

**15th MEETING OF THE TORRES STRAIT
FINFISH FISHERY RESOURCE ASSESSMENT GROUP**

29-30 NOVEMBER 2023

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**15th MEETING OF THE PJJA TORRES STRAIT
FINFISH FISHERY RESOURCE ASSESSMENT GROUP (FFRAG 15)**

Wednesday 29th - Thursday 30th November 2023 - (8:30am-5pm)

Novotel Oasis Hotel - Cairns

DRAFT AGENDA

1 PRELIMINARIES

1.1 Acknowledgement of Traditional Owners, Welcome and Apologies

The Chair will welcome members and observers to the 15th meeting of the FFRAG.

1.2 Adoption of Agenda

The FFRAG will be invited to adopt the draft agenda.

1.3 Declaration of Interests

Members and observers will be invited to declare any real or potential conflicts of interests and determine whether a member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict.

1.4 Action Items from Previous Meetings

The FFRAG will be invited to note the status of action items arising from previous meetings.

1.5 Out-of-Session Correspondence

The FFRAG will be invited to note out of session correspondence on FFRAG matters since the previous meeting.

2 UPDATES FROM MEMBERS

2.1 Industry & Scientific Members

Industry and scientific members will be invited to provide a verbal update on matters concerning the Torres Strait Finfish Fishery, in particular, providing comment on fishing patterns, behaviours, prices, and market trends this season.

2.2 Government Agencies

The FFRAG will be invited to note updates from AFMA, TSRA and QDAF on matters concerning the Torres Strait Finfish Fishery.

2.3 PNG National Fisheries Authority

The FFRAG will be invited to note a verbal update from the PNG National Fisheries Authority if a representative is in attendance.

2.4 Native Title

The FFRAG will be invited to note a verbal update from Malu Lamar (Torres Strait Islander) Corporation RNTBC if a representative is in attendance.

2.5 Climate and Ecosystem Update

The FFRAG is invited to note an update on climate and ecosystem changes and discuss their impacts on Torres Strait finfish fisheries.

3 STOCK ASSESSMENTS AND RBC ADVICE

3.1 Spanish Mackerel

The FFRAG will be invited to review the 2023 stock assessment outcomes and provide advice on a Recommended Biological Catch for Spanish mackerel for the 2024-25 fishing season.

3.2 Coral Trout

Having regard for new catch data, and previous assessments, the FFRAG will be invited to provide advice on a Recommended Biological Catch for coral trout for the 2024-25 fishing season. The FFRAG will consider the outcomes of a scientific sub-group review of the 2019 stock assessment scheduled for 28 November 2023.

4 MANAGEMENT

4.1 Update to the TSF01 Daily Fishing Logbook

The FFRAG will be invited to review the draft amendments to the TSF01 logbook. Subject to endorsement from the FFRAG, these amendments will be finalised before the commencement of the 2024-25 fishing season.

5 RESEARCH

5.1 Climate Change Research

The FFRAG will be invited to note a presentation from Dr Laura Blamey regarding past and current research investigating climate change modelling and impacts in the Torres Strait.

5.2 Biological Sampling Project

The FFRAG will be invited to note an update from the QDAF project team on the current project *Torres Strait Finfish Fishery Coral Trout and Biological Sampling 2021-2024* (project number 2020/0814).

5.3 Non-Commercial Catch Project

The FFRAG will be invited to note an update from Mr David Brewer on 'phase 2' of the non-commercial catch project: *Measuring non-commercial fishing catches (traditional subsistence fishing) in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods*, which was approved for co-funding between AFMA and the FRDC in the 2022/23 - 2023/24 financial years.

5.4 Research Priorities

The FFRAG will be invited to discuss and provide advice on any proposals received regarding research scopes recently endorsed by the Torres Strait Scientific Advisory Committee for the 2024-25 funding year.

FFRAG members will also be invited to review the research priorities for the Finfish Fishery. This discussion will lead on from FFRAG 13 and will form preliminary advice for the 2025-26 funding year.

6 PRIORITIES FOR THE RAG / DATE AND VENUE FOR NEXT MEETING

FFRAG members will be invited to discuss other future priorities for management of the Finfish Fishery.

The FFRAG will discuss arrangements for FFRAG 16 and 17, tentatively scheduled for September and November 2024, and be advised of upcoming meetings of the FFWG (5 - 6 December 2023) and the PZJA meeting to decide next season's sustainable catch limits (January 2024).

7 OTHER BUSINESS

FFRAG members will be invited to discuss other business for consideration.

The Chair must approve the attendance of all observers at the meeting. Individuals wishing to join the meeting as an observer must contact the Executive Officer – Chris Boon (chris.boon@afma.gov.au)

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
PRELIMINARIES Welcome and Apologies	Agenda Item 1.1 For Noting

RECOMMENDATIONS

1. That the Resource Assessment Group **NOTE**:
 - a) an acknowledgement of Traditional Owners;
 - b) the Chair's welcome address;
 - c) apologies received from members unable to attend.

2. As of 15 November 2023, no formal apologies have been received.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
PRELIMINARIES Adoption of Agenda	Agenda Item 1.2 For Decision

RECOMMENDATION

1. That the Resource Assessment Group consider and **ADOPT** the draft agenda.

BACKGROUND

2. A first draft annotated agenda was circulated to members and observers on 24 October 2023.
3. As of 15 November 2023, no comments from members were received.
4. Agenda item 2.5 – “Climate Change and Ecosystem Update” was added to the agenda as per PZJA 44 advice.
5. Agenda item 5.2 – “Non-Commercial Catch Project” was added to the agenda by AFMA before the meeting.
6. The order of ‘Research’ agenda items was amended to bring forward the presentation on climate change research.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
PRELIMINARIES Declarations of Interest	Agenda Item 1.3 For DECISION

RECOMMENDATIONS

1. That the Resource Assessment Group members:
 - a) **DECLARE** all real or potential conflicts of interest in Torres Strait finfish fisheries at the commencement of the meeting (**Table 1**).
 - b) **DETERMINE** whether the member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict;
 - c) **ABIDE** by decisions of the Resource Assessment Group regarding the management of conflicts of interest.
 - d) **NOTE** that the record of the meeting must record the fact of any disclosure, and the determination of the Resource Assessment Group as to whether the member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict.

BACKGROUND

2. Consistent with *Protected Zone Joint Authority (PZJA) Fisheries Management Paper No. 1* (FMP1), which guides the operation and administration of PZJA consultative forums, members are asked to declare any real or potential conflicts of interest.
3. Resource Assessment Group members are asked to declare all real or potential conflicts of interest or update the standing list of declared interests (**Table 1**) if required.
4. FMP1 recognises that members are appointed to provide input based on their knowledge and expertise and as a consequence, may face potential or direct conflicts of interest. Where a member has a material personal interest in a matter being considered, including a direct or indirect financial or economic interest; the interest could conflict with the proper performance of the member's duties. Of greater concern is the specific conflict created where a member is in a position to derive direct benefit from a recommendation if it is implemented.
5. When a member recognises that a real or potential conflict of interest exists, the conflict must be disclosed as soon as possible. Where this relates to an issue on the agenda of a meeting this can normally wait until that meeting, but where the conflict relates to decisions already made, members must be informed immediately. Conflicts of interest should be dealt with at the start of each meeting. If members become aware of a potential conflict of interest during the meeting, they must immediately disclose the conflict of interest.
6. Where it is determined that a direct conflict of interest exists, the forum may allow the member to continue to participate in the discussions relating to the matter but not in any decision-making process. They may also determine that, having made their contribution to the discussions, the member should retire from the meeting for the remainder of discussions on that issue. Declarations

of interest, and subsequent decisions by the forum, must be recorded accurately in the meeting minutes.

Table 1. FFrag member and observer declarations of interest to be updated at the meeting. Interests declared by those persons at the previous FFrag meeting are shown.

Name	Position	Declaration of interest
Members		
David Brewer	Chair	<ul style="list-style-type: none"> • Director – Upwelling P/L (David Brewer Consulting). • Honorary Fellow - CSIRO • Chair - Torres Strait Finfish RAG • Scientific member – Torres Strait Finfish Working Group • Scientific member – Northern Prawn Fishery RAG • Current consultancies with Quandamooka Yoolooburrabee Aboriginal Corporation, Newcrest Mining Ltd. • Co-investigator of current ‘Non-commercial catch monitoring project’ • As a fisheries consultant, may apply for funds for Torres Strait fishery research projects in the future where consistent with his role as Chair.
Rocky Stephen	TIB industry member	<ul style="list-style-type: none"> • Councillor for Ugar. • Chairperson of Kos and Abob Fisheries Ugar. • Works with brother in a commercial fishing business on Ugar (Brother Bear Fisheries). • Eastern cluster representative on the PZJA Finfish RAG & Working Group. • Traditional inhabitant member - Torres Strait Scientific Advisory Committee. • TSRA Board member for Ugar • TSRA Finfish Quota Management Committee. • TSRA Fisheries Advisory Committee member. • Member of Zenadth Kes Fisheries company.
Benny Dau	TIB industry member	<ul style="list-style-type: none"> • TIB Licence holder • Member of Zenadth Kes Fisheries company.
Gavin Mosby	TIB industry member	<ul style="list-style-type: none"> • TIB licence holder • Member of Torres Strait Prawn MAC • Member of Zenadth Kes Fisheries company • Member of local fishing association
Harry Nona	TIB industry member	<ul style="list-style-type: none"> • TIB licence holder – fulltime cray fishermen • Member for Kaiwalagal
Terrence Whap	TIB industry member	<ul style="list-style-type: none"> • Member of the PZJA TRL working group • President of the local fisherman’s association in Maluialgal

Name	Position	Declaration of interest
		<ul style="list-style-type: none"> PBC Director TSRA Board Member and Ranger
Michael O'Neill	Scientific member	<ul style="list-style-type: none"> Principal fisheries scientist working with the Queensland Government (Department of Agriculture and Fisheries, Fisheries Queensland) in the stock assessment program. Principal scientist for TSSAC three-year project for Spanish mackerel stock assessment work. Member of PZJA Finfish RAG and Working Group.
Ashley Williams	Scientific member	<ul style="list-style-type: none"> Scientist at CSIRO. Project leader for past Torres Strait Spanish mackerel Close-kin mark-recapture (CKMR) design project. Scientific member of Tropical Tuna RAG and MAC.
Andrew Penny	Scientific member	<ul style="list-style-type: none"> Researcher and management scientist. Serves on six AFMA/PZJA advisory groups. Conducted research previously with the Torres Strait Prawn fishery and Tropical Rock Lobster fishery. No current Torres Strait projects. Is a consultant with a general interest in tropical fisheries. Researcher on current projects involving climate change/stock assessments.
Rosemary Millward	AFMA Member	<ul style="list-style-type: none"> TBC
Chris Boon	RAG Executive Officer -AFMA	<ul style="list-style-type: none"> Employed by AFMA, no pecuniary interests or otherwise
TBC	Torres Strait Regional Authority (TSRA) Member	<ul style="list-style-type: none"> TBC
Chad Lunow	QDAF Member	<ul style="list-style-type: none"> TBC
Casual Observers		
Brooke D'Alberto	ABARES observer	<ul style="list-style-type: none"> Employed by ABARES No pecuniary interests
Quinten Hirakawa	TSRA observer	<ul style="list-style-type: none"> Employed by TSRA – fisheries program. TIB licence holder with Spanish mackerel, Reef line, Tropical Rock Lobster and Beche-de-mer endorsements Has a background as a commercial Tropical Rock Lobster fisher.
Andrew Trappett	QDAF observer	<ul style="list-style-type: none"> Co-investigator on the current Torres Strait biological sampling program. No pecuniary interests
Rik Buckworth	Independent consultant	<ul style="list-style-type: none"> Independent Fisheries Scientist with Sea Sense Consultancy. Adjunct professor at Charles Darwin University

Name	Position	Declaration of interest
		<ul style="list-style-type: none"> • Ex-NT Fisheries • Ex-CSIRO Scientist. • Current CSIRO honorary fellow. • AFMA Northern Prawn RAG. • Co-investigator for the current TS 'Spanish mackerel stock assessment' project. • Team member of 'Close-kin mark-recapture design' project. • Chair of Northern Territory Aquaculture Management Advisory Committee.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
PRELIMINARIES Actions Arising from Previous Meetings	Agenda Item 1.4 For NOTING

RECOMMENDATIONS

1. That RAG **NOTE**:

- a) the progress of actions arising from previous FFrag meetings.

KEY ISSUES

Actions arising

2. Progress against the actions arising from previous FFrag meetings are detailed in **Table 1**.

Table 1: Status of previous outstanding FFrag action items as of August 2023.

Number	Action	Status update
FFrag 14, Action 1	When discussing Spanish mackerel stock assessment development, the RAG reconfirmed previous agreements that standardising catch-rate data by skipper rather than vessel name is more appropriate, however this is challenging to progress given the capacity required to resolve issues in the skipper name dataset.	Ongoing – AFMA to consider how to achieve this action item. Identified as a potential grad-project.
FFrag 14, Action 2	Noting advice provided at FFrag14 regarding the Spanish mackerel SS model, the RAG agreed to hold a technical-FFrag meeting in November 2023 before FFrag 15 (RBC meeting) to review the analyses and discuss the structure of the model and changes due to the new software being used. Subject to member availabilities.	Ongoing – Technical discussion to be actioned at FFrag 15.
FFrag 14, Action 3	The RAG noted feedback from TIB members that the current grid zones outlined in the TDB02 Catch Disposal Record are too small, which may concern fishers in providing this level of information. AFMA to review option to apply grid zones in future TIB daily fishing logbook to make them consistent with grid zones applied to sunset sector logbook data. Consultation will need to be conducted.	Ongoing – To be considered within the broader development of daily logbook reporting for the TIB sector across TS fisheries.
FFrag 13, Action 1	RAG recommended for AFMA and the stock assessment project team to produce a one-page summary document for future assessments, commencing in 2023.	Ongoing – To be pursued under current stock assessment project in 2023-24.

FFRAG 13, Action 2	The RAG recommended to produce a 'weight of evidence' document and progress a deep-dive review of 2019 assessment to support the assessment of the coral trout stock. A workshop day (attached to a RAG) with the author is required.	Actioned/Ongoing – Scientific sub-group workshop with invited experts scheduled for 28 November 2023. Outcomes to be considered by the RAG at FFRAG15. 'Weight of evidence' doc to be produced ad-hoc based on outcomes of the review of the 2019 assessment.
FFRAG 12, Action 1	It was suggested by TIB members to also review the 'Catch Disposal Record' (CDR) TDB02 form to investigate whether it could be developed into an 'all in one' catch/effort reporting form, in place of a daily logbook for the TIB sector. It was suggested that effort data should be mandatory for the TIB sector, as it has been noted that the volunteer 'part b' section of the CDR form was not fully utilised in the most recent season. If the CDR form were to be amended to include the collection of robust effort data, then this would be an efficient mandatory reporting system for the TIB sector. AFMA agreed to investigate this consideration as an action item, including consulting with communities.	Ongoing – To be considered throughout AFMA's ongoing licencing/reporting development process and community consultation rounds.
FFRAG 12, Action 2	When reviewing the summary of median stock biomass (2022 Spanish Mackerel Stock Assessment), the RAG discussed the appraisal of transitioning to a stock synthesis-based stock assessment in future years. The RAG noted the work to date in progressing stock synthesis (SS) in the current stock assessment project and agreed to record an official action item to further develop this methodology.	Actioned/Ongoing – A RAG scientific sub-group workshop was held on 6-7 June 2023 to further develop the SS methodology. An Excel document of RAG recommendations against key aspects of the SS inputs was prepared by the RAG and distributed to members and the Principal Investigator. Ongoing development to the considered by the RAG.
FFRAG 12, Action 3	Coral Trout – estimate of non-commercial catch for RBC/TAC advice. At FFRAG12, it was concluded that due to the ongoing under-utilised nature of this fishery, that the RAG would not dedicate meeting time to formulating an estimate for non-commercial catch. This was in line with advice from previous seasons. However, TIB members stated a desire for the RAG to formally investigate an estimate of non-commercial	Ongoing – To be discussed at FFRAG 15

	catch in 2023. The RAG agreed to re-visit this topic during the 2023 meeting round, and AFMA recorded an official action item to consult with the RAG regarding a workplan to progress an estimate on non-commercial catch	
FFRAG 8, Action 1	AFMA to complete project work with industry members in 2021 with a view to implementing a new logbook for the 2021-22 season.	Ongoing – This work is on track to be actioned for the 2023/24 season in line with a scheduled update to the Torres Strait Fisheries (Furnishing of Logbooks) Instrument 2020.
FFRAG 5, Action 5	FFRAG are to work on forming a matrix of scenarios (different target reference points and building rates) to support RBC setting and deciding control rules for the harvest strategy. Matrix is to compare RBC, time to reach B Target and risk to stock (being number of model runs dropping below the limit reference point.	Ongoing – The RAG agreed to retain this action item, noting that further refinements to this process are to be actioned at the harvest strategy workshop scheduled for March 2023.
FFRAG 5, Action 7	FFRAG are to consider retrospective analyses for Spanish mackerel and how these can be built into the assessment	Ongoing – This analysis will be available for review in the stock assessment report due in May 2023.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
PRELIMINARIES Out of Session Correspondence	Agenda Item 1.5 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the correspondence sent out-of-session since 11/08/2023.

