluefin Tuna Fishery specifies the standard and any additional conditions applied.</p>
(8) A condition may relate to reporting or monitoring.	One of the standard conditions relates to reporting.
(11) A copy of an instrument under section 303FN, or this section is to be made available for inspection on the Internet.	The instrument for the Commonwealth Southern Bluefin Tuna Fishery made under sections 303FN and the conditions under section 303FT will be registered as a notifiable instrument and made available through the Department's website.

Part 16

Section 391 Minister must consider precautionary principle in making decisions	
(1) The Minister must take account of the precautionary principle in making a decision under section 303DC and/or section 303FN, to the extent he or she can do so consistently with the other provisions of this Act.	The Department has accounted for the precautionary principle in the preparation of its advice. This precautionary approach is reflected in the management arrangements established by the CCSBT and in the domestic fishery arrangements administered by AFMA. The Southern Bluefin Tuna Fishery Management Plan 1995 includes a range of objectives against which the performance of the fishery is regularly assessed. Ecological risk assessments and management strategies are also used to manage risk in the Commonwealth Southern Bluefin Tuna Fishery.
(2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.	

Part 12

Section 176 Bioregional Plans

(5) Subject to this Act, the Minister must have regard to a bioregional plan in making any decision under this Act to which the plan is relevant.

The marine bioregional plans for the Temperate East Marine Region and South-west Marine Region have been considered in the preparation of advice in relation to decisions under section 303FN (see Table 1). 'Extraction of living resources' and 'bycatch' of commercial fishing have been identified as pressures operating within these marine bioregional planning areas in which the Commonwealth Southern Bluefin Tuna Fishery operates. However these pressures have been identified as being 'of potential concern' only. The plans also note that these assessments are conservative in the context of active fisheries management, particularly when fisheries are managed at an ecosystem level, as in the Commonwealth Southern Bluefin Tuna Fishery.

The Department of the Environment and Energy's final conditions and recommendations to the Australian Fisheries Management Authority for the Commonwealth Southern Bluefin Tuna Fishery

The material submitted by the Australian Fisheries Management Authority demonstrates that the management arrangements for the Commonwealth Southern Bluefin Tuna Fishery continue to meet most of the requirements of the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition'.

Stock Status and Recovery

The spawning stock biomass of southern bluefin tuna remains at a low level—nine per cent of unfished levels and is classified by the Australian Bureau of Agricultural and Resource Economics and Sciences as overfished ([Patterson et al. 2016](#)).

Although global total allowable catches are based on a management procedure that should facilitate stock rebuilding, there remains substantial uncertainty about the level of unaccounted catch mortality and its potential impact on stock rebuilding ([Patterson et al. 2016](#)). This may impact on the probability of achieving the rebuilding target by 2035.

Management arrangements

Management arrangements in the Commonwealth Southern Bluefin Tuna Fishery include:

- total allowable catch limits
- individual transferable quotas
- area restrictions to control incidental catches in the longline fishery
- data collection and catch documentation schemes
- a compliance program supported by independent monitoring via vessel monitoring systems on all boats, and
- video monitoring on longline boats.

Notwithstanding the progress made by the Australian Fisheries Management Authority to address the outstanding risks associated with this fishery (refer to Table 2), the Department has identified a number of risks and uncertainties that must be managed to ensure that impacts are minimised. These include a need to:

- ensure a high degree of confidence in the estimates of southern bluefin tuna catch in the purse seine sector
- account for all sources of mortality of southern bluefin tuna as part of management of the species in Australian waters, and
- continue to implement all relevant measures agreed by the Commission for the Conservation of Southern Bluefin Tuna in the Commonwealth Southern Bluefin Tuna Fishery, to support the recovery of the southern bluefin tuna stock to ecologically sustainable levels.

The Department considers that until it can be demonstrated that these issues have been adequately addressed, declaration of the harvest operations of the Commonwealth Southern Bluefin Tuna Fishery as an approved wildlife trade operation for three years, until 13 December 2019, is appropriate. The Department considers that the declaration should be subject to the conditions listed in Table 4.

Unless a specific time frame is provided, each condition must be addressed within the period of the approved wildlife trade operation declaration for the fishery.

