MarinTrust Standard V2

Whole fish Fishery Assessment

Australia mixed pelagic fishery, FAO 81, Pacific Southwest: Australian Fishing Zone (AFZ), Small pelagic Fishery eastern and western subareas

MarinTrust Programme
Unit C, Printworks
22 Amelia Street
London
SE17 3BZ
E: standards@marin-trust.com
T: +44 2039 780 819

Table 1 Application details and summary of the assessment outcome

Application details and summary of the assessment outcome			
Name(s): Proteins Australia Pty Ltd.			
Country: Australia			
Email address: jeff@stockfeedsaus.com.au		**Applicant Code**	
Certification Body Details			
Name of Certification Body:		Global Trust Certification	
Assessor Name	**CB Peer Reviewer**	**Assessment Days**	**Initial/Surveillance/ Re-approval**
Léa Lebechnech	Matthew Jew	7 days	Surveillance 1
Assessment Period	To November 2022		
Scope Details			
Management Authority (Country/State)		Australian Fisheries Management Authority (AFMA)	
Main Species		Jack mackerel (*Trachurus declivis*) Blue mackerel (*Scomber australasicus*) Red bait/Cape bonnetmouth (*Emmelichthys nitidus*)	
Fishery Location		FAO 81, Pacific Southwest: Australian Fishing Zone (AFZ), Small pelagic Fishery eastern and western subareas	
Gear Type(s)		Mid-water trawl	
Outcome of Assessment			
Overall Outcome		PASS	
Clauses Failed		NONE	
CB Peer Review Evaluation		Agree with Assessor's evaluation	
Fishery Assessment Peer Review Group Evaluation		Fail. **CAB Note:** this final report has been updated to address FAPRG comments received	
Recommendation		Maintain approval	

Table 2. Assessment Determination

Assessment Determination
If any species is categorised as Endangered or Critically Endangered on IUCN's Red List, or if it appears in the CITES appendices, it cannot be approved for use as Marin Trust raw material. Jack mackerel, blue mackerel, red bait and Australian sardine are not listed as Endangered or Critically Endangered on IUCN's Red List, nor listed in CITES appendices; therefore, all the stock assessed herein are eligible for approval for use as Marin Trust by-product raw material. The Australian Fisheries Management Authority (AFMA) is the Government agency responsible for the efficient management and sustainable use of Commonwealth fish resources. Almost all stocks in the Small Pelagic Fishery (SPF) are managed by both Australian (Commonwealth) and State governments under Offshore Constitutional Settlement (OCS) arrangements. State Governments manage fishing from the Australian coast out to 3 nautical miles including commercial and recreational fishing. AFMA and South East Management Advisory Committee (SEMAC) jointly manage the Small Pelagic Fishery (SPF) in the assessment area. Except for Australian sardine, each target species is assessed in two sub areas, east and west of latitude 146°30', due to evidence of stock separation in the area assessed. The Harvest Strategy Policy applies to management of Commercial species (key commercial and by-product) in Commonwealth fisheries managed by AFMA. Non-commercial bycatch species, general bycatch and Environment Protection and Biodiversity Conservation (EPBC) Act 1999-listed species, are managed under the Bycatch Policy and the Environment Protection and Biodiversity Conservation Act 1999. The harvest strategies are periodically revised to ensure achieve defined biological and economic objectives for commercial fish stocks in a given fishery. A Harvest Strategy (quota species) adopts exploitation rates tested to provide a high probability that target stocks will be maintained, on average, at the target reference point of 50% of unfished levels (B_{50}), with a less than a 10% probability over 50 years of falling below limit reference point of 20% ($0.2B_0$) of unfished levels. All stocks in the assessment area are subject to a species-specific management regime and considered by AFMA to be not subject to overfishing (based on fishing mortality) neither overfished (based on biomass estimate). Jack mackerel, blue mackerel and red bait were assessed as Category A stocks; Australian sardine was assessed as a Category C stock (<5% of landings), and all of them achieve a PASS in all the clauses. Impact on ETPs in the last quarter posted on AFMA website are negligible with just one case reported. As a pelagic fishery, impacts on habitats and ecosystems are minimal and there have not been relevant changes since the last assessment audit. Therefore, jack mackerel (*Trachurus declivis*), blue mackerel (*Scomber australasicus*), red bait (*Emmelichthys nitidus*) and Australian sardine (*Sardinopsis sagax*), are recommended for approval for use in the assessment area under the current Marin Trust Standard v 2.0 for whole fish.
Fishery Assessment Peer Review Comments
The peer reviewer agrees with most scoring which has been clearly addressed and evidenced throughout. However fundamental evidence gaps and confusing scoring rationales provided in Cat A species scoring leads me to recommend overall Fail for this fishery. Unless sufficient evidence is provided for the auditor to scrutinise on state catches and stock assessment documents. **Notes from the CAB**: these comments have been made before this new modified version of the report. New data and information have been obtained and used to modify and finalise it.
Notes for On-site Auditor
N/A

Table 3 General Results

General Clause	Outcome (Pass/Fail)
M1 - Management Framework	PASS
M2 - Surveillance, Control and Enforcement	PASS
F1 - Impacts on ETP Species	PASS
F2 - Impacts on Habitats	PASS
F3 - Ecosystem Impacts	PASS

Table 4 Species- Specific Results

List all Category A and B species. List approximate total percentage (%) of landings which are Category C and D species; these do not need to be individually named here

Category	Species	% landings	Outcome (Pass/Fail)	
Category A	Jack mackerel (*Trachurus declivis*)	40.82%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category A	Blue mackerel (*Scomber australasicus*)	48.36%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category A	Red bait/Cape bonnetmouth (*Emmelichthys nitidus*)	9.66%	A1	PASS
			A2	PASS
			A3	PASS
			A4	PASS
Category C	Australian sardine (*Sardinopsis sagax*)	1.16%	PASS	

Table 5 Species Categorisation Table

Common name	Latin name	Stock	IUCN Redlist Category[1]	% of landings	Management	Category
Jack mackerel	*Trachurus declivis*	Jack mackerel east	LC	40.8	AFMA	A
Blue mackerel	*Scomber australasicus*	Blue mackerel east	LC	48.4	AFMA	A
Red bait/Cape Bonnetmouth	*Emmelichthys nitidus*	Red bait east	LC	9.7	AFMA	A
Australian sardine	*Sardinopsis sagax*	Australian sardine east	LC	1.2	AFMA	C

Species categorisation rationale

Species categorisation has been done following the document "2022 Species categorisation of Small Pelagic Fishery, Small Pelagic Fishery Resource Assessment Group (SPFRAG) Comments on December 07-08-2021".
The percentage of landings differs a little bit from the previous report, but the orders of magnitude are generally respected.
For this report, the assessor decided to consider the average from the last 4 reported fishing seasons (2017-2021) in the same document, as it can be seen below (the information on state and Commonwealth catch composition for 2021-2022 is not available yet):

Australia SPF Stock	Average catches 2017-2021 (t)	Average % 2017-2021
Jack mackerel east	5042.25	40.82
Blue mackerel east	5974.25	48.36
Red bait east	1192.75	9.66
Australian sardine	143.56	1.16
TOTAL	**12352.81**	**100**

Also, the AFMA arrangements for the fishing season 2022-23 have been also consulted to check the species which are included in the management plan.
This species categorisation is also coherent with the last MSC species categorisation from the Public Certification Report (PCR) of 2019, the last MSC surveillance report in 2022, and the approximative catches indicated by the client in 2021.

Blue mackerel, jack mackerel and red bait within the SPF are assessed and managed as separate stocks in the eastern and western subareas of the fishery. The western stocks of blue mackerel, jack mackerel and red bait have not been considered in the species categorization table, as state catches have been either negligible or confidential[2].

For next year's assessment, the most recent catch data from AFMA will be needed.

References:

Small Pelagic Fishery (SPF), Species summaries 2022, SPFRAG Comments. December 07-08-2021: https://afma.govcms.gov.au/sites/default/files/spf_species_summaries_2022_for_spfrag_minutes.pdf

AFMA (ed) 2022, Small Pelagic Fishery Management Arrangements Booklet 2022-23, Australian Fisheries Management Authority. Canberra, Australia: https://www.afma.gov.au/sites/default/files/final_-_small_pelagic_fishery_mab_2022-23.pdf

MRAG Americas, Inc.2019. South East Australia Small Pelagic Fishery (Commonwealth).MSC Fishery Assessment. Public Certification Report: https://fisheries.msc.org/en/fisheries/south-east-australia-small-pelagic-fishery-commonwealth-mid-water-trawl/@@assessments

[1] https://www.iucnredlist.org/

[2] Confidentiality is implemented when there are too few operators. All data involving catch information and fishing entitlement use that could reveal the identity of a fisher is confidential and can only be released with their consent. Data can be requested via formal processes. Otherwise catch is reported as required for management purposes/license conditions.

AFMA, 2008 (last revised 2022). Small Pelagic Fishery Harvest Strategy: https://www.afma.gov.au/sites/default/files/uploads/2017/04/spf-harveststrategy-2017-review.pdf

MANAGEMENT

The two clauses in this section (M1, M2) relate to the general management regime applied to the fishery under assessment. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. A fishery must meet all the minimum requirements in every clause before it can be recommended for approval.

M1	Management Framework – Minimum Requirements		
	M1.1	There is an organisation responsible for managing the fishery.	Yes
	M1.2	There is an organisation responsible for collecting data and assessing the fishery.	Yes
	M1.3	Fishery management organisations are publicly committed to sustainability.	Yes
	M1.4	Fishery management organisations are legally empowered to take management actions.	Yes
	M1.5	There is a consultation process through which fishery stakeholders are engaged in decision-making.	Yes
	M1.6	The decision-making process is transparent, with processes and results publicly available.	Yes
		Clause outcome:	**PASS**

Except for some updates made, the following information remains the same as last year's report, as no major changes occurred in the fishery. The data have been checked and confirmed with the MSC PCR from 2019, and the last surveillance audit (2022), which cover and certify exactly the same fishery, same vessel and processor: Saints Antonio and Guiseppe (one vessel) landing product in Ulladulla for processing by Stockfeeds Australia Pty Ltd in Moruya NSW.

M1.1 There is an organisation responsible for managing the fishery.

The Australian Fisheries Management Authority (AFMA) is the Government agency responsible for the efficient management and sustainable use of Commonwealth fish resources. AFMA was established under the Fisheries Administration Act 1991, following a comprehensive review of the way Commonwealth fisheries were managed. The AFMA Commission sets the Total Allowable Catch (TAC) limits for seven stocks in the small pelagic fishery for the 2022-23 fishing season, which runs from 1 May 2022 to 30 April 2023. All TACs remain similar to the previous fishing season (except for red bait east, which TAC increased from 3440 to 5370 t) and include an updated biomass estimate for blue mackerel east and Australian sardine that allows for the maximum harvest for these stocks.
TACs are set in accordance with SPF Harvest Strategy and based on the best available science.
They also consider advices from the Small Pelagic Fishery Resource Assessment Group (SPFRAG) and the South East Management Advisory Group (SEMAC). These both provide advice to the AFMA Commissioners who make the final decisions.
In the eastern sub-region, the three main species are managed in a multijurisdictional manner (i.e. managed by both the Australian and state governments) under Offshore Constitutional Settlement arrangements.

Therefore, there is an organisation responsible for managing the fishery, so it PASSES clause M1.1.

M1.2 There is an organisation responsible for collecting data and assessing the fishery.

TACs are set in accordance with SPF Harvest Strategy and based on the best available science. The South Australian Research and Development Institute (SARDI) Fisheries Science Program provides scientific advice to state and Commonwealth Governments about the sustainable management of Australia's fisheries resources. Management considers advice from the SPFRAG and SEMAC. From 2019, the SPFRAG become primary source of scientific and economic advice to AFMA regarding this fishery.
Therefore, the main duties are:

- Small Pelagic Fishery TAC determination
- Small Pelagic Fishery RAG advice
- Commission decisions

AFMA requires accurate and comprehensive data collection that is used in stock assessments and to inform species TACs, or other species-specific management measures. Fishers must accurately record all the relevant information about each fishing operation and catch data in paper or electronic logbooks that are specific for mid-water trawl and eastern area. From January

2019, the use of electronic logbooks is compulsory for SPF mid-water trawl. Skippers are also required to fill in Catch Disposal Record (CDR) forms at landing and the quantities of fish landed are verified by the authorized fish receiver.
In addition to the fishery-dependent data collection, onboard scientific independent observers are employed by AFMA to collect reliable and accurate data on fishing operations, and on catch composition for the retained or discarded parts of the catch (https://www.afma.gov.au/monitoring-enforcement/observer-program) of each fishing trip. Observer coverage for 2020/2021 was 10% for mid-water trawler vessels. Vessels in the SPF must carry an AFMA observer when requested by AFMA. Usually, observer coverage of at least 20% of the effort for SPF mid-water trawl, allows the collection of reliable information on catch composition and identification of any increase in risk to main species (e.g. increase in percentage contribution to total catch).
All vessels are required to be fitted with AFMA approved VMS units which must remain switched on at all times that the boat is nominated to a Commonwealth concession, including when in port or engaged in State fishing. VMS data allows knowledge of catch record and effort in the fishery and of interactions with large animals, the spatial distribution of the catch and ensures compliance with spatial management measures (AFMA, 2022).
Electronic monitoring systems (such as cameras) are used as independent verification of logbooks data and it has been compulsory for mid-water trawl vessels since 2015. If an AFMA observer is not present, a minimum of 10 percent of trawling fishing activity recorded by electronic monitoring will be independently reviewed across the fishery to verify interactions with protected species.

