

Australian Government Australian Fisheries Management Authority

Application for assessment of the Commonwealth Southern Bluefin Tuna Fishery (SBTF) for approval under the *Environment Protection and Biodiversity Conservation Act 1999* 

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# 1. Introduction

This submission has been produced to enable the Department of Climate Change, Energy, the Environment and Water (DCCEEW) to assess the Southern Bluefin Tuna Fishery (SBTF) management arrangements against the *Guidelines for the Ecologically Sustainable Management of Fisheries* –  $2^{nd}$  *Edition* and the requirements set out in relevant sections of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

The SBTF was declared an approved Wildlife Trade Operation (WTO) under the EPBC Act on 10 November 2004 and has been re-approved seven times. The current WTO accreditation expires on 11 November 2025.

# 2. The Fishery

# 2.1 Description of the fishery

The SBTF encompasses all southern bluefin tuna (SBT) commercial fishing operations inside the Australian Fishing Zone (AFZ) (i.e. out to 200 nautical miles) and on the high seas (Figure 1). Most SBT caught in the fishery (approximately 70-80% of the total catch) are transferred to aquaculture farms near Port Lincoln, South Australia, to be grown out before final harvest. The remainder of Australia's SBT catch is either targeted, or taken incidentally, by pelagic longline vessels operating in the Eastern Tuna and Billfish Fishery (ETBF) and, to a lesser extent, the Western Tuna and Billfish Fishery (WTBF). There is a small proportion of the catch (<1% annually) taken by vessels using minor line gear (trolling, handlining and rod and reel fishing). SBT taken in the ETBF and the WTBF must be taken in accordance with the *Southern Bluefin Tuna Fishery Management Plan 1995* (SBTMP). See Table 1 for an overview of the fishery and how it is managed.

On 31 March 2025, the SBTF was certified as sustainable against the Marine Stewardship Council (MSC) standard v2.01. The fishery is certified for 5 years, subject to successful completion of annual surveillance audits. The final MSC assessment report can be viewed <u>here.</u>



### Area of the Southern Bluefin Tuna Fishery

**Table 1.** Overview of SBTF and how it is managed.

Fishery at a glance	
Target (quota) species	Southern bluefin tuna (Thunnus maccoyii)
Fishing methods	Purse seine, pelagic longline, minor line (handline, troll, rod and reel)
Fishing season	12-month season, beginning on 1 December
No. concessions in 2025	5,324,422 SBT quota statutory fishing rights (SFRs) 34 carrier boat permit holders
No. of active vessels in 2022-23 season	Purse seine: 6 Longline and minor line: 41
Estimated value for 2022- 2023 financial year*	Purse seine \$A 24.76 million (4,712 t) Pelagic longline \$A 7.81 million (1,323 t) Total \$A 32.57 million (6,035 t)
Main markets	Fresh and frozen product - Domestic, Japan, United States, China
Major ports	Ulladulla, Bermagui, Eden, Port Lincoln and various other New South Wales south coast ports.
Stock status	SBT is highly migratory and is assessed as a single stock by the Commission for the Conservation of Southern Bluefin Tuna (CCSBT). The stock is assessed as not overfished and not subject to overfishing*

Fishery at a glance	
Management plan	The fishery is managed under the SBTMP.
Management regime	The SBTF is managed through output controls in the form of individually transferrable quotas which are allocated as SFRs under the SBTMP. Prior to the commencement of each season (1 December to 30 November), AFMA determines a Total Allowable Catch (TAC) of SBT for the domestic commercial fishery based on Australia's national allocation from the CCSBT. Each SFR entitles the holder to receive an equal portion of the TAC set by AFMA for each season, SFR's are fully transferable. Following amendments to the SBTMP in 2020, 5% of Australia's national allocation from CCSBT is set-aside for recreational fishing mortality. Recreational fishing is managed by the relevant states. Through a combination of SFR conditions, directions and regulations, AFMA implements a range of other obligations to manage the broader impacts of fishing on the marine environment (for example requiring bycatch mitigation measures to be implemented) and to support effective monitoring (for example, requiring Vessel Monitoring Systems (VMS) and electronic monitoring (EM).
Management of broader impacts	AFMA's management of broader impacts comprises monitoring and data collection programs, implementing management measures to mitigate bycatch and endangered, threatened and protected species (ETP) interactions, supporting relevant research and undertaking ecological risk assessments (ERAs). In line with <u>AFMA's Fisheries Management Paper 14 - AFMA's approach to Ecological Risk Assessments and Management (Sep 2024)</u> , AFMA consults with its advisory committees on Ecological Risk Management responses to identified high risks. The most recent ERA for the SBTF was completed in 2020.
Consultative mechanism	The Southern Bluefin Tuna Fishery Management Advisory Committee (SBTMAC) is the management advisory body for the SBTF. SBTMAC discusses and provides advice on issues relating to the management of the SBTF.
International obligations and management	Australia is a member of CCSBT. In managing the SBTF, AFMA must have regards to Australia's obligations to CCSBT.

\*Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) 2024 (see also <u>Fishery</u> <u>status reports 2024</u>)

# 2.2 Fishing methods and gear

The main methods used to target SBT include purse seine and pelagic longline. Most catch is taken by purse seine. A very small proportion of the catch (<1% annually) is taken by operators using minor line gear (trolling, handlining and rod and reel fishing).

Purse seine nets are used to target surface schools of SBT. Fish are often located with fish-spotting aircraft, or from a crow's nest aboard a purse seine or pole vessel. At times, support vessels assist in maintaining schools at the surface while the purse seiner sets its net around the school.

A purse seine operation begins by shooting the bunt end of the net from the stern of the vessel, either by attaching a large dan buoy or by using a skiff (Figure 2). The vessel then encircles the school of fish and recovers the first end of the net. The purse line that runs through purse rings attached to the footrope of the net is winched in, enclosing the bottom of the net. A proportion of the net is hauled back onto the vessel with the use of a power block to concentrate the fish into a smaller area beside the vessel. The fish are then transferred to an adjacent towing pontoon which is subsequently towed back to the ranching pontoons off Port Lincoln (Figure 3). These SBT are then grown out and harvested, largely for the sashimi tuna market in Japan. The majority of Australia's total catch of SBT is taken by purse seiners operating in conjunction with the SBT ranching sector.







Pelagic longline fishing involves the use of branch lines attached to a mainline (Figure 4). Each branch line (snood) is fitted with one or more baited hooks. The longline is set in the sea in such a manner that the mainline, branch lines and hooks are suspended in the water column by floats at the sea surface. By setting a different number of hooks between floats, longer float lines and varying line setter and boat speed, fishers can set gear at different depths in the water column allowing them to target different species.

# Figure 4. Illustration of a pelagic longline (a longline [baited] hook is attached to each snood and termed a longline clip).



### 2.3 Target and by-product species

The SBTMP does not authorise fishing for any species other than SBT. If an SBT SFR holder takes another species when fishing for SBT, they must hold the relevant concession that permits the take of that species. Logbook data supported by scientific observer data (Appendix 2b) demonstrates that the purse seine method of fishing is very selective and results in very low bycatch or take of byproduct species. Skipjack tuna are sometimes associated with schools of SBT and are occasionally taken in low numbers. For the reporting period (December 2019-November 2024) there are no logbook reports of the retention of any by-product species by the purse seine method in SBTF. However, observer reports include a level of discards not reported in logbooks. This included large quantities of jellyfish and sponges. Other observer records of discards were usually single occurrences of less than 20kg.

SBT are caught in the pelagic longline and minor line sector of the fishery by boats licensed to fish in the ETBF and WTBF. The take of bycatch and byproduct species associated with pelagic longline and minor line methods when fishing for SBT is managed under the *Eastern Tuna and Billfish Fishery Management Plan 2010* and *Western Tuna and Billfish Fishery Management Plan 2005* and associated arrangements. Minor catches of SBT are also taken by boats licensed in the Commonwealth Trawl Sector (CTS) of the Southern and Eastern Scalefish and Shark Fishery (SESSF). A summary of SBT catches is at Appendix 1.

# 2.4 Value of the fishery

The estimated value of the SBTF in the 2022-2023 financial year was \$32.57 million (catch 6,035 t) (ABARES 2024).

# 3. Management regime

# 3.1 Description of the management regime

Commonwealth fisheries are administered by AFMA under the *Fisheries Management Act 1991* (FMA), *Fisheries Management Regulations 2019*. In line with the FMA, AFMA has determined a <u>statutory management plan</u> for the SBTF. SFRs have been granted under the SBTMP and a person must hold uncaught quota SFRs to fish in the fishery. Quota SFRs are subject to <u>conditions</u>. Through a combination of SFR conditions, directions and regulations, AFMA implements a range of other obligations to manage the broader impacts of fishing on the marine environment (for example requiring bycatch mitigation measures to be implemented) and to support effective monitoring (for example to support the implementation of VMS, EM). Plain English summaries of management arrangements are provided to commercial fishers each year. The guide for the 2024-25 season can be found <u>here</u>.