Table 4: Commonwealth Southern Bluefin Tuna Fishery Assessment – Summary of Issues, Conditions and Recommendations December 2016

Issue	Condition
<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. To ensure that these decisions remain valid and export approval continues uninterrupted, the Department of the Environment and Energy needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes operational and legislated amendments that may affect sustainability of the target species or negatively impact on byproduct, bycatch, EPBC Act protected species or the ecosystem.</p>	<p>Condition 1:</p> <p>Operation of the Commonwealth Southern Bluefin Tuna Fishery will be carried out in accordance with the Southern Bluefin Tuna Fishery Management Plan 1995 in force under the <i>Fisheries Management Act 1991</i>.</p> <p>Condition 2:</p> <p>The Australian Fisheries Management Authority to inform the Department of the Environment and Energy of any intended material changes to the Commonwealth Southern Bluefin Tuna Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.</p>
<p><u>Annual Reporting</u></p> <p>It is important that reports be produced and presented to the Department of the Environment and Energy annually in order for the performance of the fishery and progress in implementing the conditions and recommendations in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should follow Appendix B to the 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition' and include a description of the fishery, management arrangements in place, research and monitoring outcomes, recent catch data for all sectors of the fishery, status of target stock, interactions with EPBC Act protected species, impacts of the fishery on the ecosystem in which it operates and progress in implementing the Department's conditions and recommendations. Electronic copies of the guidelines are available from the Department's website at http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries</p>	<p>Condition 3:</p> <p>The Australian Fisheries Management Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

Issue	Condition
<p><u>Estimates of southern bluefin tuna catch in the purse seine sector</u></p> <p>Having accurate estimates of commercial catch is important to ensuring the effective management and recovery of the global southern bluefin tuna stock.</p> <p>The CCSBT Scientific Committee incorporates a 20 per cent assumed bias for unaccounted mortalities in the purse seine sector of Australia's southern bluefin tuna fishery, as part of the scientific analysis that underpins CCSBT management arrangements.</p> <p>Australia continues to pursue increased transparency in the monitoring of its commercial catch and national allocations through:</p> <ul style="list-style-type: none"> • supporting and funding the continuation of the Quality Assurance Review system • providing information and data to help detect any ongoing illegal, unreported or unregulated catch • supporting improvements to the Catch Documentation Scheme to track and validate legitimate southern bluefin tuna product flow, and • supporting improved verification of catch and effort data for all southern bluefin tuna fishing to better understand all sources of mortality. <p>In 2011 stereo-video technology was demonstrated to be a more reliable means of accounting for southern bluefin tuna caught by the purse seine method compared with Australia's existing catch monitoring techniques.</p> <p>The Department notes that a research project is currently underway into automation of stereo-video monitoring. It is important that improvements in monitoring the commercial catch of southern bluefin tuna be implemented as soon as possible.</p>	<p>Condition 4:</p> <p>The management arrangements for the Commonwealth Southern Bluefin Tuna Fishery to implement catch monitoring technologies which provide a high degree of confidence in the estimates of southern bluefin tuna catch in the purse seine sector.</p>

Issue	Condition
<p><u>Accounting for all sources of mortality</u></p> <p>To avoid overfishing, total allowable catch limits (TACs) for fish species are set based on stock assessments and the best available science. These assessments consider fish entering (recruitment) and leaving (mortality) the fishery. All sources of mortality, from recreational, charter, Indigenous and commercial fisheries, as well as other anthropogenic and natural sources, need to be considered and accounted for in the stock assessment and TAC setting. Failure to account for all sources of mortality of southern bluefin tuna could lead to catch limits being set too high, causing stocks to be overfished and potentially reducing its chances of recovery.</p> <p>Where reliable information is unavailable and uncertainty exists management needs to be guided by the precautionary principle.</p> <p>The CCSBT's Scientific Committee has recommended that, by 2018, CCSBT should better account for all sources of mortality. This includes accounting for the catch of non-CCSBT member countries, and Members' 'attributable catches' from their commercial, Indigenous and recreational fishing sectors. Failure to do this would significantly reduce the probability of achieving the CCSBT's rebuilding targets for southern bluefin tuna.</p> <p>The Australian Bureau of Agricultural and Resource Economics and Sciences has completed a project (Project 2012/022.20 Moore et al. 2015) to obtain a method for determining a statistically robust estimate of recreational and charter fishing catch of southern bluefin tuna in Australian waters. Australia is considering options to improve estimates of recreational catch of SBT and account for all attributable catch within our national allocation as soon as possible, and at least by 2018.</p>	<p>Condition 5:</p> <p>The management arrangements for the Commonwealth Southern Bluefin Tuna Fishery to begin accounting for Australia's attributable (commercial, Indigenous and recreational fishing sector) southern bluefin tuna catch as soon as possible, and at least by 2018.</p>
<p><u>Implementing agreed CCSBT measures</u></p> <p>With the global stock of southern Bluefin tuna at critically low levels, recovering the stock is a high priority for Australia and other CCSBT members. It will be important that Australia contributes to recovering the stock through ensuring that all measures agreed at CCSBT are implemented in the Australian domestic fishery, through Australian domestic arrangements.</p>	<p>Condition 6:</p> <p>The management arrangements for the Commonwealth Southern Bluefin Tuna Fishery to continue to implement all relevant measures agreed by the Commission for the Conservation of Southern Bluefin Tuna in the Commonwealth Southern Bluefin Tuna Fishery, to the extent that these are within the remit of AFMA, to support the recovery of the southern bluefin tuna stock to ecologically sustainable levels.</p>