Therefore, there is an organisation responsible for collecting data and assessing the fishery, so it PASSES clause M1.2.

M1.3 Fishery management organisations are publicly committed to sustainability.

The Fisheries Management Act 1991 (FM Act) is one of the most important documents relating to the management of Commonwealth fisheries and the SPF fishery. It sets outs AFMA's legislative responsibility for the efficient management and sustainable use of Commonwealth fish resources on behalf of the Australian community. Also sets out the legislative basis for SFR's, licenses and permits. Its Part 1 (Preliminary), Section 3A Principles of ecologically sustainable development, gives legal empowerment to AFMA to develop sustainability objectives.
These principles state that:

- Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equity considerations
- If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- The principle of inter-generational equity: the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations
- The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making

Therefore, fishery management organisations are publicly committed to sustainability, so the fishery PASSES clause M1.3.

M1.4 Fishery management organisations are legally empowered to take management actions.

AFMA Objectives (Fisheries Management Plans) are set out in Section 3 of the FM Act (1991) as follows:

- Implementing efficient and cost-effective fisheries management on behalf of the Commonwealth
- Ensuring that the exploitation of fisheries resources and the carrying on of any related activities are conducted in a manner consistent with the principles of ecologically sustainable development (which include the exercise of the precautionary principle), the need to have regard to the impact of fishing activities on non-target species and the long-term sustainability of the marine environment
- Maximizing net economic returns to the Australian community from the management of Australian fisheries
- Ensuring accountability to the fishing industry and to the Australian community in AFMA's management of fisheries resources
- Achieving government targets in relation to the recovery of the costs of AFMA

Therefore, fishery management organisations are legally empowered to take management actions, so the fishery PASSES clause M1.4.

M1.5 There is a consultation process through which fishery stakeholders are engaged in decision-making.

AFMA Resource Assessment Groups (RAGs) and Management Advisory Committees (MACs) play a role in identifying research needs, assessing proposals and the outcomes of research, both essential stock assessment type research and other relevant management related projects. The SPF Scientific Panel is considered a RAG. AFMA's Research Committee (ARC) determines research priorities and projects for funding.

Members of Committees and Groups include AFMA fishery managers, fishing operators, scientists and researchers, state and territory governments, conservation groups and recreational fishers.

From 2019, the SPFRAG became primary source of scientific and economic advice to AFMA regarding this fishery. The return to a more conventional RAG model comes after a two-year trial of a Scientific Panel (SP) and Stakeholder Forum model. SEMAC will continue to be the source of management advice on SPF to AFMA. The last meeting was carried out in December 2021 and the minutes from the meeting performed in July 2021 are available.
The priorities for those meetings were as follows:

- Bycatch and Discard Workplan
- SPF 2022-23 Research Priorities
- SPF Five Year Strategic Research Plan

Therefore, there is a consultation process through which fishery stakeholders are engaged in decision-making, so the fishery PASSES clause M1.5.

M1.6 The decision-making process is transparent, with processes and results publicly available.

Stakeholder Forums are the main avenue to capture stakeholder views regarding science for the SPF. Forums are open to members of peak recreational fishing bodies, environmental non-government organizations (e-NGOs), indigenous groups, individual community stakeholders and commercial fishing industry members.
Amendments to the Freedom of Information Act 1982 introduced an Information Publication Scheme which requires Government agencies to publish certain information on their website (from May 2011). Information available on AFMA's website includes but is not limited to:

- AFMA's organizational structure; functions and powers
- Details of statutory appointments
- AFMA's annual reports, including TAC's
- Current agency consultations
- Information AFMA routinely provides to Parliament
- AFMA Commission meeting - Chairman's summary

Documents listed as operational information, where they have not been published for downloading on AFMA's website, can be made available to members of the public by contacting AFMA's Freedom of Information Coordinator.

Therefore, the decision-making process is transparent, with processes and results publicly available, so the fishery PASSES clause M1.6.

References

Small Pelagic Fishery (SPF), SPFRAG Comments on December 07-08-2021. Species summaries 2022:
https://afma.govcms.gov.au/sites/default/files/spf_species_summaries_2022_for_spfrag_minutes.pdf

AFMA (ed) 2022, Small Pelagic Fishery Management Arrangements Booklet 2022-23, Australian Fisheries Management Authority. Canberra, Australia: https://www.afma.gov.au/sites/default/files/final_-_small_pelagic_fishery_mab_2022-23.pdf

Small Pelagic Fishery - General Conditions 2022 - 2023 season:
https://www.afma.gov.au/sites/default/files/small_pelagic_fishery_general_conditions_2022-23.pdf

Australian Fisheries Management Authority AFMA (Home page): https://www.afma.gov.au/fisheries

South East Management Advisory Committee (SEMAC):
https://www.afma.gov.au/sites/default/files/semac_36_final_minutes_-_signed.pdf

AFMA Commission website: https://www.afma.gov.au/about/afma-commission

Small Pelagic Fishery Stakeholder Forum: https://www.afma.gov.au/fisheries/small-pelagic-fishery/small-pelagic-fishery-stakeholder-forum

Small Pelagic Fishery Scientific Panel: https://www.afma.gov.au/fisheries/small-pelagic-fishery/small-pelagic-fishery-scientific-panel

MRAG Americas, Inc. 2022. South East Australia Small Pelagic Fishery (Commonwealth) Midwater Trawl. Second Surveillance Report: https://fisheries.msc.org/en/fisheries/south-east-australia-small-pelagic-fishery-commonwealth-mid-water-trawl/@@assessments

MRAG Americas, Inc. 2019. South East Australia Small Pelagic Fishery (Commonwealth).MSC Fishery Assessment. Public Certification Report: https://fisheries.msc.org/en/fisheries/south-east-australia-small-pelagic-fishery-commonwealth-mid-water-trawl/@@assessments

AFMA, 2008 (last revised 2022). Small Pelagic Fishery Harvest Strategy: https://www.afma.gov.au/sites/default/files/uploads/2017/04/spf-harveststrategy-2017-review.pdf

Links	
MarinTrust Standard clause	1.3.1.1, 1.3.1.2
FAO CCRF	7.2, 7.3.1, 7.4.4, 12.3
GSSI	D.1.01, D.4.01, D2.01, D1.07, D1.04,

M2	**Surveillance, Control and Enforcement - Minimum Requirements**		
	M2.1	There is an organisation responsible for monitoring compliance with fishery laws and regulations.	Yes
	M2.2	There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.	Yes
	M2.3	There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.	Yes
	M2.4	Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.	Yes
		Clause outcome:	**PASS**

As previously stated, the following information remains similar to last year's report, as no major changes have occurred in the fishery. The few minor updates have been noted here.

M2.1 There is an organisation responsible for monitoring compliance with fishery laws and regulations.

AFMA's National Compliance and Enforcement Program is conducted via the use of a risk-based approach, which enables resources to be targeted to the areas where they are most needed.
The main functions of the Program are:

- Ensuring compliance with AFMA's domestic fisheries management measures
- Ensuring licensed boats comply with fishing conditions
- Ensuring that there are no unlicensed foreign boats operating
- Managing port access for foreign boats
- Surveillance and apprehension of foreign boats fishing illegally

Compliance Risk Management Teams (CRMTs) are prioritised for action (in the annual compliance program) by the Operational Management Committee (OMC). Teams are generally multi-disciplinary, and/or multi-agency with team members determined by the risk being addressed and/or the type of program proposed.

Fisheries Officers conduct targeted inspections of Commonwealth endorsed operators. All foreign fishing boats can be inspected on arrival. All Commonwealth fishing boats are tracked via vessel monitoring systems (VMS).

Therefore, there is an organisation responsible for monitoring compliance with fishery laws and regulations, so the fishery PASSES clause M2.1.

M2.2 There is a framework of sanctions which are applied when laws and regulations are discovered to have been broken.

Statutory Fishing Rights (SFRs) allow fishers take a percentage of the TAC that has been set for each quota species. SFR's granted under the Management Plan may be transferred, leased, surrendered or cancelled. A 28-day quota reconciliation process is in place should a quota be exceeded. Compliance actions are undertaken if a quota holder is still over quota after a 28-day period for any landing.

AFMA has set an overcatch percentage of 10% for all SPF quota species on the last day of the fishing season. AFMA then deducts this amount from the Quota SFR (fisher) in the next season, provided there is enough uncaught quota SFRs to cover the overcatch.

Part 3 (Regulation of Fishing) Division 8 (Suspension and cancellation of fishing concessions) of the Fisheries Management Act 1991 outlines conditions whereby AFMA may suspend or cancel a fishing concession with the SPF.

Part 6 (Surveillance and Enforcement) Division 1 (Officers) of the Fisheries Management Act 1991 Section 84 (Powers of Officers) gives Officers powers of search and seizure of evidence when a commission of an offence against the Act is suspected.

These measures (or tools) can be used in combination, separately or for types of incidents to achieve the most appropriate outcome. Sanctions may include:

- Warnings, Cautions
- Commonwealth Fisheries Infringement Notices
- Amendments to fishing concession conditions
- Directions by fisheries officers e.g. to cease fishing or return to port
- Prosecution, suspension or cancellation of fishing concessions. The Commonwealth Director of Public Prosecutions (CDPP) prosecutes crimes against Commonwealth law

Therefore, there is a framework of sanctions which are applied when laws and regulations are discovered to have been broken, so the fishery PASSES clause M2.2.

M2.3 There is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing.

FM Act 1991 defines the Australian Fishing Zone (AFZ) and provides for the majority of Commonwealth fisheries offences and for the legal framework for fisheries managed by the Australian Government. The Act sets out, among other things: fisheries management objectives and arrangements for regulating; permitting; and taking enforcement action with respect to fishing operations.

The National Compliance and Enforcement Policy (2020) policy provides an explanation of AFMA's compliance and enforcement role and AFMA's risk-based approach across the Commonwealth fisheries, 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 like improved compliance outcomes (AFMA can tailor or target compliance measures to effectively deal with the most significant non-compliance risks), efficiency gains (the target of compliance measures to the most significant risks ensures 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).

More precisely, 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
- surveillance and apprehension of foreign boats fishing illegally in the AFZ

In addition to the risk treatment model, 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. AFMA also provides education programs to increase voluntary compliance. 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 your responsibilities. Australia combats IUU fishing through aerial surveillance, sea patrols and real-time monitoring of fishing vessels. If IUU boats are caught in Australian waters they can be seized, and the crew detained and prosecuted, and in some cases imprisoned. AFMA has a key role in implementing a number of regional and international agreements and arrangements which identify the tools used to strengthen policing systems, or monitoring, control and surveillance (MCS) programs to combat IUU fishing.

According to the MSC report of 2019, AFMA compliance has inspected 8 SPF vessels since 27 September 2016, covering 4 different vessels. The have been no compliance issues detected related to mid-water trawl vessel of this fishery not respecting closed areas or having impact on benthic habitat. Also, no systematic non-compliance events related to secondary species management were identified, and this represents clear evidence that the partial strategy for minor secondary species is implemented successfully.
According to the last MSC surveillance report of this fishery, there were no non-compliance offences in the year 2020/2021 (email from Josh Froggatt, Manager, National Compliance Operations (Canberra), Australian Fisheries Management Authority).
AFMA compliance is subject to both internal and external review and demonstrated to have been effective.

Therefore, there is no substantial evidence of widespread non-compliance in the fishery, and no substantial evidence of IUU fishing, so the fishery PASSES clause M2.3.

M2.4 Compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS.

AFMA collect data on catch composition (fishery logbooks and AFMA observer program), fishing effort (logbooks), spatial and temporal distribution of the fishing effort (through VMS), interactions with protected species (logbooks and observer program) and monitors all fishing activities and compliance with regulations (compliance monitoring).
Also, AFMA deploys a comprehensive enforcement system, including at sea patrols and boardings, pre-inspection checks and inspections on offloading. The effectiveness of the inspection system is underlined by a system of risk assessment where systematic offenders are likely to be singled out.

Specific non-compliance areas have been prioritised, notably Sea bird mitigation- vessels complying with concession conditions and vessel management plans, Dolphin mitigation - vessels complying with concession conditions and vessel management plans, Seal mitigation - vessels complying with concession conditions and vessel management plans, Accurate reporting of all ETP species, accurate reporting of all migrative species, VMS and EM operational at all times, Log books vessels complying with concession and log book conditions, Logbook and Catch disposal book accuracy and closure monitoring.

