

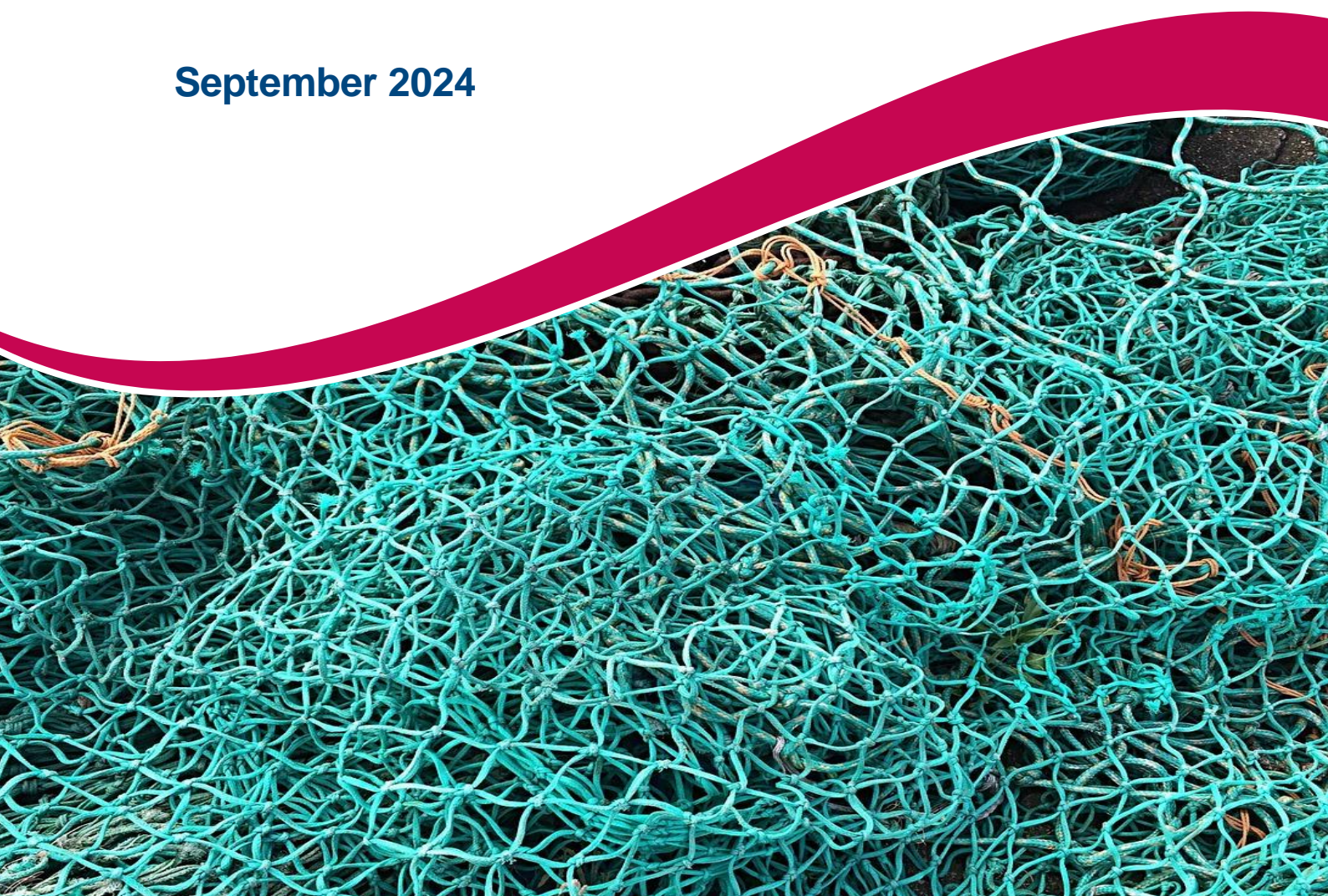


Australian Government

Australian Fisheries Management Authority

AFMA procedure for setting TACCs for tropical tunas in the Eastern Tuna and Billfish Fishery

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About this document

This document sets out the Australian Fisheries Management Authority's (AFMA) procedure for setting total allowable commercial catches (TACCs) for three tropical tuna species in the Eastern Tuna and Billfish Fishery (ETBF). The three tropical tuna species are albacore tuna (*Thunnus alalunga*), bigeye tuna (*Thunnus obesus*) and yellowfin tuna (*Thunnus albacares*).