BACKGROUND

2. The following correspondence was circulated out-of-session since 11/18/2023. Copies of this correspondence can be requested at any time from the FFRAG Executive Officer.

Date	Item
29 August 2023	RE: FFRAG 14 - Stock Assessment Data Meeting. 30th August 2023. Teams link included. (Meeting Papers and PowerPoint presentation)
29 August 2023	FW: FFRAG #14, 30 August, background information
30 August 2023	RE: FFRAG #14, 30 August, background information. (Shark depredation PowerPoint)
31 August 2023	Updated Finfish Fishery Research Scopes
28 September 2023	FFRAG 15 Venue
24 October 2023	FFRAG 15 - Draft Agenda
6 November 2023	FFRAG 15 - Dietary Requirements

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
UPDATES FROM MEMEBRS Industry and Scientific members	Agenda Item 2.1 For NOTING and DISCUSSION

RECOMMENDATIONS

1. That the RAG:
 - a) **NOTE** any updates provided by industry and scientific members;
 - b) **DISCUSS** strategic issues, including economic trends, affecting the management and development of Torres Strait fisheries.

Key Issues

2. Verbal reports will be provided by industry and scientific members under this item. The FFRAG Chairperson may also welcome a short report from any invited participants from industry at this agenda item.
3. It is important that the Finfish RAG (and also the Finfish Working Group (FFWG)) develop a common understanding of any relevant matters within adjacent jurisdictions and what issues if any, are having the greatest impact on industry and the management of fisheries. Such understanding will ensure proceedings of the FFRAG and FFWG are focused and may more effectively address each issue.
4. FFRAG members are asked to provide any updates on trends and opportunities in global markets, processing and value adding. Industry is also asked to contribute advice on economic and market trends where possible. Scientific members are asked to contribute advice on any broader strategic research projects or issues that may be of interest to the Torres Strait industry in future.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
UPDATES FROM MEMBERS Government Agencies	Agenda Item 2.2 For NOTING

RECOMMENDATIONS

1. That the Resource Assessment Group (RAG):
 - a) **NOTE** the update provided by the Australian Fisheries Management Authority (AFMA) below;
 - b) **NOTE** the the Wildlife Trade Operation (WTO) conditions for the Finfish Fishery as summarised in **Table 3**;
 - c) **NOTE** the verbal update provided by the Queensland Department of Agriculture and Fisheries (QDAF); and
 - d) **NOTE** the verbal update provided by the Torres Strait Regional Authority (TSRA).

AFMA UPDATE

TAC, Leasing, Licencing, & Catch Data

2. At its 28 February 2023 meeting the Protected Zone Joint Authority (PZJA) decided that the Total Allowable Catches (TAC) for the Torres Strait Finfish Fishery 2023-24 season will be 75 tonnes for Spanish mackerel and 135 tonnes for coral trout. The PZJA decision was in line with advice from the Torres Strait Finfish Resource Assessment Group and Torres Strait Finfish Working Group.
3. In line with advice from the TSRA Finfish Quota Management Committee (FQMC) and the TSRA Board, the following catch amounts were allocated to the Sunset sector (**Table 1**). These allocations were applied to sunset licence conditions by AFMA as the licencing Delegate.

Table 1: 2023-24 fishing season TACs and catch allowance by sector.

Species	Agreed TAC	Sunset Sector Catch Share	TIB Sector Catch Share
Spanish Mackerel	75	62	13
Coral Trout	135	12.5	122.5
Other reef line species	n/a	1.7	No Limit

4. As of 16 October 2023, the following number of licences were registered:

Table 2: Number of licenses issued for the 2021/22, 2022/23 and 2023/24 Torres Strait Finfish Fishery seasons.

Fishing season	Number of TIB licences			Receiver licences	Number of Sunset licences
	SM	Reef line	Dual endorsed		SM/Reef line combined
2021/22	56	22	166	83	3
2022/23	34	20	107	66	3
2023/24	31	33	41	69	3

5. A Catch Watch Report for the 2022/23 season can be reviewed at **Attachment 2.2a**
6. A Catch Watch Report for the 2023/24 season can be reviewed at **Attachment 2.2b**

Wildlife Trade Operation (WTO) Approval under the EPBC Act 1999

7. The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires the Australian Government to assess the environmental performance of all commercial fisheries, including those in the Torres Strait, and promote ecologically sustainable fisheries management. Approval under the EPBC Act is necessary for fisheries to be able to legally export commercially wild caught seafood from Australia. Such approvals may be subject to conditions applicable to the responsible management authority and fishers.
8. In June 2023 the Australian Fisheries Management Authority applied for export approval for the Torres Strait Finfish Fishery (TSFF) under the EPBC Act. The application was assessed, and the fishery was declared by the Delegate for the Minister of the Environment and Water, as an approved wildlife trade operation under Part 13A of the EPBC Act until 1 November 2026 (**Attachment 2.2c**). More information can be accessed at the following link:
<https://www.dcceew.gov.au/environment/marine/fisheries/commonwealth/torres-strait-finish>
9. Live coral trout were exported for the first time in 2017¹. Maintaining a WTO approval for the fishery allows for the continued opportunity for live and frozen product to be exported, as well providing a sound basis for responsible fisheries management.
10. This approval was based on the 'Assessment of the Torres Strait Finfish Fishery October 2023', which was undertaken by the Department of Climate Change, Energy, the Environment and Water. This assessment contained 7 approval conditions under Part 13 & 13a of the EPBC Act to ensure ecological risks continue to be managed.
11. AFMA invites both the Finfish RAG and Finfish Working Group (WG) to monitor progress against each condition and provide advice on addressing conditions. To assist the RAG and WG, **Tables 3 & 4** provides a summary of each condition.

¹ Fishery Status Reports 2021, Chapter 16 – ABARES

Table 3. Current Wildlife Trade Operation (WTO) conditions for the Finfish fishery (Part 13A).

Part 13A Conditions on the approved wildlife trade operation declaration for the Torres Strait Finfish Fishery – November 2023

Condition 1:

Operation of the Torres Strait Finfish Fishery must be carried out in accordance with Torres Strait Finfish Fishery Management Plan 2013 in force under the Torres Strait Fisheries Act 1984 and the Torres Strait Fisheries Regulations 1985.

Condition 2:

The Australian Fisheries Management Authority must inform the Department of Climate Change, Energy, the Environment and Water of any intended material changes to the Torres Strait Finfish Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* (Cth) decisions are made.

Condition 3:

The Australian Fisheries Management Authority must inform the Department of Climate Change, Energy, the Environment and Water of any intended changes to fisheries legislation that may affect the legislative instruments relevant to this approval.

Condition 4:

The Australian Fisheries Management Authority must produce and present reports on the Torres Strait Finfish Fishery to the Department of Climate Change, Energy, the Environment and Water by September annually, as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*.

Condition 5:

- A) By 30 June 2024, the Australian Fisheries Management Authority must implement mandatory bycatch reporting for the sunset sector of the Torres Strait Finfish Fishery. This must include the mandatory reporting of all non-retained species, undersized target or byproduct species, and any shark depredation incidents.
- B) By 30 June 2026, the Australian Fisheries Management Authority must review reporting measures in the Torres Strait Finfish Fishery to ensure the accuracy of bycatch, discard and protected species interaction data. This review must incorporate evidence taken from independent data validation methods.

A final report detailing the review's findings and any management responses must be provided to the Department of Climate Change, Energy, the Environment and Water by this date.

Condition 6:

By 30 June 2026, the Australian Fisheries Management Authority must implement species-specific coral trout reporting in the Torres Strait Finfish Fishery and ensure this data is considered in any future stock assessments and the determination of total allowable catches in the fishery.

Table 4. Current Wildlife Trade Operation (WTO) conditions for the Finfish fishery (Part 13).

Part 13 Conditions on the approved wildlife trade operation declaration for the Torres Strait Finfish Fishery – November 2023

Condition A:

By 30 June 2026, the Australian Fisheries Management Authority must review reporting measures in the Torres Strait Finfish Fishery to ensure the accuracy of bycatch, discard and protected species interaction data. This review must incorporate evidence taken from independent data validation methods.

A final report detailing the review's findings and any management responses must be provided to the Department of Climate Change, Energy, the Environment and Water by this date.

ABARES Fishery Status Reports

12. Each year, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) compiles fishery status reports which provide an independent assessment of the biological status of fish stocks and the economic status of fisheries managed, or jointly managed, by the Australian Government (Commonwealth fisheries). The most recent ABARES Fishery Status Report was released in 2023 and summarises the performance of the finfish fishery in 2021 and 2022, against the requirements of fisheries legislation and policy.
13. In the 2023 report, both Spanish mackerel and coral trout are classified as not being overfished, and not subject to overfishing. The status of the Torres Strait Finfish and Fishery is summarised in the table below.

Table 4. Extract from Chapter 15 of the 2023 Torres Strait Finfish Fishery ABARES Fishery Status Report.

Biological status					
Stock	2021		2022		Comments
	Fishing mortality	Biomass	Fishing mortality	Biomass	
Coral trout (<i>Plectropomus</i> spp.)					Recent catches are below levels that are likely to drive biomass below B_{LIM} .
Spanish mackerel (<i>Scomberomorus commerson</i>)					Current catch is below recommended biological catch. Most recent estimate of biomass is above $0.2B_0$.
Economic status					
The key objectives of the fishery are based on socio-economic outcomes. Catch has been relatively stable in the last decade and leasing revenue for the Traditional Inhabitant Boat Sector has increased recently.					

Notes: $0.2B_0$ 20% of unfished biomass. B_{LIM} Biomass limit reference point.

Fishing mortality ■ Not subject to overfishing ■ Subject to overfishing ■ Uncertain
Biomass ■ Not overfished ■ Overfished ■ Uncertain

14. ABARES fishery status reports can be accessed on the ABARES website at:
<https://www.agriculture.gov.au/abares/research-topics/fisheries/fishery-status>

TSRA UPDATE

15. The RAG will be invited to note a verbal update from TSRA.

QDAF UPDATE

16. The RAG will be invited to note a verbal update from QDAF.



AFMA CATCHWATCH

A REPORT FROM THE AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY

Notice Issued on 17 November 2023

Torres Strait Finfish Fishery - Data Period 1 July 2022 to 30 June 2023 (End of Season Report)

Species Name		Agreed Total Allowable Catch (TAC) (kg)	Reported catch [^] (kg)	Available TAC (kg)	% TAC Caught
Traditional Inhabitant Boat Licence (TIB) sector					
Spanish mackerel		18,000	3626.1	14,373.9	20.14%
Coral Trout		100,000	4283.3	95,716.7	4.28 %
Basket species	Barramundi cod	No catch limit	566.4	n/a	n/a
	Cobia		-		
	Emperor		-		
	Spangled Emperor		-		
	Red emperor		-		
	Rockcod		-		
	School mackerel		82.5		
	Shark mackerel		-		
	Trevallies and scads		-		
	Tripletail maori wrasse		10		
	Tropical snappers (mixed)		-		
	Basket species TOTAL		658.9		
Sunset Licence (Sunset) sector					
Spanish mackerel		57,000	49,016.3	7,983.7	85.99%
Coral Trout		35,000	23,485.7	11,515	67.1%
Basket species	Barramundi cod	3,500	-	1379.8	60.5%
	Cobia		16		
	Emperor		508		
	Mixed fish		-		
	Red emperor		106		
	Rockcod		178.5		
	School mackerel		-		
	Shark mackerel		389		
	Trevallies and scads		787.5		
	Tripletail maori wrasse		-		
	Tropical snappers (mixed)		135.2		
	Basket species TOTAL		2,120.2		

Notes:

[^] Catch reported through mandatory TDB02 Catch Disposal Records (CDRs) and does not include any unreported catches or outstanding catches (there is an expected processing delay of 2-3 weeks from when a Fish Receiver completes a CDR and AFMA receives and processes it). TIB sector operates under a competitive total allowable catch. Sunset sector boats have individual vessel catch allowances detailed here: www.afma.gov.au/fisheries-services/concession-holders-conditions

Conversion ratios used to convert back to whole weight are:

	Spanish mackerel	Coral trout	Other reef-line species
Filleted	1.608 : 1	2 : 1	2.5 : 1
Gilled & Gutted	1.048 : 1	1.1 : 1	1.1 : 1

Season date is financial year 1 July to 30 June



AFMA CATCHWATCH

A REPORT FROM THE AUSTRALIAN FISHERIES MANAGEMENT AUTHORITY

Notice Issued on 17 November 2023

Torres Strait Finfish Fishery - Data Period 1 July 2022 to 30 June 2023 (End of Season Report)

Species Name		Agreed Total Allowable Catch (TAC) (kg)	Reported catch^ (kg)	Available TAC (kg)	% TAC Caught
Traditional Inhabitant Boat Licence (TIB) sector					
Spanish mackerel		13,000	3185.6	9814.4	24.5%
Coral Trout		122,500	14.2	122,485.8	0.02 %
Basket species	Barramundi cod	No catch limit		n/a	n/a
	Cobia		-		
	Emperor		-		
	Spangled Emperor		-		
	Red emperor		-		
	Rockcod		-		
	School mackerel				
	Shark mackerel		-		
	Trevallies and scads		-		
	Tripletail maori wrasse				
	Tropical snappers (mixed)		-		
	Basket species TOTAL				
Sunset Licence (Sunset) sector					
Spanish mackerel		62,000	33,067.7	28,932.3	53.3%
Coral Trout		12,500			
Basket species	Barramundi cod	1,700	11.25	1688.75	0.66%
	Cobia				
	Emperor				
	Mixed fish				
	Red emperor				
	Rockcod				
	School mackerel				
	Shark mackerel				
	Trevallies and scads				
	Tripletail maori wrasse				
	Tropical snappers (mixed)				
	Basket species TOTAL		11.25		

Notes:

[^] Catch reported through mandatory TDB02 Catch Disposal Records (CDRs) and does not include any unreported catches or outstanding catches (there is an expected processing delay of 2-3 weeks from when a Fish Receiver completes a CDR and AFMA receives and processes it). TIB sector operates under a competitive total allowable catch. Sunset sector boats have individual vessel catch allowances detailed here: www.afma.gov.au/fisheries-services/concession-holders-conditions

Conversion ratios used to convert back to whole weight are:

	Spanish mackerel	Coral trout	Other reef-line species
Filleted	1.608 : 1	2 : 1	2.5 : 1
Gilled & Gutted	1.048 : 1	1.1 : 1	1.1 : 1

Season date is financial year 1 July to 30 June



Australian Government

Department of Climate Change, Energy,
the Environment and Water

OFFICIAL

Attachment 2.2c

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Mr Wez Norris
Chief Executive Officer
Australian Fisheries Management Authority
Box 7051
Canberra BC
Canberra ACT 2610

Dear Mr Norris

I am writing to you as Delegate of the Minister for the Environment and Water in relation to the wildlife trade assessment of the Torres Strait Finfish Fishery (the fishery) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In June 2023, the Australian Fisheries Management Authority (AFMA) applied for assessment and approval for the fishery under the Part 13 (protected species) and Part 13A (export) provisions of the EPBC Act.

