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Australian Country Report

Ecologically Related Species in the Australian Southern Bluefin Tuna Fishery 2022–23 and 2023–24

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Research by the Australian Bureau of Agricultural and Resource Economics and Sciences

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We acknowledge the Traditional Custodians of Australia and their continuing connection to land and sea, waters, environment and community. We pay our respects to the Traditional Custodians of the lands we live and work on, their culture, and their Elders past and present.

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Summary

Purpose

This report includes information and data on ecologically related species (ERS) from Australia's southern bluefin Tuna (SBT) fishery, updated for the 2022–23 and 2023–24 fishing seasons.

Catch and effort

Australian SBT commercial catches for the 2023 and 2024 calendar years were 5,850 t and 6,216 t, respectively. The 2022–23 quota year catch was 6,035 t and the 2023–24 quota year catch was 6,324 t. The Australian allocation from the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) was 6,238.4 t for the 2022–23 fishing season and 7,295 t for the 2023–24 fishing season. A portion of this allocation was set aside to cover recreational fishing mortality (311.9 t in 2022–23 and 364.75 t in 2023–24). Australia increased its effective total allowable commercial catch (TACC) by 681.7 t in 2022–23 and 572.7 t in 2023–24 to account for undercatch in the previous season. Table 1 shows vessel and hook information for each of the fishing seasons.

Table 1 Vessel number and type, percentage of catch and hooks deployed by fishing season

	Number of purse-seine vessels	Number of longline vessels	Number of other vessels	% of catch by purse-seine vessels	Hooks deployed in shots that caught SBT
2022–23	6	24	14	77.8	749,118
2023–24	5	27	12	71.2	1,124,261

Note: Other vessels include: 2022–23, 10 rod-and-reel vessels, 2 trolling vessels and 1 pole-and-line vessel in the ETBF and 1 trolling vessel in the WTBF; 2023–24, 9 rod-and-reel vessels and 1 pole-and-line vessel from the ETBF, and 2 trolling vessels from the WTBF.

Observer coverage

In the 2022–23 fishing season, purse-seine observer coverage was 8.1% of sets, representing 14 sets observed where SBT were retained. In 2023, 9.7% of shots where SBT was caught in the Eastern Tuna and Billfish Fishery (ETBF) by longline vessels were audited by electronic monitoring (e-monitoring). In 2023, 3% of shots where SBT was caught in the Western Tuna and Billfish Fishery (WTBF) by longline vessels were audited by e-monitoring.

In the 2023–24 fishing season, the purse-seine observer coverage was 11.9% of sets, representing 22 sets observed where SBT were retained. In 2024, the percentage of shots audited by e-monitoring where SBT were caught by longline vessels was 10.3% for the ETBF and 13.5% for the WTBF.

Interactions with ERS

Details of ERS interactions in the SBT fishery are provided in the report. Longline interactions in the ETBF and WTBF reported here are only for shots where SBT was taken as SBT is targeted only at certain locations and time periods. Interactions with seabirds, sharks, non-target fish and marine mammals are reported for shots where SBT was taken in the ETBF and WTBF where data are available. No ERS interactions were reported in logbooks for the purse-seine SBT fishery.

Mitigation measures

Australia has implemented mitigation measures to address seabird and turtle bycatch in the longline fisheries to ensure the best practice mitigation measures are in place. These measures are provided in detail.

1 Introduction

Three domestic fisheries managed by the Australian Government interact with southern bluefin tuna (SBT; *Thunnus maccoyii*) in varying quantities: the Southern Bluefin Tuna Fishery (SBTF), the Eastern Tuna and Billfish Fishery (ETBF) and the Western Tuna and Billfish Fishery (WTBF). The SBTF targets SBT in the Great Australian Bight using purse seine, with the fishing season running from 1 December to 30 November[1]. After capture, the SBT are transferred to grow-out cages and fattened for up to approximately 6 months before being harvested. The ETBF and WTBF are longline fisheries primarily targeting yellowfin tuna (*Thunnus albacares*), bigeye tuna (*Thunnus obesus*), albacore (*Thunnus alalunga*), swordfish (*Xiphias gladius*) and striped marlin (*Tetrapturus audax*). Longlining for SBT occurs primarily in the Australian winter months between May and October in the ETBF. The fishing season in the WTBF begins on 1 February each year, and in the ETBF the fishing season is the calendar year. Because the three fisheries have distinct characteristics and management plans, they are separated within this report.

Australia separates its ecologically related species (ERS), or non-target catch, into byproduct and bycatch (including protected species under the *Environment Protection and Biodiversity Conservation Act* 1999 (EPBC Act 1999)). The purse-seine fishery has very little interaction with ERS as the purse-seine fishing method is highly selective. The longline fisheries are multi-species fisheries that, while being relatively selective, catch a range of fish and shark species and have reported interactions with seabirds and, to a lesser extent, marine turtles. A reduction in discarding of species with little commercial value has been a focus of management initiatives. For example, in 2000 the Australian Fisheries Management Authority (AFMA) implemented Bycatch Action Plans for the SBTF, WTBF and ETBF. Since 2008, a bycatch and discarding program has been in place to deal with bycatch issues and develop workplans for each fishery.

Australia has made considerable investments to mitigate the rate of seabird, turtle and shark interactions and capture during longline fishing operations. Australia has also completed research on mitigation measures to reduce the capture of seabirds and other ERS in longline fisheries (e.g. Robertson et al. 2013). In addition, electronic monitoring (e-monitoring) has been introduced in longline fisheries to verify logbooks.

This report includes information and data on ERS from Australia's SBT fishing activity for the 2022–23 and 2023–24 fishing seasons.

[1] Various time periods, such as 'calendar years', 'fishing seasons' and Australian 'quota years', can be used when describing Australia's SBTF. Unless otherwise indicated, we have used fishing seasons in this report, but note that fishing seasons of the various fishery components often span quota years.

2 Review of SBT Fishery

Fleet size and distribution

Historical fleet size and distribution

Fishing for SBT began in the early 1950s off New South Wales and South Australia and then later, in 1970, off Western Australia. The catch, then used primarily for canning, peaked at 21,500 t in 1982.

Historically, there has been longlining for SBT off Tasmania and Western Australia, with occasional catches in South Australian waters. There were also some purse-seine, trolling and poling operations in the offshore waters of the Australian Fishing Zone (AFZ). Longlining in which SBT is taken in recent years primarily occurs off south-eastern New South Wales where SBT is accessible to more vessels, as well as in waters to the south and east of Tasmania. Longlining for SBT typically occurs during the winter months (May to October), in core and buffer zones (described below) which move as the SBT migrate.

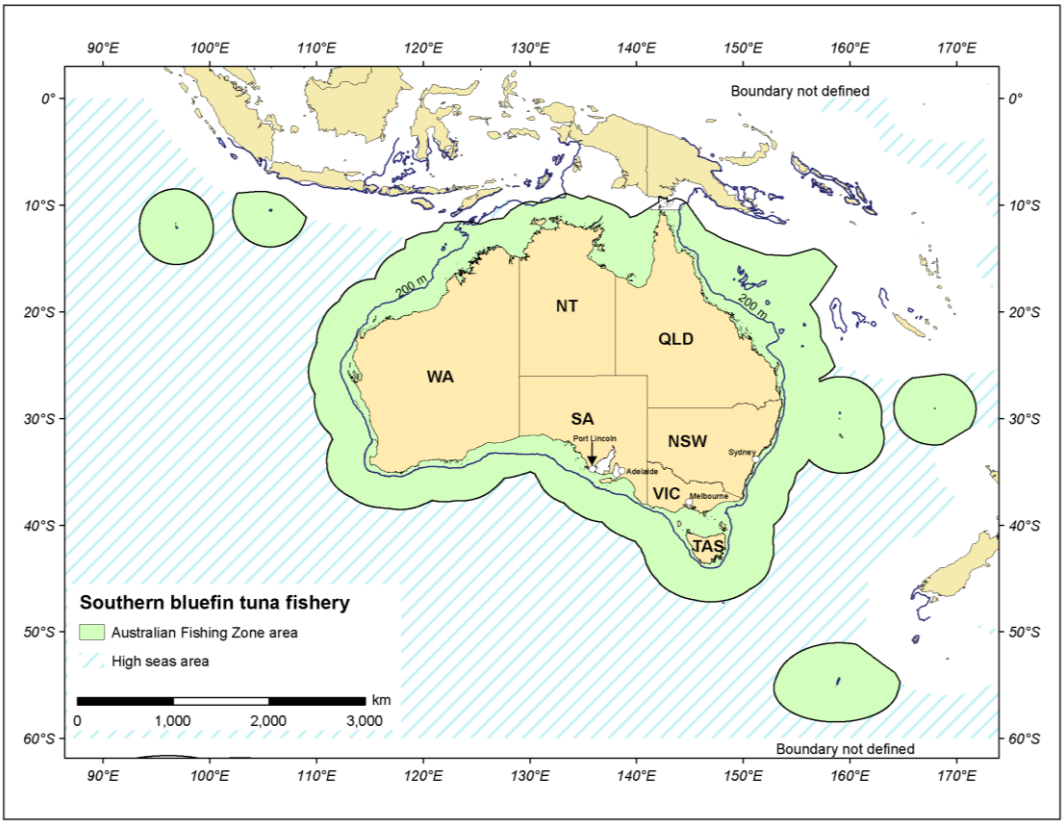
Current fleet size and distribution

Southern Bluefin Tuna Fishery

All SBT caught commercially in Australia is taken under the *Southern Bluefin Tuna Fishery Management Plan 1995* and is required to be covered by quota. The area of the SBTF encompasses the entire AFZ and extends onto the high seas (Figure 1). The definition of the AFZ is consistent with Australia's Exclusive Economic Zone (EEZ) and extends out to 200 nautical miles from the coast. There are two main components for the fishery: the purse-seine fleet operating out of Port Lincoln, South Australia, and longline fleets operating off eastern (ETBF) and western (WTBF) Australia, which take SBT while fishing for other tuna and billfish species. To longline in these areas, operators are required to have a Boat Statutory Fishing Right in either the ETBF or WTBF, hold uncaught quota for SBT and meet observer or e-monitoring requirements. Management measures in terms of gear restrictions and bycatch are managed separately in these fisheries.

In recent years, the purse-seine fleet operating out of Port Lincoln has taken 70–80% of the total SBT commercial catch, fishing in the Great Australian Bight. The SBT are towed back to Port Lincoln, transferred into grow-out pontoons and farmed for a period of time before harvest. In 2022–23 and 2023–24, SBT were also landed by longline and minor-line methods in the ETBF and WTBF.