All vessels nominated to the SPF quota are fitted with a VMS of a category specified in the register of AFMA approved units. The VMS unit must remain switched on at all times that the boat is nominated to a Commonwealth concession, including when in port or engaged in State fishing. The register can be found on the AFMA website. If the VMS is not operating or is malfunctioning the boat must remain in port until the VMS is inspected, repaired if necessary and AFMA has received confirmation from an authorised technician that the automatic location communicator (ALC) is functioning normally.

Fishers must accurately record all the relevant information about each fishing operation and catch data in paper or electronic logbooks that are specific for mid-water trawl and eastern area. From January 2019, the use of electronic logbooks is compulsory for SPF mid-water trawl. Skippers are also required to fill in Catch Disposal Record (CDR) forms at landing and the quantities of fish landed are verified by the authorized fish receiver.

Onboard Scientific Observers are employed by AFMA to independently record catch, effort and biological information of each fishing trip. Vessels in the SPF must carry an AFMA observer when requested by AFMA. Observers have no authority to direct

fishing operations of the boat or act in an enforcement role. However, observers are required to report their observations. Observer coverage for 2020/2021 was 10% for mid-water trawler vessels. Vessels in the SPF must carry an AFMA observer when requested by AFMA.
Usually, observer coverage of at least 20% of the effort for SPF mid-water trawl, allows the collection of reliable information on catch composition and identification of any increase in risk to main species.

AFMA presents annually its report on national compliance and enforcement program. An assessment of previous years' performance has been undertaken against the 2022–2023 NCEP targets. The result in 21/22 are shown as "within threshold" or "target" in all the key target, notably that 98% of nominated boats are fitted with VMS units and the units are reporting at a rate greater than 12 polls per day, or have a valid Temporary Switch Off (TSO) approval. Only one target has not been met: in 21-22, 21 incidents of boats non-compliance with electronic monitoring requirements have been reported.

According to the MSC PCR of 2019, there is some evidence that the strategy is being implemented successfully. Such evidence can be derived from compliance monitoring, where no systematic non-compliance issues related to ecosystem regulations have been identified. There is not yet clear evidence that the strategy is being implemented successfully because the fishery is a new developing fishery.

Therefore, compliance with laws and regulations is actively monitored, through a regime which may include at-sea and portside inspections, observer programmes, and VMS, so the fishery PASSES clause M2.4.

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Links	
MarinTrust Standard clause	1.3.1.3
FAO CCRF	7.7.2
GSSI	D1.09

CATEGORY A SPECIES

The four clauses in this section apply to Category A species. Clauses A1 - A4 should be completed for **each** Category A species. If there are no Category A species in the fishery under assessment, this section can be deleted. A Category A species must meet the minimum requirements of all four clauses before it can be recommended for approval. The clauses should be completed by providing sufficient evidence to justify awarding each of the requirements a pass or fail rating. The species must achieve a pass rating against all requirements to be awarded a pass overall. **If the species fails any of these clauses it should be re-assessed as a Category B species.**

Species Name	**Jack mackerel (*Trachurus declivis*) eastern stock**	
A1	**Data Collection - Minimum Requirements**	
A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	Yes
A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	Yes
	Clause outcome:	**PASS**

A1.1 Landings data are collected such that the fishery-wide removals of this species are known.

All Commonwealth fishers must record all catch and effort details (including gear and spatial position) in their official AFMA daily fishing logbooks. Catch weights are used in combination with gear, effort and spatial data to inform fishery stock assessments. A Harvest Strategy Policy (HSP see A3.1) makes provision for the monitoring of all fishery–dependent data (catch, effort and size/age catch structure).

Commonwealth catch increased to 9,873 t in 1997–98, fluctuated markedly to 2003–04 and then declined as a result of decreasing effort in the fishery. Commonwealth catch has fluctuated in recent years, reaching 6,316 t in 2015–16, decreasing to 4,942 in 2018–19 and increasing again to 7,808 t in 2019–20 (Figure 1). Commonwealth catch for 2020–21 was 5,454 t.

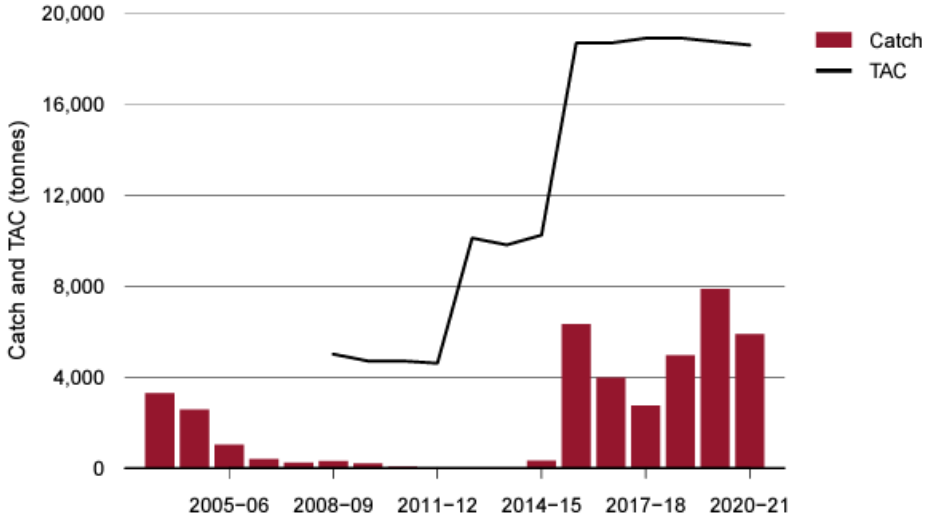

Figure 1. Commonwealth eastern jack mackerel catch and TAC, 2003–04 to 2020-21 seasons.
Source: DAWE-ABARES 2021

In the last MSC surveillance audit (2022), catches of eastern Jack mackerel are available:

TAC	Year	**2020/2021**	18,630	**Tonnes**
UoA share of total TAC	Year	**2020/2021**	29.2	**%**
Total green weight catch by UoC	Year (most recent)	**2019/2020**	5,706	**Tonnes**
Total green weight catch by UoC	Year (second most recent)	**2020/2021**	5,451	**Tonnes**

Figure 2. Total Allowable Catch (TAC) and catch data: Jack mackerel.
Source: MRAG Americas, Inc. 2022

However, it is considered that landings data are collected such that the fishery-wide removals of this species are known, so the fishery PASSES clause A1.1.

A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.

Daily Egg Production Method (DEPM) surveys generate estimates of spawning stock size (SSB) based on surveys of eggs during spawning seasons. DEPM estimates are currently used as absolute estimates of stock size for the purpose of calculating Recommended Biological Catches (RBCs). TACs are then calculated by subtracting any significant known sources of mortality from RBCs. Adjustments for catches taken in other fisheries will be based on the Scientific Panel's best estimate of future catch in other fisheries. Where no DEPM surveys have been conducted, the use of an Atlantis ecosystem model to provide estimates of biomass is available. The model uses all available information on species distribution, relative abundance and dietary requirements. The SPF Harvest Strategy (HS) explicitly recognises that biomass estimates derived from the Atlantis–SPF model are more uncertain than those based on DEPMs.

The last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above $B_{50\%}$. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with B_{MSY}.

The HCRs are documented in the Small Pelagic Fishery Harvest Strategy (SPFHS). Smith et al (2015) determined conservative exploitation levels that aimed to maintain stocks above B50% with a high degree of confidence (<8% probability of falling below $B_{20\%}$ in 50 years) for a range of management strategy evaluation (MSE) scenarios. Therefore, even at maximum exploitation rates the fishery is highly likely to be operating below F_{MSY} under average conditions. The MSE results provide the basis for the HCRs, with maximum exploitation rates of 12% for jack mackerel.
While direct measures of biomass are only conducted every five years at the most, annual assessments of catch, effort, CPUE and age and length frequencies for each species are presented in a Fishery Assessment Report.

A spawning biomass of 156,292 t (95% CI 49,120–263,496 t) was estimated using the DEPM from an egg survey in January and February 2019.

The SPFRAG used the 2019 DEPM-based biomass estimate to recommend a 2020–21 RBC of 18,755 t, using the tier 1 exploitation rate (12%) from the 2017 harvest strategy. This was the first season that the tier 1 exploitation rate was used to set an RBC for eastern jack mackerel. After factoring in state catches, the AFMA Commission agreed to a TAC of 18,580 t. Recent catches have been below the RBC calculated using a management strategy evaluation (MSE)-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, ABARES estimates that the eastern jack mackerel stock is classified as not overfished and not subject to overfishing.

Therefore, sufficient additional information is collected to enable an indication of stock status to be estimated, so the fishery PASSES clause A1.2.

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Links

MarinTrust Standard clause	1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	7.3.1, 12.3
GSSI	D.4.01, D.5.01, D.6.02, D.3.14

A2	**Stock Assessment - Minimum Requirements**		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	Yes
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	Yes
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	Yes
	A2.4	The assessment is subject to internal or external peer review.	Yes
	A2.5	The assessment is made publicly available.	Yes
		Clause outcome:	**PASS**

A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.

Annual fisheries assessments include updated catch and effort, CPUE data from the previous fishing season, in addition to length–frequency and age information from catches. Adjustments for catches taken in other fisheries are based on the SPF Scientific Panel's best estimate of future catch in other fisheries (e.g. average of recent recorded annual catches). Information on changes in spatial and temporal patterns of effort and catch are also included in these annual assessments.
Annual Fishery Assessments also aim to provide evidence suitable for detecting stock depletion, localised depletion or changes in the size and age structure of the catch that cannot be adequately explained by reasons other than a decline in abundance.

The last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above B50%. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with B_{MSY}.

Therefore, a stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species, so the fishery PASSES the clause A2.1.

A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.

The Harvest Strategy applies harvest control rules to available biomass estimates (SSB) from DEPM surveys to determine a Recommended Biological Catch (RBC) for each stock. Other sources of mortality are then applied to RBCs to derive total allowable catch (TAC) recommendations by AFMA.

According to the MSC PCR, the PRI is interpreted as a point below which the recruitment might be impaired, and it can be analytically or empirically determined. In any case, the PRI cannot be less than 20% of the spawning stock level that would be expected in the absence of fishing or B_0. If the evidence shows that a stock is below PRI, the MSC requires that the impact of the UoA is low enough that if the species is capable of improving its status, the UoA will not hinder that improvement; it does not require evidence that the status of the species is actually improving.
The limit reference points for AFMA managed species are in accord to the Commonwealth Fisheries Harvest Strategy Policy and consistent with the MSC PRI (20% B_0, equivalent to a Limit Reference Point (LRP) of 0.2% B_0).
Reference points are set as a percentage of B_0. Recent catches of eastern jack mackerel have been below the RBC calculated using an MSE-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the eastern jack mackerel stock is classified as not overfished and not subject to overfishing.

Therefore, the assessment provides an estimate of the status of the biological stock relative to a reference point or proxy, so the fishery PASSES clause A2.2.

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

A spawning biomass of 156,292 t (95% CI 49,120–263,496 t) was estimated using the DEPM from an egg survey in January and February 2019 (AFMA 2020). The SPFRAG used the 2019 DEPM-based biomass estimate to recommend a 2020–21 RBC of 18,755 t, using the tier 1 exploitation rate (12%) from the 2017 harvest strategy (AFMA 2019d). This was the first season that the tier 1 exploitation rate was used to set an RBC for eastern jack mackerel. After factoring in state catches, the AFMA Commission agreed to a TAC of 18,580 t.

Therefore, the assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status, so the fishery PASSES clause A2.3.

A2.4 The assessment is subject to internal or external peer review.

The SPF Scientific Panel last met in January 2021 in order to peer review scientific and economic data provided by ABARES and in turn provide advice to SEMAC and AFMA (Commission). During the 2021 meeting, the Panel noted that no issues were raised at the Stakeholder forum regarding annual assessments of SPF Stocks including Jack mackerel and RBC advice. The Panel confirmed its previous recommendations for RBCs, based on the 2017 SPF Harvest Strategy and DEPM Survey results.

Therefore, the assessment is subject to internal or external peer review, so the fishery PASSES clause A2.4.

A2.5 The assessment is made publicly available.

Minutes of annual meetings of the SPF Scientific Panel summarise findings of stock assessment studies and list agreed RBC's and SSB's for each managed stock on their website. Detailed information on stock assessments is available on request through the Freedom of Information Act.

Fishery status reports published by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) provide independent assessments of the biological status of fish stocks including jack mackerel and the economic status of fisheries managed, or jointly managed, by the Australian Government (Commonwealth fisheries). ABARES uses data and information sourced from AFMA and Regional Fisheries Management Organisations (RFMO's). Fishery status reports are published annually on the ABARES website.

Therefore, the assessment is made publicly available, so the fishery PASSES clause A2.5.

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Links

MarinTrust Standard clause	1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	12.3
GSSI	D.5.01, D.6.02, D.3.14

A3	**Harvest Strategy - Minimum Requirements**		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	Yes
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	Yes
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	Yes
		Clause outcome:	**PASS**

A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.

Commonwealth Fisheries Harvest Strategy Policy (HSP) and Guidelines allow for a science–based approach to setting catch limits and offers advice on how to interpret and apply policy to fisheries.