The application has now been assessed and I have declared the fishery an approved Wildlife Trade Operation (WTO) under Part 13A of the EPBC Act until 1 November 2026. This approval is contingent on six conditions being met by AFMA during the period of the WTO regarding the notification of any management and legislative changes, regular annual reporting, changes to the logbook to require bycatch reporting, a review of interactions with protected species through some form of independent data validation and species level reporting of coral trout caught in the fishery (**Attachment A**).

I have also accredited the fishery's management regime under Part 13 of the EPBC Act, contingent on one condition being met by AFMA regarding independent data validation of protected species interaction data (**Attachment B**).

Please note a person whose interests are affected by this decision may make an application to the department for the reasons for the decision and may apply to the Administrative Appeals Tribunal to have it reviewed. I have enclosed information on these processes at **Attachment C**.

I look forward to assessing AFMA's progress against the conditions in the annual reports for this fishery.

Yours sincerely

Belinda Jago
Branch Head
Ocean and Wildlife Branch
Delegate of the Minister for the Environment and Water
27 October 2023

DCCEEW.gov.au

John Gorton Building - King Edward Terrace, Parkes ACT 2600 Australia
GPO Box 3090 Canberra ACT 2601 ABN: 63 573 932 849

1

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Attachment A

Part 13A Conditions on the approved wildlife trade operation declaration for the Torres Strait Finfish Fishery – November 2023**Condition 1**

Operation of the Torres Strait Finfish Fishery must be carried out in accordance with Torres Strait Finfish Fishery Management Plan 2013 in force under the *Torres Strait Fisheries Act 1984* and the Torres Strait Fisheries Regulations 1985.

Condition 2

The Australian Fisheries Management Authority must inform the Department of Climate Change, Energy, the Environment and Water of any intended material changes to the Torres Strait Finfish Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* (Cth) decisions are made.

Condition 3

The Australian Fisheries Management Authority must inform the Department of Climate Change, Energy, the Environment and Water of any intended changes to fisheries legislation that may affect the legislative instruments relevant to this approval.

Condition 4

The Australian Fisheries Management Authority must produce and present reports on the Torres Strait Finfish Fishery to the Department of Climate Change, Energy, the Environment and Water by September annually, as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*.

Condition 5

- A) By 30 June 2024, the Australian Fisheries Management Authority must implement mandatory bycatch reporting for the sunset sector of the Torres Strait Finfish Fishery. This must include the mandatory reporting of all non-retained species, undersized target or byproduct species, and any shark depredation incidents.
- B) By 30 June 2026, the Australian Fisheries Management Authority must review reporting measures in the Torres Strait Finfish Fishery to ensure the accuracy of bycatch, discard and protected species interaction data. This review must incorporate evidence taken from independent data validation methods.

A final report detailing the review's findings and any management responses must be provided to the Department of Climate Change, Energy, the Environment and Water by this date.

Condition 6

By 30 June 2026, the Australian Fisheries Management Authority must implement species-specific coral trout reporting in the Torres Strait Finfish Fishery and ensure this data is considered in any future stock assessments and the determination of total allowable catches in the fishery.

Attachment B**Part 13 Conditions on the approved wildlife trade operation declaration for the Torres Strait Finfish Fishery – November 2023****Condition A**

By 30 June 2026, the Australian Fisheries Management Authority must review reporting measures in the Torres Strait Finfish Fishery to ensure the accuracy of bycatch, discard and protected species interaction data. This review must incorporate evidence taken from independent data validation methods.

A final report detailing the review's findings and any management responses must be provided to the Department of Climate Change, Energy, the Environment and Water by this date.

Attachment C

Notification of Reviewable Decisions and Rights of Review¹

There is a right of review to the Administrative Appeals Tribunal (AAT) in relation to certain decisions/declarations made by the Minister, the Minister's delegate or the Secretary under Part 13A of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Section 303GJ(1) of the EPBC Act provides that applications may be made to the AAT for the review of the following decisions:

- (a) to issue or refuse a permit; or
- (b) to specify, vary or revoke a condition of a permit; or
- (c) to impose a further condition of a permit; or
- (d) to transfer or refuse to transfer a permit; or
- (e) to suspend or cancel a permit; or
- (f) to issue or refuse a certificate under subsection 303CC(5); or
- (g) of the Secretary under a determination in force under section 303EU; or
- (h) to make or refuse a declaration under section 303FN, 303FO or 303FP; or
- (i) to vary or revoke a declaration under section 303FN, 303FO or 303FP.

If you are dissatisfied with a decision of a type listed above you may:

1. by notice, provided in writing, request that the Minister or the Minister's delegate give you a statement in writing setting out the reasons for the decision as per section 28 of the *Administrative Appeals Tribunal Act 1975*. The Minister, or Minister's delegate may refuse to give you a statement of reasons if your application is made more than 28 days after the day on which you received this notice.
2. apply to the AAT for independent merits review of the decision. The AAT undertakes *de novo* merits review. This means they take a fresh look at the facts, law and policy relating to the decision and arrive at their own decision. They decide if the decision should stay the same or be changed. They are independent of the Department.

Application for review of a decision must be made to the AAT within **28 days** after the day on which you have received the reviewable decision. However an extension of time for lodging an application may be granted by the AAT under certain circumstances. Please visit the AAT's website at <http://www.aat.gov.au/> or telephone 1800 228 333 for further information. The role of the AAT is to provide a review mechanism that is fair, just, economical, informal and quick.

Applications & Costs

Applications to the AAT are made by lodging an Application Form (Form 1). This can be found on the AAT's website at <http://www.aat.gov.au/>.

There are no strict timelines in which the AAT must review the decision, however the first conference between the parties will usually be held within 6 to 10 weeks of the application being lodged. The time frame for review of certain decisions can be expedited in some circumstances.

¹ In accordance with the *Administrative Appeals Tribunal Act 1975* Code of Practice for Notification of Reviewable Decisions and Rights of Review

The cost of lodging an application for review is \$962 (as of 16 December 2021) (GST inclusive). You may be eligible to pay a reduced fee of \$100.00 if

1. you are receiving legal aid for your application;
2. you hold a health care card, a Commonwealth seniors health card or any other card issued by the Department of Social Services or the Department of Veteran's Affairs that entitles the holder to Commonwealth health concessions;
3. you are in prison or lawfully detained in a public institution;
4. you are under 18 years of age; or
5. you are receiving youth allowance, Austudy or ABSTUDY.

You may also be eligible for a reduced fee if you can demonstrate to the AAT that paying the full fee would cause you financial hardship. Further information can be found on the AAT's website.

Additionally, you can access information about legal assistance at

<https://www.ag.gov.au/LegalSystem/Legalaidprogrammes/Commonwealthlegalfinancialassistance/Documents/LegalFinancialAssistanceInformationSheet.pdf>.

If you pay a standard application fee, most of it will be refunded if the case is resolved in your favour. The refund amount is the difference between the fee you paid and \$100. So, if you paid \$962, you get back \$862. There is no refund if you paid the lower application fee for certain taxation decisions or the reduced fee of \$100.

Contact Details

Further information or enquiries relating to the decision should be directed to:

The Director
Sustainable Fisheries Section
Department of Climate Change, Energy, the Environment and Water
GPO Box 3090
Canberra ACT 2601
Email: sustainablefisheries@dcceew.gov.au

Alternatively, you may contact the AAT at their Principal Registry or the Deputy Registrar, Administrative Appeals Tribunal in your Capital City or Territory.

Administrative Appeals Tribunal
Street address: Level 6, 83 Clarence Street, Sydney
Mailing address: GPO Box 9955, Sydney, NSW 2001
T: 1800 228 333 and (02) 9276 5000
F: (02) 9276 5599
E: generalreviews@aat.gov.au
W: <http://www.aat.gov.au>

Freedom of Information Request

You may make an application under the *Freedom of Information Act 1982* (FOI Act) to access documents. Further information can be found at

<https://www.dcceew.gov.au/about/reporting/freedom-of-information>.

Please contact the Freedom of Information Contact Officer at foi@dcceew.gov.au for more information.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
UPDATES FROM MEMBERS Papua New Guinea National Fisheries Authority	Agenda Item 2.3 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the update to be provided by the PNG National Fisheries Authority (NFA).

BACKGROUND

2. A verbal report will be provided under this item.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
UPDATES FROM MEMBERS Native Title	Agenda Item 2.4 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** any updates on Native Title matters from members, including representatives of Malu Lamar (Torres Strait Islanders) Corporation RNTBC (Malu Lamar).

BACKGROUND

2. On 7 August 2013 the High Court of Australia confirmed coexisting Native Title rights, including commercial fishing, in the claimed area (covering most of the Torres Strait Protected Zone). This decision gives judicial authority for Traditional Owners to access and take the resources of the sea for all purposes. Native Title rights in relation to commercial fishing must be exercisable in accordance with the *Torres Strait Fisheries Act 1984*.
3. Traditional Owners and Native Title representative bodies have an important role in managing Torres Strait fisheries. It is important therefore that the RAG keep informed on any relevant Native Title issues arising.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
UPDATES FROM MEMBERS Climate and Ecosystem Update	Agenda Item 2.5 For Noting

RECOMMENDATIONS

1. That the Finfish Resource Assessment Group (FFRAG):
 - a. **NOTE** that at its meeting on 19 July 2023, the Protected Zone Joint Authority (PZJA) agreed that a standing agenda item “Climate and ecosystem update” be introduced to all RAG and Working Group agendas where total allowable catch (TAC) and/or effort limits are to be considered;
 - b. **NOTE** the PZJA also directed PZJA agencies, RAGs and Working Groups to further develop mechanisms to collate and incorporate Traditional Ecological Knowledge into fisheries monitoring and assessment;
 - c. **NOTE** work being undertaken to incorporate climate change information into fisheries management advice and decisions in other Commonwealth managed fisheries, with a view to implementing a similar process for Torres Strait fisheries;
 - d. **DISCUSS** the draft Climate and Ecosystem Status report for the Torres Strait Finfish Fishery (**Attachment 2.5a**);
 - e. **NOTE** an overview of recent work undertaken in Torres Strait fisheries related to climate change.

KEY ISSUES

Building climate change information into fisheries management processes

2. In other Commonwealth managed fisheries (fisheries managed elsewhere in Australia by AFMA), a program of work is being undertaken to ensure that climate impacts are more strategically incorporated into the management of these fisheries to ensure that AFMA continues to meet legislative objectives relating to ecological sustainability. This work is a follow up action from the *Adaption of Commonwealth fisheries management framework to climate change project (FRDC project 2016-059)* (the climate adaptation project) that looked at the readiness of Commonwealth fisheries management arrangements to the potential impacts of climate change and provided a range of resources to assist with adaptation.
3. As a foundational element of the Climate Adaptation Program, the AFMA Commission endorsed a suite of actions to build explicit and structured consideration of climate change impacts into decision-making processes. These actions include adding a standing agenda item on climate change to advisory body meetings and preparing Climate and Ecosystem Status reports for key fisheries. Recognising the priority that the Torres Strait community places upon management of climate change impacts and the vulnerability of Torres Strait fisheries to climate change, AFMA is rolling out similar for Torres Strait fisheries through the PZJA’s advisory committees.

Draft Climate and Ecosystem Status Report









4. To inform management decision-making processes, including advisory body discussions, annual Climate and Ecosystem Status reports are being developed for key Commonwealth fisheries.

These reports are intended to provide a short, accessible update on key indicators of climatic or ecosystem status and trends relevant to the fishery, utilising readily available information.

5. Noting the interest in climate impacts on Torres Strait fisheries, and the body of work to better understand the effect of climate change on these fisheries, AFMA has prepared a draft Climate and Ecosystem Status report for consideration by the FFRAAG (see **Attachment 2.5a**). This report utilises currently available information, noting that limited climate and ecosystem/oceanographic observations are available in the Torres Strait.
6. The intent is that this report will be refined over time based on FFRAAG, Finfish Working Group (FFWG) and expert feedback. Feedback in particular is encouraged on the following:
 - a. What key indicators would the FFRAAG like included in the report?
 - b. Is it useful and appropriate to capture fishers observations in the report?
 - c. What would be the preferred timing for production of this report?
7. Consideration of climate and ecosystem impacts in the context of fisheries management is complementary to a range of other work being undertaken by researchers to understand and model climate impacts on Torres Strait and related fisheries in northern Australia (see further information below).

Climate related changes expected in Northern Australia

8. FRDC project 2016-059 produced a series of regional projections of climate impacts for Australian fisheries. While this did not include projections specific to the Torres Strait, the regional projection for northern Australia predicted climate-related changes as summarised in the table below.

	Observed change (vs 1950)	Future change (vs today)
OCEAN TEMPERATURE 	0.6 - 0.8°C increase	0.6 - 1.0°C increase
MARINE HEATWAVE 	15 - 20 day increase	>200 day increase
STORMS 	Conflicting information	Stronger & more variable
DROUGHTS 	Shorter, more intense	Longer, twice as frequent
RAINFALL 	Roughly steady	Roughly steady
SEALEVEL RISE 	20cm increase	20 - 40cm increase
OXYGEN 	Approx 2% decrease	5% decrease
ACIDIFICATION 	30% increase	20 - 120% increase

(Excerpt from: [Regional Projection for Northern Australia](#). FRDC 2016-059: Guidance on Adaptation of Commonwealth Fisheries management to climate change)

9. The draft Climate and Ecosystem Status Report (provided at **Attachment 2.5a**) provides an insight into recent trends in the Torres Strait, including valuable knowledge on changes being seen by fishers. Feedback will be sought at the meeting on the contents and any additional information that would be valuable to inform FFRAAG advice.

BACKGROUND

Outcomes of the Torres Strait climate change scoping project

10. The need to better understand the species-specific effects of climate change and variability on Torres Strait Fisheries was initially identified as a research priority by TSSAC in December 2018 (TSSAC 71). TSSAC agreed a scoping study should be undertaken on the possible methods and resources needed to build an information framework that can evaluate the implications of future climate variability and change scenarios on fisheries to better allow fisheries managers and industry to respond and adapt to any changes.
11. The project delivered an evaluation of the over-arching data requirements and framework that are needed to support a climate change model that will evaluate the implications of future climate variability and change scenarios on key fisheries. The study considered previous reviews of climate implications for Torres Strait, consulted extensively with relevant fishery researchers, managers and key stakeholders and convened a workshop, with relevant fishery modelling expert end-users and stakeholders.
12. The TSSAC considered the project's outcomes and recommendations at their 79th meeting on 9-10 June 2021 and agreed that if the project was to progress beyond this scoping phase, it would provide a range of information that is of value to fisheries management, including improved understanding of the interactions between fisheries and ecosystems, and the impact of different climate change scenarios.
13. The full project report is available from the PZJA website:
<https://www.pzja.gov.au/research/climate-variability-and-change-relevant-key-fisheries-resources-torres-strait-scoping>
14. More information on this project will be provided under Agenda Item 5.3.

Climate change modelling project update

15. Following on from the TSSAC's recommendations on the climate change scoping project, a follow up call for research proposals was made in February 2022 with one proposal received from CSIRO. Having regard to feedback from all PZJA advisory committee RAGs and Working Groups out of session, the TSSAC considered this research proposal at their meeting on 6-7 April 2022 (TSSAC 81).
16. The project is intended to:
 - a. enable fisheries managers and communities to better prepare for climate change mitigation and adaptation, where possible;
 - b. integrate new and existing fisheries and environmental data within an over-arching data framework;
 - c. provide estimates of the impacts that different climate change scenarios could have on the marine ecosystem and associated fisheries/species;
 - d. provide estimates of the economic, social and other fisheries-related livelihood impacts of climate change on communities in the short (2 yrs), medium (5 yrs) and longer term (10+ yrs), and suggest some possible actions for adaptation; and
 - e. help differentiate between the relative effects of fishing and climate change on marine resources.
 - f. provide results in formats (e.g. graphical, video, written) which can be communicated to stakeholders (Torres Strait Island Communities, Fishers, Fisheries Managers and local and regional organisations).
17. TSRA will fund this project in full, with the project commencing shortly.