Figure 1 Area of Australia's Southern Bluefin Tuna Fishery

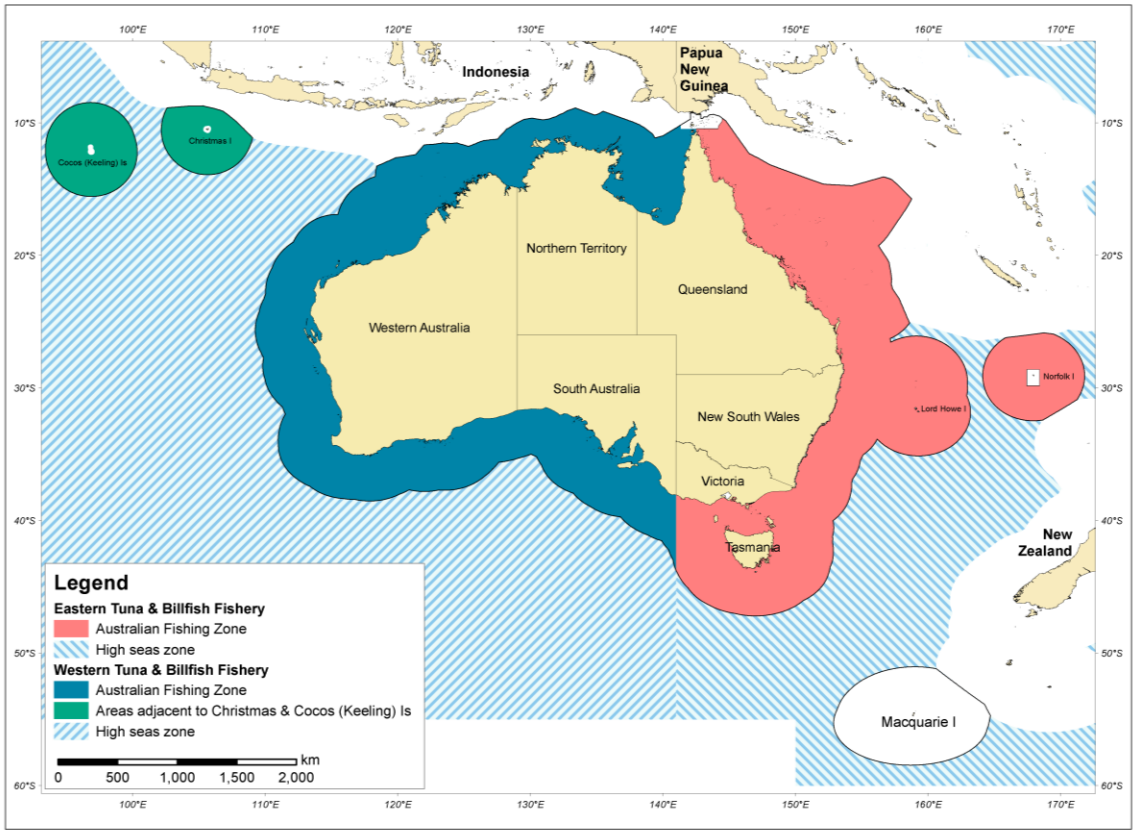


Eastern Tuna and Billfish Fishery

The ETBF extends from Cape York to the Victoria–South Australia border, including waters around Tasmania (Figure 2). ETBF operators also commonly operate high seas areas throughout the Western Pacific Ocean, consistent with the area of competency of the Western and Central Pacific Fisheries Commission. Domestic longline vessels are mostly 15–25 m long and use monofilament gear. Fishing practices vary with target species, location and season. Vessels usually conduct one longline operation per day or night, depending on the target species. A typical longline set will comprise about 1,700 hooks. Fishers commonly operate around 107 days per year. Most trips are between 2 and 15 days, but occasionally trips extend up to 30 days. Typical fishing trips range from 40–300 nautical miles from port, though in the past some vessels journeyed out to 1,000 nautical miles or further to fish.

The Eastern Tuna and Billfish Fishery Management Plan 2010 came into effect on 1 March 2011. The species managed under the ETBF Plan include albacore, bigeye tuna, billfish, longtail tuna, northern bluefin tuna, Ray's bream, skipjack tuna and yellowfin tuna.

Figure 2 Area of Australia's Eastern and Western Tuna and Billfish fisheries



Western Tuna and Billfish Fishery

The WTBF encompasses the area of the AFZ off the northern, western and southern coastline westward from Cape York Peninsula (142°30'E) off Queensland to 141°E at the Victoria–South Australia boarder (Figure 2). The fishery includes waters seaward of territorial waters (outside 12 nautical miles from the coast) adjacent to Christmas and Cocos (Keeling) Islands and high seas areas throughout the Indian Ocean, consistent with the area of competency of the Indian Ocean Tuna Commission. Most longline vessels in the fishery are 15–25 m long and set 1,000–1,500 hooks on monofilament lines, with an average of one set per day. Vessels fish throughout the year with an average trip of 4 to 10 days.

The Western Tuna and Billfish Management Plan 2005 came into effect on 12 November 2006. Quota species include bigeye tuna, yellowfin tuna, striped marlin and swordfish.

Distribution of catch and effort

Australian SBT commercial catches for the 2023 and 2024 calendar years were 5,850 t and 6,216 t, respectively. The 2022–23 quota year catch was 6,035 t and the 2023–24 quota year catch was 6,324 t. The Australian allocation from the Commission for the Conservation of Southern Bluefin Tuna (CCSBT) was 6,238.4 t for the 2022–23 fishing season and 7,295 t for the 2023–24 fishing season. A portion of this allocation was set aside to cover recreational fishing mortality (311.9 t in 2022–23 and 364.75 t in 2023–24). Australia increased its effective total allowable commercial catch (TACC) by 681.7 t in 2022–23 and 572.7 t in 2023–24 to account for undercatch in the previous season.

The locations of the purse-seine and longline catches for 2022–23 are shown in Figure 3 and Figure 4, respectively. The locations of the purse-seine and longline catches for 2023–24 are shown in Figure 5 and Figure 6, respectively.

Table 2 describes the vessels, percent catch by purse-seine vessels and hooks deployed for the two fishing seasons. The location of the catch by gear type (purse seine and longline) and shown in Figures 3a and 3b and Figures 4a and 4b[2] for the 2022–23 and 2023–24 fishing seasons, respectively.

Table 2 Vessel number and type, percentage of catch and hooks deployed by fishing season

	Number of purse-seine vessels	Number of longline vessels	Number of other vessels	% of catch by purse-seine vessels	Hooks deployed in shots that caught SBT
2022–23	6	24	14	77.8	749,118
2023–24	5	27	12	71.2	1,124,261

Note: Other vessels include: 2022–23, 10 rod-and-reel vessels, 2 trolling vessels and 1 pole-and-line vessel in the ETBF and 1 trolling vessel in the WTBF; 2023–24, 9 rod-and-reel vessels and 1 pole-and-line vessel from the ETBF, and 2 trolling vessels from the WTBF.

[2] SBT catch has been filtered so that only operations from a total of five or more vessels over the time period from 2022–23 and 2023–24 are shown. The catch was first aggregated using a kernel density algorithm at a spatial resolution of 25 km square. A neighbourhood analysis was then carried out on the same data and at the same spatial resolution; only the cells where five boats or more operated were then used to make the final map of catch per units of area. The footprint shows grid cells at a spatial resolution of one degree (111 km square) where vessels have reported catch during the time period.

Figure 3 Location of SBT catch by purse seine in 2022–23

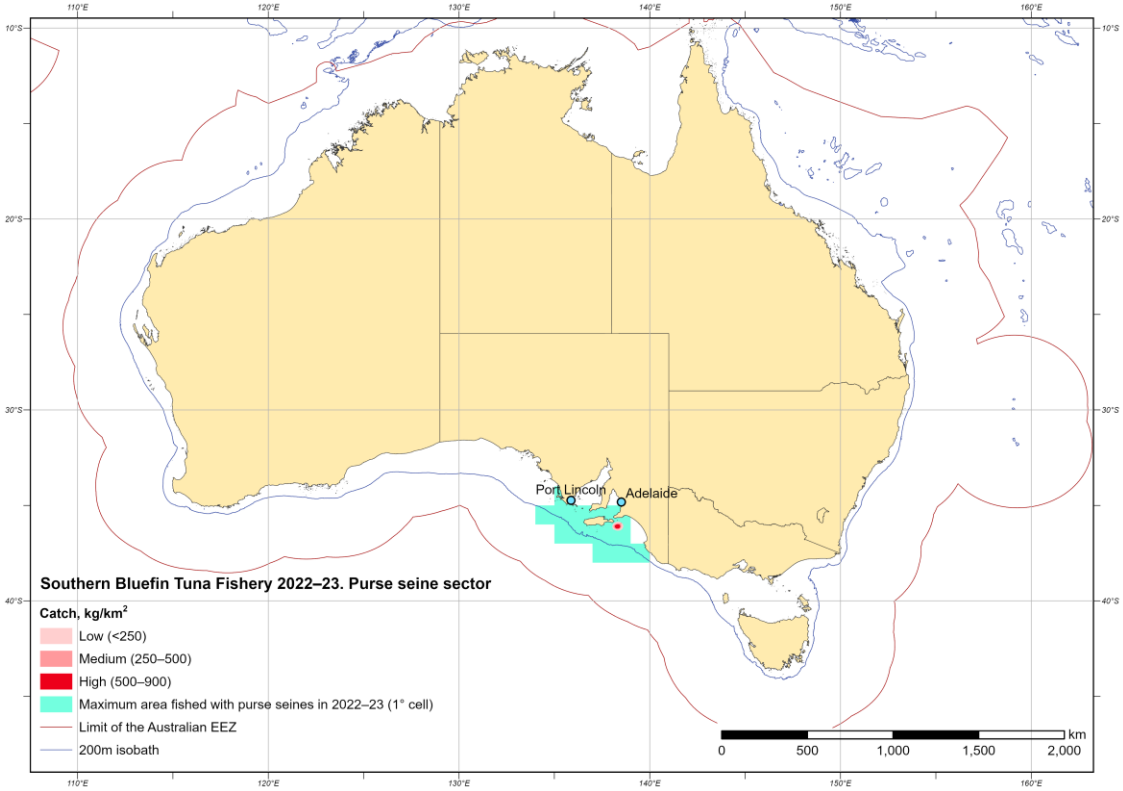
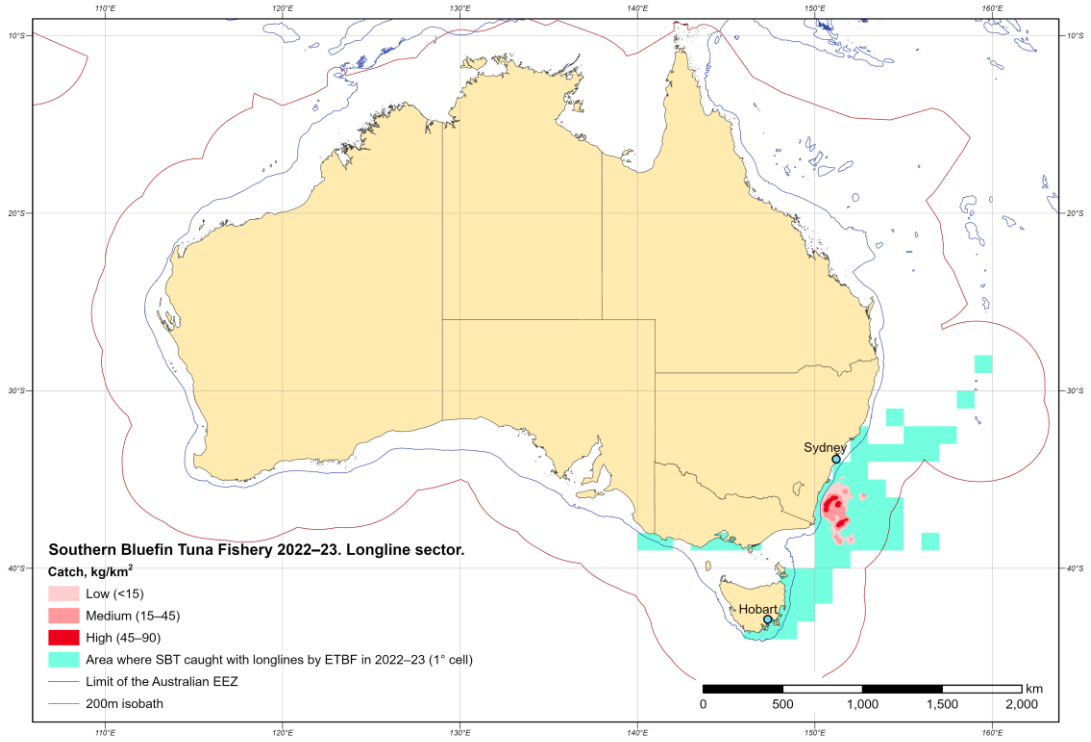


Figure 4 Location of SBT catch by longline in 2022–23



Note: SBT was caught in the WTBF in 2022–23, however all catch was discarded. WTBF catch locations are not represented in this figure.