As noted in section 2.2, the use of pelagic longlines to fish for SBT is permitted under the SBTMP. To fish for SBT using pelagic longline a person must be authorized to fish in the ETBF or WTBF. To operate in the ETBF or WTBF, operators must hold a boat SFR in either the ETBF or WTBF and hold uncaught quota. Management measures designed to manage the broader impacts of longline fishing on the marine environment are implemented through the management arrangements for the ETBF and WTBF. The ETBF and WTBF are subject to a separate accreditation process under the EPBC Act. EPBC Act assessment applications recently (early 2025) for these fisheries are available on DCCEW website (ETBF here, and WTBF here).

Management arrangements implemented for the SBTF, ETBF and WTBF have regard for Australia's obligations to CCSBT of which Australia is a member.

While recreational fishing continues to be managed by the relevant states, a proportion of the catch is set-aside for recreational fishing of SBT (see section 3.4).

# 3.2 Consultation processes

AFMA consults with a range of stakeholders when making key decisions about the fishery and developing fisheries management arrangements. Consultation is primarily undertaken through the <u>SBTMAC</u>.

The SBTMAC membership comprises scientific, industry, recreational fishing and management stakeholders who are appointed following a public application process. Casual observers, together with invited participants, also attend.

The Scientific Committee of CCSBT is the key scientific assessment group for the SBTF and includes representation from member countries of the CCSBT and nominated scientists including the Commonwealth Scientific and Industrial Research Organisation (CSIRO), ABARES and other scientific experts. Representatives from the fishing industry and fisheries management also attend Scientific Committee meetings. This committee provides advice to the CCSBT regarding SBT stocks and the global annual catch of SBT.

The CCSBT holds its annual meeting in October to agree management measures and members' national allocations. It generally occurs before commencement of the Australian fishing season 01 December.

# 3.3 Performance against objectives, performance indicators and performance measures

A statement of the performance of the SBTF against its objectives, performance indicators and performance measures is made annually in AFMA's Annual Report. A copy of the 2023-24 Annual Report can be found on <u>AFMA's website</u>.

# 3.4 Controlling the level of harvest

The harvest of SBT is managed using output controls, specifically by setting a TAC per fishing season, and allocating the TAC equally across all quota SFRs in the fishery.

The SBTMP was amended in October 2020 to incorporate provisions to set-aside 5% of Australia's allocation from CCSBT to account for recreational fishing of SBT. The set-aside amount was based on a national recreational fishing survey that estimated recreational SBT catch was 270 t for the year of the survey (2018-19 fishing season). The 5% recreational set-aside was first implemented in the 2020-21 fishing season, an amount of 311.9 t<sup>1</sup>. Excess in the set-aside amount allows for fluctuation between years in the recreational fishery. The 5% set-aside amount has increased to 365 t in 2023-24. An amount well above the recreational catch (270 t) estimated for the 2018-19 fishing season (see table 2).

The annual 5% set-aside means the AFMA Commission can allocate up to 95% of Australia's national allocation agreed by CCSBT to the commercial fishing industry. Under the terms of the SBTMP, AFMA may set catch limits lower than that set by CCSBT but cannot exceed the national allocation from CCSBT. In determining the TAC and overcatch and undercatch limits, AFMA, in consultation with the SBTMAC, consider Australia's allocation from CCSBT and estimates of all sources of mortality on each stock, including commercial, recreational, charter and traditional fishing impacts where that information is available.

Discard of SBT is subject to conditions across all sectors of the SBTF. In the purse seine sector discarding of SBT other than live release (immediately after capture) is not permitted. Live release in the purse seine sector is allowed subject to Clause 22C of the SBTMP. All dead SBT encountered during purse-seine operations, towing or transfers must be recorded in logbooks and accounted for by quota.

For longline sectors in the ETBF and WTBF only SBT that are alive and vigorous may be released. All dead SBT must be retained except for when fish have been damaged by sharks to the point they are not fit for human consumption. Shark damaged discards are recorded in logbooks. SBT discards from the ETBF and WTBF are detailed in the WTO applications for those fisheries (available on DCCEW website ETBF here WTBF here).

The current TAC in the SBTF for the 2024-25 fishing season is 6,930.25 t.

<sup>&</sup>lt;sup>1</sup> In the 2019-20 season prior to amending the SBTMP, industry voluntarily set aside 250t to allow for recreational fishing of SBT for that season (see table 2)

### Undercatch

Under the SBTMP, undercatch arrangements allow concession holders the option of having unused quota entitlements in a fishing season taken into account in the following fishing season. Undercatch (and Overcatch) arrangements provide concession holders and AFMA with flexibility to manage catches at the end of the fishing season. In the SBTF undercatch is conditional upon the total commercial catch in the fishery (at the end of the season) being either above or below Australia's Effective Commercial Catch Limit<sup>2</sup> minus 20% of the TAC (for that season). If the total commercial catch is above the catch threshold, concession holders are allowed to carry forward 100% of their uncaught holdings into the next season. If the total commercial catch is below the catch threshold, then concession holders may only carry forward a maximum of 20% of their uncaught total quota holdings. These arrangements are consistent with CCSBT's <u>Resolution on Limited Carry forward of Unfished Annual TAC of SBT</u>.

### Overcatch

Under the SBTMP, overcatch arrangements allow concession holders to take a limited amount of catch in excess of their quota holdings following the end of the season. The overcatch arrangements for the 2024-25 season comprise the following settings:

- a) a determined percentage of 5%: The determined percentage (5%) allows fishers to catch up to 5% more than their allocated quota in a season, with this overcatch deducted from the following season's quota at a 1:1 rate.
- b) a determined amount of 100 t: The determined amount (100 t) sets an absolute cap on the excess quota that can be caught, regardless of the percentage or quota holdings. The calculated excess for an SFR holder is determined as the lesser of the determined percentage or the determined amount.
- c) and a determined additional weight of 2 t: Additionally, the determined additional weight (2 t) allows for a further small overcatch beyond the calculated excess, which is deducted from the following season's quota at a higher rate of 2:1.

# 3.5 Harvest strategy

The SBTF is managed in line with the CHSP and the Australian Government Guidelines for the Implementation of the Policy (the Guidelines, 2018; <u>harvest strategy policy and guidelines</u>). The CHSP provides a framework for the development of harvest strategies for key commercial species taken in Australia's Commonwealth fisheries and outlines processes for monitoring and assessing the biological and economic conditions of commercial fish species in relation to fishery specific reference levels (a reference point or points); and pre-determined rules that control fishing activity according to the biological and economic conditions of the fishery (as defined by monitoring or assessment). These rules are referred to as harvest control rules or decision rules.

For jointly managed, international fisheries such as the SBTF, the CHSP further states that AFMA must set Commonwealth fishery catch levels taking into account available science and evidence, the Australian negotiating position, advice from government and any relevant decisions of applicable regional organisations (Regional Fisheries Management Organisations; RFMO). For international

<sup>&</sup>lt;sup>2</sup> Effective Commercial Catch Limit = TAC for the season commencing on 1 December plus the total undercatch amount for the fishery (if any) from the previous fishing season.

stocks, the domestic catch level must be the same or less than that permitted under the relevant international arrangements.

As a highly migratory, single stock, that is subject to an effective internationally agreed management procedure, a domestic harvest strategy for the SBTF is not required.

### CCSBT Management Procedure (Harvest strategy)

In 2011, CCSBT adopted a binding measure to recover the SBT stock to sustainable levels by agreeing to a Management Procedure (MP). A MP is a pre-agreed set of rules that can specify changes to the TAC based on updated monitoring data.

In 2020, CCSBT developed a new MP to guide the setting of global TACs from 2021 onwards. The new MP, known as the "Cape Town Procedure", incorporates new data series and a new rebuilding objective. The new data series comprise changing the recruitment monitoring series from an aerial survey of juveniles to estimates of two-year old abundance from a gene tagging program and incorporating spawning stock estimates from close-kin mark-recapture. The Cape Town Procedure has the following main management parameters (for more information see: <u>Management Procedure CCSBT website</u>):

- The MP is tuned to a 50% probability of achieving a biomass level of 30% of the original spawning stock biomass by 2035;
- The MP is also designed to achieve the original objective of the Bali procedure: i.e. a 70% probability of rebuilding the stock to the interim rebuilding target reference point of 20% of the original spawning stock biomass by 2035;
- The minimum TAC change (increase or decrease) is 100 t;
- The maximum TAC change (increase or decrease) is 3,000 t;
- The TAC will be set for three-year periods; and
- The national allocation of the global TAC to CCSBT members within each three-year period is apportioned according to the <u>Resolution on the Allocation of the Global Total Allowable</u> <u>Catch.</u>

# 3.6 Recovery strategies for overfished stocks

SBT was delisted as Conservation Dependent under the EPBC Act in July 2024. This decision is consistent with the observed rebuilding of the stock that is the direct result of the management measures in place for the global SBT stock.