18. The first stage of the project will involve (1) setting up a Project Steering Committee and (2) deploying two moorings in Torres Strait, to collect oceanographic data for use in the climate modelling system. These moorings will provide additional data, to the AIMS data collection devices already present in Torres Strait, which are also planned to be used by this project.
19. More information on this project will be provided under Agenda Item 5.3.

Other relevant research to date on climate change impacts on Torres Strait Fisheries

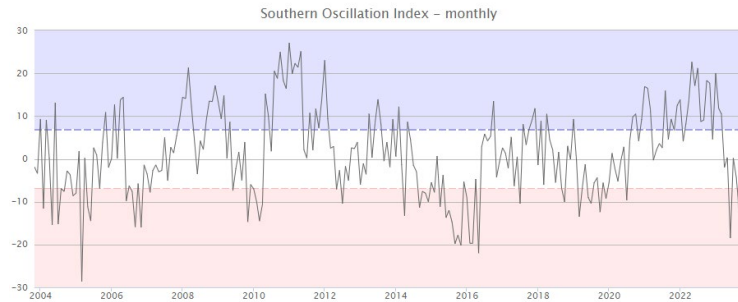
20. In terms of assessing the likely impacts of climate change on Torres Strait Fisheries the following has been undertaken:
 - a. Qualitative Sensitivity Analysis: Assessing the vulnerability of Torres Strait fisheries and supporting habitats to climate change (Welch and Johnson 2013);
 - b. Management Strategy Evaluation to integrate climate changes into the TRL Stock Assessment: An Integrated Management Strategy Evaluation (MSE) for the Torres Strait Rock Lobster *Panulirus ornatus* fishery (Plagányi *et al* 2012);
 - c. System Modelling: Models of Intermediate Complexity of Ecosystems (MICE) – applied to TRL in the Torres Strait. Used in the following projects:
 - i. AFMA project 2017/0816 – Environmental drivers of variability and climate projections for the Torres Strait tropical lobster *Panulirus ornatus*. (Plagányi *et al* 2018).
 - ii. Decadal-Scale Forecasting of Australian Fish and Fisheries (Fulton *et al* 2018).
 - d. TRL stock assessment model sensitivity analyses when explicitly incorporating climate change influences on survival and growth – presented in TRLRAG meetings, milestone reports (Plagányi *et al.* 2020¹) and published paper (Plagányi *et al.* 2019²).

¹ Plagányi, É., Tonks, M., Murphy, N., Campbell, R., Deng, R., Edgar, S., Salee, K., Upston, J. (2020) Torres Strait Tropical Rock Lobster (TRL) Milestone Report 2020 on fishery surveys, CPUE, stock assessment and harvest strategy: AFMA Project R2019/0825. May 2020 Draft Final Report. 183 pp

² Plagányi, É.E., Haywood, M., Gorton, R., Siple, M. & Deng, R. 2019. Management implications of modelling fisheries recruitment. *Fisheries Research* 217: 169-184

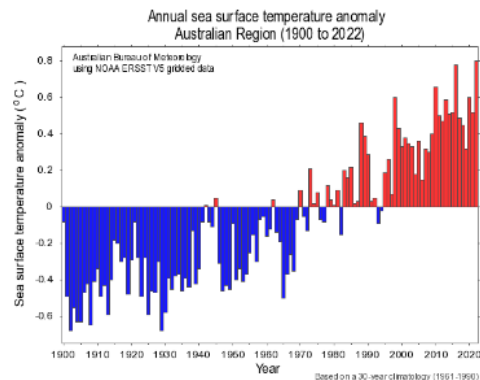
Hindcast

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Sustained negative values of below -7 typically indicate El Niño, while sustained positive values above +7 typically indicate La Niña



Sea surface temperature anomalies around Australia have been generally trending upwards over the past 30 years.

What is happening on the water and what are fishers seeing?

- Insert industry observations here

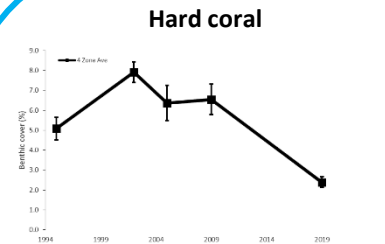


Figure 4-9. Zones (A) and East Torres Strait (4 zone) (B) average (stratified) benthic cover (%) for five coral (hard) from five surveys (does not include deep-reef strata) (error bars = 1 s.e.).

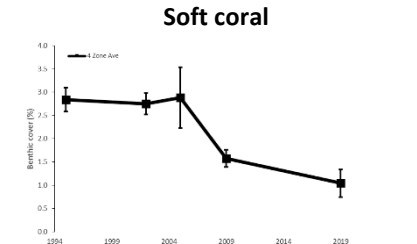


Figure 4-10. Zones (A) and East Torres Strait (4 zone) (B) average (stratified) benthic cover (%) for soft coral from five surveys (does not include deep-reef strata) (error bars = 1 s.e.).

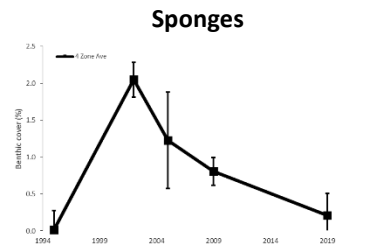


Figure 4-11. Zones (A) and East Torres Strait (4 zone) (B) average (stratified) benthic cover (%) for sponge from five surveys (does not include deep-reef strata) (error bars = 1 s.e.).

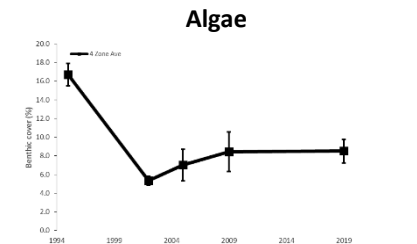


Figure 4-13. Zones (A) and East Torres Strait (4 zone) (B) average (stratified) benthic cover (%) for algae from five surveys (does not include deep-reef strata) (error bars = 1 s.e.).

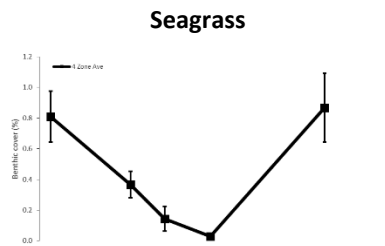


Figure 4-12. Zones (A) and East Torres Strait (4 zone) (B) average (stratified) benthic cover (%) for seagrass from five surveys (does not include deep-reef strata) (error bars = 1 s.e.).

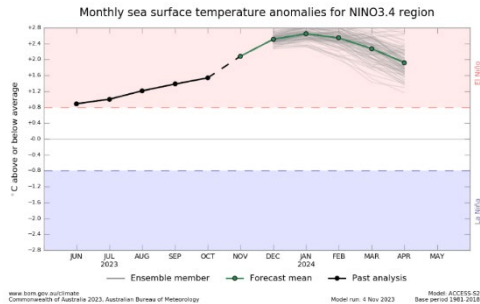
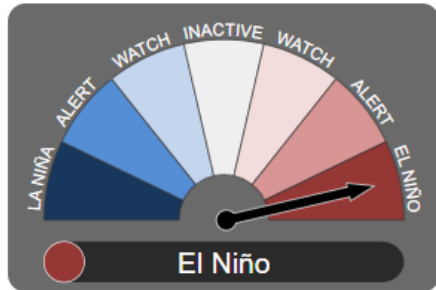
In eastern Torres Strait:

- Cover of hard coral, soft coral and sponges has declined since 2002 – concern as perform key ecosystem functions
- Seagrass cover has increased since 2009

Other indicators and trends e.g. turbidity, sea level, pH?

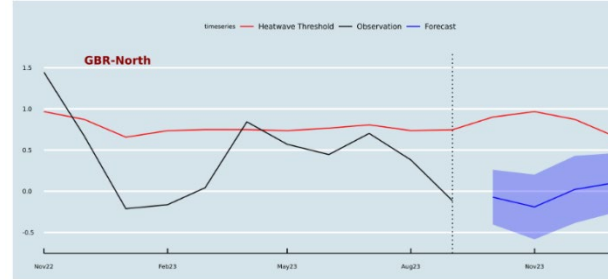
Forecast

ENSO outlook



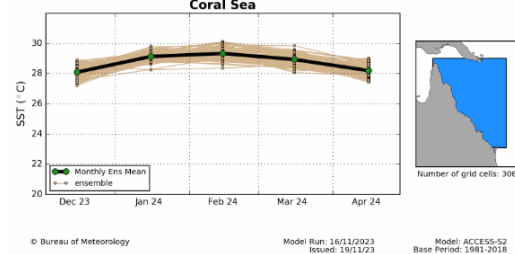
An El Niño has been declared and is underway. Climate model outlooks suggest this El Niño is likely to continue into the early southern hemisphere autumn 2024. An El Niño phase typically produces drier years

Marine heatwave forecast



Water temperatures up to January 2024 are not predicted to exceed the seasonal marine heatwave threshold (red line)

Sea Surface Temperature Outlook December to April

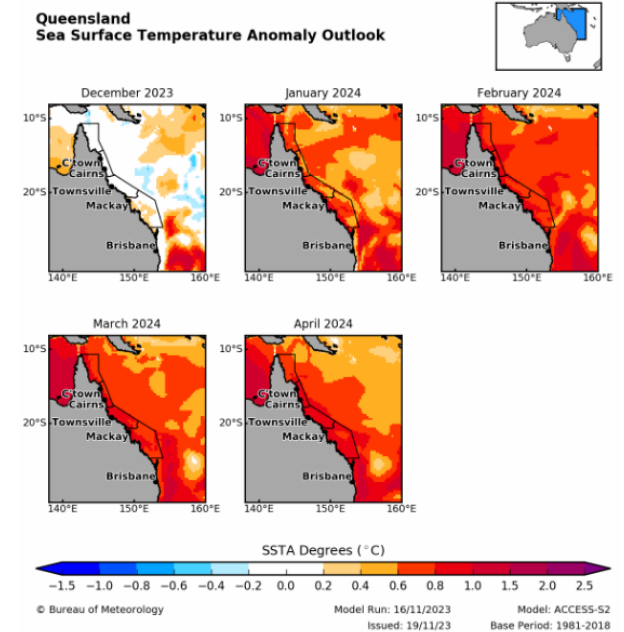


Water temperatures for the Coral Sea (closest to Torres Strait) are forecast to be 28°C in December 2023, increasing to 29°C by January 2024

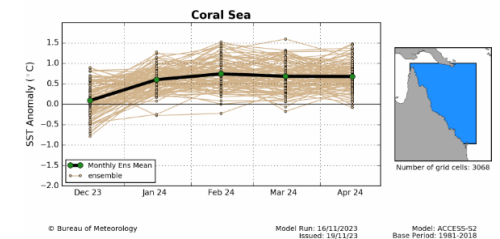
Other indicator forecasts?

SST anomaly outlook

Queensland Sea Surface Temperature Anomaly Outlook



Sea Surface Temperature Anomaly Outlook December to April



Between December 2023 and April 2024, water temperatures are predicted to be between 0.1-0.7°C above the long-term average water temperature

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
STOCK ASSESSMENTS AND RBC ADVICE Spanish mackerel	Agenda Item No. 3.1 For Discussion and Advice

RECOMMENDATIONS

That the Resource Assessment Group (RAG):

1. **REVIEW** the results of the updated Spanish mackerel stock assessment (stock synthesis) and Recommended Biological Catch (RBC) estimates to be presented by FFRA Scientific Member Dr Michael O'Neill and Co-investigator Dr Rik Buckworth under the funded project "*Torres Strait Spanish mackerel stock assessment*" (project number 200815); and
2. Having regard for the stock assessment outcomes, RBC estimates and advice on a harvest strategy for the fishery, **DISCUSS** and **PROVIDE ADVICE** on an RBC for Spanish mackerel for the 2024-25 season.

KEY ISSUES

3. In preparation for updating the stock assessment and estimating an RBC for the 2024-25 fishing season, the RAG recently reviewed the preliminary SS model and new data catch / biological data available from the 2022-23 fishing season and provided recommendations on:
 - a) treatments to be applied to data inputs;
 - b) specific model analyses and sensitivities to be undertaken; and
 - c) the RBC calculation method.
4. Advice regarding key aspects of the preliminary stock synthesis (SS) assessment model was provided at a technical subgroup meeting (6-7 June 2023) and endorsed at FFRA 13 meeting (8 June 2023).
5. Key aspects considered in the technical subgroup meeting included:

<ul style="list-style-type: none"> • Catch rates (input) • Catch rate CVs (input) • Harvest (input) • Spawning biomass (B) (input) • Steepness (h) (parameter) • Natural mortality (parameter) • Length-age data (input) • Growth (parameter) 	<ul style="list-style-type: none"> • Estimates of SS uncertainty (output) • Recruitment deviations (parameter) • Recommended biological catches (input) • Cookbook (diagnostics) • Sensitivity tests (input) • Report (output) • Dynamic B0 report (output) • Model convergence / IUU application
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6. At FFRA 13 meeting, noting the advice of the stock assessment team and SS technical subgroup, the RAG **agreed to remove MSY from future grids of RBC options (Table 1)**.
7. At FFRA 14 meeting (30 August 2023), the RAG noted a presentation from Dr Michael O'Neill regarding a review of data inputs for the 2023 SS stock assessment with data to 30 June 2023.
8. The presentation summarised the 2023 data, including newly available catch and biological data to be used in the scheduled 2023 stock assessment. In keeping with the established process followed by the

RAG since 2020, the RAG was asked to discuss and provide advice across four separate data assessment categories:

- Assessment item 1- Total annual fish harvests
- Assessment item 2- Standardised catch rates
- Assessment item 3- Fish age-length data
- Assessment item 4- Fish biology

9. A summary of this advice can be reviewed in the FFrag 14 meeting record.
10. The RAG agreed to include newly available commercial catch-weight data from the 2022-23 season, noting that the project team would need to collaborate with AFMA before the following meeting to resolve a small number of issues identified in the data.
11. Further to the above action, the RAG agreed to hold a technical-FFrag meeting in early November 2023 before the RBC meeting to review the analyses and discuss the structure of the model and changes due to the new software being used (subject to availabilities).
12. Due to the limited availability of members, the technical meeting was deferred. The project team proposes to action further considerations for the stock assessment model at FFrag 15.

Table 1: Agreed change to the current ‘matrix of scenarios’ / grid of RBC options which is utilised by the FFrag when considering yearly RBC advice: The “constant F_{msy}” row (highlighted in red) will be removed from the table as of the 2023 stock assessment. RBC options displayed are for illustrative purposes.

No.	Name of RBC approach 1941 custom model	% of <u>all</u> simulations below S ₂₀ over 12 years and 6 analyses Assuming average recruitment and constant RBC	Median RBC tonnes Over 6 analyses
1	Constant F _{MSY}	12.7%	137
2	Constant F ₄₀	12.2%	132
3	Constant F ₄₈	10.3%	102
4	Constant F ₅₀	9.9%	95
5	Constant F ₆₀	8.9%	67

Non-Commercial Catch Estimates

13. Consistent with Australian Government policy (detailed in the *Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2007*), all sources of mortality (catch) must be taken into account when setting a TAC. This means the TAC generally equates to the Recommended Biological Catch (RBC) for the species minus expected catches to be taken outside of the commercial fishery.
14. Estimates of other sources of mortality have been used to revise the Spanish mackerel notional annual TAC since the 2017-18 season.