Figure 5 Location of SBT catch by purse seine in 2023–24

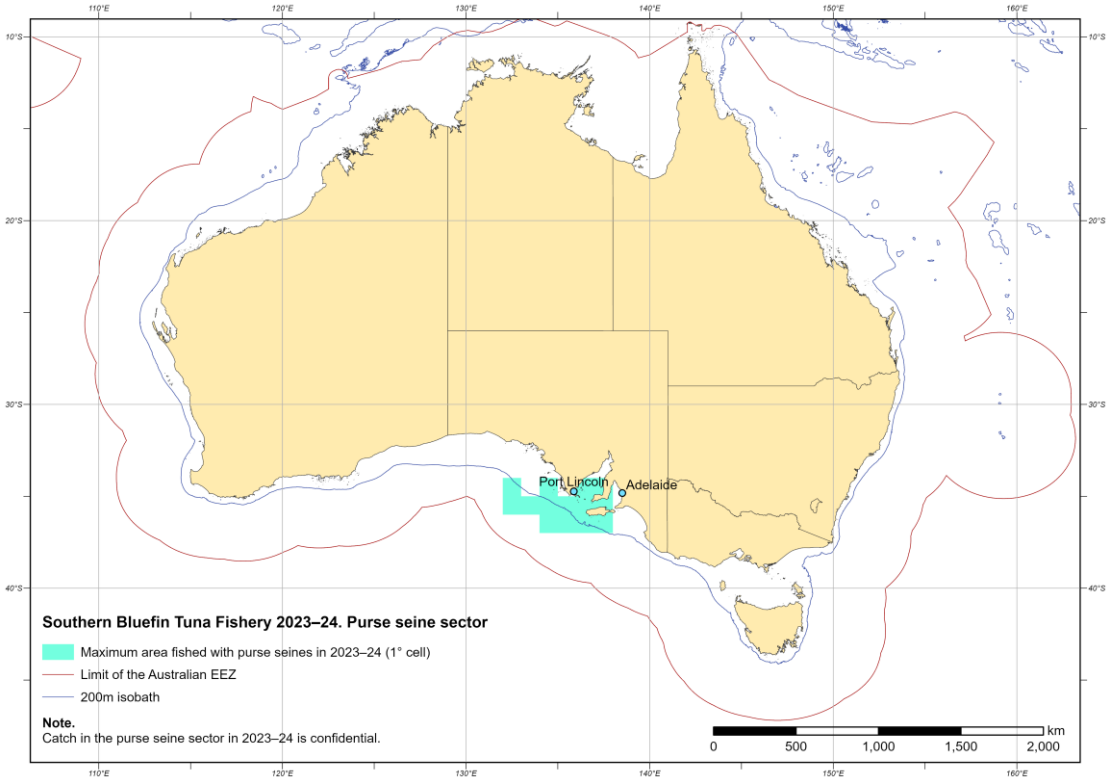
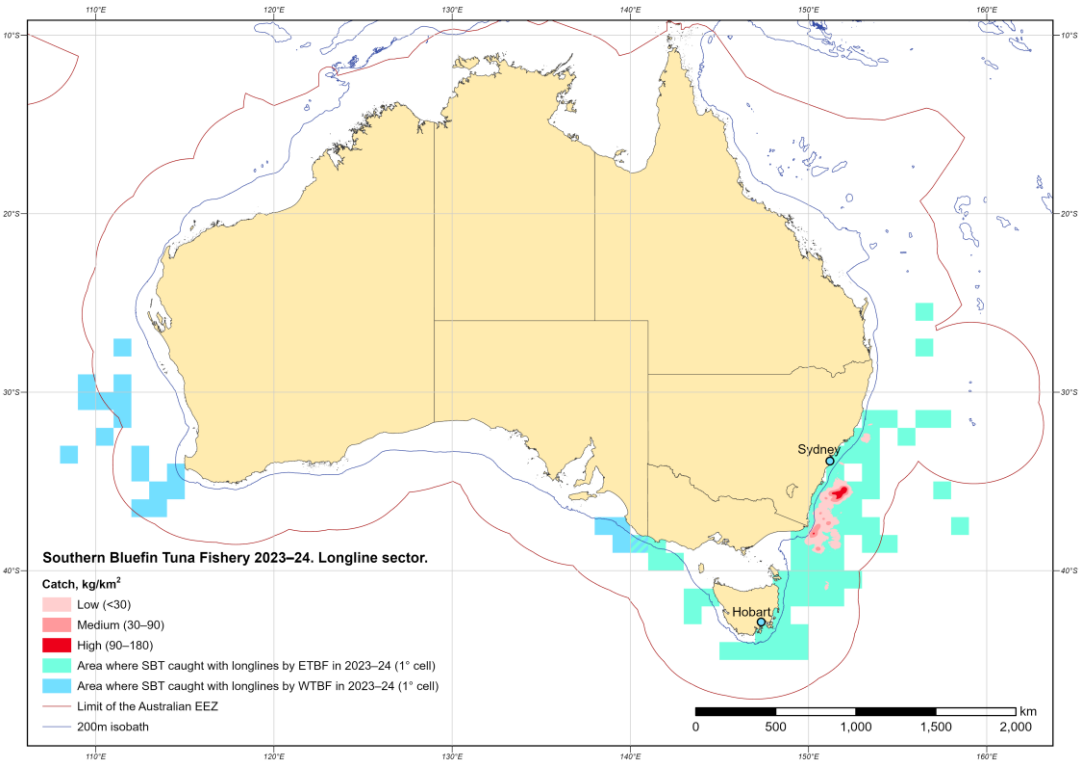


Figure 6 Location of SBT catch by longline in 2023–24



3 Fisheries monitoring for each fleet

Catch documentation

There are a series of compulsory fishery-specific logbooks and associated catch disposal records that are required by law to be completed by Australian fishers. Current fishery-specific logbooks and catch disposal records can be downloaded from AFMA.

All of the data provided in logbooks and catch disposal records must be supplied to AFMA within specified time periods. Verification of these data is undertaken through either observer programs or e-monitoring and, as a minimum, through an annual audit process undertaken by AFMA. In addition, specific reporting forms for protected species under the EPBC Act 1999 (e.g. seabirds, marine mammals etc) are included with the fishery-specific logbooks in all Australian Commonwealth fisheries.

Observer programs

The observer program began in 2001 in the ETBF and 2003 in the WTBF and SBTF. Observers are sourced from universities and the maritime industries with experience in collecting biological data at sea. Observers must complete an AFMA observer training course.

Observer reports include details of daily fishing operations, the mitigation measures employed and any non-target or ERS species interactions. In terms of ERS species interactions, the number (and weight where appropriate) of each species caught is recorded for each shot observed as well as the life status (alive, dead, injured) and whether it was retained or discarded. Australia's observer program aims to monitor 10% of SBT fishing activities and employs international and domestic observers in compliance with CCSBT observer standards.

In the 2022–23 fishing season, purse-seine observer coverage was 8.1% of sets, representing 14 sets observed where SBT were retained. In 2023, 9.7% of shots where SBT was caught in the ETBF by longline vessels were audited by e-monitoring. In 2023, 3% of shots where SBT was caught in the WTBF by longline vessels were audited by e-monitoring. For all WTBF shots, regardless of whether SBT was caught or not, 9% of effort was audited by e-monitoring in 2023.

In the 2023–24 fishing season, the purse-seine observer coverage was 11.9% of sets, representing 22 sets observed where SBT were retained. In 2024, the percentage of shots audited by e-monitoring where SBT were caught by longline vessels was 10.3% for the ETBF and 13.5% for the WTBF.

Electronic monitoring

In Australian Commonwealth fisheries, fishers are required to complete catch and effort information for each operation in their logbook, which includes information on retained and discarded catch and interactions with protected species. These data are used in scientific analyses, such as catch standardisations that provide AFMA with information to meet its legislative objectives under the Fisheries Management Act 1991. Historically, AFMA has used at-sea observer programs to verify fisher-reported logbook data. However, the increasing financial and logistical costs associated with AFMA’s at-sea observer program, as well as ongoing data quality issues present in fishing logbooks prompted AFMA to investigate more cost-effective ways of monitoring fishing operations.

E-monitoring technologies were identified as a potential cost-effective tool that could aid in improving the accuracy of logbook data without the limitations associated with at-sea observer

programs (e.g. non-random placement of at-sea observers on fishing vessels), while also allowing for greater monitoring coverage of fishing activities.

On 1 July 2015, AFMA implemented integrated e-monitoring systems in several of its managed fisheries, including the ETBF and the Gillnet Hook and Trap (GHaT) sector of the Southern and Eastern Scalefish and Shark Fishery (SESSF). As a result, at-sea observers have been phased out of the ETBF. Important biological data continues to be collected through an established in-port sampling program in the ETBF.

Under the current program, AFMA uses the integrated e-monitoring system to validate fisher-reported logbook information with an audit target of 10% of hauls from each vessel. This audit includes an analysis of catch composition, discards and interactions with protected species. Through the auditing process and accompanying feedback to fishers, AFMA aims to independently evaluate the veracity of fisheries logbook information as a source of data for assessing and managing fisheries.

Emery et al. (2025) compared congruence between logbook and e-monitoring records in the ETBF. Overall congruence at the fleet level was higher for retained catch and higher for endangered, threatened and protected groups (i.e. seabirds) rather than at the species level (i.e. wandering albatross). In addition, there was significant inter-vessel variation in logbook reporting performance. For example, a small number of vessels were not reporting any bycatch and discards while other vessels demonstrated perfect congruence for some species. These results highlight the utility of e-monitoring to identify reporting issues, which can then be addressed by managers.

Vessel Monitoring System

All vessels operating in Commonwealth Fisheries included in the SBTF are required to operate an approved Vessel Monitoring Systems (VMS) while fishing and transiting to and from fishing grounds. This allows real-time vessel position and activity reporting to a central VMS operations area at AFMA.

Port monitoring

Australian fisheries officers conduct random inspections of landings at key SBT ports, as well as at-sea boardings and inspection of vessels taking SBT in the longline and purse seine fisheries.

Compliance risk assessments for all sectors taking SBT are completed annually. Likewise, a specific compliance operational plan is developed and implemented on an annual basis for each fishery.

4 Seabirds

Seabirds can be attracted to longline vessels by discharged offal and baits, and on occasion ingest baited hooks during the setting or, less commonly, hauling of longlines. Bait is not used when purse seining, therefore the rate of seabird interactions in this sector is very low.

Oceanic longline fishing is listed as a key threatening process for seabirds under the EPBC Act 1999, requiring the development of the Threat Abatement Plan (TAP) for the Incidental Catch (or bycatch) of Seabirds during Oceanic Longline Fishing Operations (Commonwealth of Australia 2018). More information on the TAP is provided in the section 'Mitigation measures to minimise seabird bycatch' below.

Australia has implemented permit conditions on longline fishing operators that are designed to prevent the capture of seabirds. For example, Australian vessel fishing south of 25°S must deploy bird-scaring lines (streamers), known as 'tori' lines, to deter seabirds from diving on the line and line weighting to quickly sink the line out of reach of seabirds.

Consistent with the objectives and prescriptions of the TAP, Australia has implemented conditions aimed at reducing seabird mortality through requirements on fishing permits. These are detailed in Section 7 of this report.

Observed seabird interactions

Southern Bluefin Tuna Fishery

There are very few recorded incidences of seabirds interacting with fishing vessels or purse-seine gear in the SBTF. There have been no observed seabird interactions in the purse-seine sector since the 2007–08 fishing season.

Eastern Tuna and Billfish Fishery

The ETBF does interact with seabirds, although the current interaction rate is low. In parallel with the implementation of the TAP, a variety of mitigation measures have been implemented, and the fishery-wide interaction rate is consistently below 0.05 seabirds per 1,000 hooks set as the performance indicator under the TAP (Lawrence et al. 2009).

There were five observed seabird interactions in the Australian ETBF in 2023 on shots taking SBT, and two observed seabird interactions in 2024 (Table 3) on shots taking SBT. Seabird interactions occurring in the ETBF when fishing for other species are reported annually to the Western and Central Pacific Fisheries Commission (WCPFC; e.g. Patterson & D'Alberto 2025).

Western Tuna and Billfish Fishery

The prevalence of seabirds on the west coast of Australia is considerably less than that of the east coast. In addition to the lower abundance of seabirds, the majority of the fleet in the WTBF targets swordfish and therefore set at night.