Since SBT was listed as Conservation Dependent in 2010, the SBT stock:

- a) has recovered to a level above the CHSP default biomass limit reference point, a point below which the risk to the stock is regarded as unacceptably high; and
- b) is expected to rebuild to the target reference point agreed by CCSBT under the MP (a biomass equivalent to 30% of the original Total Reproductive Output (TRO) by 2035 with 50% probability).

The 2020 and 2023 stock assessments estimated SBT to be at 20% and 23% of original spawning stock biomass (TRO) respectively (see section 5.1). As a result, SBT has been classified by ABARES as **not overfished** and **not subject to overfishing** since 2021 (ABARES 2021).

# 3.7 Enforcement of the management arrangements

AFMA's compliance and enforcement program is ultimately designed to maintain the integrity of fisheries management arrangements and protect Australia's fishing resources. AFMA seeks to achieve a level of compliance consistent with its legislative objectives by maximising voluntary compliance and creating effective deterrents to non-compliance.

The main functions of the compliance program include:

- ensuring compliance with AFMA's domestic fisheries management measures;
- ensuring licensed boats comply with fishing conditions within the AFZ;
- ensuring that there are no unlicensed foreign boats operating in the AFZ;
- managing port access for foreign boats; and
- surveillance and apprehension of foreign boats fishing illegally in the AFZ.

The National Compliance and Enforcement Program is conducted via the use of a risk-based approach, which enables AFMA's resources to be targeted to the areas where they are most needed and where they will prove most effective. It involves a series of steps to identify and assess non-compliance risks and then apply appropriate enforcement actions to mitigate these risks.

Risk-based compliance has a range of benefits:

- **improved compliance outcomes** AFMA can tailor or target compliance measures to effectively deal with the most significant non-compliance risks;
- efficiency gains AFMA can tailor or target compliance measures to the most significant risks, ensuring resources are concentrated in the areas where they are most likely to improve compliance outcomes; and
- greater industry support for compliance programs/measures risk management processes are widely understood by the fishing industry and the community as a whole.

In addition to the risk-based approach, it is essential that AFMA maintains a general deterrence program. By maintaining a presence at fishing ports (and at sea), AFMA discourages those members of the fishing community who do not wish to comply with the rules and regulations. It also reassures those who are complying that non-compliant activity is likely to be detected. Further, AFMA officers can assist those wishing to comply (but not knowing how) by providing advice and/or instructions on operators' responsibilities.

In the SBTF, the key compliance risks include VMS non-compliance; quota evasion, logbook reporting requirements and unauthorised fishing. To address these risks, AFMA's compliance program covers the following five main elements:

• Integrated Computer VMS: used to continuously monitor pelagic longline operations and the movement of boats in and out of ports and entries into closed areas. It allows AFMA to contact vessels whose reports are overdue and to ensure that the vessel and VMS is working in accordance

with the conditions imposed on fishing permits. Temporary reporting schedules may be arranged for a vessel whose VMS has stopped working, or the vessel may be directed to return to port.

- Vessel inspections: Random in-port and at-sea inspections are carried out on active vessels in the fishery. Additional inspections may be carried out on targeted vessels if intelligence indicates that further action is warranted.
- Fish receiver inspections: Regular inspections on fish receiver premises are carried out. Additional inspections may be carried out on targeted receivers if intelligence indicates further action is warranted.
- Education and Communication Strategy: An integral part of the National Compliance and Enforcement Program is the development and delivery of communications and education strategies to assist industry in understanding their legislative obligations. By engaging with industry, encouraging compliance and deterring non-compliance, the education and communication strategy is utilised for providers who are willing to comply and may need some assistance to comply.

AFMA enforces compliance through legislative frameworks, including penalties and sanctions such as fines, licence suspensions, or prosecution. Offending vessels or individuals may face immediate penalties or seizure of catch for severe violations. Identified compliance issues are addressed promptly through enhanced surveillance, targeted inspections, and increased industry engagement. Emerging risks are assessed annually to adapt the compliance regime to evolving challenges in fisheries management.

### Audits

At the end of each fishing season AFMA conducts an audit of all farming companies. The level 1 audit includes the following:

- monthly breakdowns of receipt and sale of SBT including mortalities;
- verified counts of SBT conducted during transfer from tow pontoons into farms;
- CCSBT Catch Documentation Scheme (CDS) figures and domestic sales; and
- mortalities recorded by the SBT fish receiver.

Each season, selected farming companies and wild caught fish receivers also undergo a level 2 audit, aiming to capture in excess of 10% of all commercially landed SBT. This audit includes a full assessment conducted by AFMA officers who review company records which may include spreadsheets, feed boat logs, dive logs, sales and export documentation, including CDS documentation. As part of the level 2 audit, two AFMA officers independently recount all video/DVD recorded by AFMA's agent during the verified count of SBT transferred into those farms included in the audit.

# 3.8 Mitigating impacts on the wider ecosystem

A key element of AFMA's strategy to pursue the ecological aspect of Ecologically Sustainable Development is the implementation of ERAs for all fisheries managed by AFMA. These assessments evaluate the impacts of fishing on various components of the marine environment and adopt an ecosystem-based assessment approach. The ERAs facilitate the prioritisation of research, data collection, monitoring needs, and management actions for fisheries, to evaluate and address risks posed by fishing activities on various ecosystem components ensuring they are managed sustainably and efficiently.

The 'Ecological Risk Assessment for the Effect of Fishing' (ERAEF) was developed collaboratively by CSIRO Oceans and Atmosphere (now CSIRO Environment) and the AFMA (Hobday et al., 2007, 2011a). The ERAEF provides a hierarchical framework for thoroughly assessing the ecological risks associated with fishing, evaluating impacts on five revised ecological components: key commercial species, secondary commercial species, byproduct and bycatch species, protected species, habitats, and ecological communities (AFMA 2024, see also <u>Fisheries Management Paper 14</u> - AFMA's Approach to Ecological Risk Assessments and Management).

The risk assessments examine key commercial species, byproduct and bycatch species, protected species, habitats, and communities. The assessments utilise a hierarchical approach that includes Level 1 (SICA) and Level 2 (productivity susceptibility analysis (PSA) and sustainability assessment for fishing effects) analyses. Level 2 PSA is a semi-quantitative analysis of the risk posed by fishing to all individual species, habitats and communities identified in the scoping. The PSA analysis does not take into account management measures currently in fisheries, which can potentially over-estimate the actual risk to some species. A residual risk analysis can then take into account this constraint using guidelines developed by AFMA.

Updating of ERAs is guided by a stepped process whereby Management Advisory Committees (MACs) will review reassessment triggers every four years within a five-year cycle and provide advice to the AFMA's Ecological Risk Management Steering Group (ERMSG) as to the need to update their ERA or seek approval to maintain their existing ERA for another 5 years. Noting the possibility of exceptional circumstances an ERA can be updated at any time in consultation with MACs.

The most recent ERA undertaken for the purse seine sector of the fishery was completed in 2020. A total of 50 species across multiple ecological components were assessed. No high risks were identified for any components assessed in the SBT purse seine sub-fishery from internal activities. The external activities that impacted components were other fisheries on key commercial and protected species, and communities, and aquaculture on protected species and communities (Bullman et al. 2020). Where external hazards are found to be a high risk at level 1 AFMA is not required to conduct a level 2 analysis. However, AFMA is required to ensure *"the relevant authority is aware of such risks"* (AFMA 2024). The ERA identified moderate risk from other fisheries to SBT as a target species. This was due to a level of recreational catch not being accounted for (Bullman et al. 2020). Recreational catch has been included in total SBT mortality since the 2020-21 season (see section 3.4). The ERA report is available on the AFMA website (Ecological Risk Assessment for Effects of Fishing Report for the Southern Bluefin Tuna Fishery: Purse Seine Sub-Fishery 2015-2019).

The most recent ERA for the ETBF is based on data from the 2018 to 2022 fishing seasons, and was completed in 2025 (Sporcic et al., 2025a). The most recent ERA for the WTBF is based on data from the 2018 to 2022 fishing seasons, and was completed in 2025 (Sporcic et al., 2025b) The results of those ERA's can be found on AFMA's website <u>here</u>.

# 3.9 National policies, plans and strategies

A range of national threat abatement plans, recovery plans, policies and international agreements are relevant to the SBTF. The SBTF management arrangements align, and where necessary support the implementation of, these national policies, plans and strategies.

### *3.9.1 Commonwealth Fisheries Harvest Strategy Policy*

The SBTF is managed in line with the CHSP and associated implementation guidelines. For further information see section 3.5 Harvest strategy above.

### 3.9.2 Bycatch species

The key objective of the <u>Commonwealth Fisheries Bycatch Policy (CFBP)</u> is to "minimise fishing-related impacts on general bycatch species in a manner consistent with the principles of ecologically sustainable development and with regards to the structure, productivity, and biological diversity of the ecosystem"<sup>3</sup>. To provide assistance to Australian Government entities (principally the AFMA) in interpreting and implementing the requirements of the CFBP the Australian Government has also created Guidelines for the implementation of the CFBP 2018.