The Minister makes the final decision on what the TAC should be for any given year. Thus if signs of population decline became evident, the agency has mechanisms in place to reduce exploitation as required. Finally, although the Small Pelagic Fishery Harvest Strategy document does not contain explicit LRPs, it is directly linked to the Commonwealth Harvest Strategy Policy which states that when a stock falls below the LRP (which is generally at least equivalent to PRI) a Stock Rebuilding Strategy must be implemented, with exploitation rates reduced to levels that ensure stock recovery within a defined timeframe. AFMA has already implemented several Stock Rebuilding Strategies under the Harvest Strategy framework (e.g. blue warehou).

The HS applies harvest control rules to available biomass estimates from DEPM surveys, to determine an RBC for each quota species. Other sources of mortality are then applied to RBCs to derive the TAC recommendations by AFMA's Commission.

Stocks in the SPF are managed under a harvest strategy that has been revised several times in recent years. The review of the 2014 harvest strategy included ecosystem and population modelling. Recommendations from the review were incorporated into the current harvest strategy, which adopts a target reference point of 50% of the unfished biomass ($0.5B_0$) and a limit reference point of $0.2B_0$.
However, the last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the

uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above $B_{50\%}$. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with BMSY

The harvest strategy has 3 tiers, with static exploitation rates for each tier and stock. Operating at tier 1 requires a recent egg survey and a biomass estimate based on the DEPM. Tier 1 allows for the highest exploitation rates. A tier 1 RBC can be set for a maximum of 5 years. If there is no updated survey, the harvest strategy steps down to tier 2. Tier 2 has reduced exploitation rates in acknowledgement of the increasing uncertainty about how well the DEPM-based biomass estimate reflects current biomass. Similarly, the harvest strategy steps down from tier 2 to tier 3 after a further 5 or 10 years (depending on the species), which further reduces the exploitation rate. There is no time limit for a species to remain at tier 3.

Also, quota statutory fishing rights (SRFs) allow fishers to take a percentage weight of the TAC that has been set for each quota species. SFR's are granted under the Management Plan and may be transferred, leased, surrendered, or cancelled. To fish in the SPF, fishers must hold uncaught quota SFRs nominated to the boat that will fish the quota. Once the TAC for the fishing season is set by the AFMA Commission, the number of SFR's a fisher holds, will determine what percentage of the TAC, by weight, they can catch.

Furthermore, closed areas are in operation when regional catch limits are exceeded. A framework of sanctions is applied when laws and regulations are discovered to have been broken.

Therefore, there is a mechanism in place by which total fishing mortality of this species is restricted, so the fishery PASSES clause A3.1.

A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.

According to ABARES fishery status reports 2021, Recent catches have been below the RBC. Historical catches have been low and are not likely to have reduced biomass below the LRP.

Commonwealth catch increased to 9,873 t in 1997–98, fluctuated markedly to 2003–04 and then declined as a result of decreasing effort in the fishery. Commonwealth catch has fluctuated in recent years, reaching 6,316 t in 2015–16, decreasing to 4,942 in 2018–19 and increasing again to 7,808 t in 2019–20 State catches have been negligible in recent years. Commonwealth catch for 2020–21 was 5,454 t, so there is no evidence of exceeding the TAC. It can also be clearly seen in figures 1 and 2 above, that catches did not exceed TAC in recent years.

Therefore, total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment, so the fishery PASSES clause A3.2.

A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).

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 areas where they are most needed and where they will prove most effective. Features of the programme include ensuring compliance with AFMA's domestic fisheries management measures. Fisheries Officers conduct targeted inspections of Commonwealth endorsed operators. All Commonwealth fishing boats are tracked via satellite – to vessel monitoring systems. Catch monitoring includes electronic logbooks, a Catch Documentation Scheme, electronic monitoring, logbooks, observers, audits and inspections.
AFMA enforces the provisions of the Fisheries Management Act 1991, Torres Strait Fisheries Act 1984 and the Maritime Powers Act 2013; including the power to close a fishery should the stock be estimated to be below the limit reference point or proxy. To date this has not happened for the jack mackerel stock.

Therefore, commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible), so the fishery PASSES clause A3.3.

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Standard clause 1.3.2.1.3

Links	
MarinTrust Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4	**Stock Status - Minimum Requirements**		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	Yes
		Clause outcome:	**PASS**

A4.1 The stock is at or above the target reference point, OR IF NOT:
The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:
The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.

According to the while spawning biomass estimates from fishery-independent egg surveys are available for all UoA species, biomass reference points are not directly used explicitly or implicitly to assess stock status. Instead, fishing mortality (F) expressed as the % exploitation rate is used as an implicit reference point to determine stock status in the Fishery Assessment Reports.
Recent catches have been below the RBC, calculated using an MSE-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the eastern jack mackerel stock is classified as not overfished and not subject to overfishing.
The figure 3 below clearly shows that the current stock status (recent exploitation rate), was below the reference point (maximum exploitation rate) from 2017 to 2019.

Stock Status relative to Reference Points			
	Type of reference point	**Value of reference point**	**Current stock status relative to reference point**
Reference point used in scoring stock relative to PRI (SIa)	Exploitation rate	Max. exploitation rate: • Jack mackerel 12% • Blue mackerel 23% • Redbait 9%	Recent exploitation rate: • Jack mackerel <4% • Blue mackerel <3% • Redbait <1%
Reference point used in scoring stock relative to MSY (SIb)	Exploitation rate	Max. exploitation rate: • Jack mackerel 12% • Blue mackerel 23% • Redbait 9%	Recent exploitation rate: • Jack mackerel <4% • Blue mackerel <3% • Redbait <1%

Figure 3. Stock Status relative to Reference Points.
Source: MRAG Americas, Inc. 2019.

Therefore, the stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure, so the fishery PASSES clause A4.1.

References

MRAG Americas, Inc. 2022. South East Australia Small Pelagic Fishery (Commonwealth) Midwater Trawl. Second Surveillance Report: https://fisheries.msc.org/en/fisheries/south-east-australia-small-pelagic-fishery-commonwealth-mid-water-trawl/@@assessments

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Links	
MarinTrust Standard clause	**1.3.2.1.4**
FAO CCRF	**7.2.1, 7.2.2 (e)**
GSSI	**D6 01**

Species Name	Blue mackerel (*Scomber australasicus*) eastern stock	
A1	**Data Collection - Minimum Requirements**	
A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	Yes
A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	Yes
	Clause outcome:	**PASS**

A1.1 Landings data are collected such that the fishery-wide removals of this species are known.

All Commonwealth fishers must record all catch and effort details (including gear and spatial position) in their official AFMA daily fishing logbooks. Catch weights are used in combination with gear, effort and spatial data to inform fishery stock assessments. A Harvest Strategy Policy (HSP see A3.1) makes provision for the monitoring of all fishery–dependent data (catch, effort and size/age catch structure).

Most of the eastern blue mackerel catch has historically been taken in state fisheries. However, Commonwealth catches have exceeded state catches since 2015–16. The total combined catch (state and Commonwealth, excluding Victorian catches which were confidential) for 2019–20 was 6,124 t, comprising 5,693 t from the Commonwealth and 431 t from state fisheries. Commonwealth catch increased to 6,215 t in 2020–21 (Figure below).

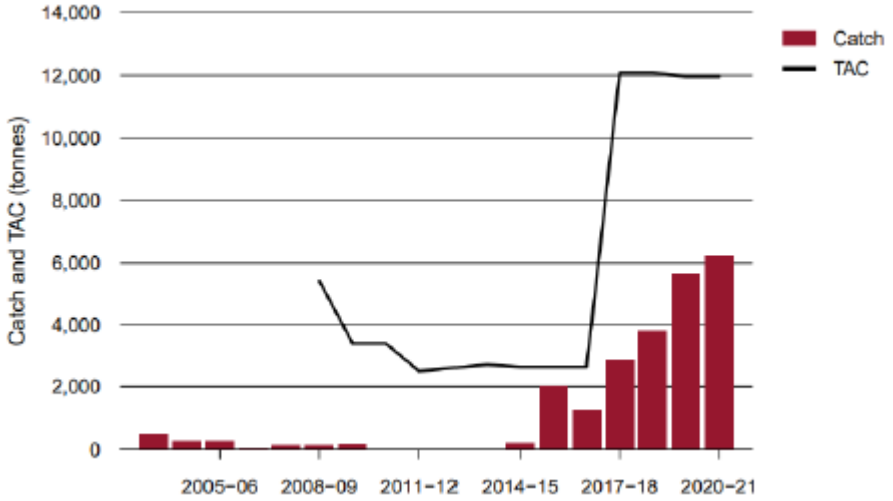

Figure 4. Commonwealth blue mackerel eastern stock catch and TAC, 2003–04 to 2020-21 seasons.
Source: Fisheries status, Department of Agriculture, Water and the Environment DAWE-ABARES 2021.

In the last MSC surveillance audit (2022), catches of eastern blue mackerel are available:

TAC	Year	**2020/2021**	11,440	**Tonnes**
UoA share of total TAC	Year	**2020/2021**	55.4	**%**
Total green weight catch by UoC	Year (most recent)	**2019/2020**	5,979	**Tonnes**
Total green weight catch by UoC	Year (second most recent)	**2020/2021**	6,343	**Tonnes**

Figure 5. Total Allowable Catch (TAC) and catch data: blue mackerel.
Source: MRAG Americas, Inc. 2022

Therefore, it is considered that landings data are collected such that the fishery-wide removals of this species are known, so the fishery PASSES clause A1.1.

A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.

Daily Egg Production Method (DEPM) surveys generate estimates of spawning stock size (SSB) based on surveys of eggs during spawning seasons. DEPM estimates are currently used as absolute estimates of stock size for the purpose of calculating Recommended Biological Catches (RBCs). TACs are then calculated by subtracting any significant known sources of mortality

from RBCs. Adjustments for catches taken in other fisheries will be based on the Scientific Panel's best estimate of future catch in other fisheries. Where no DEPM surveys have been conducted, the use of an Atlantis ecosystem model to provide estimates of biomass is available. The model uses all available information on species distribution, relative abundance and dietary requirements. The SPF Harvest Strategy (HS) explicitly recognises that biomass estimates derived from the Atlantis–SPF model are more uncertain than those based on DEPMs.

According to the last MSC surveillance audit, the HCRs are documented in the Small Pelagic Fishery Harvest Strategy (SPFHS). Smith et al (2015) determined conservative exploitation levels that aimed to maintain stocks above $B_{50\%}$ with a high degree of confidence (<8% probability of falling below B20% in 50 years) for a range of MSE scenarios. Therefore, even at maximum exploitation rates the fishery is highly likely to be operating below F_{MSY} under average conditions. The MSE results provide the basis for the HCRs, with maximum exploitation rates of 15% for blue mackerel.
While direct measures of biomass are only conducted every five years at the most, annual assessments of catch, effort, CPUE and age and length frequencies for each species are presented in a Fishery Assessment Report.

The SPFRAG used the 2014 DEPM estimate to recommend an RBC for 2020–21. Tier 1 of the 2017 harvest strategy (exploitation rate of 15%) was used to recommend a 2020–21 RBC of 12,495 t. This was the fifth season that the tier 1 exploitation rate was used to set an RBC for eastern blue mackerel. After factoring in state catches, the AFMA Commission agreed to a TAC of 11,970 t.
A new egg survey was completed in September 2019, and a spawning biomass of 88,265 t (95% CI 33,320–143,209 t) was estimated using the DEPM. The SPFRAG used the 2019 DEPM estimate to recommend an RBC for 2021–22.

Recent catches have been below the RBC calculated using an MSE-tested harvest strategy and are a small proportion of the most recent estimate of biomass. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the eastern blue mackerel stock is classified as not overfished and not subject to overfishing.

Therefore, sufficient additional information is collected to enable an indication of stock status to be estimated, so the fishery PASSES clause A1.2.

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Links	
MarinTrust Standard clause	1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	7.3.1, 12.3
GSSI	D.4.01, D.5.01, D.6.02, D.3.14

A2	**Stock Assessment - Minimum Requirements**		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	Yes
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	Yes
	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	Yes
	A2.4	The assessment is subject to internal or external peer review.	Yes
	A2.5	The assessment is made publicly available.	Yes
		Clause outcome:	**PASS**

A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.

Annual fisheries assessments include updated catch and effort data from the previous fishing season in addition to length–frequency and age information from catches. Adjustments for catches taken in other fisheries are based on the SPF Scientific Panel's best estimate of future catch in other fisheries (e.g. average of recent recorded annual catches). Information on changes in spatial and temporal patterns of effort and catch are also included in these annual assessments. Annual Fishery Assessments also aim to provide evidence suitable for detecting stock depletion, localised depletion or changes in the size and age structure of the catch that cannot be adequately explained by reasons other than a decline in abundance.

The last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above $B_{50\%}$. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with B_{MSY}.

The most recent assessment of the Eastern stock of blue mackerel was completed in 2019 using fishery data for 2019–20.

Therefore, a stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species, so the fishery PASSES the clause A2.1.

A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.