There were no observed seabird interactions in the Australian WTBF in 2023 or 2024 on shots taking SBT. Seabird interactions occurring in the WTBF are reported annually to the Indian Ocean Tuna Commission (IOTC) (e.g. Blake & Patterson 2025).

Table 3 Observed interactions between seabird species and longline shots that took SBT (CCSBT statistical area 2, 4, 7 and 8) in 2023 and 2024

2023		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	**														
4	EM	716,732	73,892	10.3	VZZ		3	1			0.58		0.42					
4	EM	716,732	73,892	10.3	PQW				1		0.58		0.42					
7	EM	**	**	**									1					
NA[f]	EM	**	**	**														
TOTAL		775,461	74,492	9.6		0	3	1	1		0.58		0.42					

Notes:

a. Values in these shaded cells are repeated for all species within a strata
b. Number of longline hooks
c. Percentage of the number of hooks
d. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
e. TP = tori poles, NS = night setting, WB = weighted branchline
f. Effort outside of areas covered by the CCSBT Statistical Areas

** confidential data

2024		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	14.3							0.68		0.32					
4	EM	941,539	105,065	11.2	PQW				1		0.62		0.38					
7	EM	119,647	7,100	5.9	ALZ			1			0.70		0.30					
8	EM	**	**	14.9									1					
NA[f]	EM	**	0	0														
TOTAL		1,108,674	118,106	10.6		0	0	1	1		0.62		0.38					

Notes:

a. Values in these shaded cells are repeated for all species within a strata
b. Number of longline hooks
c. Percentage of the number of hooks
d. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
e. TP = tori poles, NS = night setting, WB = weighted branchline
f. Effort outside of areas covered by the CCSBT Statistical Areas

** confidential data

Non-observed seabird interactions

Southern Bluefin Tuna Fishery

No seabird interactions have been recorded in logbooks for the purse-seine fishery.

Eastern Tuna and Billfish Fishery

Fishers in the ETBF encounter SBT during a limited time of the year when SBT migrate into the ETBF area, typically May to October. In addition, fishing for SBT is permitted only in designated areas. 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 only vessels holding SBT quota and having a fully operational e-monitoring system on board. There were a number of seabird interactions in 2023 and 2024 in shots where SBT was caught recorded in the logbooks (Table 4). Seabird interactions for the entire ETBF are reported annually to the WCPFC (e.g. Patterson & D'Alberto 2025).

Western Tuna and Billfish Fishery

There were no seabird interactions in 2023 in logbook shots where SBT was caught. One seabird interaction in logbook shots where SBT was caught occurred in 2024. Seabird interactions occurring in the WTBF are reported annually to the IOTC (e.g. Blake & Patterson 2025).

Table 4 Logbook interactions between seabirds and longline shots that took SBT (CCSBT statistical areas 2, 4, 7, 8 and outside stat areas) in 2023 and 2024

2023								
Stratum (CCSBT Statistical Area)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
4	716,732	ALZ	9	0.013	5	0.007	3	1
4	716,732	DIM	3	0.004	3	0.004		
4	716,732	PQW	12	0.017	11	0.015	1	
7	**	**	**	**	**	**	**	**

2024								
Stratum (CCSBT Statistical Area)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
4	941,539	ALZ	5	0.005	3	0.003	2	
4	941,539	PQW	1	0.001	1	0.001		
7	119,647	ALZ	25	0.209	13	0.109	12	

7	119,647	VZZ	2	0.016	2	0.016		
8	**	**	**	**	**	**	**	**

Notes: Capture and mortality rates are given per thousand hooks. Mortalities and mortality rates are based on the number of deceased individuals. Releases indicate the number of individuals released alive. Unknown indicates the number of individuals released with unknown life status. Data are from shots in the ETBF and WTBF where SBT were caught. FAO 3 alpha species codes can be found at: https://www.fao.org/fishery/en/collection/asfis. No interactions were recorded in CCSBT Statistical Area 2.
**confidential data

5 Non-target fish

Observed and non-observed fish interactions

Southern Bluefin Tuna Fishery

The purse-seine fishery is highly selective and takes few non-target fish. Because purse-seine trips often exceed 20 days and there are limited freezer facilities on board the vessels, any non-target fish catch is generally discarded alive.

In the 2022–23 fishing season, there were 130 skipjack tuna observed caught, 30 of which were retained, and 100 of which were discarded. In the 2023–24 fishing season, there were 30 skipjack tuna observed caught, all of which were discarded. No non-target fish catch was reported in purse-seine fishery logbooks.

Eastern Tuna and Billfish and Western Tuna and Billfish fisheries

Table 5 provides observed non-target catch in the ETBF and WTBF for 2023 and 2024. Table 6 provide the non-target scalefish catch recorded in logbooks. Again, only non-target fish captured during shots that captured SBT are provided.

Table 5 Observed interactions between non-target scalefish species and longline shots that took SBT (CCSBT statistical area 2, 4, 7, 8 and outside stat areas) in 2023 and 2024

2023		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	**														
4	EM	716,732	73,892	10.3	ALB	1082			64		0.58		0.42					
4	EM	716,732	73,892	10.3	ALI		2		122		0.58		0.42					
4	EM	716,732	73,892	10.3	BET	18		1			0.58		0.42					
4	EM	716,732	73,892	10.3	BIL	1					0.58		0.42					
4	EM	716,732	73,892	10.3	BRA	2					0.58		0.42					
4	EM	716,732	73,892	10.3	BUK	1					0.58		0.42					
4	EM	716,732	73,892	10.3	CGX	1					0.58		0.42					
4	EM	716,732	73,892	10.3	DOL	9					0.58		0.42					
4	EM	716,732	73,892	10.3	GEP	2		5	28		0.58		0.42					
4	EM	716,732	73,892	10.3	LAP	1					0.58		0.42					

4	EM	716,732	73,892	10.3	LEC	9			14		0.58		0.42					
4	EM	716,732	73,892	10.3	MLS	4					0.58		0.42					
4	EM	716,732	73,892	10.3	MOP			30	48		0.58		0.42					
4	EM	716,732	73,892	10.3	MZZ	3		5	42		0.58		0.42					
4	EM	716,732	73,892	10.3	OIL	4		1	5		0.58		0.42					
4	EM	716,732	73,892	10.3	POA	83			2		0.58		0.42					
4	EM	716,732	73,892	10.3	SKJ	7					0.58		0.42					
4	EM	716,732	73,892	10.3	SSP	1					0.58		0.42					
4	EM	716,732	73,892	10.3	SWO	167		2	18		0.58		0.42					
4	EM	716,732	73,892	10.3	TUN	3		13	10		0.58		0.42					
4	EM	716,732	73,892	10.3	TUS	23		35	128		0.58		0.42					
4	EM	716,732	73,892	10.3	YFT	247			4		0.58		0.42					
7	EM	**	**	**	**	**	**	**	**				1					
NA[f]	EM	**	**	**														
TOTAL		775,461	74,492	9.6		1,668[g]	2[g]	92[g]	485[g]		0.58		0.42					

Notes:

a. Values in these shaded cells are repeated for all species within a strata
b. Number of longline hooks
c. Percentage of the number of hooks

d. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
e. TP = tori poles, NS = night setting, WB = weighted branchline
f. Effort outside of areas covered by the CCSBT Statistical Areas
g. Total observed captures only include captures from non-confidential stratums
** confidential data

2024		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	14.3	**	**	**	**	**		0.68		0.32					
4	EM	941,539	105,065	11.2	ALB	1471			66		0.62		0.38					
4	EM	941,539	105,065	11.2	ALI			2	63		0.62		0.38					
4	EM	941,539	105,065	11.2	BET	18			1		0.62		0.38					
4	EM	941,539	105,065	11.2	BIL	1			4		0.62		0.38					
4	EM	941,539	105,065	11.2	BRA	5					0.62		0.38					
4	EM	941,539	105,065	11.2	BRZ	48			1		0.62		0.38					
4	EM	941,539	105,065	11.2	DOL	14		2	1		0.62		0.38					
4	EM	941,539	105,065	11.2	GEP				25		0.62		0.38					
4	EM	941,539	105,065	11.2	LAP	1					0.62		0.38					

4	EM	941,539	105,065	11.2	LEC	1			1		0.62		0.38					
4	EM	941,539	105,065	11.2	MLS	5					0.62		0.38					
4	EM	941,539	105,065	11.2	MOP			14	52		0.62		0.38					
4	EM	941,539	105,065	11.2	MOX				3		0.62		0.38					
4	EM	941,539	105,065	11.2	MZZ	1		2	93		0.62		0.38					
4	EM	941,539	105,065	11.2	OIL				1		0.62		0.38					
4	EM	941,539	105,065	11.2	POA	1					0.62		0.38					
4	EM	941,539	105,065	11.2	SKJ	7					0.62		0.38					
4	EM	941,539	105,065	11.2	SWO	284	1	2	46		0.62		0.38					
4	EM	941,539	105,065	11.2	TUN	9			9		0.62		0.38					
4	EM	941,539	105,065	11.2	TUS	47	8	99	505		0.62		0.38					
4	EM	941,539	105,065	11.2	YFT	125			3		0.62		0.38					
7	EM	119,647	7,100	5.9	ALB	11					0.70		0.30					
7	EM	119,647	7,100	5.9	ALI				4		0.70		0.30					
7	EM	119,647	7,100	5.9	GEP				4		0.70		0.30					
7	EM	119,647	7,100	5.9	LEC				1		0.70		0.30					
7	EM	119,647	7,100	5.9	MOP				2		0.70		0.30					

7	EM	119,647	7,100	5.9	MZZ				1		0.70		0.30					
7	EM	119,647	7,100	5.9	POA	3					0.70		0.30					
7	EM	119,647	7,100	5.9	SBF	1					0.70		0.30					
7	EM	119,647	7,100	5.9	SWO	15			2		0.70		0.30					
7	EM	119,647	7,100	5.9	TUS	35		3	10		0.70		0.30					
8	EM	**	**	14.9	**	**	**	**	**				1					
NA[f]	EM	**	0	0														
TOTAL		1,108,674	118,106	10.6		2,169[g]	9[g]	126[g]	905[g]		0.62		0.38					

Notes:

a. Values in these shaded cells are repeated for all species within a strata
b. Number of longline hooks
c. Percentage of the number of hooks
d. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
e. TP = tori poles, NS = night setting, WB = weighted branchline
f. Effort outside of areas covered by the CCSBT Statistical Areas
g. Total observed captures only include captures from non-confidential stratums

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Table 6 Logbook interactions between non-target scalefish species and longline shots that took SBT (CCSBT statistical area 2, 4, 7, 8) in 2023 and 2024

2023								
Stratum (CCSBT Statistical Areas)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
2	**	**	**	**	**	**	**	**
4	716,732	ALB	10,149	14.16	9,7617	13.42	61	471
4	716,732	ALI	1,231	1.72	940	1.31	278	13
4	716,732	BET	494	0.69	483	0.67		11
4	716,732	BFT	39	0.05	35	0.05		4
4	716,732	BLM	19	0.03	18	0.03	1	
4	716,732	BRU	21	0.03	21	0.03		
4	716,732	BUM	124	0.17	27	0.04	81	16
4	716,732	CEO	245	0.34	141	0.2	76	28
4	716,732	DOL	48	0.07	48	0.07		
4	716,732	JHX	40	0.06	5	0.01	34	1
4	716,732	LEC	44	0.06	36	0.05	4	4
4	716,732	MLS	38	0.05	36	0.05		2
4	716,732	MOX	3,517	4.91	193	0.27	3,144	180
4	716,732	NXJ	14	0.02	8	0.01		6

4	716,732	OIL	111	0.15	13	0.02	96	2
4	716,732	POA	611	0.85	610	0.85		1
4	716,732	SKJ	13	0.02	13	0.02		
4	716,732	SWO	1,915	2.67	1,770	2.47	65	80
4	716,732	YFT	2,525	3.52	2,438	3.40	3	84
7	**	**	**	**	**	**	**	
NA	**	**	**	**	**	**	**	