15. FFRAG 8 (4-5 Nov 2020) updated the estimate of non-commercial catches of Spanish mackerel which was subsequently applied to the TAC for the 2021-22 and 2022-23 seasons.
16. Increases were recommended from 10 tonnes to 15 tonnes for subsistence fishing, and from 2 tonnes to 5 tonnes for recreational fishing. Consistent with previous years, the RAG agreed that charter fishing catches were likely to be minimal. These estimates were subsequently left unchanged for the 2021-22, 2022-23, and 2023-24 fishing seasons. The FFWG supported this approach in all instances.
17. At FFRAG 14 meeting, the RAG was invited to discuss whether these estimates of Spanish mackerel 'non-commercial catch' required amending for the following three purposes:
 - a) For the 2022/23 season, noting any new evidence, to ensure that the most accurate level of **past** harvest can be inputted into 2023 stock assessment (to calculate the 2024/25 **RBC**).
 - b) For the 2023/24 season, noting any new evidence, to ensure that the most accurate level of **future** harvest can be inputted into 2023 stock assessment (to calculate the 2024/25 **RBC**).
 - c) For the 2024/25 season, noting any new evidence, to ensure that the most accurate level of **future** harvest can be provided to the FFWG for their consideration in recommending a **TAC** for the 2024/25 season.
18. The RAG agreed to retain the estimated catch of 15 tonnes for kai kai, 5 tonnes for recreational (including charter), and 0 tonnes for PNG sectors for the 2022-23, 2023-24 and 2024-25 seasons.

Harvest Strategies for the Torres Strait Finfish Fishery

19. The AFMA funded project Harvest Strategies for the Torres Strait Finfish Fishery (the Harvest Strategy Project) was completed in 2019. This project provided the foundation and framework of a harvest strategy for the two key species of the TSFF (Spanish mackerel and coral trout). Since project completion, the FFRAG has used this document as a basis for ongoing development, prioritizing harvest strategy components for Spanish mackerel due to the underutilised nature of the coral trout fishery. This has guided the TAC-setting process for this species.
20. At FFRAG 10 meeting (3-4 November 2021), the FFRAG reviewed work to date and agreed that objectives (including guiding principles), indicators (biomass), reference points (target and limit reference points), and decision rules of the preliminary Spanish mackerel harvest strategy were well progressed. The RAG recommended that a Management Strategy Evaluation (MSE) be undertaken to assess and refine the harvest strategy for Spanish mackerel, to ensure that it meets Traditional Owner objectives and is robust to uncertainties. A public call for research for this work was released in 2021 and 2022 however, no proposals were received.
21. See **Attachment 3.1a** for a summary of the harvest strategy for Spanish mackerel, including components identified for further development through the FFRAG and a future MSE. Key components include:
 - Biomass limit reference point (B_{LIM}): 20% unfished biomass
 - Interim target reference point: 48% unfished biomass
 - Long-term (>12 years) target reference point: 60% unfished biomass
 - Yearly stock assessment to be conducted until population is assessed to be >40% unfished biomass
 - Yearly biological sampling to be conducted to support stock assessments
 - Fishery to be closed if assessed when a stock assessment determines the Fishery to fall below B_{LIM}
 - Fishery can only be re-opened when a stock assessment determines the Fishery to be above the biomass limit reference point.

22. The FFrag, with consideration of the CHSP and agreed harvest strategy components, formulates a yearly Recommended Biological Catch (RBC). In forming its RBC advice, the FFrag:

1. considers different constant (non-hockey-stick) harvest rates applied to the results from a yearly stock assessment. Each level of harvest rate relates to building the stock to different target reference points (B_{MSY} through to B_{60});
2. agrees to a forecasted estimate of stock biomass in the following fishing season based on an assumed level of harvest.
3. agrees to an estimate of ongoing recruitment.
4. reviews fish population projections to evaluate risk to the stock. The RAG considers how many years in the stock assessment model-runs would the stock drop below the limit reference point during a 12 year-time period (three times the age of full sexual maturity). In line with the CHSP, if more than 10% of model runs (based on over 1000 simulations), dropped the stock below B_{LIM} ; this would represent an unacceptable risk to the stock. The RAG discounts approaches that represent unacceptable risk to the stock.
5. selects an RBC which, assuming a constant-catch rule, would build the stock, on average, to the interim target reference point (F_{48}) within a reasonable timeframe of 12 years (three times the age of sexual maturity).
6. Provides an estimate of non-commercial catch (fishing mortality) to be deducted from the RBC to set the TAC.

Attachment 3.1a

Guiding principles and key fishery attributes – factors that helped shape the development of the Torres Strait Spanish Mackerel Harvest Strategy	
Recommended	Consistency with the Commonwealth Fisheries Harvest Strategy Policy and Guidelines (HSP, 2018). This is consistent with objectives of the <i>Torres Strait Fisheries Act 1984</i> (the Act).
	Have regard for traditional knowledge and the ability of communities to manage fishery resources locally, through acknowledging and incorporating customary and traditional laws, recognising; Malo Ra Gelar, Gudumalulgal Sabe, Maluailgal Sabe, Kulkaigal Sabe.
	Recognise commercial fishing by traditional inhabitants is important for local employment, economic development and for the passing down of traditional knowledge and cultural lore. Enough fish need to be left in the water for future fishers to make money and to protect the traditional way of life, livelihoods and cultural values.
	Spanish mackerel are a shared resource important for subsistence, commercial, traditional, charter and recreational sectors. Shared stock under the Torres Strait Treaty with PNG, stock to be shared if PNG nominate to do so.
	<p>TACs should vary according to stock status (up and down):</p> <ul style="list-style-type: none"> • If biomass decreases be cautious. Stock is not to go below the limit; • If biomass is increasing be conservative; 'bank' fish.
	Having regard for the current stock size (B_{31}) and that B_{60} is not quickly achieved (possibly greater than 12 years) without significant reductions in catch which may in turn cause significant economic and social impacts on the Fishery, a shorter-term target reference point is first required.
	Torres Strait Spanish mackerel stock are assumed separate from other regional stocks. They have limited mixing with the Queensland East Coast and the Gulf of Carpentaria stocks (see Buckworth et al. 2007 and Newman et al. 2009).

	There is potential for variations in availability and abundance of Spanish mackerel in the Fishery, due to their movement, schooling and aggregation patterns for feeding and spawning, recruitment and mortality.
	Spanish mackerel are a shared resource important for subsistence, commercial, traditional, charter and recreational sectors.

Operational objectives What we want the harvest strategy to achieve.	
Recommended	Maintain the stock at (on average), or return to, a target biomass point (B_{TARG}) equal to a stock size that aims to protect the traditional way and life and livelihood of traditional inhabitants and is biologically and economically acceptable.
	Maintain stocks above the limit biomass level (B_{LIM}), or an appropriate proxy, at least 90 per cent of the time.
	Reduce fishing levels if a stock is below B_{TARG} but above B_{LIM} .
	Implement rebuilding strategies, if the stock moves below B_{LIM} .

Indicators Indicators provide information on the state of the stock and how the stock is doing against agreed reference points (reference points are addressed below and are a specified level of these indicators)	
Recommended	Biomass – Catch and effort data from daily fishing logbooks is used as a proxy for abundance in the stock assessment model which is used to calculate biomass of the stock as a proportion of unfished biomass (B_0).

Requires further development	Fishing mortality (B) based indicators. The stock assessment model can estimate a level of F to move the stock towards the target.
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Reference points		
A reference point is a specified level of an indicator used as a basis for managing a stock or fishery. Reference points will generally be based on indicators of either the total or spawning stock size (biomass) or the amount of harvest (fishing mortality). Reference points show where we want (target) and don't want (limit) the stock levels in the fishery to be.		
Recommended	Unfished biomass (B_0) = $B_{1940} = 100\%$.	The year 1940 is considered the start of the commercial operations in the Fishery. The unfished biomass B_0 therefore is the model-estimate of spawning stock biomass in 1940.
	Target (B_{TARG}) reference point = B_{48}	<p>B_{48}⁸ is the default target (a proxy for B_{MEY} - biomass at maximum economic yield) in the Commonwealth HS Policy.</p> <p>FFRAG supported the B_{48} target reference point and outlined the following rationale for adopting this value.</p> <p>FFRAG noted that the most recent assessment update was estimating B_{MSY} for the stock as being close to the Commonwealth Harvest Strategy Policy of B_{40} which is a commonly accepted indicator in fisheries as a target reference point for maintaining a level of biomass (not catches) focused on maximising sustainable harvest (yield) from the fishery.</p>

⁸ Comm HSP: The target reference point for key commercial fish stocks is the stock biomass required to produce maximum economic yield from the fishery (BMEY). For multispecies fisheries, the biomass target level for individual stocks may vary in order to achieve overall maximum economic yield from the fishery. In cases where stock-specific BMEY is unknown or not estimated, a proxy of 0.48 times the unfished biomass, or 1.2 times the biomass at maximum sustainable yield (BMSY), should be used. Where BMSY is unknown or poorly estimated, a proxy of 0.4 times unfished biomass should be used. Alternative target proxies may be applied provided they can be demonstrated to be compliant with the policy objective.

		<p>Noting identified uncertainty in our data and stock assessment model there is a need to be precautionary and apply a 'buffer'. Traditional owners have also advised an objective for the fishery is to have a target biomass level that supports good catch rates. For these two reasons, a multiplier is applied to set the target biomass at a higher level than B_{MSY}. It was noted in other fisheries this may be considered as a B_{MEY} target reference point or proxy (to maximise economics from harvest taken) but in this fishery, B_{MEY} is unable to be calculated without reliable price data from catches.</p> <p>The RAG agreed that a 20 per cent buffer would be applied to B_{MSY} in order to set B_{TARG} (1.2 times B_{MSY} of B₄₀ = B₄₈), though consideration (based on QDAF experience) was given to alternative multipliers given work undertaken by Pascoe et al. to estimate the best proxy economic target reference point in data-poor fisheries. FFRAG considered comparisons of costs to revenue ratios and appropriate multipliers from the research but noted that the examples were not comparable with the Torres Strait Finfish Fishery.</p> <p>It was noted that a desktop study could be funded to calculate this optimum B_{MSY}: B_{MEY} point noting that setting a biomass level that is high will trade off available harvest and the number of boats active in the fishery.</p>
	Limit reference point (B _{LIM}) = B ₂₀	B _{LIM} is the spawning biomass level below which the ecological risk to the stock is unacceptable and the stock is defined as 'overfished'. This is an agreed level which we do not want the stock to fall below. B ₂₀ is the default limit proxy in the Commonwealth HS Policy ⁹ .
Requires further development	Long term B _{TARG} = B ₆₀	Further analysis and advice is required on the suitability of B ₆₀ as a long-term B _{TARG} , in comparison to other target biomass levels above B _{MSY} having regard for the biology of the species and performance of the Strategy in meeting its objectives.

⁹ Comm HSP: All stocks must be maintained above their biomass limit reference point (BLIM) at least 90 per cent of the time. Where information to support selection of a stock-specific limit reference point is not available, a proxy of 0.2 times unfished biomass should be used.

		<p>Stakeholders have recommended that the Strategy ensures enough fish are left in the water to support commercial fishing but also protect the traditional way of life and livelihoods of traditional inhabitants.</p> <p>Advice to date is that a higher target biomass level (referring to 60%), would increase catch rates and improve profits in the fishery over other lower reference points, such as B_{48}. RAG advice on the suitability of B_{60} against other possible higher target biomass levels is necessary. There are likely to be trade-offs between medium-term returns from the fishery (significantly reduced TAC) and longer-term returns (more fish in the water meaning less cost to catch and therefore higher returns. Also, there would be more fish in the water for other users).</p> <p>Quantitative analysis and/or evidence from comparable fisheries may enable more evidence-based advice and decision making on the longer-term target.</p>
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Decision Rules (also called Harvest Control Rules)

These rules are designed to maintain and/or return the stock to the target reference point.

Recommended	If stock falls below the limit reference point (B_{LIM}).	The Fishery is closed (all commercial fishing for Spanish mackerel is to cease) and subject to a rebuilding strategy. The nature of the rebuilding strategy will be determined on the basis of the stock assessment (to be applied immediately) and the rate of recovery (i.e. number of years to achieve a biomass greater than B_{LIM}).
	Re-opening the Fishery ¹⁰	Following closure of the Fishery, the Fishery can only be re-opened when a stock assessment determines the Fishery to be above the biomass limit reference point.

¹⁰ Comm HSP: Once a stock has been rebuilt to above the limit reference point with a reasonable level of certainty, it may be appropriate to recommence targeted fishing in line with its harvest strategy, which will continue to rebuild the stock towards its target reference point.

Requires further development	If the stock is above the limit reference point but below the target reference point.	The RBC is to be set at level that allows for the stock to build towards the target. Importantly the decision rule can be designed to build the stock at different rates (e.g. the number of years for the stock to build to the target reference point or the rate of building near the target or limit).
Requires further development	If stock is overfished (below B_{LIM})	<p>Consistent with the Commonwealth HS policy the FFRAG and FFWG have recommended that commercial fishing for Spanish mackerel should cease if the stock falls below B_{LIM}. Further FFRAG discussion and advice is sought to consider additional decision rules and actions required to guide rebuilding and to trigger any necessary reviews of the HS, noting the HS should be designed to avoid the stock breaching the limit.</p> <p>FFRAG are to note and discuss the HS policy requirements to be included in the Spanish Mackerel HS if the stock falls below B_{LIM}:</p> <ul style="list-style-type: none"> a) that targeted commercial fishing for Spanish mackerel will cease b) a rebuilding strategy will be developed to build the stock above B_{LIM} with a reasonable level of certainty c) if B_{LIM} is breached while the fishery is operating in line with HS, the HS must be reviewed. <p>Further advice to be sought on:</p> <ul style="list-style-type: none"> a) A process to understand how the stock has rebuilt above B_{LIM} with certainty in the absence of commercial fishing e.g. model projections. b) whether a decision rule with a lower level of fishing pressure would be appropriate if the stock is above but close to B_{LIM}. <p>FFRAG noted that four years would likely be the minimum possible recovery time (based on biology of the animal) to rebuild the stock back above B_{LIM} and the existing model could be used to forecast how the stock would respond with zero catches if closed to commercial fishing.</p>

Requires further development	Utilisation related Decision Rules (desired fishing intensity) noting a fishery may have indicators and reference points including spawning stock size (biomass) or the amount of harvest (F or fishing mortality i.e. utilisation of the resource).	<p>Decision rules have yet not been established for harvest related performance metrics such as future 'target' catches or 'target' catch rates desired by industry per primary vessel or per TIB dory day. Given that limited catch and effort data has only recently become available from TIB sector, the HS focus has been on agreeing biomass-based reference points and decision rules.</p> <p>Additionally, at recent FFRAG/FFWG meetings, with regard to considering various longer-term target biomass reference points, industry expressed a strong preference for management to focus on building the biomass back to BTARG in the coming years, before exploring any other scenarios.</p>
Requires further development	Precautionary increases to total allowable catches.	<p>Stakeholders recommended that if the stock assessment outcomes suggested increases in the TACs, these increases should only occur slowly through some kind of change limiting rule, noting that an increased TAC would likely not affect the TIB sector with the low present level of utilisation. Stakeholder advised a preference for 'banking' these fish to contribute to the biomass and future catch rates rather than harvesting this extra stock.</p> <p>At a previous FFRAG/WG meeting a number of challenges were identified with applying a change limiting rule for possible TAC increases. Instead the RAG/WG placed priority on examining different building rate scenarios which may achieve this desired precautionary outcome. FFRAG are asked to confirm this approach and provide advice on how to progress change-limiting rules if necessary.</p>

Monitoring and assessment cycle	
Recommended	Based on the most recent estimate of the stock status (0.31 times unfished biomass) and declining biomass (and CPUE) trend, a stock assessment should be performed annually until the biomass is estimated to be above B ₄₀ .