A coordinated effort involving all stakeholders is necessary to address bycatch effectively, so the <u>National Bycatch Policy</u> (separate to the CFBP) emphasises cooperative management between Commonwealth and state authorities in reducing bycatch. AFMA coordinates and liaises with State and Territory Fisheries where applicable and appropriate.

The SBTF is managed in line with CFBP. AFMA's approach and initiatives have evolved over time but broadly fall into the following categories which are described elsewhere in this report:

- monitoring and reporting requirements (see sections 4.1 and 6.1);
- gear limitations and mitigations measures (see section 6.3);
- periodic industry education to improve bycatch handling and identification (see section 7.2); and
- research to improve bycatch reduction and mitigation (see section 9)

### 3.9.3 Endangered, Threatened and Protected Species

### Seabirds

Although there are no recorded (logbook or observed) interactions between purse seine fishing and seabirds, interactions occur in the longline sector.

The incidental catch (or bycatch) of seabirds during oceanic longline fishing operations is listed under the EPBC Act as a key threatening process (since 1995). As a result, the Australian Government has in place a threat abatement plan (TAP) titled *Threat Abatement Plan for the incidental catch (or bycatch) of seabirds during oceanic longline fishing operations (2018)* (seabird TAP). The ultimate aim of the seabird TAP is to achieve a zero bycatch of seabirds, especially threatened albatross and petrel species, in all longline fisheries. Recognising the availability of current mitigation methods, the objective of the

<sup>&</sup>lt;sup>3</sup> Department of Agriculture and Water Resources, 2018

current TAP is to further reduce the seabird bycatch and bycatch rate during oceanic longline fishing operations in the AFZ.

The seabird TAP specifies a range of measures for AFMA to implement. These include: i) requiring the adoption of proven mitigation measures that ensure the performance criteria for each Commonwealth-managed longline fishery are achieved in all areas and seasons; ii) minimum independent monitoring; and iii) adaptive management if performance criteria are exceeded. The seabird TAP defines performance criteria as a maximum permissible bycatch rate at or above which a management response is required. The seabird TAP sets a seabird bycatch rate performance criteria for each of AFMA's longline fisheries (see Table 4 of the seabird TAP). For the purposes of the criteria a season (fishing season) is defined into two periods: Summer 1 September to 30 April and Winter 1 May to 31 August. AFMA has in place management arrangements to implement the seabird TAP requirements (see detail under section 7.2 Mitigating risks to protected species and communities below) and attends, presents and actively participates in the Seabird TAP Stakeholder Working Group annual meetings.

The then Department of Agriculture and Resources also developed the National Plan of Action for Minimising Incidental Catch of Seabirds in Australian Capture Fisheries (<u>NPOA – Seabirds</u>) in 2018. Measures for assessing success under the NPOA – Seabirds considers the impact of the seabird TAP, which are more prescriptive and applicable to the longline fisheries which catch SBT.

### Sharks

Australia's Revised Second National Plan of Action for the Conservation and Management of Sharks (<u>Shark-plan 2</u>) "encourages improved management of shark populations in Commonwealth, state, and Northern Territory waters" (Department of Agriculture Fisheries and Forestry (DAFF) 2025) and aligns with international commitments, including the International Plan of Action for Conservation and Management of Sharks (<u>IPOA-SHARKS</u>). Shark-plan 2 provides guidance to resources users (including fisheries) to improve the conservation and management of sharks by concisely detailing issues for shark conservation and management and identifying actions to address these issues.

AFMA attends the Shark-plan Representative Group which monitors implementation of Shark-plan 2 and provides updates and progress reports against actions. AFMA compile data, information on management arrangements, programs and projects in response to each specific issue and action detailed in Shark-plan 2. This information is available on the <u>Department of Agriculture, Fisheries and Forestry's website</u>.

AFMA implements specific measures to related shark bycatch mitigation (see section 6 Bycatch and section 8 Protected species and threatened ecological communities below).

### Turtles

Although there are no recorded (logbook or observed) interactions between purse seine fishing and marine turtles, interactions occur in the longline sector.

In 2003, the then Department of the Environment and Energy developed a national <u>Recovery Plan for</u> <u>Marine Turtles in Australia</u>. The long-term objective of this plan for the conservation status of marine turtles to improve so that they can be removed from the EPBC Act threatened species list, with interim objectives and actions to achieve this objective also defined. The plan covers an extremely broad range of risks, but it does define fisheries bycatch as a specific action area (Action Area 7). In addition to the operational elements, identified under the Section 3.9.2 Bycatch species, the enabling processes AFMA has in place which support this plan include:

- best practice gear requirements specific to turtles (see section 6.3);
- supporting specific research on turtle mitigation; and
- engagement in and support for RFMOs with respect to turtle mitigation and management.

# 3.10 Changes since the previous assessment

### **Climate Change Adaptation Program**

AFMA's Climate Adaptation Program is implementing a range of measures to incorporate climate change information and risks into decision making frameworks, to ensure that management of Commonwealth fisheries is adaptive to the impacts of climate change (AFMA Climate Adaptation Program). Climate and Ecosystem Status Reports have been developed for a range of Commonwealth fisheries, including the <u>SBTF</u>. These reports are a useful tool to provide an update or indication on the current state (or health) of the environment or ecosystem, relative to longer-term trends or target states. They provide a way to integrate a variety of diverse data into a simple overview that can be easily communicated, providing managers and stakeholders with up-to-date trends for a specific region or ecosystem.

AFMA is also developing a <u>Climate Risk Framework (CRF)</u> in consultation with key stakeholders as an approach to integrate climate risks into formal decision-making processes at AFMA. At its November 2023 meeting, the AFMA Commission approved a proposal to proceed with a trial implementation of the CRF across several Commonwealth fisheries. The CRF involves a four-step process that seeks to:

- 1. Assess the overall risk to a species based on the impacts of climate change and the biological status of the stock using the best available information,
- 2. Consider whether there are sufficiently precautionary measures in the existing science, management or industry adaptation pathways to respond to the impacts of climate change,
- 3. Assess the residual risk to a species, and where required,
- 4. Provide advice to the AFMA Commission on any additional measures required to respond to the impacts of climate change.

AFMA established a Working Group to support the trial implementation of the CRF and provide strategic advice to the AFMA Commission and AFMA management on the development, coordination and implementation of the CRF across Commonwealth fisheries. The Working Group membership includes Dr Beth Fulton, Dr Alistair Hobday, Dr David Smith and Dr Keith Sainsbury, with administrative support from AFMA's Climate Adaptation team.

CCSBT is yet to explicitly account for climate impacts however the MP derived TAC advice is somewhat robust to climate change impacts as the data collection programs monitor spawning (Close Kin Mark Recapture) and recruitment (juvenile gene tagging program). The CCSBT MP is due for review in 2027.

This will provide an opportunity to explore the need for more explicit consideration of climate change impacts in the MP.

### De-listing as Conservation Dependent under EPBC Act

Effective from 11 July 2024, the Minister for the Environment deleted SBT from the Conservation Dependent listing category under the EBPC Act.

# 4. Monitoring and data collection

### 4.1 Data collection, data validation and data monitoring programs

AFMA has established a range of robust monitoring systems, including advanced electronic surveillance, to ensure regulatory compliance and improve the quality of the data collected. Monitoring and data collection programs in the SBTF include logbooks, <u>Catch Disposal Records</u> (CDRs), EM in the pelagic longline sector, VMS, port visits and vessel inspections.

### Daily fishing logbooks

Daily fishing logbooks are completed by the fisher and are a self-reported record of fishing catch and effort, that are specific to the method employed. Details on data collected can be found below including at the links provided.

#### Line Methods

AFMA requires ETBF and WTBF fishers to record all catch, fishing effort and fishing method information in electronic logbooks at sea (Longline.pdf). This includes ETP and Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) listed species. Minor line operators must fill in a paper logsheet from the LN01A or LN01B LN01B logbook (Line Fishing Daily Fishing Log).

#### Purse seine and pole caught fish that are landed to a farm

Fish taken by purse seine or pole methods that are landed to a farm, are recorded in the Australian Purse Seine and Pole Daily Fishing Log – for farmed SBT only – (TPB03A). The Farm Transit Log (SBT03B) is completed by the holder of the SBT carrier boat permit or representative, and provided to AFMA's authorised representative, which undertakes the fish count when fish are transferred from tow pontoons to ranching pontoons. All mortalities that occur during the capture and towing operations must be recorded on the appropriate forms and must be available for inspection if requested by an AFMA officer. In accordance with the SBTMP, SBT can be released from a purse seine net immediately after capture, providing they are alive and vigorous and details of the release are noted in the logbook.

In line with reporting requirements for the CCSBT, a farm stocking form (<u>FSAU</u>) is completed after transfers have taken place.

#### Purse seine and pole caught fish that are not landed to a farm

Fish taken by purse seine methods that are not landed to a farm are recorded in the Purse Seine Daily Fishing Log (<u>PS01A</u>).