2024								
Stratum (CCSBT Statistical Areas)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
2	**	**	**		**		**	**
4	914,539	ALB	11,939	12.68	11,811	12.54	23	105
4	914,539	ALI	720	0.76	634	0.67	86	
4	914,539	BET	202	0.21	199	0.21	3	
4	914,539	BFT	338	0.36	338	0.36		
4	914,539	BRU	89	0.09	89	0.09		
4	914,539	BUM	89	0.09	60	0.06	29	
4	914,539	CEO	142	0.15	76	0.08	65	1

4	914,539	DOL	71	0.08	68	0.07	3	
4	914,539	JHX	51	0.05	9	0.01	42	
4	914,539	MLS	43	0.05	42	0.05		1
4	914,539	MOX	3502	3.72	34	0.04	3366	102
4	914,539	OIL	62	0.07	34	0.04	23	5
4	914,539	POA	1097	1.17	1081	1.15	16	
4	914,539	SKJ	107	0.11	107	0.11		
4	914,539	SSP	58	0.06	52	0.06		6
4	914,539	SWO	2294	2.44	2125	2.27	114	55
4	914,539	YFT	2433	2.58	2413	2.56	15	5
7	119,647	ALB	346	2.89	337	2.82		9
7	119,647	ALI	81	0.68	46	0.38	34	1
7	119,647	BFT	17	0.14	14	0.12		3
7	119,647	BUM	495	4.14	15	0.13	480	
7	119,647	CEO	15	0.13	5	0.04	10	
7	119,647	MOX	85	0.71			85	
7	119,647	POA	22	0.18	22	0.18		
7	119,647	SWO	75	0.63	73	0.61		2
8	**	**	**		**		**	

NA	**	**	**		**		**	

Notes: Capture and mortality rates are given per thousand hooks. Mortalities and mortality rates are based on the number of retained individuals. Releases indicate the number of individuals released alive. Unknown indicates the number of individuals with unknown life status. Data are from shots in the ETBF and WTBF where SBT were caught and only species where 10 or more individuals were caught are reported. FAO 3 alpha species codes can be found at: https://www.fao.org/fishery/en/collection/asfis.
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Observed and non-observed shark interactions

Southern Bluefin Tuna Fishery

Bycatch of sharks during pole-and-line and purse seine fishing (including farm operations) for SBT is minimal. Sharks taken incidentally during purse seining are able to be released before the net is retrieved and fish are transferred to tow cages. Sharks are known to interact with tow cages containing SBT being towed back to farms, and divers work to release these sharks alive.

In the 2022–23 fishing season, one Port Jackson shark was caught and released with unknown life status. In the 2023–24 fishing season, one blue shark was caught and released alive. No interactions between purse-seine vessels and sharks were recorded in logbooks in 2023 and 2024.

Eastern Tuna and Billfish and Western Tuna and Billfish fisheries

Shark catch details from e-monitoring for ETBF and WTBF shots that took SBT are provided in Table 7 for 2023 and 2024. Catches from logbook shots that took SBT are provided in Table 8 for 2023 and 2024. Mitigation measures to reduce shark bycatch are in place in the ETBF and WTBF (see section 7). The catch of sharks for the entire ETBF is reported annually to the WCPFC (e.g. Patterson & D'Alberto 2025). The catch of sharks for the entire WTBF is reported annually to the IOTC (e.g. Blake & Patterson 2025).

Table 7 Observed interactions between shark species and longline shots that took SBT (CCSBT statistical area 2, 4, 7 and 8) in 2023 and 2024

2023		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	**														
4	EM	716,732	73,892	10.3	BSH		9	287	425		0.58		0.42					
4	EM	716,732	73,892	10.3	BTH				1		0.58		0.42					
4	EM	716,732	73,892	10.3	CWZ			1	9		0.58		0.42					
4	EM	716,732	73,892	10.3	MAK			2			0.58		0.42					
4	EM	716,732	73,892	10.3	MSK				1		0.58		0.42					
4	EM	716,732	73,892	10.3	POR		1	2			0.58		0.42					
4	EM	716,732	73,892	10.3	RSK		2	15	30		0.58		0.42					
4	EM	716,732	73,892	10.3	SHK		3	58	171		0.58		0.42					
4	EM	716,732	73,892	10.3	SMA	1		1	1		0.58		0.42					
4	EM	716,732	73,892	10.3	THR			1	1		0.58		0.42					
7	EM	**	**	**	**	**	**	**	**				1					

NA[f]	EM	**	**	**														
TOTAL		775,461	74,492	9.6		1[g]	15[g]	367[g]	639[g]		0.58		0.42					

Notes:

a. Values in these shaded cells are repeated for all species within a strata
b. Number of longline hooks
c. Percentage of the number of hooks
d. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
e. TP = tori poles, NS = night setting, WB = weighted branchline
f. Effort outside of areas covered by the CCSBT Statistical Areas
g. Total observed captures only include captures from non-confidential stratums

** confidential data

2024		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	14.3	**	**	**	**	**		0.68		0.32					
4	EM	941,539	105,065	11.2	BSH		2	35	377		0.62		0.38					
4	EM	941,539	105,065	11.2	CWZ				3		0.62		0.38					
4	EM	941,539	105,065	11.2	MAK	2					0.62		0.38					
4	EM	941,539	105,065	11.2	MSK				1		0.62		0.38					
4	EM	941,539	105,065	11.2	POR		1				0.62		0.38					
4	EM	941,539	105,065	11.2	RSK			1	19		0.62		0.38					
4	EM	941,539	105,065	11.2	SHK	1		3	107		0.62		0.38					
4	EM	941,539	105,065	11.2	SMA	2	1	2	1		0.62		0.38					
4	EM	941,539	105,065	11.2	THR				3		0.62		0.38					
7	EM	119,647	7,100	5.9	BSH		2	16	262		0.70		0.30					
7	EM	119,647	7,100	5.9	MAK		1				0.70		0.30					
7	EM	119,647	7,100	5.9	MSK				1		0.70		0.30					

7	EM	119,647	7,100	5.9	RSK				5		0.70		0.30					
7	EM	119,647	7,100	5.9	SHK				184		0.70		0.30					
8	EM	**	**	14.9	**	**	**	**	**				1					
NA[f]	EM	**	0	0														
TOTAL		1,108,674	118,106	10.6		5[g]	7[g]	57[g]	963[g]		0.62		0.38					

Notes:

a. Values in these shaded cells are repeated for all species within a strata
b. Number of longline hooks
c. Percentage of the number of hooks
d. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
e. TP = tori poles, NS = night setting, WB = weighted branchline
f. Effort outside of areas covered by the CCSBT Statistical Areas
g. Total observed captures only include captures from non-confidential stratums

** confidential data

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Table 8 Logbook interactions between shark species and longline shots that took SBT (CCSBT statistical area 2, 4, 7 and 8) in 2023 and 2024

2023								
Stratum (CCSBT Statistical Area)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
2	**	**	**	**	**	**	**	**
4	716,732	ALV	129	0.180	18	0.025	111	
4	716,732	BRO	46	0.064	18	0.025	28	
4	716,732	BSH	11,615	16.205	1,910	2.665	9,219	486
4	716,732	SKH	1,878	2.620	1,032	1.440	757	89
4	716,732	SMA	119	0.166	57	0.079	62	
4	716,732	TIG	47	0.066	19	0.027	27	1
7	**	**	**	**	**	**	**	**

2024								
Stratum (CCSBT Statistical Area)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
2	**	**	**	**	**	**	**	**

4	941,539	ALV	31	0.33	6	0.006	19	6
4	941,539	BSH	14,172	15.052	1,119	1.188	12,282	771
4	941,539	OCS	31	0.033		0.000	1	30
4	941,539	SKH	307	0.326	21	0.022	286	
4	941,539	SMA	121	0.128	41	0.044	67	13
4	941,539	TIG	82	0.087	4	0.004	76	2
7	119,647	BSH	3,786	31.643	852	7.121	2,627	307
7	119,647	SKH	965	8.065	529	4.42	216	220
7	119,647	SMA	32	0.267	4	0.33	26	2
8	**	**	**	**	**	**	**	**

Notes: Capture and mortality rates are given per thousand hooks. Mortalities and mortality rates are based on the number of retained individuals. Releases indicate the number of individuals released alive. Unknown indicates the number of individuals with unknown life status. Data are from shots in the ETBF and WTBF where SBT were caught and only species where 10 or more individuals were caught are reported. FAO 3 alpha species codes can be found at: https://www.fao.org/fishery/en/collection/asfis.
**confidential data

6 Marine mammals and marine reptiles

The SBTF and the ETBF and WTBF longline fisheries all have a very low incidence of marine mammal and reptile interactions.

Southern Bluefin Tuna Fishery

No interactions with marine mammals or reptiles, observed or non-observed, were recorded in the purse seine fishery in 2023–24 or 2024–25.

Eastern Tuna and Billfish and Western Tuna and Billfish Fisheries

There was one observed interaction with marine reptiles from longline shots where SBT was taken in both 2023 and 2024 (Table 9). There were additional interactions with reptile and mammal species recorded in logbooks shots were SBT was taken in 2023 and 2024 (Table 10). Interactions with marine mammals and reptiles for the entire ETBF are reported annually to the WCPFC (e.g. Patterson & D'Alberto 2025). Interactions with marine mammals and reptiles for the entire WTBF are reported annually to the IOTC (e.g. Blake & Patterson 2025).

Table 9 Observed interactions between marine mammal and reptile species and longline shots that took SBT (CCSBT statistical area 2, 4, 7, 8 and outside stat areas) in 2023 and 2024

2023		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	**														
4	EM	716,732	73,892	10.3	DKK			1			0.58		0.42					
7	EM	**	**	**									1					
NA[f]	EM	**	**	**														
TOTAL		775,461	74,492	9.6				1			0.58		0.42					

Notes:

h. Values in these shaded cells are repeated for all species within a strata
i. Number of longline hooks
j. Percentage of the number of hooks
k. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
l. TP = tori poles, NS = night setting, WB = weighted branchline
m. Caught outside of areas covered by the CCSBT Statistical Areas

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2024		Total & Observed Effort[a]				Observed Captures				Proportion of observed effort with specific mitigation measures[a,e]								
Stratum (*CCSBT Statistical Areas or finer scale*)	Human Observer / EM	Total Effort[b]	Total Observed Effort[b]	Observer Coverage[c]	Species (FAO code)	Fate (*numbers*)				TP + NS	TP + WB	NS + WB	TP + WB + NS	TP	NS	WB	NIL	Others
						Retained (dead)	Discarded (dead)	Released (live)	Other[d]									
2	EM	**	**	14.3							0.68		0.32					
4	EM	941,539	105,065	11.2	TTL			1			0.62		0.38					
7	EM	119,647	7,100	5.9							0.70		0.30					
8	EM	**	**	14.9									1					
NA[f]	EM	**	0	0														
TOTAL		1,108,674	118,106	10.6				1			0.62		0.38					

Notes:

h. Values in these shaded cells are repeated for all species within a strata
i. Number of longline hooks
j. Percentage of the number of hooks
k. All other captures not included in the columns for Retained (dead), Discarded (dead), and Released (live) e.g. released with undetermined life status
l. TP = tori poles, NS = night setting, WB = weighted branchline
m. Caught outside of areas covered by the CCSBT Statistical Areas

** confidential data

Table 10 Logbook interactions between marine mammals and marine reptiles, and longline shots that took SBT (CCSBT statistical area 2, 4, 7, 8 and outside stat areas) in 2023 and 2024

2023								
Stratum (CCSBT Statistical Area)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
4	716,732	DKK	3	0.004		0.000	3	
4	716,732	ZPX	5	0.007		0.000	5	

2024								
Stratum (CCSBT Statistical Area)	**Total effort (no. hooks)**	**Species**	**Captures**	**Capture rate (per 1000 hooks)**	**Mortalities**	**Mortality rate (per 1000 hooks)**	**Releases**	**Unknown**
2	**	**	**	**	**	**	**	**
4	941,539	DKK	1	0.001		0.000	1	
4	941,539	ZPX	1	0.001		0.000	1	
7	119,647	SEK	2	0.025		0.000	2	

Notes: Capture and mortality rates are given per thousand hooks. Mortalities and mortality rates are based on the number of deceased individuals. Releases indicate the number of individuals released alive. Unknown indicates the number of individuals released with unknown life status. Data are from shots in the ETBF and WTBF where SBT were caught. FAO 3 alpha species codes can be found at: https://www.fao.org/fishery/en/collection/asfis. No interactions were recorded in CCSBT Statistical Area 8.
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7 Mitigation measures to minimise seabird and other species bycatch

In Australia, the EPBC Act (1999) is the primary legislation that covers environmental issues, including the ecologically sustainable use of marine resources. The EPBC Act requires that:

- all Commonwealth-managed and State/Northern Territory wild capture marine fisheries with an export component be assessed to determine the extent to which management arrangements will ensure each fishery is being managed in an ecologically sustainable way;
- all Commonwealth-managed fisheries are also assessed to determine the impact of actions taken under a fishery management plan on matters of national environmental significance; and
- all Commonwealth-managed fisheries and any State-managed fisheries that operate in Commonwealth waters should also be assessed to determine the impacts of fishing operations on cetaceans, listed threatened species and ecological communities, migratory species, and listed marine species under the EPBC Act.