The Harvest Strategy applies harvest control rules to available biomass estimates (SSB) from DEPM surveys to determine a Recommended Biological Catch (RBC) for each stock. Other sources of mortality are then applied to RBCs to derive total allowable catch (TAC) recommendations by AFMA.
According to the MSC PCR, the PRI is interpreted as a point below which the recruitment might be impaired, and it can be analytically or empirically determined. In any case, the PRI cannot be less than 20% of the spawning stock level that would be

expected in the absence of fishing or B_0. If the evidence shows that a stock is below PRI, the MSC requires that the impact of the UoA is low enough that if the species is capable of improving its status, the UoA will not hinder that improvement; it does not require evidence that the status of the species is actually improving.
The limit reference points for AFMA managed species are in accord to the Commonwealth Fisheries Harvest Strategy Policy and consistent with the MSC PRI (20% B_0, equivalent to a Limit Reference Point (LRP) of 0.2% B_0).
Reference points are set as a percentage of B_0. Recent catches of eastern jack mackerel have been below the RBC calculated using an MSE-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the eastern jack mackerel stock is classified as not overfished and not subject to overfishing.

Egg surveys for the eastern stock of blue mackerel (undertaken in association with Australian sardine surveys) were conducted in August–September 2014. For eastern blue mackerel, the DEPM-based estimate of spawning biomass was 83,300 t (95% CI 35,100–165,000 t) (Ward et al. 2015). However, because samples of adult blue mackerel were not collected during the egg survey, reproductive parameters of adult blue mackerel were taken from previous egg surveys off southern Australia between 2001 and 2006 and the scientists suggested that estimate of spawning biomass be treated with caution. The Small Pelagic Fishery Resource Assessment Group (SPFRAG) used the 2014 DEPM estimate to recommend an RBC for 2020–21. Tier 1 of the 2017 harvest strategy (exploitation rate of 15%) was used to recommend a 2020–21 RBC of 12,495 t. This was the fifth season that the tier 1 exploitation rate was used to set an RBC for eastern blue mackerel. After factoring in state catches, the AFMA Commission agreed to a TAC of 11,970 t.
Furthermore, the figure 3 above clearly shows the current stock status (recent exploitation rate) relatively to the reference point (maximum exploitation rate) from 2017 to 2019.

A new egg survey was completed in September 2019, and a spawning biomass of 88,265 t (95% CI 33,320–143,209 t) was estimated using the DEPM (Ward 2020). The SPFRAG used the 2019 DEPM estimate to recommend an RBC for 2021–22.

Therefore, the assessment provides an estimate of the status of the biological stock relative to a reference point or proxy, so the fishery PASSES clause A2.2.

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

Tier 1 of the 2017 harvest strategy (exploitation rate of 15%) was used to recommend a 2020–21 RBC of 12,495 t. This was the fifth season that the tier 1 exploitation rate was used to set an RBC for eastern blue mackerel. After factoring in state catches, the AFMA Commission agreed to a TAC of 11,970 t.

Therefore, the assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status, so the fishery PASSES clause A2.3.

A2.4 The assessment is subject to internal or external peer review.

The SPF Scientific Panel last met in January 2021 in order to peer review scientific and economic data provided by ABARES and in turn provide advice to SEMAC and AFMA (Commission). During the 2021 meeting the Panel noted that no issues were raised at the Stakeholder forum regarding annual assessments of SPF Stocks including blue mackerel and RBC advice. The Panel confirmed its previous recommendations for RBCs, based on the 2017 SPF Harvest Strategy and DEPM Survey results for the stocks.

Therefore, the assessment is subject to internal or external peer review, so the fishery PASSES clause A2.4.

A2.5 The assessment is made publicly available.

Minutes of annual meetings of the SPF Scientific Panel summarise findings of stock assessment studies and list agreed RBC's and SSB's for each managed stock on their website. Detailed information on stock assessments is available on request through the Freedom of Information Act.

Fishery status reports published by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) provide independent assessments of the biological status of fish stocks including jack mackerel and the economic status of fisheries managed, or jointly managed, by the Australian Government (Commonwealth fisheries). ABARES uses data and

information sourced from AFMA and Regional Fisheries Management Organisations (RFMO's). Fishery status reports are published annually on the ABARES website.

Therefore, the assessment is made publicly available, so the fishery PASSES clause A2.5.

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Links

MarinTrust Standard clause	1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	12.3
GSSI	D.5.01, D.6.02, D.3.14

A3	**Harvest Strategy - Minimum Requirements**		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	Yes
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	Yes
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	Yes
		Clause outcome:	**PASS**

A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.

Commonwealth Fisheries Harvest Strategy Policy (HSP) and Guidelines allow for a science–based approach to setting catch limits and offers advice on how to interpret and apply policy to fisheries.

The Minister makes the final decision on what the TAC should be for any given year. Thus, if signs of population decline became evident, the agency has mechanisms in place to reduce exploitation as required. Finally, although the Small Pelagic Fishery Harvest Strategy document does not contain explicit LRPs, it is directly linked to the Commonwealth Harvest Strategy Policy which states that when a stock falls below the LRP (which is generally at least equivalent to PRI) a Stock Rebuilding Strategy

must be implemented, with exploitation rates reduced to levels that ensure stock recovery within a defined timeframe. AFMA has already implemented several Stock Rebuilding Strategies under the Harvest Strategy framework (e.g. blue warehou).

The HS applies harvest control rules to available biomass estimates from DEPM surveys, to determine an RBC for each quota species. Other sources of mortality are then applied to RBCs to derive the TAC recommendations by AFMA's Commission.
Stocks in the SPF are managed under a harvest strategy that has been revised several times in recent years. The review of the 2014 harvest strategy included ecosystem and population modelling. Recommendations from the review were incorporated into the current harvest strategy, which adopts a target reference point of 50% of the unfished biomass ($0.5B_0$) and a limit reference point of $0.2B_0$.
However, the last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above $B_{50\%}$. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with B_{MSY}.

The harvest strategy has 3 tiers, with static exploitation rates for each tier and stock. Operating at tier 1 requires a recent egg survey and a biomass estimate based on the DEPM. Tier 1 allows for the highest exploitation rates.
A tier 1 RBC can be set for a maximum of 5 years. If there is no updated survey, the harvest strategy steps down to tier 2.
Tier 2 has reduced exploitation rates in acknowledgement of the increasing uncertainty about how well the DEPM-based biomass estimate reflects current biomass. Similarly, the harvest strategy steps down from tier 2 to tier 3 after a further 5 or 10 years (depending on the species), which further reduces the exploitation rate. There is no time limit for a species to remain at tier 3.
Also, quota statutory fishing rights (SRFs) allow fishers to take a percentage weight of the TAC that has been set for each quota species. SFR's are granted under the Management Plan and may be transferred, leased, surrendered, or cancelled. To fish in the SPF, fishers must hold uncaught quota SFRs nominated to the boat that will fish the quota. Once the TAC for the fishing season is set by the AFMA Commission, the number of SFR's a fisher holds, will determine what percentage of the TAC, by weight, they can catch.

Furthermore, closed areas are in operation when regional catch limits are exceeded. A framework of sanctions is applied when laws and regulations are discovered to have been broken.

Therefore, there is a mechanism in place by which total fishing mortality of this species is restricted, so the fishery PASSES clause A3.1.

A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.

According to ABARES fishery status reports 2021, Recent catches have been below the RBC. Historical catches have been low and are not likely to have reduced biomass below the LRP.

Most of the eastern blue mackerel catch has historically been taken in state fisheries. However, Commonwealth catches have exceeded state catches since 2015–16. The total combined catch (state and Commonwealth, excluding Victorian catches which were confidential) for 2019–20 was 6,124 t, comprising 5,693 t from the Commonwealth and 431 t from state fisheries. Commonwealth catch increased to 6,215 t in 2020–21, so there is no evidence of exceeding the TAC. It can also be clearly seen in figures 4 and 5 above, that catches did not exceed TAC in recent years.

Therefore, total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment, so the fishery PASSES clause A3.2.

A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).

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 areas where they are most needed and where they will prove most effective. Features of the programme include ensuring compliance with AFMA's domestic fisheries management measures. Fisheries Officers conduct targeted inspections of Commonwealth endorsed operators. All Commonwealth fishing boats are tracked via satellite – to vessel monitoring systems. Catch monitoring includes electronic logbooks, a Catch Documentation Scheme, electronic monitoring, logbooks, observers, audits and inspections.
AFMA enforces the provisions of the Fisheries Management Act 1991, Torres Strait Fisheries Act 1984 and the Maritime Powers Act 2013; including the power to close a fishery should the stock be estimated to be below the limit reference point or proxy. To date this has not happened for the blue mackerel stock.

Therefore, commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible), so the fishery PASSES clause A3.3.

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Standard clause 1.3.2.1.3

Links	
MarinTrust Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4	**Stock Status - Minimum Requirements**		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	Yes

	Clause outcome: **PASS**

A4.1 The stock is at or above the target reference point, OR IF NOT:
The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:
The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.

According to the while spawning biomass estimates from fishery-independent egg surveys are available for all UoA species, biomass reference points are not directly used explicitly or implicitly to assess stock status. Instead, fishing mortality (F) expressed as the % exploitation rate is used as an implicit reference point to determine stock status in the Fishery Assessment Reports.
The figure 3 above clearly shows that the current stock status (recent exploitation rate), was below the reference point (maximum exploitation rate) from 2017 to 2019.
Recent catches have been below the RBC, calculated using an MSE-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the eastern blue mackerel stock is classified as not overfished and not subject to overfishing.

Therefore, the stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure, so the fishery PASSES clause A4.1.

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Links	
MarinTrust Standard clause	**1.3.2.1.4**
FAO CCRF	**7.2.1, 7.2.2 (e)**
GSSI	**D6 01**

Species Name	**Red bait/Cape bonnetmouth (*Emmelichthys nitidus*) eastern stock**	
A1	**Data Collection - Minimum Requirements**	
A1.1	Landings data are collected such that the fishery-wide removals of this species are known.	Yes
A1.2	Sufficient additional information is collected to enable an indication of stock status to be estimated.	Yes
	Clause outcome:	**PASS**

A1.1 Landings data are collected such that the fishery-wide removals of this species are known.

All Commonwealth fishers must record all catch and effort details (including gear and spatial position) in their official AFMA daily fishing logbooks. Catch weights are used in combination with gear, effort and spatial data to inform fishery stock assessments. A Harvest Strategy Policy (HSP see A3.1) makes provision for the monitoring of all fishery–dependent data (catch, effort and size/age catch structure).

The red bait fishery started in the early 1980s. Total landings (Commonwealth and state) were less than 2,000 t per year between 1984–85 and 2000–01, but increased in 2001–02 and peaked at 7,450 t in 2003–04. Annual catches decreased steadily thereafter. Commonwealth catch for 2020–21 was 2,011 t, down from 2,412 t in 2019–20 (Figure below).

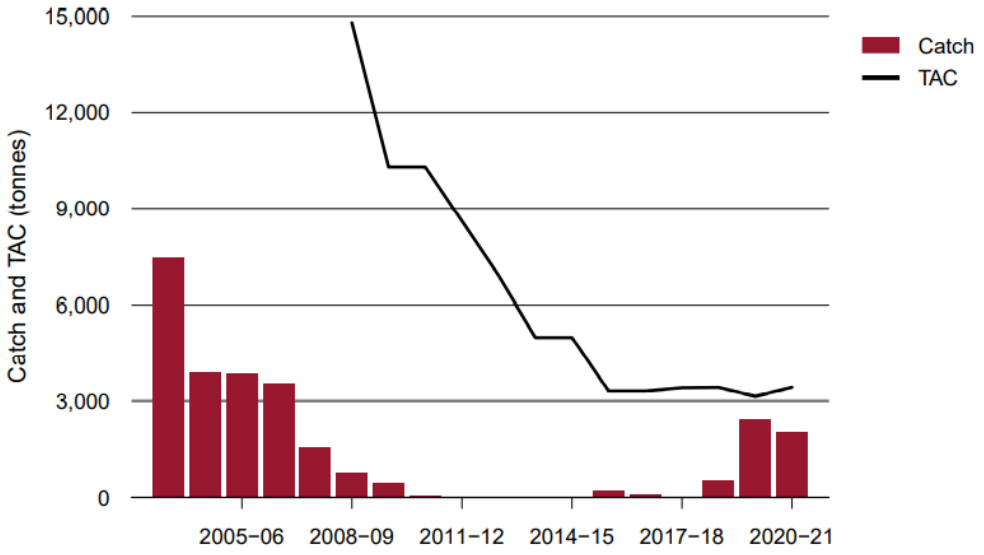

Figure 6. Commonwealth eastern red bait catch and TAC, 2003–04 to 2020-21 seasons.
Source: Fisheries status, DAWE-ABARES 2021.