Fish taken with the use of pole fishing methods that are not landed to a farm, are recorded in the Australian Purse Seine and Pole Daily Fishing Log (<u>TPB03A</u>).

### Catch disposal records - longline and fish not landed to a farm

CDRs for SBT were introduced in September 1985. The recording details have since been modified to reflect changes in the nature of the SBTF. SBT landed in the longline fishery are recorded in the Pelagic Fisheries CDR (PT02B), and this is used to decrement quota.

All CDRs are signed by the fishing concession holder and the first fish receiver immediately after unloading the catch. CDRs also provide a means to verify logbook data. A copy of the completed catch disposal form must be submitted to AFMA within twenty-four hours of the dispatch of a consignment from the place of unloading.

### Catch disposal records – farmed fish

Catcher boats must complete the SBTF Farm CDR – Purse Seine Boat (<u>SBT02</u>). This form is designed to meet the requirement that operators provide a catch estimate at the start of the tow operation.

In the case of farming operations when SBT are transferred from tow pontoons to the ranching pontoons, a transfer weighing is conducted consistent with the <u>Transfer weighing determination</u>. This includes an average weight of fish applied to a total count of all fish transferred obtained with a video recording carried out by the AFMA contracted monitoring company. The transfer weighing forms the basis of a weight estimate that is recorded in the Farm Disposal Record (<u>SBT04B</u>) and decremented from quota.

### **CCSBT Catch documentation scheme**

In 2008 the CCSBT adopted a <u>Resolution on the Implementation of a CCSBT Catch Documentation</u> <u>Scheme</u>. The resolution came into force on 1 January 2010. The CDS replaced the export based Trade Information Scheme. The aim of the CDS is to prevent SBT caught by Illegal, Unreported and Unregulated fishing practices, from entering the market. The CDS also provides an accurate estimate of total catches for monitoring and compliance purposes.

The CDS applies to all SBT sold domestically or exported. Under the CDS, each whole fish must be tagged (with a uniquely numbered tag), weighed and measured, and have the correct accompanying documentation.

Copies of all documents issued and received are provided to the CCSBT Secretariat on a quarterly basis for compiling into an electronic database. The data from all member countries is analysed annually at the CCSBT Compliance Committee meeting to identify discrepancies and ensure the scheme is preventing illegal SBT catch entering the market.

#### **Observer program**

An AFMA observer program has been in place in the purse seine sector since 2002-03 fishing season. The program aims to meet the domestic observer and the CCSBT requirement to observe at least 10% of the catch. The principal objectives of the observer program are to:

- Monitor and record the day-to-day fishing operations;
- Observe, record and report catch, effort, bycatch and fate of purse seine caught SBT, including monitoring tow operations;
- Collect information on the vessel details including: search gear and methods, and fishing gear;

- Collect biological data from fishing operations; and
- Observe and collect wildlife abundance data
- Observe and collect data on all interactions with ETP species

### **Electronic monitoring**

Electronic monitoring has been implemented in the ETBF and WTBF for all longline boats since 2015. The EM system uses video cameras and sensors to detect and record fishing activity, which is reviewed later to validate logbook catch and effort data, verify catch composition, mitigation methods and reporting of EPBC Act listed species interactions. Footage is selected at random, with the objective of reviewing 10% of catch across the fisheries.

The objective of the EM program is to validate the commercial catch of quota and by-product species; catch interactions with EPBC Act listed species and other bycatch species and discards to quantify the effects of fishing on these species; and the incidence of discarding (including life status) and high grading.

In the years since the introduction of EM, reporting has shown improvements in data collection, compliance and fishers' behaviour that have resulted in improved overall management of the fishery and increased transparency. In 2023, ABARES published an independent <u>evaluation of the reliability</u> <u>of electronic monitoring and logbook data in the ETBF</u>. The analyses and results indicated that the overall congruence (similarity between EM and logbook data) was superior for key commercial species compared to byproduct and bycatch; higher for retained than discarded catch; and higher for ETP groups (e.g., seabirds, turtles, or marine mammals) than at a species taxonomic level. However, the report also noted significant inter-annual and inter-vessel variability in the congruence for some species.

Whilst EM has been implemented in the ETBF and WTBF since 2015, AFMA may direct fishers in the ETBF and WTBF to carry an observer if required.

# 5. Stock Assessments

# 5.1 Key target and byproduct species

CCSBT conducts stock assessments every 3 years. The most recent assessment in 2023 estimated the relative TRO, a proxy for spawning stock biomass, at 23% (with a range of 21-29%) of the initial TRO. This reflects an increase from the 20% (16-24%) estimated in 2020 and 13% (11-17%) in 2017. Despite this positive trend, the stock remains below the level estimated to produce maximum sustainable yield. However, the stock has been assessed to be rebuilding at approximately 5% per year since its low point in 2009 (Hillary et al. 2023).

# 5.2 Distribution and spatial structure of key stocks

The distribution of SBT is well understood, assessed to be a single stock, constrained almost entirely to the southern hemisphere, predominantly in waters between 30° and 50° S. SBT are known to spawn only in the Java Sea, south-east of Java, Indonesia (see figure 5). Spawning takes place annually

between September and April and juvenile SBT migrate down the coast of Australia. During the summer months (December-April), SBT congregate near the surface in the coastal waters off the south coast of Australia moving to deeper waters during winter. Tagging studies suggest young SBT migrate seasonally between the south coast of Australia and the central Indian Ocean. SBT older than 5 years of age are rarely found in nearshore surface waters, and their distribution extends over the southern circumpolar area throughout most of the Pacific, Indian and Atlantic Oceans (CCSBT 2024b).



Figure 5: Stock structure, distribution and movement of SBT in the Indian and Western Pacific Oceans

# 5.3 Estimates of total removals

For the SBTF the reported commercial landed catches for the 2019-20 to 2023-24 fishing seasons are shown in Table 2. The 5% set-aside for recreational catches is also shown in Table 2 (refer to section 3.4 for an explanation of the 5% recreational fishing set-aside).

**Table 2.** SBT commercial catch from 2019-20 to 2023-24 and the 5% set-aside for recreational catches. Source:Commercial catch from AFMA CDR data.

Sector	SBT retained (t)							
Sector	2019-20	2020-21	2021-22	2022-23	2023-24			
Commercial Catch	5,429	5,646	5,972	6,035	6,323			
Recreational Catch set-aside	250	312	312	312	365			

Commonwealth fisheries that have overlapping area of waters with the SBTF include the ETBF, WTBF, Small Pelagic Fishery, SESSF, and the Coral Sea Fishery. Retained catches of SBT within these fisheries has only been recorded in the ETBF, WTBF and Commonwealth Trawl Sector of the SESSF (see Appendix 1). Catches of SBT must be covered with SBT quota.

# 5.4 Indicator by-product species

The SBTMP does not permit the take of any species other than SBT.

# 6. Bycatch

# 6.1 Bycatch composition

Fishers have mandatory reporting requirements to record all byproduct, bycatch, and discards (during fishing, see section 4). Logbook data supported by scientific observer data demonstrates that the purse seine method of fishing, in the area currently fished, is very selective and results in low bycatch or take of byproduct species.

Discard data from AFMA logbooks and observer logbooks between the 2019-20 and 2023-24 fishing seasons are included in Appendix 2a and 2b respectively. Discards of SBT reported in logbooks (see Appendix 2a) relates to live release of fish immediately following capture (see sections 3.4 and 4.1).

For longline fishing in the ETBF and WTBF discards of SBT are only permitted for fish that arrive at the vessel in an alive and vigorous condition or when fish have been damaged by sharks to the point they are not fit for human consumption. Shark damaged discards are recorded in logbooks. SBT discards from the ETBF and WTBF are included in appendix 2a and detailed in the WTO applications for those fisheries (available on DCCEW website ETBF here WTBF here).

# 6.2 Risk assessment on the effects of fishing on bycatch

The most recent ERA for the SBTF, completed in 2020 identified no high risks across any of the ecological components assessed.

As all components included in the ERA were assessed to be at low risk at the Level 1 Scale Intensity Consequence Analysis further risk assessment was not undertaken. For additional information see section 3.8 above.

The most recent ERA's for the ETBF and WTBF were completed in 2025 with 7 and 3 species, respectively, assessed as high risk (Sporcic et al. 2025a, Sporcic et al. 2025b). The results of those ERA's can be found on AFMA's website <u>here</u>. AFMA's Ecological Risk Management responses to these identified risks for the ETBF and WTBF will consider current measures and any potential additional measures in line with <u>AFMA's Fisheries Management Paper 14 - AFMA's approach to Ecological Risk</u> <u>Assessments and Management (Sep 2024)</u>. This process is underway.

# 6.3 Bycatch mitigation measures

Due to highly selective nature of purse seine fishing and consequently the low levels of reported and observed bycatch in the sector, there are no bycatch mitigation measures prescribed for the purse seine method.