The assessments consider the impacts of the fishery on target and non-target species caught and the impacts of fishing on the broader marine environment. Initial and subsequent assessments have been completed for the SBT Fishery, ETBF and WTBF and continue to guide the development of improved management arrangements to reduce the ecological impacts of Australian fisheries catching SBT.

Measures to reduce the ecological impacts of fisheries catching SBT rely initially on the analysis of fishery-dependent and -independent data collected through e-monitoring, observer programs, logbooks and targeted research activities. As more data are collected and the impacts of SBT fishing operations on ERS become clearer, strategies to reduce these impacts continue to be developed and refined.

In this context, Australia has:

- Continued to use catch and effort logbooks to collect data on the catch of target and non-target species.
- Introduced observer programs in the SBT surface fishery (2003), and its longline fisheries targeting SBT (2001 and 2003 for the ETBF and WTBF, respectively), which include specific reporting requirements for protected species.
- Introduced e-monitoring in the longline fisheries (2015) and undertaken research that has shown this is an effective technology for providing required fields in the WCPFC observer program and that the introduction of this technology has greatly improved logbook reporting (Emery et al. 2018, 2019a, 2019b, 2025).
- Initiated a range of at-sea programs to trial strategies to reduce the incidental mortality of seabirds caught during longlining operations (e.g. by increasing hook sink rates).
- Introduced detailed strategies to reduce bycatch and impacts on ecologically related species, performance measures to monitor progress, and reporting and review targets to assess the effectiveness of these strategies, and refine them where necessary. An important part of these

strategies is the development of fishing industry codes of practice to reduce impacts on ERS (see below).

AFMA has completed ecological risk assessments (ERAs) for each fishery managed by the Commonwealth to quantify impacts on ecologically related species and the broader marine environment. Ecological risk management reports for the SBTF, ETBF and WTBF are also available and detail management priorities in those fisheries, based on the results of the assessments. The ERAs rely on existing biological and catch information and consider five ecosystem components: target species, byproduct and bycatch species, protected species, habitats, and communities. The assessments categorise various species as being at high, medium or low risk on the basis of inter alia susceptibility to capture by the various fishing methods, their distribution, and the ability for species populations to recover.

Current measures

Mandatory measures for each fleet

Mitigation measures to minimise seabird bycatch

Seabirds are opportunistic feeders and are attracted to longline vessels, particularly during line setting, but also during line hauling, when the seabirds are at risk of being caught or entangled in the fishing gear. Seabirds are also attracted to discarded offal and are at risk of ingesting still baited hooks being retrieved. The design of purse-seine nets and the way this fishing gear is deployed, means that the risk of seabird bycatch during purse seine fishing operations is very low.

The adverse impact of longline fishing activities on seabirds was not fully realised until the 1980s. The incidental catch of seabirds during pelagic longline fishing operations was listed as a key threatening process on 24 July 1995. Threat abatement plans for this key threatening process have been in place since 1998. The current TAP (2018) requires the ETBF and WTBF to reduce the bycatch of seabirds in oceanic longline operations and maintain a bycatch rate of less than 0.05 seabirds per 1000 hooks in all fishing areas southwards of the parallel of 25°S (by 5° latitudinal bands) and season (1 September–30 April; 1 May–31 August). More recently, Australia has recognised the need to extend our commitment to addressing the incidental catch of seabirds from other fishing methods. Australia has recently developed a National Plan of Action (NPOA) seabirds that applies to all fisheries under Commonwealth jurisdiction and coordinates national action to alleviate the impact of longline fishing activities on seabirds in Australian waters (DAWR 2018).

Considerable progress has been made under successive TAPs to reduce the impact of pelagic longlining on seabirds. The incidental bycatch rates for several fisheries are below the 0.05 birds per 1,000 hooks, which are the maximum permissible levels set as performance criteria that apply to ETBF and WTBF vessels operating in the longline sector of the SBTF. The criteria under the current plan, apply to individual fishing seasons and fishing areas, as relevant. This reduction in bycatch rates has been achieved through the combined efforts of the fishing industry, researchers and non-governmental stakeholders working with government to reduce seabird bycatch in longline fisheries in a feasible, effective and efficient way. The prescriptions in the current plan recognise this success and seek to further reduce the incidental capture of seabirds.

Information on the level and nature of interactions between seabirds and fishing gear has increased significantly since 1995, and there is now extensive information available upon which to base decision-making. Considerable research and development activities have been undertaken into seabird bycatch mitigation measures including at-sea trials. This work could not have been achieved without the continued engagement and support of industry. The prescriptions in the TAP also draw on best and improving practices in seabird bycatch mitigation for pelagic longline fishing developed

under the *Agreement on the Conservation of Albatrosses and Petrels* (ACAP). This international agreement, to which Australia is a Party, aims to achieve and maintain a favourable conservation status for albatrosses and petrels. ACAP has been developed under the auspices of another international agreement, the *Convention on the Conservation of Migratory Species of Wild Animals* (CMS). There is now increased confidence concerning the effectiveness of several mitigation measures, particularly line weighting strategies, use of bird-scaring lines, retention of offal during line setting, and night setting (in certain instances). These mitigation measures form the basis of the prescriptions set out in this TAP.

TAPs must specify actions needed to achieve their objective. Under the current plan:

- AFMA will require all pelagic longline tuna fishers operating within either the ETBF or WTBF, or both fisheries, southwards of the parallel of 25 degrees South to:
    a. employ a line-weighting strategy approved by AFMA that enables the bait to be rapidly taken below the reach of most seabirds;
    b. employ at least one bird-scaring line constructed to a specified standard approved by AFMA, or use another proven mitigation measure approved by AFMA for use without such a line;
    c. not discharge offal during line setting; and
    d. employ, as part of an adaptive management approach to seabird bycatch mitigation, such other mitigation measures as AFMA may stipulate following consultation with the Department of Climate Change, Energy, the Environment and Water (including, but not limited to, use of bird exclusion devices and/or managing offal discharge during line hauling, night setting, and area closures).
- AFMA will continue to require domestic and foreign vessels in all longline 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.
- AFMA will implement an appropriate management response if identified circumstances occur, or data analysis indicates that the performance criteria[3], defined in this threat abatement plan, have not been met in any fishing area[4], season[5] or fishery, or that independent monitoring has dropped below acceptable levels. Consistent with an adaptive management approach, the management response will be implemented as soon as practical, but no later than within three months of identification of a problem.

See Appendix I and II for specific measures required for the ETBF and WTBF in 2025.

Mitigation measures to minimise shark bycatch

Australia developed a NPOA for the Conservation and Management of Sharks (Shark-plan 2004) in line with the FAO International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks). This plan was reviewed and revised in 2012 (Shark plan 2; see section 11). Accordingly,

[3] In the ETBF and WTBF the performance criteria against which achievement of the objectives of the TAP is measured is a bycatch rate of less than 0.05 birds per 1,000 hooks.
[4] Fishing areas within the ETBF or WTBF south of the parallel of 25 degrees South are divided for the purposes of the TAP into five-degree latitudinal bands.
[5] Seasons are defined, for the purposes of the criteria, into summer 01Sep– 30Apr, and winter 01May – 31Aug.

regulations have been put in place in the pelagic longline fisheries to minimise shark bycatch and prevent indiscriminate finning.

The regulations applying to the ETBF and WTBF are:

- A ban on the use of wire leaders.
- A limit of 20 sharks per trip, excluding school shark, gummy shark, elephantfish (Callorhinchidae), chimaerids (Chimaeridae and Rhinochimaeridae) and sawshark. This limit does not apply to great white sharks and grey nurse sharks, which are no-take protected 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.

Note that shortfin makos, longfin makos and porbeagles were listed under the Convention of Migratory Species (CMS) in 2008, which triggered a mandatory legal obligation to list them for protection under Australia's EPBC Act 1999. Listing under the EPBC Act 1999 came into effect on 29 January 2010. As a consequence, in February 2010 all Australian fisheries that interact with these species in Commonwealth waters were assessed under the EPBC Act. The management arrangements for each fishery was reaccredited on the basis that the arrangements in place required all reasonable steps to be taken to ensure that shortfin and longfin makos and porbeagles are not killed or injured as a result of fishing activities. These species may be retained in accredited fisheries if the sharks have come onboard dead. Live caught specimens must be released unharmed and fishers are required to report interactions.

CITES Appendix II listings for sharks and manta rays

The 16th meeting the Conference of Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Bangkok, March 2013) listed a number of shark and manta ray species (oceanic whitetip shark, great, smooth and scalloped hammerhead sharks, porbeagle shark, giant oceanic manta ray and reef manta ray) on Appendix II of CITES (CITES Appendix II lists species that, while not threatened with extinction now, may become so in the future if trade is not regulated). These listings took effect on 14 September 2014. All these species may be encountered by different fishing gears that target tuna and tuna-like species.

The CITES Appendix II listing of shark species does not entail a ban on capture, however the listing does require that any international trade, including any *Introduction from the Sea* (i.e. catch sourced from the High Seas), is informed by a non-detriment finding (which determines the harvest is sustainable and that specimens are accompanied by CITES permits for either their import or export.

Non-detriment findings consider, but are not limited to, standard information on species biology and life history characteristics, historical and current range, population structure, status and trends, information on all sources of mortality and management measures in place.

Since 14 September 2014, Australia has had a non-detriment finding in place for the commercial harvest and export, with national harvest levels set for each of the newly-listed shark species. The manta ray species are not included in the non-detriment finding as they are not retained in Australian fisheries for trade.

The 19th CITES Conference of Parties (Panama, November 2022) adopted proposals to list all species of hammerhead sharks (Family Sphyrnidae), guitarfishes (Family Rhinobatidae) and requiem sharks (Family Carcharinidae) in Appendix II. The listings for guitarfish and hammerhead sharks took effect from 23 February 2023, while the listing for requiem sharks took effect from 25 November 2023.

Overall, 34 species were considered for a non-detriment finding, based on expert scientific advice (DCCEEW 2023). While the findings for all the species considered indicated that current levels of harvest were sustainable and therefore a non-detriment finding was appropriate, additional recommendations were made for some species.

Mitigation measures to minimise sea turtle bycatch

Interactions between sea turtles and pelagic longline fisheries in the AFZ are rare, particularly in areas where SBT are targeted. Guidelines for mitigating the impact of longline fisheries on marine turtles are described under 'Voluntary measures for each fleet', although there is compulsory carriage of line cutters and de-hookers. Interactions with the purse seine fishery are negligible and there has been no need to develop mitigation measures for this sector.

In 2009, Australia formally submitted a mitigation plan, *Eastern Tuna and Billfish Fishery Sea Turtle Mitigation Plan*, for review by the Western and Central Pacific Fisheries Commission Scientific Committee and Technical Compliance Committee, and approval by the Commission. The mitigation plan was submitted under CMM 2008-03 (Conservation and Management of Sea Turtles) and was designed to reduce the interaction rate of turtles in pelagic longline fisheries which target swordfish. It took effect 1 January 2010.