In the last MSC surveillance audit (2022), catches of eastern red bait are available:

TAC	Year	**2020/2021**	3,440	**Tonnes**
UoA share of total TAC	Year	**2020/2021**	38.9	**%**
Total green weight catch by UoC	Year (most recent)	**2019/2020**	1,991	**Tonnes**
Total green weight catch by UoC	Year (second most recent)	**2020/2021**	1,338	**Tonnes**

Figure 7. Total Allowable Catch (TAC) and catch data: red bait.
Source: MRAG Americas, Inc. 2022

However, it is still considered that landings data are collected such that the fishery-wide removals of this species are known, so the fishery PASSES clause A1.1.

A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.

Daily Egg Production Method (DEPM) surveys generate estimates of spawning stock size (SSB) based on surveys of eggs during spawning seasons. DEPM estimates are currently used as absolute estimates of stock size for the purpose of calculating Recommended Biological Catches (RBCs). TACs are then calculated by subtracting any significant known sources of mortality from RBCs. Adjustments for catches taken in other fisheries will be based on the Scientific Panel's best estimate of future catch in other fisheries. Where no DEPM surveys have been conducted, the use of an Atlantis ecosystem model to provide estimates of biomass is available. The model uses all available information on species distribution, relative abundance and dietary requirements. The SPF Harvest Strategy (HS) explicitly recognises that biomass estimates derived from the Atlantis–SPF model are more uncertain than those based on DEPMs.

According to the last MSC surveillance audit, the HCRs are documented in the Small Pelagic Fishery Harvest Strategy (SPFHS). Smith et al (2015) determined conservative exploitation levels that aimed to maintain stocks above $B_{50\%}$ with a high degree of confidence (<8% probability of falling below $B_{20\%}$ in 50 years) for a range of MSE scenarios. Therefore, even at maximum exploitation rates the fishery is highly likely to be operating below F_{MSY} under average conditions. The MSE results provide the basis for the HCRs, with maximum exploitation rates of 10% for redbait. While it is unclear why the exploitation rate for redbait is higher than that recommended (10% versus 9%), redbait exploitation rates are highly unlikely to reach these levels as redbait are only caught as a by-product during targeted jack mackerel and blue mackerel fishing.
While direct measures of biomass are only conducted every five years at the most, annual assessments of catch, effort, CPUE and age and length frequencies for each species are presented in a Fishery Assessment Report.

The most recent egg surveys for eastern red bait – in 2005 and 2006 – provided spawning biomass estimates (using DEPM) of 86,990 t (coefficient of variation [CV] 0.37) and 50,782 t (CV 0.19), respectively. The average of these 2 estimates (68,886 t) was used to generate an RBC of 3,444 t for 2020–21, using the tier 2 decision rule. This was the ninth season that tier 2 was used to set an RBC for eastern red bait. After factoring in state catches, the AFMA Commission agreed to a TAC of 3,424 t. The 2021 DEPM survey gave a biomass estimate of 54,000 t and permitted to generate an agreed TAC of 3,440 t for 2021-2022.

Recent catches have been below the RBC calculated using an MSE-tested harvest strategy and are a small proportion of the most recent estimate of biomass. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the red bait east stock is classified as not overfished and not subject to overfishing.

Therefore, sufficient additional information is collected to enable an indication of stock status to be estimated, so the fishery PASSES clause A1.2.

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Links

MarinTrust Standard clause	1.3.2.1.1, 1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	7.3.1, 12.3
GSSI	D.4.01, D.5.01, D.6.02, D.3.14

A2	**Stock Assessment - Minimum Requirements**		
	A2.1	A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.	Yes
	A2.2	The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.	Yes

	A2.3	The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.	Yes
	A2.4	The assessment is subject to internal or external peer review.	Yes
	A2.5	The assessment is made publicly available.	Yes
		Clause outcome:	**PASS**

A2.1 A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species.

Annual fisheries assessments include updated catch and effort data from the previous fishing season in addition to length–frequency and age information from catches. Adjustments for catches taken in other fisheries are based on the SPF Scientific Panel's best estimate of future catch in other fisheries (e.g. average of recent recorded annual catches). Information on changes in spatial and temporal patterns of effort and catch are also included in these annual assessments.
Annual Fishery Assessments also aim to provide evidence suitable for detecting stock depletion, localised depletion or changes in the size and age structure of the catch that cannot be adequately explained by reasons other than a decline in abundance.

The last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above $B_{50\%}$. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with B_{MSY}.

RBC's and TAC's are set using 2015 harvest strategy control rules and latest DEPM biomass estimates using the Atlantis ecosystem model. Annual fisheries assessments are undertaken and include updated catch and effort data from the previous fishing season in addition to Length–frequency and age information from catches for each stock fished.

Therefore, a stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock), and considers all fishery removals and the biological characteristics of the species, so the fishery PASSES the clause A2.1.

A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.

The Harvest Strategy applies harvest control rules to available biomass estimates (SSB) from DEPM surveys to determine a Recommended Biological Catch (RBC) for each stock. Other sources of mortality are then applied to RBCs to derive total allowable catch (TAC) recommendations by AFMA.

According to the MSC PCR, the PRI is interpreted as a point below which the recruitment might be impaired, and it can be analytically or empirically determined. In any case, the PRI cannot be less than 20% of the spawning stock level that would be expected in the absence of fishing or B_0. If the evidence shows that a stock is below PRI, the MSC requires that the impact of the UoA is low enough that if the species is capable of improving its status, the UoA will not hinder that improvement; it does not require evidence that the status of the species is actually improving.
The limit reference points for AFMA managed species are in accord to the Commonwealth Fisheries Harvest Strategy Policy and consistent with the MSC PRI (20% B_0, equivalent to a Limit Reference Point (LRP) of 0.2% B_0). Reference points are set as a % of B_0.
For the stock, recent catches have been below the RBC calculated using an MSE-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass (see figure 3). On this basis, the eastern red bait stock is classified as not overfished and not subject to overfishing.

Therefore, the assessment provides an estimate of the status of the biological stock relative to a reference point or proxy, so the fishery PASSES clause A2.2.

A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.

The egg surveys for eastern red bait – in 2005 and 2006 – provided spawning biomass estimates (using DEPM) of 86,990 t (coefficient of variation [CV] 0.37) and 50,782 t (CV 0.19), respectively. The average of these 2 estimates (68,886 t) was used to generate an RBC of 3,444 t for 2020–21, using the tier 2 decision rule. This was the ninth season that tier 2 was used to set an RBC for eastern red bait. After factoring in state catches, the AFMA Commission agreed to a TAC of 3,424 t. The 2021 DEPM survey gave a biomass estimate of 54,000 t and permitted to generate an agreed TAC of 3,440 t for 2021-2022.

Therefore, the assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status, so the fishery PASSES clause A2.3.

A2.4 The assessment is subject to internal or external peer review.

The SPF Scientific Panel last met in January 2021 in order to peer review scientific and economic data provided by ABARES and in turn provide advice to SEMAC and AFMA (Commission). During the 2021 meeting the Panel noted that no issues were raised at the Stakeholder forum regarding annual assessments of SPF Stocks including jack mackerel and RBC advice. The Panel confirmed its previous recommendations for RBCs, based on the 2017 SPF Harvest Strategy and DEPM Survey results.

Therefore, the assessment is subject to internal or external peer review, so the fishery PASSES clause A2.4.

A2.5 The assessment is made publicly available.

Minutes of annual meetings of the SPF Scientific Panel summarise findings of stock assessment studies and list agreed RBC's and SSB's for each managed stock on their website. Detailed information on stock assessments is available on request through the Freedom of Information Act.

Fishery status reports published by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) provide independent assessments of the biological status of fish stocks including jack mackerel and the economic status of fisheries managed, or jointly managed, by the Australian Government (Commonwealth fisheries). ABARES uses data and information sourced from AFMA and Regional Fisheries Management Organisations (RFMO's). Fishery status reports are published annually on the ABARES website.

Therefore, the assessment is made publicly available, so the fishery PASSES clause A2.5.

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Links	
MarinTrust Standard clause	1.3.2.1.2, 1.3.2.1.4, 1.3.1.2
FAO CCRF	12.3
GSSI	D.5.01, D.6.02, D.3.14

A3	**Harvest Strategy - Minimum Requirements**		
	A3.1	There is a mechanism in place by which total fishing mortality of this species is restricted.	Yes
	A3.2	Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.	Yes
	A3.3	Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).	Yes
		Clause outcome:	**PASS**

A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.

Commonwealth Fisheries Harvest Strategy Policy (HSP) and Guidelines allow for a science–based approach to setting catch limits and offers advice on how to interpret and apply policy to fisheries.

The Minister makes the final decision on what the TAC should be for any given year. Thus if signs of population decline became evident, the agency has mechanisms in place to reduce exploitation as required. Finally, although the Small Pelagic Fishery Harvest Strategy document does not contain explicit LRPs, it is directly linked to the Commonwealth Harvest Strategy Policy which states that when a stock falls below the LRP (which is generally at least equivalent to PRI) a Stock Rebuilding Strategy must be implemented, with exploitation rates reduced to levels that ensure stock recovery within a defined timeframe. AFMA has already implemented several Stock Rebuilding Strategies under the Harvest Strategy framework (e.g. blue warehou).

The HS applies harvest control rules to available biomass estimates from DEPM surveys, to determine an RBC for each quota species. Other sources of mortality are then applied to RBCs to derive the TAC recommendations by AFMA's Commission.

Stocks in the SPF are managed under a harvest strategy that has been revised several times in recent years. The review of the 2014 harvest strategy included ecosystem and population modelling. Recommendations from the review were incorporated into the current harvest strategy, which adopts a target reference point of 50% of the unfished biomass ($0.5B_0$) and a limit reference point of $0.2B_0$.

The harvest strategy has 3 tiers, with static exploitation rates for each tier and stock. Operating at tier 1 requires a recent egg survey and a biomass estimate based on the DEPM. Tier 1 allows for the highest exploitation rates.
A tier 1 RBC can be set for a maximum of 5 years. If there is no updated survey, the harvest strategy steps down to tier 2.
Tier 2 has reduced exploitation rates in acknowledgement of the increasing uncertainty about how well the DEPM-based biomass estimate reflects current biomass. Similarly, the harvest strategy steps down from tier 2 to tier 3 after a further 5 or 10 years (depending on the species), which further reduces the exploitation rate. There is no time limit for a species to remain at tier 3.
The last MSC surveillance audit report indicated that there was negligible benefit in conducting surveys every two years compared to five years, however uncertainty increased substantially when DEPM surveys were conducted more than five years apart. This led to the Tier 2 recommendation to halve exploitation rate to maintain stocks above $B_{50\%}$ with the same degree of confidence. The same occurs for Tier 3. By including these decision rules, the Harvest Strategy explicitly accounts for the uncertain event that PRI is approached in the absence of a direct biomass measure by automatically reducing exploitation to levels that will ensure recovery of the stock to levels above $B_{50\%}$. While it cannot be argued that these HCRs are responsive to the state of the stock, they do ensure that the exploitation rate is reduced as the PRI is theoretically approached, and they can be expected to keep the stock fluctuating around a target level at least consistent with B_{MSY}.

Also, quota statutory fishing rights (SRFs) allow fishers to take a percentage weight of the TAC that has been set for each quota species. SFR's are granted under the Management Plan and may be transferred, leased, surrendered, or cancelled. To fish in the SPF, fishers must hold uncaught quota SFRs nominated to the boat that will fish the quota. Once the TAC for the fishing

season is set by the AFMA Commission, the number of SFR's a fisher holds, will determine what percentage of the TAC, by weight, they can catch.

Furthermore, closed areas are in operation when regional catch limits are exceeded. A framework of sanctions is applied when laws and regulations are discovered to have been broken.

Therefore, there is a mechanism in place by which total fishing mortality of this species is restricted, so the fishery PASSES clause A3.1.

A3.2 Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.

According to ABARES fishery status reports 2021, recent catches have been below the RBC.
Historical catches have been low and are not likely to have reduced biomass below the LRP.

The red bait fishery started in the early 1980s. Total landings (Commonwealth and state) were less than 2,000 t per year between 1984–85 and 2000–01, but increased in 2001–02 and peaked at 7,450 t in 2003–04. Annual catches decreased steadily thereafter. Commonwealth catch for 2020–21 was 2,011 t, down from 2,412 t in 2019–20. It can also be clearly seen in figures 6 and 7 above, that catches did not exceed TAC in recent years.

Therefore, total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment, so the fishery PASSES clause A3.2.

A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).

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 areas where they are most needed and where they will prove most effective. Features of the programme include ensuring compliance with AFMA's domestic fisheries management measures. Fisheries Officers conduct targeted inspections of Commonwealth endorsed operators. All Commonwealth fishing boats are tracked via satellite – to vessel monitoring systems. Catch monitoring includes electronic logbooks, a Catch Documentation Scheme, electronic monitoring, logbooks, observers, audits and inspections.

AFMA enforces the provisions of the Fisheries Management Act 1991, Torres Strait Fisheries Act 1984 and the Maritime Powers Act 2013; including the power to close a fishery should the stock be estimated to be below the limit reference point or proxy. Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible). To date this has not happened for the red bait stock.

Therefore, commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible), so the fishery PASSES clause A3.3.