The ETBF and WTBF longline fisheries, 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. Management of the ETBF and WTBF aims to mitigate and, where possible, reduce bycatch during fishing operations in line with AFMA's objectives and obligations relating to bycatch (see section 3.9.2). Along with fishery level discarding strategies, this is done through a suite of mitigation and management measures, with specific operational elements detailed below.

### 6.3.1 Gear specifications

Gear limitations designed to reduce bycatch are implemented and enforced through SFR conditions and include:

- **Tori lines** tori lines create a physical and visual barrier around the area where longlines are set, preventing seabirds from accessing the baited hooks.
- Line weighting line weighting is a standard practice in longline fishing to effectively position baited hooks below the diving range of seabirds. The implementation of line weighting facilitates the prompt sinking of baited hooks, reducing the likelihood of seabird interactions.
- Non-frozen bait when fishing south of 25°S only non-frozen bait may be attached to the hooks, to reduce the likelihood of seabird interactions.
- Wire trace prohibition— In 2005, Australia banned the use of wire leaders in the ETBF to reduce shark bycatch.
- **Circle hooks** Circle hooks are specially designed to increase the likelihood of hooking fish in the mouth, unlike traditional J-hooks, which often catch fish deeper in the gut. These are easier to remove and reduces stress on the fish, improving the chances of survival for fish that are released; and can significantly reduce the capture of turtles in longline fishing.
- Line-cutters must be constructed to allow the line to be cut as close to the hook as possible and be a minimum of 1.5 m in length, to minimise immediate harm to bycaught species and ongoing risk from trailing line.
- De-hooking devices must be designed to enable hooks embedded in bycatch species to be removed with minimum damage to the fish or protected species, which includes shielding the barb and having blunt edges. Where more than one size of hook is to be carried, a dehooking device (or devices) must be carried that can be used with all hooks on the boat. The use of linecutters and de-hooking devices are intended to minimize damage to bycatch species and ensure safe handling practices.

Circle hooks, line cutters, and de-hooking devices benefit all species, including fish, marine mammals, turtles, sharks and rays.

### 6.3.2 Additional limitations

Retention bans and limits on a range of bycatch and byproduct species reduce the impact of fishing operations on these species. These are often due to resource sharing agreements with recreational or State fisheries, international measures, conservation status or domestic risks. Full species lists are available in the catch limit section of the ETBF Management Arrangements Booklet and the WTBF Management Arrangements Booklet.

There are several shark-specific measures in place in the ETBF and WTBF. A "fins naturally attached" condition to meet both national and international shark conservation standards is enforced through SFR conditions, where fishers may not carry or possess on their vessel any shark fins are not attached to the shark's carcass. Likewise, it is forbidden to carry, retain or land shark liver unless the carcass from which the liver was obtained is also landed (enforced through the *Fisheries Management Regulations 2019*, section 68).

Additionally, there are limits on the number of sharks that may be taken in a single trip or the size of some shark species taken; and catch limits or retention bans may also be applied to specific shark species or species deemed to be at high ecological risk. SFR conditions further stipulate that non-retained sharks must be released with safe handling protocols to maximize their chances of survival post-release. For further detail, refer to the ETBF Application on ecological sustainability and the WTBF Application on ecological sustainability (available on the DCCEEW website).

### 6.4 Indicator bycatch species

There has been no need identified to use a by-catch species as an indicator species to inform a broader assessment of fishing in the SBTF. As described in this document, the fishery is assessed through a combination of: 1) SBT stock assessment and annual monitoring of indicators (including fishery independent genetic surveys) and 2) ERAs. For certain by-catch and protected species there are national policies in place to guide AFMA's management of those species.

### 6.5 Management actions

#### **Data collection**

Mandatory reporting, verified through observers and EM (see section 4) and enforced through compliance arrangements (see section 3.7) underpin AFMA's bycatch management actions.

#### Bycatch handling

It is the responsibility of fishers to handle bycatch species correctly to maximize their chances of survival. Improper handling practices can significantly reduce survival rates and negatively impact the long-term sustainability of these species. Mistreatment of bycatch is strictly prohibited. Such mistreatment is defined as any action taken or omitted that could likely result in death, injury, or distress to any bycatch species. These requirements are implemented and enforceable through SFR conditions.

To assist fishers, AFMA has developed a range of <u>bycatch handling guides</u> including a <u>video</u> to help ensure that fishers use best practice when handling their bycatch. These guides help fishers understand the importance of bycatch handling and provide helpful information on handling techniques and understanding fishers' obligations.

### Species ID guides and guidebooks

AFMA create, manage and update <u>identification guides and information guidebooks</u> for a range of species, including, sharks, rays, and some fish. Collecting accurate data on bycaught and discarded species, especially if they are ETP, allows ongoing improvement and monitoring of these species.

### **Operational behaviours**

AFMA prepares and circulates guidance for longline fishers on operational behaviours which can limit or reduce seabird interactions. Some of these include hook positions for bait, setting speeds, and voluntary movements in response to seabird risk. Research into operational behaviours which can reduce bycatch interactions across a range of species is ongoing.

### Research

AFMA supports, funds and engages in research to reduce interactions and improve outcomes for bycaught species.

# 7. Live Bait

# 7.1 Capture of live bait

Catching live bait for the purposes of attracting tuna is allowed for in the SBTF. A range of live bait species (*Emmelichthys nitidus*, Trachurus spp., *Sardinops sagax*, Clupea spp., *Scomber australasicus* and *Engraulis australis*) are permitted to be taken; however, the use of frozen sardines, sourced from the South Australian Sardine Fishery is now the preferred method of chumming fish. Logbook records for the 2023-24 fishing season indicate there were no live sardines taken for the purposes of chumming. In the last six years, only 700 kg of pilchards were reported as caught for live bait in the SBTF, all of which was taken in the 2021-20 fishing season.

# 8. Protected species and threatened ecological communities

# 8.1 Fishery impacts on protected species and communities

All concession holders must ensure that, as far as practicable, there is no interaction with a protected species under the EBPC Act during a fishing trip (section 70 of the <u>Fisheries Management Regulations</u> 2019). All interactions with listed species must be recorded (see section 4).

There have been no interactions with species listed under the EPBC Act reported by fishers in purse seine logbooks between 2019-20 and 2023-24. Observer data includes a single interaction with a Blue shark in the 2022-23 fishing season, prior to the species CITES listing taking effect under the EPBC Act on 25 November 2023 (see Appendix 2b). Numerous sharks, seabirds, marine turtles and cetaceans

are reported to interact with longline, and to a lesser extent minor line gear, in the ETBF and WTBF. Protected species interactions for the ETBF and WTBF are detailed in the WTO applications for those fisheries (available on DCCEW website ETBF <u>here</u> WTBF <u>here</u>).

In accordance with the <u>Memorandum of Understanding between AFMA and the Department of the</u> <u>Environment and Heritage</u> AFMA reports quarterly on interactions with protected species on behalf of Commonwealth fishing operators to the DCCEEW. These reports are publicly available on AFMA's website (AFMA ETP quarterly reports).

AFMA conducts ERAs to evaluate the impact of fishing activities on marine species, habitats, and communities. The findings from these assessments are used to prioritise management, research, data, and monitoring requirements of the fishery. The ERA process is detailed in section 3.8 above.

# 8.2 Mitigating risks to protected species and communities

### 8.2.1 Protected species groups

AFMA most commonly manages bycatch and wildlife interactions at a species group level which are designed to address bycatch objectives for groups of related species (e.g. turtles, sharks, birds, cetaceans). The mitigation and management measures above in sections 6.3 and 6.5 apply across multiple species groups. Species which are not ETP thereby also benefit from the mitigation measures and management actions which cover ETP species. This approach also allows for consistent management across fisheries and consideration of cumulative risks, as well as being efficient and cost-effective approaches to managing bycatch.

### Seabirds

All seabirds are protected under the EPBC Act. The management settings to manage seabird interactions across Commonwealth fisheries are comprehensive. In longline fisheries performance is measured against the performance criterion of 0.05 seabirds per 1000 hooks in any fishing area (as specified in the seabird TAP, see section 3.9.3). AFMA's approach involves management action at both a whole of fishery and individual vessel level.

When fishing with longlines the use of tori lines or night setting, specified line weighting regimes, and non-frozen baits are required when fishing south of 25°S, which includes key areas of targeted longline fishing for SBT. AFMA monitors fishing effort and reported seabird interactions across each five-degree latitude fishing area south of 25°S and in each TAP season to ensure fisheries meet the specified performance criteria. AFMA may implement additional conditions (such as area closures, daylight setting bans, or other broadscale management measures as needed) should there be an elevated level of risk beyond that manageable by individual operators.