Prior to the start of the 2013 fishing season, AFMA revoked the mitigation plan as the trigger limits established were being breached and the plan was not proving effective. Instead, there is now a requirement for vessels targeting swordfish using shallow sets to use large circle hooks when setting less than 8 hooks per bubble. There is also a requirement that at least one de-hooker and one line cutter be carried at all times.

Mitigation measures to minimise fish bycatch

Effective from 27 July 1998, the commercial take of blue and black marlin was banned under the Fisheries Management Act 1991. Regulations specified that blue and black marlin must be returned to the water irrespective of life status. In addition, specific limits for some species apply (see the management arrangement booklets noted above for further details).

Compliance monitoring system

AFMA's observer program currently places observers on domestic and, if required, foreign vessels fishing within the AFZ and some adjacent areas under international arrangements. Observers are trained in specialised sampling techniques including environmental observations, and are briefed to educate fishers on their responsibilities to complete logbooks and other data sources, and to use mitigation strategies to reduce impacts on ERS. Where EM audit detects an incident of possible non-compliance relevant to ERS species including mitigation requirements, an information report is reviewed by AFMA investigators and actioned accordingly.

AFMA has a responsibility to enforce the provisions of the Fisheries Management Act 1991 and the Torres Strait Fisheries Act 1984 through the detection and investigation of illegal activities by both domestic and foreign fishing boats in the AFZ and Commonwealth-managed fisheries. The Australian Customs and Border Protection Services also patrol waters in the AFZ as part of the Australian Government's anti-illegal fishing strategy.

Level of Compliance

Mitigation measures to minimise seabird bycatch

Australia's level of compliance with measures to minimise seabird bycatch is high, based on e-monitoring, observer and compliance reports. Australia is continuing to conduct research to develop and domestically implement new and more effective seabird mitigation measures and has promoted their adoption by various RFMOs. Australia is compliant with all relevant resolutions and conservation and management measures in the IOTC and WCPFC.

Mitigation measures to minimise shark bycatch

Australia's level of compliance with measures to minimise shark bycatch is high based on e-monitoring, observer and compliance reports. Australia has continued to promote the adoption of shark mitigation measures, such as a ban on wire trace and requiring that sharks be landed with fins attached, in various international meetings. Australia is compliant with all relevant resolutions and conservation and management measures in the IOTC and WCPFC.

Mitigation measures to minimise sea turtle bycatch

Australia's level of compliance with sea turtle mitigation measures is high based on e-monitoring, observer and compliance reports. Australia considers that current sea turtle bycatch management and mitigation measure in place in its pelagic longline fisheries, principally the ETBF and WTBF, fulfil Australia's obligations to *FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations.* In addition, AFMA has provided line cutters and de-hookers to all longline vessels in the ETBF and WTBF, thus ensuring the requirement to carry them is very likely to be met. Australia is compliant with all relevant resolutions and conservation and management measures in the IOTC and WCPFC.

Mitigation measures to minimise fish bycatch

There is a very high level of compliance with the requirement that blue and black marlin be returned to the water (see management arrangement booklets for a complete list of species that cannot be taken). No logbook or EM reviewed reports noted the retention of these species in shots where SBT was caught in 2023 or 2024. In addition, there is a high level of compliance with the State finfish catch restrictions on some species.

Voluntary measures for each fleet

'Industry codes of practice' are in place for a number of fisheries, including the ETBF. These generally include voluntary bycatch mitigation measures together with handling and release guidelines for seabirds, including:

- Puncturing of swim bladders of thawed baits to increase sinking rates
- Gear selection that minimises the probability of seabird bycatch
- Promoting safe handling and release of seabirds caught alive on longlines.

AFMA has run a 'seabird bycatch education program' in the ETBF to teach fishers about fishing practices designed to minimise seabird bycatch, effective line weighting, and correctly assembling/deploying tori lines.

A recovery plan for sea turtles in Australia has been developed by the Australian Government Department of Climate Change, Energy, the Environment and Water. The overall objective of the plan is to reduce the detrimental impacts on Australian populations of marine turtles and hence promote their recovery in the wild.

A video 'Crossing the line: sea turtle handling guidelines for the longline fishing industry' has been produced by the Fisheries Research and Development Corporation to help the Australian longline fishing industry minimise its impact on sea turtle populations. It shows how to use de-hooking devices on deck and on turtles still in the water, how to safely bring turtles aboard and handle them on deck, how to help comatose turtles recover and how to release them back into the water.

Proportion of fleet using voluntary measures

The proportion of the fleets using the voluntary measures is generally thought to be high. This is based on information such as the generally low seabird bycatch in longline fisheries, as well as e-monitoring data reviewed and reported to AFMA.

Measures under development/testing

Australia has conducted a number of scientific trials to further reduce seabird bycatch in longline fisheries, including a variety of line-weighting trials, methods to increase line sink rates and an underwater bait setting machine (e.g. Robertson & van den Hoff 2010; Robertson et al. 2010a, b; Robertson & Candy 2013; Robertson et al. 2013; Robertson et al. 2015). Scientific studies have been conducted to investigate the most appropriate minimum sink rate of line, differences in the sink rates of live and dead baits, the sink rates of different stages of thawed bait and a variety of weighted branchline arrangements.

Previous research on wire versus nylon leaders indicates that catch rates of sharks are significantly reduced when nylon leaders are used (Ward et al. 2008); conversely, catch rates of sharks increase when circle hooks are used instead of tuna hooks (Ward et al. 2009).

Despite the relatively rare occurrence of interactions between pelagic longliners and sea turtles within the AFZ, the Australian Government has recognised the potential for these interactions to threaten the survivability of the species. Australian research quantified the relative effects of circle and tuna hooks on catches of target and common non-target species (Ward et al. 2009). Although not designed to compare capture rates of marine turtles on circle and tuna hooks (owing to the rarity of sea turtle interactions in Australian longline fisheries), results demonstrated that higher catch rates of target species were attained when circle hooks were used (Ward et al. 2009).

8 Public relations and education activities

Public relations activities

All mitigation strategies in place or being trialled by Australia to reduce impacts of SBT fishing on ERS include a level of education and extension to increase their effectiveness. Specific activities to educate fishers on ERS issues are included in the TAP, National Plan of Action for Sharks, and Bycatch Action Plans for both the tuna purse seine and longline fisheries. AFMA's Resource Assessment Groups and Management Advisory Committees are valuable forums in which government, non-government, industry and other stakeholders can discuss current and emerging mitigation strategies.

AFMA staff regularly visit key SBT fishing ports and engage in education and extension activities during these visits. AFMA also provides education materials in the form of brochures, fact sheets, communication post cards, media releases and other written material for extension to fishers and the general public. A large amount of material is made available through the websites of AFMA and the Fisheries Research and Development Corporation (FRDC). Industry representatives are continuing to refine existing codes of practice to reduce the environmental impacts of Australian tuna fisheries.

Communication (media releases, published material, video, public presentations)

AFMA provides education materials in the form of booklets, posters, media releases, educational videos and other written material for further education of vessel skippers and crews. Industry and the general public are able to subscribe to AFMA for electronic media releases and be informed of upcoming extension activities in their local area. A large amount of material is made available through the websites of AFMA and the FRDC. Media releases and other publications are also available.

Education

Training of fishers

Specific activities to educate fishers on ERS issues are included in the TAP, National Plans of Action for Sharks and Seabirds and Bycatch Action Plans for both the tuna purse seine and longline fisheries, and in the Ecological Risk Assessment project.

In addition, fishers are briefed on their responsibilities to complete logbooks and other data submission obligations, and in the requirements for, and use of, mitigation strategies to manage impacts on ERS. This information is passed onto vessel skippers and crews during observer trips and port visits.

Bycatch and discards in the Eastern Tuna and Billfish Fishery are managed under the Fisheries Management Strategy Eastern Tuna and Billfish Fishery (ETBF) 2019 – 2023. Under the strategy, bycatch mitigation, identification and handling workshops have been delivered to ETBF operators. The operational strategies are soon to be updated.

Managers

The Australian Government is committed to the ecologically sustainable development of Australian fisheries and all associated international obligations. On-the-job and specific training is provided to meet this commitment.

Observers

Observers are sourced from universities and maritime industries and require the ability to live and work at sea, have demonstrated experience in collecting biological data at sea, and have experience in fisheries research methodologies and collection of associated scientific data.

Information exchange

Australia is committed to its data exchange obligations, and information exchange in general, and actively encourages open and transparent regional approaches in line with the revised requirements for CCSBT member's annual report to ERSWG, and the Recommendation to Mitigate the Impact on Ecologically Related Species of Fishing for Southern Bluefin Tuna, adopted at the 15th meeting of the Commission in October 2008.

Australia's commitment is also evident in the priority given to meeting data exchange obligations to the WCPFC, IOTC and the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR).

9 Information on other ERS (non-bycatch) such as prey and predator species

In 2001, AFMA initiated the project Ecological Risk Assessment for Commonwealth Fisheries (ERACF). This project undertook ERAs that looked at the impact, both direct and indirect, of fisheries activities on all aspects of the marine ecosystem, which includes prey and predator species. This work forms part of a transition to ecosystem-based fisheries management by AFMA.

The ERA framework details a process for assessing and progressively addressing the impacts that fisheries activities have on five aspects of the marine ecosystem, including:

- target species
- bycatch and byproduct species
- threatened, endangered and protected species
- habitats
- communities.

All ERAs for Australian Government-managed fisheries are now publicly available, as are the management reports detailing the response planned to the results of the ERAs.

10 Other

Not applicable.

11 Implementation of the IPOA-Seabirds and IPOA-Sharks

Australia endorsed the IPOA-Seabirds, and has undertaken 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 three nautical miles offshore to the extent of Australia's EEZ. To manage these interactions, Australia has put in place the TAP. The TAP (2018) is Australia's key national measure for mitigating the impact of longline fisheries on seabird populations, and is consistent with the IPOA-Seabirds. In 2018, an NPOA for Seabirds was also implemented for all fisheries under Commonwealth Jurisdiction.

Australia's National Plan of Action for Conservation and Management of Sharks (NPOA-Sharks) was released in 2004 according to guidelines as set out in the International Plan of Action for the Conservation and Management of Sharks (IPOA-Sharks). As part of the review of Australia's NPOA-Sharks, the Australian Government produced the 2009 Shark Assessment Report (Bensley et al. 2010).

The second Australian NPOA-Sharks (Shark-plan 2) was released in July 2012 and identifies how Australia will manage and conserve sharks. In addition, an operational strategy was developed in conjunction with state and territory jurisdictions and stakeholders to identify what actions will be pursued in order to meet the objectives of the plan.

The most recent review of the NPOA-Sharks was informed by an updated Shark Assessment Report (Wright et al. 2022) and feedback from key stakeholders through the Shark-plan Representative Group. The Australian Fisheries Management Forum, including representatives from the Australian Government, Northern Territory and state fisheries management agencies, adopted the Revised Shark-plan 2 in April 2024. Changes to the Shark-plan recognise that many actions have been completed, including the implementation of legislation to ban the practise of shark finning.

References

Bensley, N, Woodhams, J, Patterson, HM, Rodgers, M, McLoughlin, K, Stobutzki, I & Begg, GA 2009, *Shark Assessment Report for the Australian National Plan of Action for the Conservation and Management of Sharks*, final report to the Department of Agriculture, Fisheries and Forestry, Bureau of Rural Sciences, Canberra, accessed 18 November 2025.

Blake, SAP & Patterson, HM 2025, *Australian national report to the Scientific Committee of the Indian Ocean Tuna Commission for the 2025*, Indian Ocean Tuna Commission, IOTC-2025-SC28-NR-01, Twenty-eighth Session of the Scientific Committee, 1–5 December 2025, Mumbai, India, DOI: 10.25814/mr13-6136, accessed 18 November 2025.

Commonwealth of Australia 2018, *Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (2018)*, Department of the Environment and Energy, Canberra, accessed 18 November 2025.

DAWR 2018, *National plan of action for minimising incidental catch of seabirds in Australian capture fisheries*, Department of Agriculture and Water Resources, Canberra, accessed 18 November 2025.