Requires further development	<p>Future FFRAG advice is sought on:</p> <ul style="list-style-type: none"> a) An appropriate assessment cycle when the stock is above B40 and/or methods for evaluating future assessment cycles. b) Likely data needs to support monitoring stock performance under the Strategy over time. c) Standard procedures for applying the decision rules to the stock assessment outcomes, and, any other minimum stock assessment scenarios, and/or, sensitivities. <p>FFRAG noted that although other options balancing risk and cost might be considered, given the decline in catch rates, transitional nature of the fishery, lack of fishery independent monitoring and suggestions of environmental influences on the fishery, there is a strong rationale to conduct yearly stock assessments for Spanish mackerel.</p> <p>FFRAG considered that examining CPUE in intervening years between full assessments (as an alternative) would be possible as an indicator of stock health but running a full assessment using the model would be more cost effective - given that running CPUE standardisations alone does require time and resources and the accepted full model can be run.</p> <p>FFRAG recommended that until MSE testing had been conducted, and the stock could be demonstrated to be at or above B40 (as a B MSY proxy), yearly stock assessments are required.</p>
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Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
STOCK ASSESSMENTS AND RBC ADVICE Coral trout	Agenda Item No. 3.2 For Discussion and Advice

RECOMMENDATIONS

That the Finfish Fishery Resource Assessment Group:

1. **NOTE** an update regarding a coral trout stock assessment workshop scheduled for 28 November 2023.
2. Having regard for new catch data, previous assessments, and the 2022 coral trout standardised CPUE timeseries, **DISCUSS** and **PROVIDE ADVICE** on an RBC for coral trout for the 2024-25 fishing season.
3. **DISCUSS** and **PROVIDE ADVICE** on an estimate of non-commercial catch for coral trout.
4. **NOTE** that the final report for the 2022 standardised CPUE timeseries was published in November 2023. This report can be accessed at the following link: <https://era.daf.qld.gov.au/id/eprint/9564/>

KEY ISSUES

1. The status of coral trout has been assessed against both the results of a Management Strategy Evaluation (MSE) undertaken in 2006 (Williams et al. 2007, 2011) and more recently, a preliminary stock assessment undertaken by Dr George Leigh (QDAF) and Dr Matthew Holden (University of Queensland) under the previously funded project ‘*Harvest strategies for the Torres Strait Finfish Fishery*’.
2. At its 31 October-1 November 2019 meeting (FFRAG 5) the RAG recommended that a stock assessment be conducted during the 2021-22 fishing season, once further data is available. At the time, the FFRAG considered that postponing the stock assessment for three years would allow enough time for additional data to be included. The additional data priorities identified being:
 - a) Review and possible inclusion of data from a 1994-95 CSIRO fish survey data in the Torres Strait (*Influence of Coastal Processes on Large Scale Pattern in Reef Fish Communities of Torres Strait, Australia*, Milton & Long, CSIRO 1997);
 - b) Improved catch and effort data from TIB fishers; and
 - c) Fishery independent data such as an underwater survey or biological sampling.
3. Biological sampling for coral trout commenced in the 2020-21 fishing season for the first time.
4. At its meeting (14-15 October 2021, meeting 9), the FFRAG did not recommend undertaking a stock assessment for coral trout as an immediate research priority for funding in 2022-23 nor did the FFRAG support a fishery-independent-survey at that time.
5. Dr Trevor Hutton summarised coral trout data from the 1995-1996 CSIRO dive survey and presented to the RAG at FFRAG 10. The RAG considered this summary along with an updated standardized CPUE timeseries when formulating an RBC for the 2022/23 season. The RAG did not

consider the substantive annual RBC of 135 tonnes to be a risk to sustainability based on the available information.

6. The RAG at FFrag 13 meeting upgraded a stock assessment for coral trout to an 'essential' priority (previously 'desirable'), in its 5-Year Rolling Research Plan. The RAG clarified that this research is now essential, given the current interest in increasing the quantum of effort in the fishery, noting that this would be a logical step in providing a key input into a future harvest strategy.

2022 standardised CPUE time series and recommendations from FFrag 12

7. At their meeting on 7-8 December 2022, the FFWG noted a presentation by scientific member Dr Michael O'Neill on an updated catch-per-unit-effort (CPUE) time series for coral trout. This time series standardised the catch rates of sunset fishers, accounting for the various geographic zones of the fishery area, and the efficiency of individual fishing vessels. The WG noted that the current iteration of the timeseries contains all available data, including catch data from QDAF (pre-2004). This was incorporated into the CPUE analysis as an action from FFrag 12 meeting (3-4 November 2022).
8. The WG noted that with the inclusion of the QDAF data that catch rates remain above 130 kg per boat day. Therefore, the 'trigger level' of 90.6kg per boat-day, considered under the harvest strategy work completed to date for the fishery, has not been reached. The WG recalled that should catch rates decline to 90.6kg per boat day, then this was trigger an immediate priority to conduct a formal stock assessment.
9. The WG agreed that the finalised CPUE time series did not suggest a decline in the coral trout population, noting that the addition of historical QLD data suggest that catch rates remain consistent with the long-term average.
10. The WG noted that the FFrag provided the following advice at their meeting on 3-4 November 2022:
 - Having considered recent catch data, previous assessments, and the updated CPUE time series, the RAG concluded that there is no evidence to suggest amending the substantive RBC of 135 tonnes; the available data does not suggest a decline in the coral trout population, and there were no justifications identified to increase the RBC.
 - The FFrag agreed that, based on all lines of evidence, it is highly unlikely that the stock is at risk from fishing:
 1. Fishing levels remain low in the Fishery. The total reported catch for 2021-22 fishing season is 42 t;
 2. Outcomes of the 2006 Management Strategy Evaluation (MSE) analysis and the 2019 preliminary stock assessment both predict the current biomass to be high relative to virgin biomass:
 3. MSE: Four constant catch scenarios of 80, 110, 140 and 170 tonnes were tested which all achieved a biomass for the fishery of at least 60 per cent of virgin total biomass by 2025 (B60). The biomass in 2004 was estimated to be more than 60 per cent of unfished levels (Williams et al. 2011, 2007). Commercial catch in recent years has been below historical catch levels and well below the lowest catch level simulated in the MSE (80 t per year).

4. Preliminary stock assessment: This assessment found the coral trout stock to be around 80 per cent of virgin biomass (B80). All of the model estimates of current spawning biomass were above 65 per cent estimated virgin biomass (B65).
 5. Although there is some uncertainty with the 1995/96 CSIRO dive survey (reviewed at FFRAG 10), the density estimates provide a level of validation of the density estimates derived from the preliminary stock assessment; and
 6. The RAG recommended an RBC for coral trout of 135 tonnes for the 2023/24 season.
11. The FFWG supported the FFRAG's advice and recommended that the coral trout TAC remain at 135t for the 2023-24 fishing season.
 12. In providing its advice, the WG considered that TAC for coral trout has not been calculated with an explicit deduction to account for likely catches taken outside the fishery (eg traditional, recreational or charter fishing). This is because it has not been a high priority to undertake work to determine catch estimates whilst catches remain very low compared with the TAC.
 13. The WG noted advice from TIB members that it is desirable to reassess the priority of providing an estimate of non-commercial catch when recommending a TAC for the 2024/25 season.
 14. Advice from TIB members at FFRAG 14 meeting affirmed the intention to consider an estimate of non-commercial catch when providing RBC advice at FFRAG 15.

BACKGROUND

15. At the RAG's meeting on 31 October – 1 November 2019 (meeting 5) the RAG identified, two triggers that may indicate changes in the risk profile for the stock:
 - a) Catches from TIB + Sunset sector exceeding 90 t (being two thirds of the constant catch TAC of 134.9 t); and
 - b) If the standardised catch rate per day drops below 90.6 kg per primary vessel day¹.
16. The RAG advised that either of these two triggers being met would flag a change in the stock status and will mean a stock assessment is to be carried out to investigate. FFRAG considered that further work would be required to develop decision rules based on the outcomes of this assessment if triggered; i.e. how are the outputs of the assessment used to then move the stock relative to the reference points.
17. Relevantly the RAG also recommended that an alternative, robust indicator of stock status, other than CPUE from the small number of sunset boats targeting coral trout, needs to be developed to track the stock status over time.
18. At FFRAG 9 meeting on 14-15th October 2021, the RAG noted the 2020 *ABARES Fishery Status Report* for the Torres Strait Finfish Fishery. It was raised by a scientific member that although coral trout are currently classified as not being overfished, and not subject to overfishing, due to the

¹ The catch rate associated with B80 was determined to be 120 kg per day based on an average from 2012-2017 advice is that if it falls below 90 kg per day (as a proxy for B60) it would trigger an assessment.

increasing length of time since the last evaluation of the coral trout stock, there is an increasing risk of it becoming unknown what the productivity of the stock is.

19. The RAG noted unless a stock assessment can be endorsed, then there is a risk that the fishery may be classed as 'status uncertain' for being over-fished/subject to overfishing.

20. Recent commercial catches of Coral trout in the Fishery are summarised below:

- | | |
|---------------------------|--------------------------|
| • 21 tonnes in 2014-15 | • 32.5 tonnes in 2019-20 |
| • 38.4 tonnes in 2015-16. | • 18.9 tonnes in 2020-21 |
| • 25.7 tonnes in 2016-17 | • 41.9 tonnes in 2021-22 |
| • 27.3 tonnes in 2017-18 | • 27.8 tonnes in 2022-23 |
| • 17.3 tonnes in 2018-19 | |

15. A coral trout TAC of 135 tonnes has been in place since 2007–2008 (note historically the TAC was 134.9 tonnes but the PZJA agreed to simplify the TAC for the 2019-20 fishing season). This TAC was based on the average catch between 2001 and 2005 and included historic high catches reported in the fishery.

16. In the absence of a formal stock assessment, the status of the coral trout stock has been evaluated against the results of a Management Strategy Evaluation (MSE) undertaken in 2006 (Williams et al. 2007, 2011). In this MSE exercise, four constant catch scenarios of 80, 110, 140 and 170 tonnes were tested which all achieved a biomass for the fishery of at least 60 per cent of virgin total biomass by 2025. The biomass in 2004 was estimated to be more than 60 per cent of unfished levels (Williams et al. 2011, 2007). Commercial catch in recent years has been below historical catch levels and well below the lowest catch level simulated in the MSE (80 t per year).

17. At its meeting on 13-14 March 2019 the FFRAG considered a preliminary stock assessment for coral trout. The FFRAG accepted the assessment as preliminary noting the stage of development of the assessment and the range of uncertainties within the assessment. The FFRAG noted the results of the preliminary stock assessment suggest the coral trout stock is healthy with around 80 per cent of virgin biomass available. The RAG noted that all of the model estimates of current spawning biomass were above 65 per cent estimated virgin biomass.

Non-Commercial Catch

18. To date, the TAC has not been calculated with an explicit deduction to account for likely catches taken outside the fishery (kai kai, recreational, charter). This is because it has not been a high priority to undertake work to determine catch estimates whilst catches remain very low compared with the TAC.

19. At its meeting on 27-28 November (meeting 6), the RAG recommended that AFMA undertake a work plan to support RAG consideration of likely catches ahead of the following fishing season. To date, this work has not been actioned due to the underutilised nature of the fishery (catches far below the available TAC).

20. The RAG agreed to retain this action item, noting however, that progressing this action needs to be assessed against other RAG priorities and in light of any future research investment to develop an approach for measuring non-commercial fishing for the region.
21. At its meeting on 14-15th October 2021 the RAG noted the progression of the project *Developing an approach for measuring non-commercial fishing in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods*, which was completed in 2021. This project proposed a timeline of future monitoring projects to measuring non-commercial catch, including coral trout.
21. in 2023, 'Phase 2' of the non-commercial catch project (*Measuring non-commercial fishing catches (traditional subsistence fishing) in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods*) was approved for funding in 2023-24 & 2024-25.
22. This project will seek to quantify the levels of non-commercial take of a wide range of fisheries resources, including finfish.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2025
MANAGEMENT Update to the TSF01 Logbook	Agenda Item No. 4.1 For Discussion and Advice

RECOMMENDATIONS

That the Resource Assessment Group (RAG):

1. **REVIEW, DISCUSS** and **PROVIDE ADVICE** regarding work to date on draft amendments to the TSF01 logbook
2. **NOTE** that subject to endorsement from the FFrag, these amendments will be finalised before the commencement of the 2024-25 fishing season.

KEY ISSUES

3. AFMA has prepared a range of draft TSF01 logbooks for the RAG to review (to be presented during the meeting).
4. Key advice required by AFMA to progress the publishing of the updated logbook includes a consideration of the removal of dory-specific catch data for non-target mackerel species, and an appraisal of the efficacy of new data inputs.
5. As well as actioning the advice of the RAG, the proposed amendments to the TSF01 logbook will action several conditions of the recently approved WTO assessment of the fishery (refer to Agenda Item 2.2).

BACKGROUND

6. AFMA has catalogued FFrag advice to date regarding proposed amendments to the TSF01 logbook. Extracts are provided below.

FFrag1- 9-10 NOV 2017

- It was noted that the current logbook does not have the capacity to record catch and effort per tender for the reef-line sector (mackerel sector is able to report per tender) and instead lumped all the catch per day under the primary vessel. This misses recording valuable effort data which may vary per dory.
- It was also noted that the logbook had no capacity to record where each tender was fishing, noting that they may travel some distance from the primary vessel.

FFrag3- 19-20 NOV 2018

- Consideration should be given to improving catch reporting on Coral trout, including:
 - reviewing or splitting the *Torres Strait Finfish Fishery Daily Fishing Logbook (TSF01)* into two separate logbooks tailored to either reef-line fishing targeting trout or Spanish mackerel. It was noted that this was the arrangement in the fishery prior to 2003 when fishers used either the old specific *SM02 logbook* for mackerel and the

“Queensland East Coast Line Fin Fish Fisheries Logbook” (LF series of logbooks LF01 and LF02) for recording reef-line fishing. Information is required from fishers on operation by tender (better understanding the effort portion of CPUE).

- Improving awareness of spatial patterns in Coral trout fishing (use of onboard monitoring, working with fishers on characterising historic patterns of behaviour, logbook changes and vessel monitoring systems on dories were suggested).

FFRAG4- 13-14 MARCH 2019

The RAG considered that a data need for the fishery was understanding other factors driving the abundance of Spanish mackerel. These might include consideration of other data streams such as the Integrated Marine Observing System remote sensing data, measuring shark depredation of catch (amending daily fishing logbooks) and broader climate change impacts and monitoring across Torres Strait / northern Australia. The RAG noted that the mackerel stock assessment pre-proposal received in answer to the TSSAC call for research, if funded, would begin investigating this issue.

FFRAG5- 31 OCT- 1 NOV 2019

RAG strongly supported the push for legislation to be changed to support mandatory logbooks to maximise accurate data provision from TIB sector of the fishery. RAG considered that amendments to the daily fishing logbook may be necessary to streamline data collection with TIB fishers (e.g. simplified separate data sheets for Spanish mackerel and reef-line fishing, the FFRAG considered the *Northern Territory Government Spanish Mackerel Fishery Daily Log Sheet* as an example of a simple log-sheet) and that training on recording GPS co-ordinates may be required.

FFRAG6- 27-28 November 2019

FFRAG advised that these benefits would be realised only if VMS and catch data was recorded from both the primary vessel and dories; i.e. daily fishing logbooks would need to capture catch per dory with the effort component alone potentially collected by VMS.

FFRAG7- 8 October 2020

N/A

FFRAG8- 4-5 November 2020

Agenda item 4.1 Logbook review TSF01

The RAG noted an update from the AFMA EO on the data presently collected through the AFMA *TSF01 Torres Strait Finfish Fishery Daily Fishing Logbook*. AFMA outlined a number of issues identified by the RAG over time to improve the quality of catch and effort data coming from Sunset fishers. The RAG noted that this agenda item was to get general advice from the RAG ahead of some succinct project work with industry members in 2021 with a view to implementing a new logbook for the 2021-22 season.

It was noted that advice was sought on tactical changes to TSF01 to improve data from the Sunset sector as well as broader changes that might facilitate adoption by TIB sector fishers, noting that it is not mandatory for these fishers to complete a daily fishing logbook at this time.

The RAG agreed with the general principle that both Sunset and TIB sectors should be completing the same daily fishing logbook.