REFERENCES

- Australian Fisheries Management Authority (AFMA) 2009. Ecological risk management report for the Southern Bluefin Tuna Fishery, Australian Fisheries Management Authority, Canberra.
- Australian Fisheries Management Authority (AFMA) 2016a. Catchwatch reports. <http://www.afma.gov.au/fisheries-services/catchwatch-reports/> Accessed 19 November 2016.
- Australian Fisheries Management Authority (AFMA) 2016b. Concession holders and conditions <http://www.afma.gov.au/fisheries-services/concession-holders-conditions/>. Accessed 19 November 2016.
- Australian Fisheries Management Authority (AFMA) 2016c. Submission for Assessment under the *Environmental Protection and Biodiversity Act 1999*. <http://www.environment.gov.au/marine/fisheries/commonwealth/southern-bluefin/application2016>. Accessed 19 November 2016.
- Australian Fisheries Management Authority (AFMA) 2016d. Protected species interaction reports. <http://www.afma.gov.au/sustainability-environment/protected-species-management/protected-species-interaction-reports/>. Accessed 19 November 2016.
- Bestley S., Gunn J. S. and Hindell M. A., 2009. Plasticity in vertical behaviour of migrating juvenile southern bluefin tuna (*Thunnus maccoyii*) in relation to oceanography of the south Indian Ocean. *Fisheries Oceanography* 18(4): 237 – 254.
- Basson M., Hobday A. J., Eveson J. P. and Patterson T. A., 2012. Spatial interactions among juvenile southern bluefin tuna at the global scale: a large scale archival tag experiment, Fisheries Research and Development Corporation report 2003/002, CSIRO, Hobart. http://frdc.com.au/research/Documents/Final_reports/2003-002-DLD.pdf. Accessed 19 November 2016.
- Becker J., 2016. Southern bluefin tuna boom reaps reward for east coast fishermen. ABC Rural, 26 July 2016. <http://www.abc.net.au/news/2016-07-26/east-coast-blue-fin-tuna-boom/7661040>. Accessed 26 July 2016.
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT) 2011. Specifications of the CCSBT Management Procedure. http://www.ccsbt.org/userfiles/file/docs_english/general/MP_Specifications.pdf. Accessed 19 November 2016.
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT) 2015a. Management procedure <https://www.ccsbt.org/en/content/management-procedure>. Accessed 19 November 2016.
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT) 2015c. Report of the Twentieth Meeting of the Scientific Committee https://www.ccsbt.org/sites/ccsbt.org/files/userfiles/file/docs_english/meetings/meeting_reports/ccsbt_22/report_of_SC20.pdf. Accessed 19 November 2016.
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT) 2016a. Report of the Twenty Third Annual Meeting of the Commission https://www.ccsbt.org/sites/ccsbt.org/files/userfiles/file/docs_english/meetings/meeting_reports/ccsbt_23/report_of_CCSBT23.pdf. Accessed 19 November 2016.
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT) 2016b. Report on Biology, Stock Status and Management of Southern Bluefin Tuna: 2016. https://www.ccsbt.org/sites/ccsbt.org/files/userfiles/file/docs_english/meetings/meeting_reports/ccsbt_23/Attachment08_from_report_of_SC21.pdf. Accessed 19 November 2016.
- Commission for the Conservation of Southern Bluefin Tuna (CCSBT) 2016c. Total allowable catch. <https://www.ccsbt.org/en/content/total-allowable-catch>. Accessed 19 November 2016.
- Department of the Environment and Energy (DOEE), 2005. Southern bluefin tuna (*Thunnus maccoyii*) unsuccessful threatened species list nomination 7 September 2005. <http://www.environment.gov.au/biodiversity/threatened/nominations/ineligible-species/thunnus-maccoyii>. Accessed 19 November 2016.
- Department of the Environment and Energy (DOEE), 2010. Commonwealth Listing Advice on *Thunnus maccoyii* (Southern Bluefin Tuna). Advice to the Minister for Sustainability, Environment, Water, Population and Communities from the Threatened Species Scientific Committee (the Committee) on Amendment to the list of Threatened Species under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). <http://www.environment.gov.au/biodiversity/threatened/species/pubs/69402-listing-advice.pdf>. Accessed 19 November 2016.
- Department of the Environment and Energy (DOEE), 2012. Marine bioregional plan for the Temperate East Marine Region. <http://www.environment.gov.au/system/files/pages/1e59b6ec-8b7e-42a8-9619-b5d728f878b2/files/temperate-east-marine-plan.pdf> Accessed 19 November 2016.
- Evans K., Patterson T., A., Reid H., and Harley S., J., 2012. Reproductive schedules in southern bluefin tuna: are current assumptions appropriate? *PLoS ONE* 7(4): 1 – 7.