AFMA takes an individual accountability approach to reducing seabird interactions, with escalating mitigation requirements applying throughout a season for individual operators if pre-defined interaction triggers occur. In any one TAP season, additional mitigation requirements apply to fishers who are above the bycatch rate of 0.05 birds per 1000 hooks in any fishing area who have also:

• exceeded the bycatch rate in successive seasons; or

- interacted with more than 10 seabirds (regardless of life status, species, or conservation status); or
- been found to have an unreported seabird (regardless of life status, species, or conservation status)

Additional mitigation (i.e. in addition to standard mandatory use of tori lines, line weighting, and use of non-frozen bait), if notified by AFMA, comprise either amended line weighting to improve sink rates, night setting, hook shields, or moving the area of operation at least five degrees north of the northern most seabird interaction. If poor performance continues, further additional mitigation will be required. Any additional mitigation must be implemented on the vessel until notified by AFMA.

These arrangements are designed to be responsive to current levels of interactions and risks in the fisheries; and allow adaptive management. Monitoring, encouraging individual accountability, and ongoing assessment of risk during the season facilitates such an adaptive management approach. The ability to respond to changes in risk (for biological or operational reasons) underpins the effective adaptive management in longline fisheries.

### Turtles

All turtles are protected under the EPBC Act. Compulsory circle hooks, line cutters, and de-hookers improve post release mortality for turtles (see section 6.3). Longline fisheries are also managed consistently with the national <u>Recovery Plan for Marine Turtles in Australia</u> (see section 3.9.3) and meet CCSBT requirements for conservation of sea turtles.

### Marine mammals

All cetaceans and seals are protected under the EPBC Act. Although interactions with marine mammals are rare in pelagic longline fisheries including the ETBF and WTBF, most occur due to depredation of tuna on longlines. AFMA continues to monitor interaction levels and assess risk through its ERAs.

### 8.2.2 Species-specific measures

It is prohibited to retain any protected species listed under the EPBC Act. In some cases, mitigation measures and management approaches may be designed for a particular species only. Targeted measures applied for specific ETP species in both the ETBF and WTBF are listed below. For further detail, refer to the <u>ETBF Application on ecological sustainability</u> and the <u>WTBF Application on ecological sustainability</u> (available on the DCCEEW website).

- Retention ban on oceanic whitetip and silky shark
- Retention ban on longfin mako shark, shortfin mako shark and porbeagle sharks, unless dead. Any live shark of this list must be released.
- Maximum limit of 20 sharks per fishing trip in Commonwealth waters, excluding silky shark and oceanic white tip shark where a retention ban is in place; and excluding school shark, gummy shark, elephant fish sawshark which are managed through the Gillnet, Hook and Trap Fishery.

# 8.3 CITES-listed species

SBTF interacts with species that are listed under CITES, Appendix II. In the purse seine sector there have been no interactions with species listed under the EPBC Act reported by fishers in logbooks between 2019-20 and 2023-24. Observer data from the purse seine sector includes a single interaction with a blue shark in the 2022-23 fishing season, prior to the species CITES listing taking effect under the EPBC Act on 25 November 2023 (see Appendix 2b).

The implications of a CITES Appendix II listing include that:

- a positive CITES non-detriment finding (NDF) must be made by Australia's CITES Scientific Authority (DCCEEW) certifying that the harvest of the species will not be detrimental to its survival in the wild
- a CITES export permit issued by Australia's CITES Management Authority under the EPBC Act is required
- listed species must be sourced from a fishery with an approved WTO declaration that is current at the time of harvest.

A positive NDF for the most recently added CITES listed species, shark and rays<sup>4</sup>, that are harvested in Australian export fisheries was made in 2023 (Non-detriment finding report - sharks and rays). In November 2023, the WTO approval for the SBTF was <u>revoked</u> and <u>remade</u> to allow for the continued export of the additional shark and ray listed species. The approval was conditional on adding the following obligation (condition 5):

By 1 July 2024, the Australian Fisheries Management Authority must require that all catch of CITES listed species (including discards where possible) taken in the Commonwealth Southern Bluefin Tuna Fishery is recorded to a species level and that these catches are reported to the Department of Climate Change, Energy, the Environment and Water as part of the annual reporting requirement referred to in Condition 4.

As described above in sections 6.3, 6.5, and 8.2, AFMA has mitigation and management measures in place relevant to all CITES Appendix II taxa taken in the fishery and has arrangements in place to effectively monitor ongoing take and compliance with the mitigation measures (see sections 3.7 and 4 above). Export permit issuance and monitoring are conducted by DCCEEW and DAFF in accordance with Australia's CITES commitments. AFMA reports all catches of CITES Appendix II species to DCCEEW annually in line with the WTO condition above.

# 9. Ecosystem

# 9.1 Ecosystem management actions

The risk of fishing activities in the SBTF for ecosystems, specifically related to habitats and communities is assessed through the ERA process (see Section 3.8).

<sup>&</sup>lt;sup>4</sup> The 19th meeting of the Conference of the Parties to the CITES in 2022 adopted the inclusion of all species of hammerhead sharks (family Sphyrnidae), guitarfish (family Rhinobatidae), and requiem sharks (family Carcharhinidae) in CITES Appendix II

In 2020, habitats and communities in the SBTF were assessed and found to be at low risk from the direct impacts of fishing, including from purse seine methods. As a result of this low-risk classification, no further risk assessments were conducted for the fishery (Sporcic et al., 2025a).

The ERA assessed purse seine fishing to have only minor consequences for benthic environments. Observer data has recorded occasional interactions with benthic species. For the ERA assessment period, observers reported up to 400 kg of sponges and small numbers of demersal organisms like sand crabs and stony corals. These incidents were considered rare over a five-year ERA assessment period and no vulnerable habitats were identified within the fishery's footprint (Sporcic et al., 2025a).

The ERA found broader community components to be at moderate risk from external pressures (ie not fishing in the SBTF)—such as additional fishing of SBT by other fisheries and the removal of small pelagic fish for use in aquaculture feed. It was concluded that while these activities may cause localised changes, the purse seine fishery itself is unlikely to significantly alter overall ecosystem function, especially given that Australian SBT catches have remained stable since the 1990s (Sporcic et al., 2025a)

### 9.2 Management responses

Aside from management measures that mitigate the impact of the fishery on the wider ecosystem which are described throughout this report, no further management actions are planned. The results of the most recent ERA assessed the impacts of the fishery on habitats and communities as low risk.

# 9.3 Marine bioregional plans and marine parks

The SBTF spans the entire AFZ. As a result, the area of the SBTF covers all six Marine Bioregional Areas. However, fishing operations only occur within three of the Marine Bioregional Areas.

1. **Temperate East Marine Parks Network (TEMPN):** There are 8 Australian Marine Parks within this network covering a total area of 383,339 km<sup>2</sup> off the coast of Queensland and New South Wales, including Lord Howe and Norfolk Islands. Similarly, the TEMPN is managed under the <u>Temperate East</u> <u>Marine Parks Network Management Plan 2018</u>, which authorises commercial fishing using purse seine the Special Purpose, Multiple Use and Habitat Protection zones only under a <u>class approval</u>. Purse seine is not authorised in the Lord Howe Habitats Protection Zone.

2. **South-east Marine Parks Network:** This network includes 14 Australian Marine Parks off the coasts of Victoria, South Australia and Tasmania covering a total area of 701,927 km<sup>2</sup>. On 13 February 2025, a new management plan (<u>South-east Marine Parks Network Management Plan</u> 2025) came into effect. Similarly, under a <u>class approval</u>, commercial fishing using Purse seine in all Approved Areas except for Habitat Protection Zone (Macquarie IUCN IV)

3. **South-west Marine Park Network:** There are five Australian Marine Parks off the coast of South Australia and nine off the coast of south-west Western Australia that make up the South-west Network. These marine parks cover 508,371 km<sup>2</sup>. On 01 July 2018, a new management plan (<u>South-west Network Management Plan 2018</u>) came into effect. Similarly under a <u>class approval</u>, commercial fishing using purse seine is approved in all zones, except National Park Zones.



Figure 6. Australian Marine Bioregions.

# 10. Research

AFMA administers an annual budget for research that is prioritised and scoped through fishery advisory committees, which provide advice to the AFMA Research Committee (ARC). The ARC, in alignment with <u>AFMA's Five Year Strategic Research Plan 2023-28</u>, plays a strategic role in providing advice to the AFMA Commission on major fishery and cross-fishery research issues; the strategic direction for research relevant to AFMA's information needs; and recommending research priorities and projects for potential funding through the Fisheries Research and Development Corporation (FRDC).

Research priorities in the SBTF are considered on an annual basis, and the <u>SBTF Strategic Research</u> <u>Plan 2021-2025</u> provides a framework that identifies the key strategic research needs to support AFMA's management goals. The SBTMAC plays a crucial role in identifying research priorities, assessing research proposals, and reviewing the outcomes of relevant research—both for essential stock assessment-type research and other management-related research projects.

Key strategic SBTF research priorities currently funded through the ARC, CCSBT or FRDC are described below.

### SBT Inter-sessional Science 2024-2027 (CSIRO)

This research project provides scientific advice and support to AFMA and SBTMAC and participate in the relevant domestic and international meetings. Participate in planning and technical consultation meetings, CCSBT Extended Scientific Committee and technical meetings and inter-sessional webinars. Other key objectives include:

• Review exceptional circumstances in relation to implementation of the MP.