Logbooks changes recommended to improve Sunset sector catch and effort data:

Dory driver name

The RAG supported the AFMA suggestion to modify TSF01 to have a clear “*first name and surname*” field for dory driver name noting advice from the Spanish mackerel project team that analysing older historic dory driver data has been unsuccessful due to unclear data; e.g. dory driver name can be recorded as ‘James’, ‘Jim’, ‘Jimmy’ and cause confusion.

Shark depredation

The RAG supported modifying TSF01 to quantify the impact on catch rates over time from shark taking catch from lines (shark depredation). The RAG noted that industry have raised shark depredation as an issue that could be affecting the interpretation of catch rates. It was noted that Western Australian Fisheries have changed their logbook to ask fishers to record “*how many fish did you lose to sharks in this fishing operation?*” RAG members suggested that this part of the logbook should be a simple box where fishers should write the number of fish lost to shark depredation. The instructions should make it clear for fishers to write a zero when no interaction occurred and to not leave this field blank.

Tender data including location for both Spanish mackerel and coral trout

The RAG supported modifying TSF01 to better collect finer scale information about where fishing occurred for both Spanish mackerel and trout operations. It was noted that, for coral trout, it is important to know the number of reefs visited per fishing session.

The RAG noted that TSF01 records the location for where a primary boat is operating per fishing day and records catch taken per dory for Spanish mackerel. The RAG noted that Spanish mackerel dories generally operate nearby to the primary vessel meaning that the location of fishing operation is generally well recorded. However, for coral trout, the RAG noted advice that tenders in this fishery may travel over a wider range and visit a number of coral reefs in a fishing session meaning the location of fishing effort was poorly captured in TSF01.

Industry members advised of a concern that Sunset fishing tenders may be fishing inside the 10nm radial closures (while the primary is anchored outside) around eastern communities and collecting finer scale fishing effort data may help address this risk.

Michael O’Neill advised that, in the Queensland East Coast Spanish mackerel fishery, the data needs include the hours fished per day and the number of sites fished within a zone. It was advised that QDAF is investigating whether Vessel Monitoring Systems (VMS) fitted to dories can be used to meet this data need rather than changing their logbooks. Research is being done on how VMS data can be integrated into the stock assessment model to get information about fishing operations and where they occurred.

Fish weights: logbooks vs. CDRs

The RAG support AFMA working to update their systems to automatically link the Finfish logbook and Catch Disposal Record (CDR) data through a ‘Trip ID’ or fishing event. This would make it more time efficient to link the CDRs with verified weights with the numbers fish caught per trip.

The RAG noted that a data need for the fishery is to be able to link each fishing event in the daily fishing logbook to the corresponding CDR to best determine the average weight per fish landed. The RAG noted that generally, weights recorded in Daily Fishing Logbooks are back-deck estimates with CDRs completed in port on accurate scales are being used to verify these logbook weights. The RAG noted that CDRs are used by AFMA to deduct catches from catch holdings, not daily fishing logbooks.

The RAG noted that the reef-line portion of the logbook had data fields for ‘number’ and ‘weight’ of fish. It was noted that the mackerel section only requires fishers to record the numbers of fish and average weight/number of cartons. The RAG suggested working with industry to understand their practices for estimating or weighing fish at sea and how this varies between reef-line and mackerel fishers.

Species splits for trout

The RAG supported amending TSF01 to remove the percentage species splits estimates for coral trout and have fishers record each species individually line by line including number and kilogram.

RAG members reiterated concerns that a challenge for science and management in the reef-line fishery was the fishery catching a basket of four coral trout species and not recording them at species level. The RAG noted that fishers at present could report a basket of trout (e.g. 100 kg) and provide a percentage split to estimate the number of common, bar-cheek, blue-spot and passionfruit (e.g. 85 % common, 15 % bar-cheek).

Spatial reporting – including TIB fishers

The RAG supported redesigning the logbook, if appropriate, to help make it more user friendly for both Sunset and TIB sector fishers to fill out. The suggestion was made that have one page represent a single fishing day might make the logbook less cluttered and easier for new fishers to fill out.

RAG science members supported the extra effort fishers are going to through the FRS Catch Disposal Records (TDB02) to volunteer the broad area fished, noting the reporting zones are very large in the CDR book. However, it was advised that, to best support stock assessments, a finer scale measure of where fishing effort occurred would be needed from TIB fishers, particularly for trout, which are known to be generally found in only a small area of reef.

The RAG noted concerns from TIB industry members that reporting an exact location fished is not traditional practice within communities and was a part of Traditional Knowledge and needed to be respected. Industry members advised that this would be a challenging issue as fishers want to volunteer data to help their fishery science and management but do not want their Traditional Knowledge released to outsiders.

RAG members advised that the key to help adoption will be education, awareness and engagement with industry around the firm confidentiality requirements of the daily fishing logbook program. It was noted that, while a CDR is filled out by both a fisher and fish receiver, the daily fishing logbook is confidential and is sent straight to AFMA where it is housed securely. AFMA advised that strict information disclosure rules are in place to protect the commercially sensitive nature of these data; where data from a single fisher should never be able to be discerned from looking at any data publication.

The RAG noted advice from TIB fishers to AFMA that recording latitude and longitude co-ordinates would be another challenge in adopting daily fishing logbooks. The RAG considered the AFMA suggestion that fishers (TIB and Sunset) could be given the simpler option to report location fished as an 11 x 11km square 'hill-grid' with a grid and then a site recorded within this grid (noting the logic of these were that a hill-grid was 1/10th of a degree of longitude and equated to 6 x 6 nm). RAG members noted that the hill-grid system would be well suited to Spanish mackerel and might be suitable for coral trout based on reef site fidelity, noting sub-populations tend to stay on a single reef with some reefs spanning more than one hill-grids. It was noted that this could be further explored with industry during project work and consultation.

Non-commercial fishing data needs for the fishery

RAG industry member Kenny Bedford provide the RAG with an update on the AFMA funded project *Developing an approach for measuring non-commercial fishing in Torres Strait*. The RAG noted that RAG Chairperson David Brewer was a co-investigator on the project alongside their colleague Dr Tim Skewes.

Mr Bedford advised that a clear shift within industry was apparent over recent years with communities embracing the need for data collection and stewardship including the need for data to support their fisheries. This includes a growing sense of responsibility for all natural resources including non-commercial species such as rabbitfish.

The project is reflecting on past strategies to collect non-commercial catch data that have not been successful, as well as focusing on the stakeholder needs for such data. It was advised that there is a need for a 'critical mass' within a community to support a system given it is a shared responsibility. The project is focused on recommending a straightforward method to collect these important data with a draft report near completion.

The project is likely to recommend an education campaign to help communities understand why the collection of these data is important especially as part of an ecosystem based management system rather than considering a single species at a time.

Recognising that collecting data on non-commercial catches is a key issue for the fishery, the RAG recommended that 2021 rounds of community visits and any consultation by AFMA/TSRA should add communicating the outcomes of the non-commercial catch project to the agenda to help communities' understanding.

FFRAG9- 14-15 OCTOBER 2021

N/A

FFRAG10- 18 NOVEMBER 2021

N/A

FFRAG11- 12 OCTOBER 2022

N/A

FFRAG12- 3-4 NOVEMBER 2022

Update to the TSF01 logbook

31. The AFMA member reported that this work is on track to be actioned for the 2023/24 season, in line with a scheduled update to the Torres Strait Fisheries (Furnishing of Logbooks) Instrument 2020. The updated logbook will be shared with the RAG for their consideration out-of-session before it is implemented.
32. A scientific member suggested to review the TSF01 logbook in-step with any updates to the TRL04 logbook. This will ensure any shared data-issues between the two fisheries can be addressed efficiently. Such issues include refining the collection of effort data for calculating catch-per-unit-effort (CPUE).
33. It was suggested by TIB members to also review the 'Catch Disposal Record' (CDR) TDB02 form to investigate whether it could be developed into an 'all in one' catch/effort reporting form, in place of a daily logbook for the TIB sector. It was suggested that effort data should be mandatory for the TIB sector, as it has been noted that the volunteer 'part b' section of the CDR form was not fully utilised in the most recent season. If the CDR form were to be amended to include the collection of robust effort data, then this would be an efficient mandatory reporting system for the TIB sector. AFMA agreed to investigate this consideration as an action item, including consulting with communities. **(Action Item 1)**
101. The AFMA member informed the RAG of the intention to include species-specific coral trout reporting columns in the updated TSF01 logbook, rather than the estimate of species-spilt option which is currently provided. This would then be a logbook condition to report coral trout by species. The RAG agreed that this would be desirable.

PZJA Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
RESEARCH Climate Change Research	Agenda Item No. 5.1 FOR NOTING

RECOMMENDATION

1. That the RAG **NOTE** a presentation from Dr Laura Blamey on past and current research investigating climate change modelling and impacts in the Torres Strait.

Key Issues

2. Past research on Torres Strait-specific climate change impacts includes *Climate variability and change relevant to key fisheries resources in the Torres Strait — a scoping study* (climate change scoping project).
3. Following on from the TSSAC's recommendations on the climate change scoping project, a follow up call for research proposals was made in February 2022 with one proposal received from CSIRO. Having regard to feedback from all PZJA advisory committee RAGs and Working Groups out of session, the TSSAC considered this research proposal at their meeting on 6-7 April 2022 (TSSAC 81).
4. The project is intended to:
 - a. enable fisheries managers and communities to better prepare for climate change mitigation and adaptation, where possible;
 - b. integrate new and existing fisheries and environmental data within an over-arching data framework;
 - c. provide estimates of the impacts that different climate change scenarios could have on the marine ecosystem and associated fisheries/species;
 - d. provide estimates of the economic, social and other fisheries-related livelihood impacts of climate change on communities in the short (2 yrs), medium (5 yrs) and longer term (10+ yrs), and suggest some possible actions for adaptation; and
 - e. help differentiate between the relative effects of fishing and climate change on marine resources.
 - f. provide results in formats (e.g. graphical, video, written) which can be communicated to stakeholders (Torres Strait Island Communities, Fishers, Fisheries Managers and local and regional organisations).
5. FRDC was originally approached for a co-contribution for this project, however were unable to provide funding at this time, despite seeing the benefits of the project.
6. Following this information, TSRA agreed to fund this project in full, and are in final stages of contract negotiation with the CSIRO, and hopeful to start the project in October 2023.
7. The first stage of the project will involve (1) setting up a Project Steering Committee and (2) deploying two moorings in Torres Strait, to collect oceanographic data for use in the climate modelling system. These moorings will provide additional data, to the AIMs data collection devices already present in Torres Strait, which are also planned to be used by this project.

Torres strait finfish fishery resource assessment group	Meeting 15 29-30 November 2023
RESEARCH Project update – Spanish mackerel and coral trout biological sampling	Agenda Item 5.2 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the update provided via video conference at the meeting by Andrew Trappett, Queensland Department of Agriculture and Fisheries (QDAF), on the biological sampling project.

BACKGROUND

1. Age data is an important input into the Spanish mackerel stock assessment, helping to understand: changes in abundance, the impact of fishing and fishing selectivity, as well as recruitment variability. In line with recommendations from the FFRAG, the collection of age and length data for Spanish mackerel resumed in the 2019-20 fishing season (most recent ageing data before this was from 2005).
2. QDAF, led by Jo Langstreth, was funded by AFMA and TSRA to undertake the sampling (AFMA Project number: 2019/0832, project title: *Enhancing biological data inputs to Torres Strait Spanish mackerel stock assessment*).
3. A subsequent project was funded to continue sampling in the 2020-21 fishing season. Under the project, for the first time, samples were collected from coral trout (AFMA project number: 190851, project title: *Torres Strait Finfish Fishery: Coral trout and Spanish mackerel biological sampling*).
4. The project was funded again for another three fishing seasons 2021-22, 2022-23, 2023-24 (contract formed 28 Aug 2021) (AFMA project number 2020/0814, project title: *Torres Strait Finfish Fishery Coral Trout and Biological Sampling 2021-2024*). On 14 September 2021, the project team wrote to Torres Strait Finfish Fishery stakeholders advising them of the continuation, objectives and intended outcomes of the project.
5. Research has continued for the current fishing season with Spanish mackerel samples being collected and processed (length, sex and otoliths taken for ageing later in the season) at the Cairns based laboratories.
6. For the 2021/22 season, the following samples were collected:

Spanish mackerel

- 1074 Spanish mackerel sampled in the lab with measurements and otoliths taken.
- 424 aged.
- 1530 Spanish mackerel from 50 catches measured on length sheets by commercial fishers.

Coral trout

- 91 coral trout sampled in the lab with measurements and otoliths taken .
- 206 coral trout from 3 catches measured on length sheets by commercial fishers.

7. As part of the project for the 2023-24, the project team planned two rounds of community visits on Erub and Mer, and completed an additional visit to Ugar.
8. Andrew Trappett will be attending the FFrag meeting to provide a project update for 2022-23 and 2023-24. Members are asked to consider the update and if relevant, provide any advice on any additional initiatives to ensure industry support and participation in the sampling.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
RESEARCH Non-Commercial Catch Project	Agenda Item No. 5.3 FOR NOTING

RECOMMENDATION

1. That the RAG **NOTE** a presentation from Mr David Brewer on the upcoming 'Phase 2' of the non-commercial catch project *Measuring non-commercial fishing catches (traditional subsistence fishing) in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods* which has been approved for co-funding between AFMA and the FRDC in the 2022-23 – 2023-24 financial years.

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
RESEARCH Finfish Fishery Research Priorities	Agenda Item 5.4 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Resource Assessment Group (RAG):
 - a) **NOTE** the Torres Strait Scientific Advisory Committee (TSACC) met in August 2023 to discuss research priorities for Torres Strait fisheries. Research scopes for Biological sampling for Spanish mackerel and coral trout, Close-Kin Mark-Recapture (CKMR) for Spanish mackerel, and a stock assessment (stock synthesis) for Spanish mackerel were endorsed by TSACC and submitted through a limited tender process.
 - b) **NOTE** that one research proposal has been received for a Close-Kin Mark-Recapture (CKMR) project for Spanish mackerel.
 - c) **DISCUSS AND PROVIDE ADVICE** on the research proposal for a CKMR project.
 - d) **NOTE** that one research proposal has been received for biological sampling for Spanish mackerel and coral trout.
 - e) **DISCUSS AND PROVIDE ADVICE** on the research proposal for a biological sampling project.
 - f) **NOTE** that as of 20 November 2023, no research proposals have been received for a stock assessment for Spanish mackerel.
 - g) **DISCUSS AND PROVIDE ADVICE** on questions raised by TSACC regarding research priorities for 2024-25, including the required timing of future stock assessments for Spanish mackerel.
 - h) **NOTE** the Rolling 5-Year Research Plan for the finfish fishery, including updates provided at FFRAG 13.
 - i) **DISCUSS AND PROVIDE ADVICE** on research priorities to the FFWG and TSSAC for research priorities for funding in 2025-26.

Key Issues

2. At FFRAG 13 meeting (8 June 2023), the RAG reviewed the current 5-Year Rolling Research Plan (the Plan), noting that this document was previously updated at FFRAG 12. The RAG amended the plan, taking into consideration the outcomes of previous projects against various research priorities. The updated Plan can be reviewed at **Attachment 5.4a**. Advice from FFRAG 13 was considered by TSSAC when providing advice on research funding for the 2024-25 financial year.
3. The RAG categorised research priorities as follows:
 - Biological sampling remained the number one priority, noting the importance of collecting an unbroken dataset of biological data for use in current and future stock assessments.