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Standard clause 1.3.2.1.3

Links	
MarinTrust Standard clause	1.3.2.1.3, 1.3.2.1.4
FAO CCRF	7.2.1, 7.22 (e), 7.5.3
GSSI	D3.04, D6.01

A4	**Stock Status - Minimum Requirements**		
	A4.1	The stock is at or above the target reference point, OR IF NOT: The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT: The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.	Yes
		Clause outcome:	**PASS**

A4.1 The stock is at or above the target reference point, OR IF NOT:
The stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure OR IF NOT:
The stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.

According to the while spawning biomass estimates from fishery-independent egg surveys are available for all UoA species, biomass reference points are not directly used explicitly or implicitly to assess stock status. Instead, fishing mortality (F) expressed as the % exploitation rate is used as an implicit reference point to determine stock status in the Fishery Assessment Reports.
The figure 3 above clearly shows that the current stock status (recent exploitation rate), was below the reference point (maximum exploitation rate) from 2017 to 2019.
Recent catches have been below the RBC, calculated using an MSE-tested harvest strategy. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the eastern blue mackerel stock is classified as not overfished and not subject to overfishing.

Therefore, the stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure, so the fishery PASSES clause A4.1.

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Links	
MarinTrust Standard clause	**1.3.2.1.4**
FAO CCRF	**7.2.1, 7.2.2 (e)**
GSSI	**D6 01**

CATEGORY C SPECIES

In a whole fish assessment, Category C species are those which make up less than 5% of landings, but which are subject to a species-specific management regime. In most cases this will be because they are a commercial target in a fishery other than the one under assessment.

Clause C1 should be completed for **each** Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. Where a species fails this Clause, it may be assessed as a Category D species instead, EXCEPT if there is evidence that it is currently below the limit reference point.

Species Name	**Australian sardine, *Sardinops Sagax***	
C1	**Category C Stock Status - Minimum Requirements**	
C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Yes
C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Yes
	Clause outcome:	**PASS**

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.

State catches of Australian sardine comprise most of the total catch of the stock. Unlike the SPF, state catches are not constrained by catch limits. State catches increased substantially from 2001–02 to 2009–10, contributing to reductions in the Commonwealth TAC. Total sardine catches from the Commonwealth peaked in 2007–08 at 4,619 t, before decreasing to 894 t in 2014–15 – its lowest level since 2001–02. Total catch increased to 2,887 t in 2016–17, primarily driven by increased catches by the Victorian fleet. The total combined catch (state and Commonwealth, excluding Victorian catches because they were confidential) for 2019–20 was 727 t, comprising 232 t of Commonwealth catch and 495 t of state catch. Commonwealth catch for 2020–21 was 86 t (Figure 7).

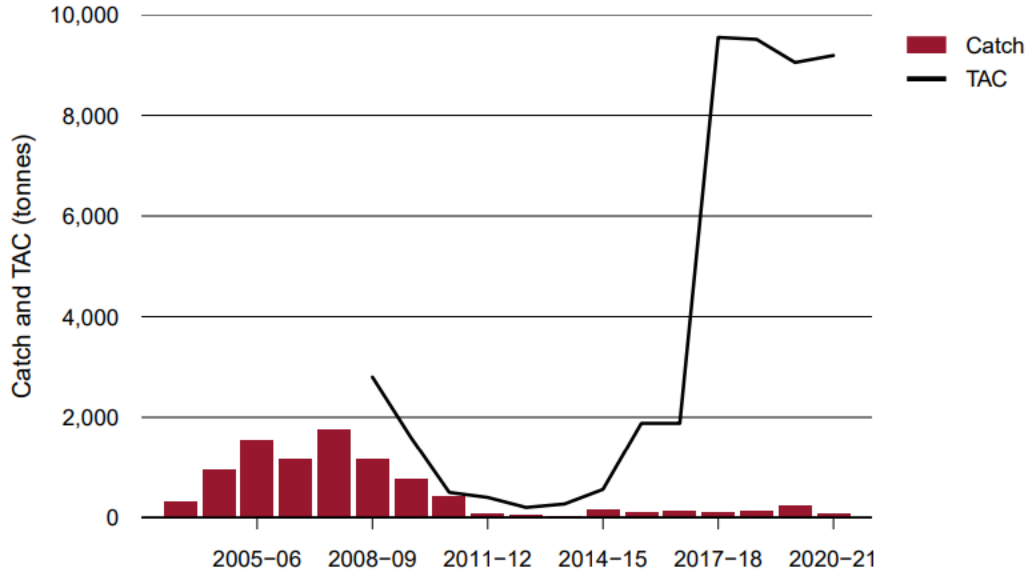

Figure 8. Commonwealth Australian sardine catch and TAC, 2003–04 to 2020-21 seasons.
Source: Fisheries status, DAWE-ABARES 2021.

Therefore, fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible, so the fishery PASSES clause C1.1.

C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.

Egg surveys for the east coast stock of Australian sardine (undertaken in association with eastern blue mackerel surveys) were completed in August–September 2014, and a spawning biomass of 49,600 t (95% CI 24,200–213,300 t) was estimated using the DEPM (Ward et al. 2015). Tier 1 of the 2017 harvest strategy (exploitation rate of 20%) and the biomass estimated from the 2014 survey were used to recommend a 2020–21 RBC of 9,915 t. This was the fifth season that the tier 1 exploitation rate was used to set an RBC for Australian sardine. After factoring in state catches, the Australian Fisheries Management Authority (AFMA) Commission agreed to a TAC of 9,190 t. A new egg survey was completed in September 2019, and a spawning biomass of 42,724 t (95% CI 15,487–69,962 t) was estimated using the DEPM (Ward 2020). The Small Pelagic Fishery Scientific Panel used the 2019 DEPM estimate to recommend an RBC for 2021–22.

Recent catches have been below the RBC calculated using a management strategy evaluation (MSE)–tested harvest strategy and are a small proportion of the most recent estimate of biomass. This level of fishing mortality is unlikely to have substantially reduced spawning biomass. On this basis, the Australian sardine stock is classified as not overfished and not subject to overfishing.

Therefore, the species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible so the fishery PASSES clause C1.2.

References

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Noriega, R, Dylewski, M, Chapter 7 Small Pelagic fishery, from Patterson, H, Bromhead, D, Galeano, D, Larcombe, J, Woodhams, J and Curtotti, R 2021, Fishery status reports 2021, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0.: https://daff.ent.sirsidynix.net.au/client/en_AU/search/asset/1032581/8

Australian Fisheries Management Authority AFMA (Home page): https://www.afma.gov.au/fisheries

Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

FURTHER IMPACTS

The three clauses in this section relate to impacts the fishery may have in other areas. A fishery must meet the minimum requirements of all three clauses before it can be recommended for approval.

F1	Impacts on ETP Species - Minimum Requirements		
	F1.1	Interactions with ETP species are recorded.	Yes
	F1.2	There is no substantial evidence that the fishery has a significant negative effect on ETP species.	Yes
	F1.3	If the fishery is known to interact with ETP species, measures are in place to minimise mortality.	Yes
		Clause outcome:	**PASS**

For the following clause, information remains generally the same as last years as no major changes occurred in the fishery, but several updates have been made.

F1.1 Interactions with ETP species are recorded.

The management plan for the SPF was most recently accredited under part 13 of the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) on 21 October 2018; this accreditation expires on 21 October 2023. Two conditions were placed on the accreditation: that, before fishing, midwater trawl vessels have mitigation devices in place for dolphins, seals and seabirds; and that new midwater trawl vessels carry 1 observer for the first 10 trips, with additional observers or monitoring to be implemented after scientific assessment. Minimum levels for observer coverage in the SPF are 10% of days fished for purse-seine vessels and 20% of days fished for midwater trawl vessels.

Separate ecological risk assessments have been done for the midwater trawl and purse-seine fishing methods used in the fishery. For purse-seine fishing, 235 species were assessed at level 2[3]; of these, 108 were assessed as being at high risk (Daley et al. 2007), with 29 remaining at high risk after applying AFMA's residual risk guidelines. The ecological risk management plan identifies 3 seal species and 26 whale and dolphin species as being at high risk in the SPF. For midwater trawl fishing, 185 species were assessed at level 1; none were deemed high risk, so none progressed to level 2, mainly because of limited historical and current fishing activity. The report by CSIRO cautioned that increasing effort might result in a higher interaction rate and consequently greater risk. AFMA is developing an 'ERA triggers checklist' specific to the SPF, based on the report Guidelines for ERA reassessment triggers for Commonwealth fisheries.

In accordance with accreditation under the EPBC Act, AFMA publishes and reports quarterly on interactions with protected species on behalf of Commonwealth fishing operators to the Department of Agriculture, Water and the Environment (DAWE). Thirty-seven interactions with protected species were reported in the SPF during 2020. These comprised 19 New Zealand fur seals (*Arctocephalus forsteri*; 1 alive and 18 dead), 1 unidentified seal (dead), 10 common dolphins (*Delphinus delphinus*; 10 dead), 4 shearwaters (*Puffinus spp*.; 1 alive and 3 dead), 1 shortfin mako (*Isurus oxyrinchus*; dead), 1 grey nurse shark (*Carcharias taurus*; alive) and 1 unidentified manta ray (*Mobula sp*.; alive). These reported interactions with protected species form part of the ongoing monitoring by DAWE of the performance of fisheries within their accreditation under the EPBC Act.
1 interaction was reported from July to September 2021 in the SPF, with one common dolphin, released dead.
2 interactions were reported from January to June 2022, both with Australian Fur Seals: one has been released alive and the other dead:

Small Pelagic Fishery

Gear Type	Common name	Total	Life status		Interaction type
			Alive	Dead	
Midwater Otter Trawl	Australian Fur Seal	1	0	1	Entangled
	Total Interactions	1	0	1	

[3] Level 1 screens out activities that are judged to have low impact, and potentially screens out whole ecological components as well. Level 2 is a screening or prioritization process for individual species, habitats and communities at risk from direct impacts of fishing. The Level 2 methods do not provide absolute measures of risk. Instead they combine information on productivity and exposure to fishing to assess potential risk – the term used at Level 2 is risk. Because of the precautionary approach to uncertainty, there will be more false positives than false negatives at Level 2, and the list of high-risk species or habitats should not be interpreted as all being at high risk from fishing. Level 2 is a screening process to identify species or habitats that require further investigation. Some of these may require only a little further investigation to identify them as a false positive; for some of them managers and industry may decide to implement a management response; others will require further analysis using Level 3 methods, which do assess absolute levels of risk.

Gear Type	Common name	Total	Life status		Interaction type
			Alive	Dead	
Midwater Otter Trawl	Australian Fur Seal	1	1	0	Entangled
	Total Interactions	1	1	0	

Therefore, interactions with ETP species are recorded, so the fishery PASSES clause F1.1.

F1.2 There is no substantial evidence that the fishery has a significant negative effect on ETP species.

The Scientific Panel (2019) noted that for protected species marine mammals and large bycatch monitoring should be reduced from 100 to 10% of Electronic Monitoring footage. This recommendation was based on the outcomes of footage reviewed in the SPF to date, as well as evidence from both AFMA-managed fisheries and international work that this level of review is sufficient to achieve accurate reporting in logbooks. As risk to seabird interactions in the fishery is low (due to very little discarding of catch and the use of bird mitigation devices) it was decided that the deployment of mitigation be audited by electronic monitoring. As detailed previously, interactions with ETP are quite scarce, well monitored, and managed if they happen.

Therefore, there is no substantial evidence that the fishery has a significant negative effect on ETP species, so the fishery PASSES clause F1.2.

F1.3 If the fishery is known to interact with ETP species, measures are in place to minimise mortality.

The SPF Bycatch and Discard Workplan 2022-2025 includes specific measures to address the risks highlighted by the ecological risk assessment and to minimise the risk of further interactions with non-target species. AFMA have developed special protected species management strategies and actions under the workplan. It notably includes the implementation of upward-opening seal excluder devices and developing vessel management plans for each midwater trawl vessel operating in the fishery, in order to minimise the risk of interactions with seabirds, seals and dolphins. Arrangements can include area closures, gear restrictions, monitoring requirements or trigger limits.

Additional management responses are triggered if the maximum interaction rate for a vessel is exceeded. The minimum management response requires the holder to immediately cease fishing and return to port until authorised by AFMA to recommence fishing using trawl gear The Commonwealth SPF industry purse-seine code of practice requires fishers to avoid interactions with species, where possible; implement mitigation measures, where necessary; release all captured protected species alive and in good condition; and report all interactions with protected species.

AFMA-managed fisheries have accreditation (Department of the Environment and AFMA) for interactions with protected species under Part 13 of the EPBC Act 1999. Without this accreditation, fishing operators may be liable for prosecution for the capture of protected species. Observer reports, in addition to other duties, record observations such as whether birds and other wildlife could be seen during a fishing trip. All operators are required to carry observers when requested by AFMA.