DCCEEW 2023, *Non-detriment findings for CITES-listed shark and ray species harvested in Australian export fisheries*, Department of Climate Change, Energy, the Environment and Water, Canberra, accessed 18 November 2025.

Emery, TJ, Noriega, R, Williams, AJ, Larcombe, J, Nicol, S, Williams, P, Smith, N, Pilling, G, Hosken, M, Brouwer, S, Tremblay-Boyer, L & Peatman, T 2018, The use of electronic monitoring within tuna longline fisheries: implications for international data collection analysis and reporting, *Reviews in Fish Biology & Fisheries*, vol. 28, pp. 887–907, DOI: 10.1007/s11160-9533-2, accessed 18 November 2025.

Emery, TJ, Noriega, R, Williams, AJ & Larcombe, J 2019a, Measuring congruence between electronic monitoring and logbook data in Australian Commonwealth longline and gillnet fisheries, *Ocean & Coastal Management*, vol. 168, pp. 307–321, DOI: 10.1016/j.ocecoaman.2018.11.003, accessed 18 November 2025.

Emery, TJ, Noriega, R, Williams, J & Larcombe, J 2019b, Changes in logbook reporting by commercial fishers following the implementation of electronic monitoring in Australian Commonwealth fisheries, *Marine Policy*, vol. 104, pp. 135–145, DOI: 10.1016/j.marpol.2019.01.018, accessed 18 November 2025.

Emery, TJ, Noriega, R, Parsa, M, Bromhead, D & Timmiss, T 2025, The capability of electronic monitoring to measure logbook reporting performance and improve data for scientific analyses, Fisheries Research, vol. 291, 107518, DOI: 10.1016/j.fishres.2025.107518, accessed 17 November 2025.

Lawrence, E, Giannini, F, Bensley, N & Crombie, J 2009, Estimation of seabird bycatch rates in the Eastern Tuna and Billfish Fishery, CCSBT-ERS/1203/Info14, Ninth meeting of the CCSBT Ecologically Related Species Working Group, 27–30 March 2012, Tokyo, Japan, accessed 18 November 2025.

Patterson, H & D'Alberto, B 2025, Annual report to the Western and Central Pacific Fisheries Commission Part 1: information on fisheries, research and statistics 2024, WCPFC-SC21-AR/CCM-01, Twenty-first Regular Session of the Scientific Committee of the Western and Central Pacific Fisheries Commission, 13–21 August 2025, Nuku'alofa, Tonga, DOI: 10.25814/b7th-0918, accessed 17 November 2025.

Robertson, G & van den Hoff, J 2010, Static water sink rate trials to improve understanding of sink rates estimated at sea, third meeting of the Seabird Bycatch Working Group, SBWG-3 Doc 31, Agreement on the Conservation of Albatrosses and Petrels, 8–9 April 2010, Mara del Plata, Argentina, accessed 18 November 2025.

Robertson G, Candy, SG & Wienecke, B 2010a, Effect of line shooter and mainline tension on the sink rates of pelagic longlines and implications for seabird interactions, *Aquatic Conservation: Marine Freshwater Ecosystems,* vol. 20, pp. 419–427, DOI: 10.1002/aqc.1100, accessed 18 November 2025.

Robertson G, Candy, SG, Wienecke, B & Lawton, K 2010b, Experimental determinations of factors affecting the sink rates of baited hooks to minimize seabird mortality in pelagic longline fisheries, *Aquatic Conservation: Marine Freshwater Ecosystems*, vol. 20, pp. 632–643, DOI: 10.1002/aqc.1140, accessed 18 November 2025.

Robertson, G & Candy, SC 2013, Does propeller turbulence affect the sink rate of baited hooks and their availability to seabirds in pelagic longline fisheries?, *Aquatic Conservation: Marine Freshwater Ecosystems,* vol. 24, pp. 179–191, DOI: 10.1002/aqc.2373, accessed 18 November 2025.

Robertson, G, Candy, SC & Hall, S 2013, New branch line weighting regimes to reduce the risk of seabird mortality in pelagic longline fisheries without affecting fish catch, *Aquatic Conservation: Marine Freshwater Ecosystems,* vol. 23, pp. 885–900, DOI: 10.1002/aqc.2346, accessed 18 November 2025.

Robertson, G, Ashworth, P, Ashworth, P, Carlyle, I & Candy, SC 2015, The development and operational testing of an underwater bait setting system to prevent the mortality of albatrosses and petrels in pelagic longline fisheries, *Open Journal of Marine Science*, vol. 5, pp. 1–12, DOI: 10.4236/ojms.2015.51001, accessed 18 November 2025.

Ward, P, Lawrence, E, Darbyshire, R & Hindmarsh, S 2008, Large-scale experiment shows that nylon leaders reduce shark bycatch and benefit pelagic longline fishers, *Fisheries Research*, vol. 90, pp. 100–108, DOI: 10.1016/j.fishres.2007.09.034, accessed 18 November 2025.

Ward, P, Epe, S, Kreutz, D, Lawrence, E, Robins, C & Sands, A 2009, The effects of circle hooks on bycatch and target catches in Australia's pelagic longline fishery, *Fisheries Research*, vol. 97, pp. 253–262, DOI: 10.1016/j.fishres.2009.02.009, accessed 18 November 2025.

Wright, D, Davis, K, Blake, S, Emery, T, Butler, I, D'Alberto, B & Woodhams, J 2022, Shark assessment report 2022, ABARES research report, Canberra, DOI:10.25814/yf67-rr23, accessed November 17 2025.

Appendix I

Mandatory seabird mitigation measures in the ETBF 2025

(Source: ETBF Longline Boat SFR Conditions 2025 Season)

At all times you must:

- Carry more than one assembled tori lines onboard
- Comply with seabird interaction obligations relating to the Threat Abatement Plan (TAP).

When you are fishing south of 25°S you must:

- Deploy a tori line before commencing a shot when fishing between the hours of nautical dawn and nautical dusk
- A tori line is not required to be deployed when performing fishing operations between the hours of nautical dusk and nautical dawn
- Use only non-frozen bait
- Set longlines with each branch line having::
  - 40 g or greater within 0.5 m of each hook, or
  - 60 g or greater within 3.5 m of each hook, or
  - 98 g or greater within 4.0 m of each hook, or

a hook-shielding device attached and deployed directly to each hook according to ACAP specifications.

When fishing south of 40°S between 1 September and 30 April you must also:

- Set all longline hooks during hours of darkness (between nautical dusk and nautical dawn)
- Not discharge offal (including discarded bait) while setting
- Not discharge offal while hauling, unless:
  - discharge takes place on the opposite side of the boat to where longlines are hauled, or
  - you have received written authorisation from AFMA for an alternative method that mitigates seabird bycatch risk.

Your tori line must be:

- At least 100 m long
- Must be deployed from a position on board the boat and utilise an additional towed line, material or object to create drag and ensure that it remains above the water surface for a minimum of 75 m from the stern of the boat
- Must have streamers attached to it with a maximum interval between the streamers of 3.5 m

- All streamers must be maintained to ensure that their lengths are as close to the water surface as possible.

Seabird interaction obligations:

Individual vessels that fail to consistently avoid or minimise seabird interactions are subject to additional monitoring and mitigation requirements. AFMA will notify the SFR holder in writing and require additional mitigation measures if the vessel:

- exceeds a seabird bycatch rate of 0.05 birds per 1,000 hooks in any 5 degree zone during any two of the last three consecutive TAP seasons, or
- exceeds the rate in the current TAP season and any of the last three consecutive seasons, or
- takes more than 10 seabirds within the current or previous TAP season, or
- is found to have an unreported seabird interaction.

The additional mitigation measures comprise at least one of the following:

- Night setting (all hooks deployed between nautical dusk and nautical dawn) - except for vessels already required to night set south of 40°S during summer TAP
- Amended line weighting of either:
    - 40 g or greater within 0.5 m of the hook, or
    - 60 g or greater within 1 m of the hook, or
    - 80 g or greater within 2 m of the hook
- ACAP approved hook-shielding devices on all hooks
- A northern shift in area of operation to at least 5 degrees north of the most northerly seabird interaction (as verified and notified by AFMA).

If a vessel on additional mitigation measures subsequently catches one albatross (dead) or two other seabirds (dead), the SFR holder must implement a further measure from the list above, or cease using live bait, or relocate north of 25°S, or cease longline fishing for the remainder of the TAP season.

Additional mitigation measures remain in place until AFMA notifies the SFR holder in writing that the vessel has achieved a seabird bycatch rate of less than 0.05 birds per 1,000 hooks. The measures reapply if the vessel subsequently exceeds the rate in any 5 degree zone within the same TAP season.

Special provisions for fishing south of 40°S during summer TAP (1 September to 30 April)

Vessels fishing in this area are subject to stricter thresholds. If the vessel exceeds 0.05 birds per 1,000 hooks but has taken fewer than 7 seabirds, the additional mitigation measures above apply immediately upon AFMA notification. If the vessel exceeds 0.05 birds per 1,000 hooks and has taken 7 or more seabirds, the vessel must immediately cease fishing south of 40°S until the end of that summer TAP season.

Appendix II

Mandatory seabird mitigation measures in the WTBF 2025

(Source: WTBF Boat SFR Conditions 2025–26 season)

At all times you must:

- Carry two or more assembled tori line onboard
- Not discharge offal while setting
- Comply with any further seabird interaction obligations relating to the Threat Abatement Plan (TAP).

When you are fishing south of 25°S you must:

- Deploy a tori line before commencing a shot when fishing between the hours of nautical dawn and nautical dusk
- A tori line if not required to be deployed when performing fishing operations between the hours of nautical dusk and nautical dawn, unless instructed by AFMA
- Use only non-frozen bait
- Set longlines with each branch line having:
  - 40 g or greater within 0.5 m of each hook, or
  - 60 g or greater within 3.5 m of each hook, or
  - 98 g or greater within 4.0 m of each hook, or

A hook-shielding device attached and deployed directly to each hook according to ACAP specifications.

Tori line specification (your tori line must):

- Have an aerial extent of at least 100 m for vessels ≥35 m, or 75 m for vessels <35 m
- Set up from a position on the boat that allows it to stay above the water for at least 75 m from the stern (generally achieved by a tori pole of 6–7 m in height)
- Have streamers attached at a maximum interval of 3.5 m
- Streamers should be maintained, ensuring that their lengths are as close to the water as possible
- Have a towed line, material or object at the end of the line to give sufficient drag to meet the aerial coverage criteria.

Seabird interaction obligations

Individual vessels that fail to consistently avoid or minimise seabird interactions are subject to additional monitoring and mitigation requirements. AFMA will notify the SFR holder in writing and require additional mitigation measures if the vessel:

- exceeds a seabird bycatch rate of 0.05 birds per 1,000 hooks in any 5 degree zone during any two of the last three consecutive TAP seasons, or
- exceeds the rate in the current TAP season and any of the last three consecutive seasons, or
- takes more than 10 seabirds within the current or previous TAP season, or
- is found to have an unreported seabird interaction.

Additional mitigation measures comprise at least one of the following:

- Night setting (all hooks deployed between nautical dusk and nautical dawn)
- Amended line weighting of either:
    - 40 g or greater within 0.5 m of the hook, or
    - 60 g or greater within 1 m of the hook, or
    - 80 g or greater within 2 m of the hook
- ACAP approved hook-shielding devices on all hooks
- A northern shift in area of operation to at least 5 degrees north of the most northerly seabird interaction (as verified and notified by AFMA).

Escalation: If a vessel on additional mitigation measures subsequently catches one albatross (dead) or two other seabirds (dead), the SFR holder must implement a further measure from the list above, or cease using live bait, or relocate north of 25°S, or cease longline fishing for the remainder of the TAP season.

Additional mitigation measures remain in place until AFMA notifies the SFR holder in writing that the vessel has achieved a seabird bycatch rate of less than 0.05 birds per 1,000 hooks. The measures reapply if the vessel subsequently exceeds the rate in any 5 degree zone within the same TAP season.

Appendix III

Summary of papers submitted by Australia

Not applicable.