This procedure has been developed in consultation with the Tropical Tuna Resource Assessment Group (TTRAG; July 2023, September 2023, March 2024 and July 2024) and Tropical Tuna Management Advisory Committee (TTMAC; August 2024). The AFMA Commission agreed to this procedure at its meeting on 12 September 2024.

1 Background

The setting of TACC's for tropical tunas is a key fisheries management process that pursues AFMA's legislative objectives in the ETBF. Under the *Eastern Tuna and Billfish Fishery Management Plan 2010*¹ (ETBF Plan) AFMA must, before the start of each fishing season and for each quota species, determine the TACC and the overcatch and undercatch limits. In determining a TACC, AFMA must consider:

- a) information given by the advisory committee, other interested Australian and international bodies and other interested persons;
- b) the total estimated catch by the commercial, recreational, Indigenous and other users of the fishery;
- c) information about the sustainability of marine species in the area of the fishery;
- d) the Commonwealth Harvest Strategy Policy and ETBF Harvest Strategy;
- e) the precautionary principle;
- f) any decisions made by the Minister or an intergovernmental Ministerial Council about resource sharing in the fishery; and
- g) the likely effect, for the fishing season, of any overcatch permitted.

Since 2013, TACC recommendations for the ETBF tropical tuna species (albacore tuna, bigeye tuna and yellowfin tuna) have been based on the application of an indicators-based and 'whole of government position' approach. In 2013 the then AFMA Commission determined that the harvest strategy originally developed for all five key commercial species in the ETBF would no longer be applied to the tropical tuna species. This change was introduced since the majority of the catch taken within the principal 'region of interest'² to the ETBF for the three tropical tunas is taken by international fleets other than the ETBF.

The procedure outlined in this document maintains the key aspects of the previous approach but provides guidance for setting TACCs for multiple fishing seasons in a single determination (decision). Under this arrangement TACCs still apply for individual fishing seasons, but the TACCs for three fishing seasons are decided at one time (i.e. in one decision). For the purposes of this document, this is referred to as a multi-season TACC decision.

1.1 Commonwealth Harvest Strategy Policy

The Commonwealth Fisheries Harvest Strategy Policy 2018 (the Policy) and associated implementation guidelines aim to ensure key commercial and byproduct fish species are managed for long-term biological sustainability and to maximise the net economic returns to the Australian community – through the implementation of harvest strategies. A harvest strategy, sometimes referred to as a management procedure, sets out a decision framework for fisheries management

¹ [Eastern Tuna and Billfish Fishery Management Plan 2010](#)

² The region of interest is Region 5 within the Western and Central Pacific Fisheries Commission (WCPFC) convention area (see section 1.2).

necessary to achieve defined biological and economic objectives for commercial fish stocks in a fishery. In general, harvest strategies outline:

- processes for monitoring and assessing the biological and economic conditions of commercial fish stocks against fishery-specific reference levels (a reference point or points) and indicators; and
- pre-determined rules that control fishing activity and could include controls on catch, effort, gear and spatial limits. These rules are referred to as harvest control rules or decision rules.

The Policy further states that for jointly managed international stocks, AFMA will set Commonwealth fishery catch levels taking into account available science and evidence; the Australian negotiating position; advice from government; and any relevant decisions of the applicable regional fisheries management organisation (RFMO). For such international stocks, the domestic Commonwealth catch level must be determined at the same or less than that permitted under the relevant international arrangements.

The Australian Government Guidelines for the Implementation of the Policy (the Guidelines, 2018) identify important considerations for determining the likely effectiveness of a domestic harvest strategy for an internationally shared stock including stock structure, trends in foreign fisheries and the proportion of Australian catch. If Australia is a major harvester of the stock and no harvest strategy has been determined internationally, AFMA must develop and implement a domestic harvest strategy consistent with the objectives of the Policy.

The Guidelines state that there is unlikely to be a specific point at which Australia is no longer a major harvester of the stock and a domestic harvest strategy is no longer effective. As general guidance, the Guidelines state that Australian catch shares above 60 per cent would be desirable and catch shares below 30 per cent are unlikely to be an appropriate circumstance for a domestic harvest strategy.