Furthermore, in May 2017, AFMA implemented the SPF Dolphin mitigation Strategy, which was then revised it in 2018-2019 and amendments to conditions came into effect on 1 November 2019. The strategy aims to minimise dolphin interactions in the trawl sector of the fishery by creating incentives for fishers to innovate and adopt best practice to minimise interactions. To fish in the SPF, all trawl vessels must have an AFMA-approved dolphin mitigation plan that outlines the actions being taken by the fisher to minimise dolphin interactions on that particular vessel. Dolphin Mitigation Plans must be updated by an operator if there are any changes to actions being taken to minimise dolphin interactions. The updated version must be approved by AFMA before implementation and recommencing fishing. AFMA may review electronic monitoring footage of any dolphin interactions to ensure that operators are operating in accordance with their Dolphin Mitigation Plan, and may require increased monitoring (observer or electronic monitoring) to confirm appropriate mitigation strategies are being used by the operator. Where a review of a Dolphin Mitigation Plan is triggered by an interaction rate or interaction cap being exceeded, its review may be done externally, and all costs associated with the review will be cost recovered.

Therefore, if the fishery is known to interact with ETP species, measures are in place to minimise mortality, so the fishery PASSES clause F1.3.

References

AFMA, 2008 (last revised 2022). Small Pelagic Fishery Harvest Strategy: https://www.afma.gov.au/sites/default/files/uploads/2017/04/spf-harveststrategy-2017-review.pdf

Noriega, R, Dylewski, M, Chapter 7 Small Pelagic fishery, from Patterson, H, Bromhead, D, Galeano, D, Larcombe, J, Woodhams, J and Curtotti, R 2021, Fishery status reports 2021, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. CC BY 4.0.: https://daff.ent.sirsidynix.net.au/client/en_AU/search/asset/1032581/8

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Daley, R., Dowdney, J., Bulman, C, Sporcic, M., Fuller, M., Ling, S. and Hobday, A. (2007). 'Ecological risk assessment for the effects of fishing.' Report for the midwater trawl sub-fishery of the Small Pelagic Fishery. Report for AFMA, Canberra: https://www.researchgate.net/publication/262689215_Ecological_Risk_Assessment_ERA_for_Effects_of_Fishing_REPORT_FOR_THE_MIDWATER_TRAWL_SUB-FISHERY_OF_THE_SMALL_PELAGIC_FISHERY

Link	
MarinTrust Standard clause	1.3.3.1
FAO CCRF	7.2.2 (d)
GSSI	D4.04, D.3.08

F2	**Impacts on Habitats - Minimum Requirements**		
	F2.1	Potential habitat interactions are considered in the management decision-making process.	Yes
	F2.2	There is no substantial evidence that the fishery has a significant negative impact on physical habitats.	Yes
	F2.3	If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.	Yes
		Clause outcome:	**PASS**

For the following clause, information remains generally the same as last years as no major changes occurred in the fishery, but several updates have been made.

F2.1 Potential habitat interactions are considered in the management decision-making process.

AFMA regularly monitor the effects fishing activities have on marine species, habitats and communities through ecological risk assessments. Assessment results help prioritise management, research, data collection and monitoring needs for the fishery. The Ecological Risk Management (ERM) framework is used to assist decision makers in developing fisheries management arrangements consistent with Ecologically Sustainable Development (ESD) objectives. The framework uses Ecological Risk Assessment for the Effects of Fishing (ERAEF) as the primary means of assessing the risks that fisheries may pose to the marine environment.

ERAEF provides a hierarchical framework for a comprehensive assessment of ecological risks arising from fishing, with impacts assessed against five ecological components including habitats. The latest Ecological Risk Assessment (ERA) for the effects of fishing report (midwater trawl small pelagic fishery) was published in September 2017. For the purse seine fishery, the latest report was published in 2007. As the gear is designed to fish in the water column it is a rare event that the gear does come into contact with the bottom. Impact on benthic habitats is likely to be minimal compared to demersal trawling.

Therefore, potential habitat interactions are considered in the management decision-making process, so the fishery PASSES clause F2.1.

F2.2 There is no substantial evidence that the fishery has a significant negative impact on physical habitats.

Ecosystem modelling has shown that harvesting SPF species at the exploitation rates proposed in the HS will have minimal impacts on predator populations or ecosystem function. Notwithstanding, AFMA will continue to consider the best available science, including that relating to the ecological impacts of fishing small pelagic species, and expert advice when setting catch limits in the SPF. Ecological impacts may include but are not restricted to effects on protected species populations, localised depletion, and ecosystem function.

ERAEF proceeds through four stages of analysis: scoping; an expert judgement-based Level 1 analysis (SICA – Scale Intensity Consequence Analysis); an empirically based Level 2 analysis (PSA – Productivity Susceptibility Analysis); and a model-based Level 3 analysis. This hierarchical approach provides a cost-efficient way of screening hazards, with increasing time and attention paid only to those hazards that are not eliminated at lower levels in the analysis. Risk management responses may be identified at any level in the analysis. The 2017 assessment of the SPF Midwater Trawl Sub-fishery included a scoping stage and a Level I analysis. All hazards (fishing activities) were eliminated at Level 1 (risk scores 1 or 2). All ecological components (including habitats) were eliminated at Level 1 i.e. there were no risk scores of 3 – moderate – or above for any component. Fishing methods used do not cause damage to the bottom: the mid-water trawl is designed and rigged to fish in midwater and is not intended to come in contact with the seabed. For purse seining, effective use requires that fish form dense aggregations on or close to the surface of the water.

Therefore, there is no substantial evidence that the fishery has a significant negative impact on physical habitats, so the fishery PASSES clause F2.2.

F2.3 If the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts.

An ERM Guide (June 2017) to assist AFMA fishery managers better implement ERAEF in a consistent and transparent manner has been published. The Guide outlines the process by which fishery managers can develop strategies to plan, implement, monitor and review fisheries, ensuring they are being managed in an ecologically sustainable way. A five-year schedule of re-assessment for all Commonwealth fisheries has been developed (unless an earlier re-assessment has been triggered). Application of the Guide will improve the implementation of the ERAEF framework, by applying certainty to the identification of high-risk species and the adoption of risk mitigation management responses. The Guide provides an overview of ERAEF and ERM for habitats and ecological communities to date, including a review of relevant objectives, ERA methods, recent research and future directions.

Therefore, if the fishery is known to interact with physical habitats, there are measures in place to minimise and mitigate negative impacts, so the fishery PASSES clause F2.3.

References

AFMA, 2008 (last revised 2022). Small Pelagic Fishery Harvest Strategy: https://www.afma.gov.au/sites/default/files/uploads/2017/04/spf-harveststrategy-2017-review.pdf

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Ecological Risk Management (2010) Report for the purse-seine sector of the Small Pelagic Fishery March 2010 20pp.: https://www.afma.gov.au/sites/g/files/net5531/f/uploads/2014/11/Ecological-Risk-Management-SPF-purse-seine-March-2010.pdf

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AFMA, 2022: Small Pelagic Fishery Bycatch and Discard Workplan 2022-2025: https://www.afma.gov.au/sites/default/files/spf_bycatch_and_discard_workplan_2022-25_final.pdf

Links	
MarinTrust Standard clause	1.3.3.2
FAO CCRF	6.8
GSSI	D.2.07, D.6.07, D3.09

F3	**Ecosystem Impacts - Minimum Requirements**		
	F3.1	The broader ecosystem within which the fishery occurs is considered during the management decision-making process.	Yes
	F3.2	There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.	Yes
	F3.3	If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.	Yes
		Clause outcome:	**PASS**

For the following clause, information remains generally the same as last years as no major changes occurred in the fishery, but several updates have been made.

F3.1 The broader ecosystem within which the fishery occurs is considered during the management decision-making process.

A Five-Year Strategic Research Plan (2022-2026) for the SPF has been published by AFMA and replaces the 2017-2022 one. It was developed by the AFMA, in consultation with the SPFRAG and the SEMAC, and identifies areas of high priority research for the SPF for the period 2022 to 2026 to: assist with the pursuit of the management objectives for the Small Pelagic Fishery, which are consistent with AFMA's objectives; and enable the effective implementation and appraisal of management arrangements.

The Plan aims to address AFMA's strategic research objectives including preventing unacceptable impacts of Commonwealth fisheries on marine ecosystems and organisms. Each year, the SPF Scientific Panel reviews research needs and develops an annual set of research priorities and work plans. A key goal is the annual monitoring, reporting and assessment of the effectiveness of current mitigation measures and the impact of the fishery on protected species. Marine mammal bycatch data are collected through observer and camera coverage and reported through regular SPF reports on protected species interactions.

This Strategic Research Plan and annual research statements are used by the AFMA Research Committee (ARC) at its August meeting to develop the ARC annual research call made in September; the ARC to recommend priorities to the Commonwealth Fisheries Research Advisory Body (ComFRAB) for potential Fisheries Research and Development Committee (FRDC) funding; and FRDC in making its annual call for research expressions of interest.

The Bycatch and Discard workplan 2022-2026 includes specific measures to address risks highlighted by the ERA and to minimise the risk of further interactions with non-target species. Management actions under the Bycatch and Discard workplan 2022-2026 include implementing upward-opening Seal Excluder Devices and developing other equipment for each mid-water trawl vessel operating in the fishery to minimise the risk of interactions with seabirds; seals and dolphins.
In the workplan is it indicated that ERM strategies are developed to respond to the outcomes of the ERA (which identifies high risk species) and may be identified at any level of assessment, to address general bycatch and discard issues in the fishery. Under the revised Bycatch Policy, ERM strategies have been replaced by Fisheries Management Strategies (FMS), which are made up of key documents such as Harvest Strategies, Bycatch and Discard Workplans, Data Strategies and other species-specific strategies. The development of an FMS for the SPF has been delayed.

Therefore, the broader ecosystem within which the fishery occurs is considered during the management decision-making process, so the fishery PASSES clause F3.1.

F3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.

SICA (Scale, Intensity, Consequence Analysis) analysis evaluates the risk to ecological components resulting from stakeholder-agreed set of activities. SICA elements are scored on a scale of 1 to 6 (negligible to extreme) using a "plausible worst case" approach. Level 1 analysis potentially result in the elimination of activities (hazards) and in some cases whole components. Any SICA element that scores 2 or less is documented, but not considered further for analysis or management response.
The assessment (2017) of the SPF Midwater Trawl Sub-fishery included a scoping stage and a Level I analysis. All hazards (fishing activities) were eliminated at Level 1 (risk scores 1 or 2). All ecological components were eliminated at Level 1 i.e. there were no risk scores of 3 – moderate – or above for any component. Significant external hazards were from other fisheries in the region. Risks rated as major or above (risk scores 4 or 5) were all related to other fishing activities on protected species and habitats and coastal development for protected species.

Therefore, there is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem, so the fishery PASSES clause F3.2.

F3.3 If one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals.

The ecosystem in Southern and Eastern Australia is not highly dependent on these target species. Research by CSIRO (Smith et al. 2015) has found that depletion of the four main target species in the SPF (jack mackerel, red bait, blue mackerel and Australian sardine) has only minor impacts on other parts of the ecosystem. The research suggested that, unlike other areas that show higher levels of dependence on similar species, such as in Peru the food web in southern and eastern Australia does not appear to be highly dependent on SPF target species, and none of the higher trophic–level predators, including tunas, seals and penguins, has a high dietary dependence on the species.

The AFMA Bycatch and Discard Program develops policy and management strategies to manage the impact of commercial fishing on non-target and protected species. Work involves trialling and assisting in the development of new bycatch reduction devices and practices. Bycatch species may include fish, crustaceans, sharks, molluscs, marine mammals, reptiles and birds. Discards can apply to fish of a commercial species that are not kept (because they are undersize, or the fishers could not obtain quota, or trip limits apply) and to the disposal of incidental species taken during fishing operations. Handling practices for commonly caught bycatch species are published regularly by AFMA. Additional precaution is included in recommendations relating to the total permissible fishery removals.

Therefore, if one or more of the species identified during species categorisation plays a key role in the marine ecosystem, additional precaution is included in recommendations relating to the total permissible fishery removals, so the fishery PASSES clause F3.3

References

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AFMA Protected Species Management Strategies: https://www.afma.gov.au/gillnet-dolphin-strategy

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2013/028. CSIRO Oceans and Atmosphere Flagship, Hobart. 74 pp.: https://www.afma.gov.au/sites/default/files/uploads/2014/02/CSIRO-report-SPF-harvest-strategy-settings-Jan-2015.pdf	
Links	
MarinTrust Standard clause	1.3.3.3
FAO CCRF	7.2.2 (d)
GSSI	D.2.09, D3.10, D.6.09

SOCIAL CRITERION

In addition to the scored criteria listed above, applicants must commit to ensuring that vessels operating in the fishery adhere to internationally recognised guidance on human rights. They must also commit to ensuring there is no use of enforced or unpaid labour in the fleet(s) operating upon the resource.

Glossary

Non-target: Species for which the gear is not specifically set, although they may have immediate commercial value and be a desirable component of the catch. OECD (1996), Synthesis report for the study on the economic aspects of the management of marine living resources. AGR/FI(96)12

Target: In the context of fishery certification, the target catch is the catch of stock under consideration by the unit of certification – i.e. the fish that are being assessed for certification and ecolabelling. (GSSI)