- Participate in discussion of strategic research and priorities for the CCSBT Scientific Research Program.
- Provide data to the CCSBT data exchange.
- Undertake the routine otolith archiving, ageing and developing age-length keys for the Australian SBT surface fishery and provide data to CCSBT.
- Participate in development of new software and operating models and prepare for running the MP.
- Run the revised Cape Town Procedure to provide TAC advice for 2027-2029.
- Revise reference set and update datafiles for a full stock assessment in 2026.
- Undertake and review a fully updated assessment of stock status.
- Prepare for a review of the MP.

### SBT gene-tagging program (CCSBT)

The CCSBT gene tagging program provides a fishery independent estimate of the absolute abundance of the age-2 cohort, with specified precision, to monitor recruitment and provide data that is one of the key inputs to the stock assessment and MP, both used to recommend the global TAC for the fishery. A pilot study commenced in 2016 and gene-tagging has continued as an on-going monitoring program since 2017.

### SBT Close-Kin Mark-Recapture program (CCSBT)

The Close-Kin Mark-Recapture program includes a separate Indonesian length/age project is an ongoing monitoring program that provide essential data on the adult component of the SBT population for use in stock assessment models and the MP, both used to recommend the global TAC for the fishery. The project includes the collection and genotyping of DNA from muscle tissue samples collected in Indonesia (adults) and Australia (juveniles) to identify parent-offspring pairs and half-sibling pairs on an annual basis. The project also includes the collection and ageing of otoliths from the Indonesian longline fishery to estimate the age distribution of the SBT spawning stock.

#### FRDC Project 2022-101: Understanding SBT Distribution Changes Through Environmental Drivers

This project investigates how environmental factors influence the distribution of SBT. In its first year, 30 Pop-up Satellite Archival Tags (PSATs) were deployed towards the end of the 2022-23 fishing season to assess the suitability of current PSAT technology and to study the movement patterns of SBT in response to environmental drivers.

#### Stereo Video Trial

During 2021, Australia undertook an open tender process to procure a service provider of stereo video technology to trial the cost effectiveness and accuracy of fully automated stereo video systems in situ in Australia's tuna farms. The tender was open to international and domestic service providers. The trial was completed in late 2024 with the final report submitted to CCSBT in November 2024. The trial highlighted several issues meaning questions remain around the confidence in results and cost-effectiveness of using stereo-video for the purposes of quota monitoring in the SBTF farm sector. At present the necessary software is not commercially available.

# **Progress against current Conditions**

The SBTF was last assessed by DCCEEW under section 303FN of the EPBC Act to be an approved WTO in 2020. In accordance with this approval, a set of conditions were made for the fishery's continued operation. Below is a summary of the progress and status in addressing them since the 2020 assessment (Table 3).

**Table 3** Progress on WTO conditions since the last assessment

Conditions for SBTF	Due date	Progress against the condition as of May 2025
<b>Condition 1.</b> Operation of the Commonwealth Southern Bluefin Tuna Fishery must be carried out in accordance with the <i>Southern Bluefin Tuna Fishery</i> <i>Management Plan 1995</i> in force under the <i>Fisheries Management Act 1991</i> (Cth) and the Fisheries Management Regulations 2019 (Cth)		<b>On track.</b> The Fishery continues to be managed in accordance with the Plan in force under the <i>Fisheries Management Act 1991</i> (Cth) and the <i>Fisheries Management Regulations 2019</i> (Cth).
<b>Condition 2.</b> The Australian Fisheries Management Authority must inform the Department of Climate Change, Energy, the Environment and Water of any intended material changes to the Commonwealth Southern Bluefin Tuna Fishery management arrangements that may affect the assessment against which <i>Environment Protection and</i> <i>Biodiversity Conservation Act</i> <i>1999</i> decisions are made.		<b>On track</b> . There have been no material changes to management arrangements that would affect the assessment. As detailed in section "3.10 Changes since the previous assessment" AFMA has established a Climate Adaptation Program and is trialling a Climate Risk Framework. SBT was deleted from the Conservation Dependent listing category under the EBPC Act. A decision made by the Environment Minister.
<b>Condition 3.</b> The Australian Fisheries Management Authority must inform the Department of Climate Change, Energy, the Environment and Water of any intended changes to fisheries legislation that may affect the legislative instruments relevant to this approval.	Ongoing throughout accreditation	There have been no changes, nor are there any plans to change fisheries legislation that may affect the legislative instruments relevant to this approval.
<b>Condition 4.</b> The Australian Fisheries Management Authority must produce and present reports on the Commonwealth Southern Bluefin Tuna Fishery to the Department of Climate Change, Energy, the Environment and Water by 30 August annually, as per Appendix B of the <i>Guidelines for the Ecologically</i> <i>Sustainable Management of Fisheries –</i> <i>2nd Edition</i> .	30 August annually	<b>On track</b> . SBTF annual reports were submitted.

Conditions for SBTF	Due date	Progress against the condition as of May 2025
<b>Condition 5.</b> By 1 July 2024, the Australian Fisheries Management Authority must require that all catch of CITES listed species (including discards where possible) taken in the Commonwealth Southern Bluefin Tuna Fishery is recorded to a species level and that these catches are reported to the Department of Climate Change, Energy, the Environment and Water as part of the annual reporting requirement referred to in Condition 4.	1 July 2024	<b>Complete.</b> AFMA mandates the reporting and collection of data on all target, by-product, bycatch and protected species; including CITES listed species. AFMA has reported this data to the Department as part of its annual reporting requirements under Condition 4.

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# Appended Data Tables

# APPENDIX 1 - RETAINED SOUTHERN BLUEFIN TUNA CATCH DATA

Retained SBT from 2019-20 to 2023-24 fishing seasons. Source: AFMA fishery CDR data and ABARES fishery status reports. \* Includes some minor line catch.

	Sum of retained wt (t)							
Retained catch by gear type	2019-20	2020-21	2021-22	2022-23	2023-24	Total		
Purse seine *	4,586	4,607	4,957	4,712	4,525	23,387		
Longline	843	1,039	1,015	1,323	1,798	6,018		
Commonwealth Trawl Sector, SESSF	-	0.41	-	-	-	0.41		
Grand Total	5,429	5,646	5,972	6,035	6,323	29,405		

# APPENDIX 2a – DISCARDED SOUTHERN BLUEFIN TUNA CATCH DATA (LOGBOOKS)

Discarded SBT from 2019-20 to 2023-24 (note: no non-quota species have been recorded as discarded in SBTF logbooks). Reported discards for the SBTF is for purse seine fishing when fish are released alive from purse seine nets immediately after capture, subject to clause 22C of the SBTMP (see section 4.1) Source: AFMA fishery logbooks. Logbook data is raw (uncleaned) and may contain errors. Dash means no reported catch. Figures are rounded to the nearest tonne, Total column may not equal sum of annual reported catches due to rounding.

Standard fich name	Sum of discarded wt (t)							
Stanuaru fish hame	19/20	20/21	21/22	22/23	23/24	Total		
Quota species- Southern B	Quota species- Southern Bluefin Tuna							
CTS	0	0	-	0	1	1		
ETBF	21	65	87	93	118	383		
GHAT	2	0	0	1	0	4		
SBTF	136	265	30	153	192	776		
WTBF	-	0	1	1	0	3		

# APPENDIX 2b – DISCARDED NON-QUOTA SPECIES CATCH DATA (OBSERVERS)

Discarded by catch species from 2019-20 to 2023-24 in the purse seine fishery. Source: AFMA observer reports. Data is raw (uncleaned) and may contain errors. U – unspecified

Chandend Sick warma	Number of individuals observed							
Standard fish hame	2019-20	2020-21	2021-22	2022-23	2023-24	Total		
Balmain Bug	2	-	-	-	-	2		
Blue Mackerel	-	1	-	_	_	1		
Blue Shark	-	-	-	1	-	1		
Bugs - Shovel nosed and slipper lobsters	-	3	-	-	-	3		
Jellyfish (Rhizostomatidae)	16,500	1	1	-	-	16,502		
Octopuses	-	1	-	_	_	1		
Port Jackson Shark	-	-	1	-	-	1		
Salps (U)	-	11,000	-	-	-	11,000		
Skipjack Tuna	-	12	130	30	200	372		
Spongiid sponges	4	-	-	-	-	4		
Starfish	12	-	-	-	-	12		
Toadfishes (U)	-	-	50	-	-	50		

# APPENDIX 3- FISHING EFFORT

Fishing effort in SBTF from 2019-20 to 2023-24. Source: ABARES fishery status reports.

Effort tupo	Season						
Enorttype	2019-20	2020-21	2021-22	2022-23	2023-24		
Purse seine search hours	1,248	1,101	1,041	1,688	1,165		
Purse seine shots	146	152	145	177	126		
Active Vessels:							
Purse seine	7	7	8	6	5		
Longline	23	20	22	24	27		