- Forbes E., Tracey S. and Lyle J., 2009. Assessment of the 2008 recreational gamefish fishery of southeast Tasmania, with particular reference to southern bluefin tuna, Tasmanian Aquaculture and Fisheries Institute, University of Tasmania, Hobart
- Giri K. and Hall, K., 2015. South Australian recreational fishing survey, Fisheries Victoria internal report series 62, Victorian Department of Economic Development, Jobs, Transport and Resources, Melbourne.
- Green C., Brown P., Giri K., Bell J. and Conron S., 2012. Quantifying the recreational catch of southern bluefin tuna off the Victorian coast, research report, Recreational Fishing Grant Program, Department of Primary Industries, Victoria.
- Honda K., Hobday A. J., Kawabe R., Tojo N., Fujioka K., Takao Y. and Miyashita K., 2010. Age-dependent distribution of juvenile southern bluefin tuna (*Thunnus maccoyii*) on the continental shelf off southwest Australia determined by acoustic monitoring. *Fisheries Oceanography*. 19(2): 151 – 158.
- Moore A., Hall K., Khageswor G., Tracey S., Hansen S., Ward P., Stobutzki I., Andrews J., Nicol S. and Brown P., 2015. Developing robust and cost-effective methods for estimating the national recreational catch of southern bluefin tuna in Australia, FRDC report 2012/022.20, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. http://frdc.com.au/research/Final_reports/2012-022.2-DLD.pdf. Accessed 19 November 2016.
- Patterson H., Begg G., and Hormis M., 2011. Southern Bluefin Tuna Fishery. In: Woodhams J, Stobutzki I, Vieira S, Curtotti R and Begg GA (eds) 2011, Fishery Status Reports 2010: status of fish stocks and fisheries managed by the Australian Government. Australian Bureau of Agricultural and Resource Economics and Sciences, pp 359 – 367, Canberra.
- Patterson H., Georgeson L., Stobutzki I. and Curtotti R. (eds) 2015. Fishery status reports 2015, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr15d9abm_20151030/24_FishStatus2015SthnBluefinTuna_1.0.0.pdf. Accessed 19 November 2016.
- Patterson H. and Hormis M., 2012. Southern Bluefin Tuna Fishery. In: Woodhams J., Vieira S. and Stobutzki I. (eds), 2012. Fishery Status Reports 2011. Australian Bureau of Agricultural and Resource Economics and Sciences, pp 330 – 338, Canberra.
- Patterson H., Stobutzki I. and Curtotti R. 2016. Chapter 23 Southern Bluefin Tuna Fishery, in Fishery status reports 2016, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra.
http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/23_FishStatus2016SthnBluefinTuna_1.0.0.pdf. Accessed 19 November 2016.
- Rowell M., Moore A., Sahlqvist P. and Begg G. 2008. Estimating Australia's recreational catch of southern bluefin tuna, Working Paper CCSBT-ESC/0809/17, Thirteenth meeting of the Scientific Committee of the Commission for the Conservation of Southern Bluefin Tuna, Rotorua, New Zealand, September 2008.
- Tracey S., Lyle J. M., Ewing G., Hartmann K. and Mapleston A., 2013. Offshore recreational fishing in Tasmania 2011/12, Institute of Marine and Antarctic Studies, University of Tasmania, Hobart.
- Tracey S., Hartmann K., McAllister J., Conron S. and Leef M. 2016. Capture stress and post-release survival of recreationally caught southern bluefin tuna, FRDC report 2013/025, Institute of Marine and Antarctic Studies, University of Tasmania, Hobart.