1.2 WCPFC, stock structure and Australia's catch shares

In addition to the objectives AFMA must pursue when administering the *Fisheries Management Act 1991*, AFMA must also have regard to the objective of ensuring that conservation and management measures in the Australian Fishing Zone (AFZ) and the high seas implement Australia's obligations under international agreements that deal with fish stocks. Relevantly, the ETBF is subject to Australia's obligations to the WCPFC. ETBF TACCs for tropical tunas must not be greater than the agreed catch limits set by WCPFC. There are no harvest strategies (or management procedures) agreed by WCPFC for any of the tropical tunas.

The three tropical tunas, managed through individual transferable quotas in the ETBF, are considered to be part of single stocks throughout the WCPFC Convention Area. The Australian share of the catch of each of these stocks is, on average, less than 25 per cent of the total catch within Region 5 of the WCPFC Convention Area. Region 5 is based on two of the nine regions used in WCPFC stock assessments and comprises both the main area fished by the ETBF fleet and a large proportion of both the Coral and Tasman Seas. Average annual (2018-2022; Tremblay-Boyer and Williams, 2023) Australian catches of the albacore tuna, bigeye tuna and yellowfin tuna represent 7 per cent, 25 per cent, and 20 per cent respectively of the total catches of these species within Region 5 of the WCPFC Convention Area.

A domestic harvest control rule-based approach is not recommended for these tuna species as the ETBF contributes a small fraction (catch shares of less than 30 per cent) of fishing mortality on the stock which are internationally managed by the WCPFC; and any changes in ETBF fishing mortality in response to the outcome of a domestic harvest strategy is unlikely to influence the future status of the stock. The successful management of these resources cannot be undertaken by Australia alone and require a regional management approach.

1.3 Historic TACCs and catches of Tropical Tunas in ETBF

Previous, annually determined TACCs for the ETBF tropical tunas have remained unchanged since the introduction of quota management in 2011. One exception to this was an increase of 200 tonnes to the yellowfin tuna TACC in 2016 to account for potential ‘pulse events’³ (**Table 1**). Note also that differences in TACCs in 2018 relate to adjustments made to accommodate a change in the timing of the 12-month fishing season, shifting to commence on 1 January each year instead of 1 March from 2019 onwards. Annual catches for the ETBF tropical tunas have consistently been below the determined TACCs (**Table 2**).

Table 1. Seasonal TACCs (tonnes) for tropical tunas in the ETBF.

Species	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018	2019	2020	2021	2022	2023	2024
Albacore Tuna	2500	2500	2500	2500	2500	2500	2500	2351	2500	2500	2500	2500	2500	2500
Bigeye Tuna	1056	1056	1056	1056	1056	1056	1056	957	1056	1056	1056	1056	1056	1056
Yellowfin Tuna	2200	2200	2220	2200	2200	2400	2400	2054	2400	2400	2400	2400	2400	2400

Table 2. Seasonal catches (tonnes) for tropical tunas in the ETBF.

Species	2011 /12	2012 /13	2013 /14	2014 /15	2015 /16	2016 /17	2017 /18	2018	2019	2020	2021	2022	2023
Albacore Tuna	737	736	783	724	982	1081	987	892	924	1177	1095	1134	835
Bigeye Tuna	458	553	490	509	800	834	451	342	284	308	391	348	235
Yellowfin Tuna	1956	1361	1347	1744	2370	1497	1819	1478	2089	1856	1593	1368	1716

³ Pulse events is a term used by the fishing industry to describe fishing seasons where catch rates of tuna species are unusually high. It is assumed that this is a result of an increase in availability of that species. Pulse events for yellowfin tuna were thought to occur during the 2016 fishing season.

2 AFMA procedure for setting TACCs for tropical tunas in the ETBF

2.1 Scope and approach

This procedure applies to the tropical tuna species subject to quota management in the ETBF, specifically albacore tuna, bigeye tuna and yellowfin tuna. The approach is based on monitoring pre-agreed indicators (the Indicators) and having regard for relevant whole of government positions. This approach is referred to as the *indicator and whole of government position* approach.

The procedure outlines AFMA's process for making multi-season TACC decisions for these species. The approach is considered appropriate on the basis that the TACCs for these species have not fluctuated significantly over the last decade and there are both administrative and industry benefits to streamlining the TACC decision-making process. Multi-season TACC decisions can reduce unnecessary regulatory processes (e.g. associated with administrative decision making) and provide greater operational certainty and stability for industry.

The procedure is designed to include flexibility where changes to the stock, fleet capacity, or international obligations require a multi-season TACC decision to be reviewed and amended. This is achieved by ensuring a subset of indicators continue to be monitored annually.

2.2 Multi-season TACC decisions

Unless otherwise recommended by TTRAG or TTMAC, TACCs for the ETBF tropical tunas (albacore tuna, bigeye tuna and yellowfin tuna) will be set for three consecutive fishing seasons in a single determination by the AFMA Commission (a multi-season TACC decision).

A multi-season TACC decision may be varied by the AFMA Commission, within the 3-year cycle, following consultation with TTRAG and TTMAC. Any variations would be implemented in the next fishing season. There could be several reasons why this may be required, including changes in the operating environment of the fishery or in order to meet Australia's obligations to WCPFC.

2.3 Indicators and review cycle

2.3.1 Indicators

The following indicators are considered by the TTRAG and TTMAC to inform TACC advice for the three tropical tuna species in the ETBF.

Indicator	Description
Catch, and catch relative to TACC	Analyses include spatial and temporal trends, catch relative to other regions, and discards, and catch relative to the TACC. Change in catch can indicate changes in availability/targeting, and allow identification of potential errors in the data.
Effort	Analyses include spatial and temporal trends, bait type, and gear type. This can indicate potential changes in fleet dynamics or targeting strategies, and allow identification of potential errors in the data.
Size	Analyses include spatial and temporal trends, size frequency, and size class. This can indicate potential changes in targeting and patterns in recruitment.
Nominal CPUE	Analyses include temporal trends (annual, seasonal) and can give an idea of general trends in catch rates. This indicator is not indicative of abundance trends.
Economic conditions index	This includes fish price, fuel and bait price, net economic return and GVP for the fishery.
Stock status	A summary of WCPFC assessments, including stock depletion and fishing mortality, is presented to the RAG. This gives a broad stock-wide (WCPFO) view of stock status and fishing pressure relative to reference points.
Standardised CPUE	Analyses include temporal trends and size class trends. This is indicative of relative abundance and patterns in recruitment.
Stock structure	Review of any new and existing information regarding stock structure, and whether species are considered to be single or multiple stocks across the Western Central Pacific Ocean (WCPO).
Climate and ecosystem status	A summary of key research and recent environmental conditions with respect to the impacts of climate change on the ETBF. This includes the sensitivity of key species, abundance projections, climate drivers and environmental factors (e.g, temperature, current strength).

2.3.2 Review cycle

During the multi-season TACC setting year, which will occur every three years, TTRAG will review all the Indicators for all tropical tuna species and provide advice on recommended TACCs to the TTMAC and the AFMA Commission. A reduced set of the Indicators will continue to be reviewed annually by TTRAG. The purpose of the annual indicator review is to enable regular review of the data quality for the fishery and the detection of significant change that may warrant further investigation, management action or alternative TACC advice.

A summary of the Indicators and their review frequency is provided in **Table 3** below.

Table 3. ETBF fishery indicators and TTRAG review frequency

Indicator	TACC setting year (occurs every three years)	Non-TACC setting years
Catch, and catch relative to TACC	Yes	Yes
Effort	Yes	Yes
Size	Yes	Yes
Nominal CPUE	No	Yes
Economic conditions index	Yes	Yes
Climate & Ecosystem Status Report	Yes	Yes
Stock status	Yes	When available from WCPFC
Standardised CPUE	Yes	No
Stock structure	Yes	No

2.4 Implementation

TACCs for ETBF tropical tuna species are determined by the AFMA Commission and are given effect through a legislative instrument. The implementation of this procedure is summarised below:

Under this procedure, in a:

- TACC setting year, TTRAG reviews all indicators, except nominal CPUE, for all species (**Table 3**) and other relevant information; and compiles a full report with their TACC advice for consideration by TTMAC and the AFMA Commission. TTMAC considers the RAG's advice and other management issues and provides TACC advice to the AFMA Commission. The AFMA Commission makes a TACC Determination for 3 consecutive fishing seasons.
- non-TACC setting years, TTRAG considers a reduced set of indicators (**Table 3**) and considers if something has changed significantly in the fishery and the fishery data that may warrant alternative TACC advice. TTRAG may provide TACC advice as required. After consideration by TTMAC, the AFMA Commission may vary the TACC Determination.

3 Review

This procedure will be reviewed periodically on an as needs basis.

4 References

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