- A yearly stock assessment for Spanish mackerel was maintained as the number two priority, noting its utility in the RAG's current harvest strategy framework for providing yearly RBC advice. Noting the RAG's endorsement of the preliminary SS model, the RAG clarified that future assessments should formally adopt the stock synthesis approach.
 - The implementation of a full-scale Close-Kin Mark-Recapture (CKMR) study for Spanish mackerel was elevated from number five to number three priority, noting the success of the recently completed CKMR scoping/design study, the completion of the coral trout CPUE standardisation project (previous number three priority), and the RAG's advice to defer the MSE for Spanish mackerel fishery (previous number four priority which was approved for funding by TSSAC in 2023/24 however no proposals were received).
 - Coral Trout Catch Per Unit Effort Standardisation was downgraded from 3rd to 4th position, noting that this priority has been preliminarily actioned (analysis presented at FRRAG 12) however requires ongoing development via the production of an official report (due in early 2023/24).
 - Harvest strategy development for Spanish Mackerel, addressed through a Management Strategy Evaluation remains a high priority at number five, noting that ongoing work is required to develop specific harvest control rules (HCRs) to be evaluated through a future MSE. The RAG agreed that these HCRs could be developed through future stakeholder workshops, either preceding a future MSE project or as part of the project itself.
 - The remaining priorities (classified as either '6 - essential', or '7 - desirable') were left unchanged, with the exception of a stock assessment for coral trout, which was upgraded to an essential priority. The RAG clarified that this research is now essential, given the current interest in increasing the quantum of effort in the fishery, and the fact that this would be a logical step in providing a key input into a future harvest strategy.
4. The RAG will be asked to confirm the order of research priorities in the *Rolling 5-Year Research Plan*.
 5. The RAG will also be asked to discuss and provide advice on the following questions raised by TSSAC at their meeting on 22-23 August 2023.
 - a) Is it reasonable to expect the stock assessment budget step down through the years, given it should become easier to run?
 - b) Should the stock assessment be run less frequently, noting there are only a few data points added each iteration, and we have a very limited budget to fund all Torres Strait research?
 - c) Provide information on how the three projects, finfish biologicals, close kin mark recapture, and the stock synthesis stock assessment fit together as long term projects. For example, will every project be required very year? Should the biological sampling project merge with the CKMR project, particularly if epigenetic aging replaces otolith aging? What does the FFRAG see as the timeline for these collaborations/ changes to each project to ensure we are maximising cost benefits of projects and not duplicating work.
 6. Further information on the above questions can be referred to in the background section below.

Background

TSSAC 82 Meeting Record Extract

Biological sampling

58. The committee noted that samples are welcome from all areas in Torres Strait, including top western, however the trips that occur with the project team focus on the main finish communities to maximise samples.
59. The committee agreed it would be useful to arrange a tour of the Queensland Fisheries facility when a number of stakeholders will be in Cairns for a meeting in a few weeks time.

ACTION: TSRA to speak to the Finfish Biologicals project team to arrange a tour of the Queensland Fisheries facility to learn more about the project alongside the upcoming meeting in Cairns.

Spanish Mackerel Stock Assessment

60. The TSSAC discussed the frequency of the Finfish Stock Assessments.
61. The noted that annual Stock Assessment updates in this fishery are proposed by the RAG as they are following the recommendations of the fishery harvest strategy. Further a conservative approach has been recommended due to there being a lot of uncertainty as it is a data poor fishery, and there are also unknown influences (likely environmental) affecting the stock as well. The annual assessment allows more responsiveness when there is an issue.
62. The TSSAC acknowledged this information, however agreed that the FFRAAG should provide responses to the following questions for TSSAC to consider alongside the application in February:
 - Is it reasonable to expect the stock assessment budget step down through the years, given it should become easier to run?
 - Should the stock assessment be run less frequently, noting there are only a few data points added each iteration, and we have a very limited budget to fund all Torres Strait research?

RECOMMENDATION: TSSAC Executive Officer to request further information from the RAG regarding the recommendations of an annual stock assessment, and answers to the questions under paragraph 62 of the meeting record.

Close Kin Mark Recapture

63. The committee noted the uncertainty in the stock assessment, as a result of it being a data poor fishery. The CKMR work aims to improve data in the fishery.
64. The proposed work would be to focus on contamination analysis in the first year of the project, then analyse the data in the preceding years of the project. If the contamination analysis indicates the data cannot be used, more samples may need to be collected before proceeding.
65. The TSSAC noted some confusion around the CKMR project scope, which isn't clear around the contamination analysis work occurring in the first year. The scope needs to be updated to reflect this.

ACTION: TSSAC Executive Officer to seek an update to the close kin mark recapture scope to properly reflect the contamination analysis work in the first year of the project.

66. The TSSAC noted the links between the three finish projects, CKMR, finish biologicals and stock assessment projects. They noted future considerations the RAG needs to make about aging work, and whether this should occur through the biological sample project or CMKR project, or how these could be combined in the future, how and when. They also noted the links to these projects and the frequency of the stock assessment. The FFrag need to advise the TSSAC on this.

RECOMMENDATION: TSSAC Executive officer to request the FFrag to provide information on how the three projects, finfish biologicals, close kin mark recapture, and the stock synthesis stock assessment fit together as long term projects. For example, will every project be required very year? Should the biological sampling project merge with the CKMR project, particularly if epigenetic aging replaces otolith aging? What does the FFrag see as the timeline for these collaborations/ changes to each project to ensure we are maximising cost benefits of projects and not duplicating work.

67. The TSSAC discussed the prioritisation of projects, and which should be released in a call for research, seeking proposals.
68. The committee discussed the possibility of moving the Management Strategy Evaluation to a future year, to free up more funding.
69. AFMA suggested there is little risk to seeking a proposal for this project this year as well, noting if the TSSAC decided to postpone the project to a future year, so as to incorporate the sandfish survey data, or due to budget constraints, the proposal could be easily updated for a future year. However if we do not seek a proposal, and other projects don't receive applications, it will then be too late to seek a proposal for this one.
70. The TSSAC noted the project scopes haven't been gone through in detail, however reflect the presentations on each scope by the AFMA fishery managers. They agreed AFMA and the scientific members can finalise these out of session, to tweak any minor wording changes.
71. The TSSAC discussed the sandfish survey project scope in particular, noting TSRA have commenced a process to understand community support for this project. Initial engagement has shown that the lama community, with conversations led by Charles David, are seeking buy in, economic benefits and involvement in the project. Economic benefits could include employment or selling product.
72. The TSSAC acknowledged that this project is a biomass survey, rather than an exploratory fishing project, so will not be taking product from the sea, only surveying animals and leaving them there, so there will be no product to sell. In 2010, a survey was completed in this same method, which employed an lama community member to be a part of the research team. In 2012, CSIRO led an experimental fishing project which had a 4t quota which was able to be sold, which is a different type of project, and not what we are seeking to do through this proposed project.

RECOMMENDATION: The TSSAC Agreed that AFMA should finalise the project scopes with the scientific members outside of the meeting, for use in the call for research. The Sandfish Survey scope will need to consider any wording required to encourage applicants to seek employment of Torres Strait Islanders in the survey work.



Rolling Five Year Research Plan 2023/24 - 2027/28

Torres Strait Finfish Fishery



Compiled by AFMA with FFRAG advice

June 2023

ABOUT THIS PLAN

The Torres Strait Scientific Advisory Committee (TSSAC) seeks input from each fishery advisory body (Resource Assessment Group (RAG), Management Advisory Committee (MAC) or Working Group (WG)) to identify research priorities over five year periods from 2023/24 to 2027/28. This template is to be used by the relevant advisory body to complete their five-year plan. The plans are to be developed in conjunction with the TSSAC Five-year Strategic Research Plan (SRP) with a focus on the three research themes and associated strategies within the SRP.

All fishery five-year plans will be assessed by the TSSAC using a set of criteria, and used to produce an Annual Research Statement for all Torres Strait fisheries.

The TSSAC then develop scopes for the highest ranking projects in order to publish its annual call for research proposals. There are likely to be more scopes that funding will provide for so TSSAC can consider a number of proposals before deciding where to commit funding.

The fishery five-year plans are to be reviewed and updated annually by the Torres Strait forums to add an additional year onto the end to ensure the plans maintain a five year projection for priority research. Priorities may also change during the review if needed.

RESEARCH PRIORITIES

Table 1. Five-year Torres Strait Finfish Fishery research plan for 2023/24 to 2027/28.

Proposed Project	Objectives and component tasks		Year project to be carried out and indicative cost*						Evaluation	
		2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Priority essential / desirable	Priority ranking1-5 (1 = highest)	Theme
Biological sampling program (length freq,sexing, ageing)	Project funded for age, sex and length data for Spanish mackerel and coral trout to support stock assessment.	\$128,000 (currently funded)	\$135,000 (currently funded)	\$162,000 Funding required *Includes 20k for genetic sampling	\$169,000 Funding required *Includes 20k for genetic sampling	\$176,000 Funding required *Includes 20k for genetic sampling	\$183,000 Funding Required *Includes 20k for genetic sampling	Essential	1	1a
Spanish mackerel stock assessment - Stock Synthesis	Need for ongoing assessment of key commercialspecies.	\$59,000 (currently funded)	\$61,000 (currently funded)	>\$20k <\$60k TBC Funding required	>\$20k <\$60k TBC Funding required	>\$20k <\$60k TBC Funding required	>\$20k <\$60k TBC Funding required	Essential	2	1a
Implement a full-scale Close-Kin Mark-Recapture for Spanish mackerel	<p>Fishery-independent estimate of abundance of the Torres Strait Spanish Mackerel Fishery.</p> <p>The RAG endorsed this project as essential, as an alternate index of abundance will provide greater certainty on the stock status.</p> <p>Project would deliver the most accurate results with at least 5 years-worth of samples.</p> <p>As of 2022/23, 2 years of samples have been collected (of which, one year of samples have been processed).</p>	0	<p>In lieu of a commencing a full-scale study, there is a need to fund the collection and processing of genetic tissue samples of 1000 fish for continuity of dataset.</p> <p>Samples collected in 2022/23 also require processing. (\$17k Currently funded).</p>	<p>Funding required</p> <p>Year 1 of <4+</p> <p>\$10k For contamination analysis (2021/22 – 2024/25 samples).</p>	<p>Funding required</p> <p>Year 2 of <4+</p> <p>\$200k? TBC</p>	<p>Funding required</p> <p>Year 3 of <4+</p> <p>\$200k? TBC</p>	<p>Funding required</p> <p>Year 4 of <4+</p> <p>\$200k? TBC</p>	Essential	3	1a

Torres Strait Finfish Fishery Coral Trout Catch Per Unit Effort Standardisation	<p>A small project is required to further refine the current CPUE standardisation methods and to update the CPUE time series with new catch and effort data.</p> <p>The CPUE series is to be based on:</p> <ul style="list-style-type: none"> any recommended refinements of the CPUE standardisation methodology developed through the AFMA funded project: Harvest Strategy of the Torres Strait Finfish Fishery (project number: 2016/0824); and all available catch and effort data. 	<p>Approved for funding in 2022/23.</p> <p>Analysis has been actioned by QDAF. Endorsed by FFRAG/WG. Report publishing due early 2023/24 FY.</p>	0	0	0	0	0	Essential	4	1a
Harvest strategy development – Spanish Mackerel Addressed through <i>Management Strategy Evaluation of Spanish mackerel for the Torres Strait Finfish Fishery.</i>	<p>The project team will use Management Strategy Evaluation to quantitatively evaluate the performance of candidate Harvest Control Rules (HCR) to complete the elements of a fisheries harvest strategy. This includes using current HS objectives as guidance (developed during project <i>Harvest Strategies for the Torres Strait Finfish Fishery</i>, and engaging with the FFRAG to refine the form of the HCRs.</p> <p>Requirement of Cwth HS Policy and Guidelines to undertake MSE prior to implementation.</p> <p>To be conducted at an appropriate later date.</p>		0	0	0	0	0	Essential	5	1a
Harvest strategy development – Coral Trout	<p>Component projects to progress Harvest Strategy development for the TSFF are being addressed through research priority 3. (CT CPUE Standardisation).</p> <p>Next steps to be progressed after the CPUE project work is completed.</p>		0	0	0	0	0	Essential	6	
Estimating catches outside the commercial fishery.	Acquiring data of catch taken from non-commercial fishers.	Phase 2 currently funded for 2023/24 – 2024/25						Essential	6	1a, 3b

Coral trout stock assessment	Need for ongoing assessment of key commercial species.	The RAG clarified that this research is now essential, given the current interest in increasing the quantum of effort in the fishery. The RAG also noted the ongoing concern of the status of the stock becoming 'uncertain'.	Essential	6	1a
Harvest Strategy and Management Strategy Evaluation (MSE) for coral trout	Requirement of Cwth HS Policy and Guidelines to undertake MSE prior to implementation.	Two separate projects. MSE work requires funding and HS development to be completed first.	Desirable	7	1a
Stock structure of Spanish mackerel	Define the spatial scale of management and connectivity of Torres Strait populations of SM with adjacent areas (Gulf, Qld, Coral Sea, PNG) potentially through collection of samples for genetic relatedness. Gulf, Qld, Coral Sea connectivity addressed SNPs in CKMR scoping study. The priority is to collect samples from the Gulf of Papua, to further refine the spatial scale of the Torres Strait stock.	Not funded, but listed as a priority for funding for samples to be collected.	Desirable	7	1a, 1b
Regular report on the status of climate change impact on Torres Strait Fisheries	<ul style="list-style-type: none"> - Species specific - Region specific Will consider the yet to be funded CC project.		Desirable	7	2
Shark depredation	Study to investigate increased shark interaction with fishery operations and depredation impact on Finfish Fishery catch rates (how to capture and track over time or investigate potential mitigation options).	<p>Not designed or costed.</p> <p>The RAG recommended that this priority be reassessed as relevant research is completed in other fisheries (jurisdictions).</p>	Desirable	7	1a

Torres Strait Finfish Resource Assessment Group	Meeting 15 29-30 November 2023
FFRAG priorities and dates for the next meetings	Agenda Item 6 For Discussion & Advice

RECOMMENDATIONS

1. That the Resource Assessment Group:
 - a) **NOTE** the management priorities for 2023 for the fishery supported by the Finfish Working Group at their meeting on 7-8 December 2022.
 - b) **DISCUSS** and **PROVIDE ADVICE** on priorities for the RAG together with a work plan for addressing recommended priorities;
 - c) **REVIEW** the proposed dates for future meetings.

KEY ISSUES

2. The FFRAG last reviewed their management priorities at FFRAG 10 (18-19 November 2021). The RAG agreed that the immediate priorities for the RAG were to:
 - a) provide advice as necessary on the Western Line Closure including any future fishing that may occur;
 - b) further develop harvest strategies for the Spanish mackerel and coral trout;
 - c) review shark management measures; and
 - d) undertake annual fishery assessments and provide RBC advice.
3. Finfish Fishery Working Group (FFWG) also considered management priorities at its meeting on 7-8 December 2022
4. A summary of these combined management priorities and their current progress can be found in **Table 1**. This table forms a workplan for the FFRAG to address its priorities.
5. The RAG are invited to review this workplan and provide advice on the current priorities of the FFRAG.

BACKGROUND

6. The RAG have a standing item at its meetings to discuss assessment, data collection and research needs for the Torres Strait Finfish Fishery. This may be informed by the RAG's meeting discussions, advice from individual members of the RAG and/or advice from the Finfish Working Group (FFWG).
7. At its meeting on 18-19 November 2021, the RAG noted the proposed management and research priorities for 2022 and made recommendations on how to progress some of those priorities.

8. Where possible, the RAG aims to prioritise and set a timeline for any identified items, having regard for resourcing.
9. In considering its priorities, the RAG may also wish to note the summary of management priorities supported by the FFWG provided in **Table 1** (some of which align with the RAG's priorities) and their progress to date.
10. Having regard for the outcomes of this meeting (including the assessment and management requirements stipulated in the WTO conditions), the RAG may wish to amend the list of priorities.

Date and venue for future meetings

11. In developing its work plan, the RAG may consider the summary of key due dates for the finfish fishery outlined in Table 2.
12. The next RAG meetings are currently proposed for September and November 2024.

Table 1. Comments relating to any progress against each management priority considered by the FFrag on 18-19 November 2021 and the FFWG on 7-8 December 2023. Priorities are listed chronologically and not in order of importance, with notable comments from previous meeting also included.

Priority		FFRAG 4-5 Nov 2020 comments	FFWG 7-8 December 2022 comments	Progress to date and further comments
1	Progress the development of a harvest strategy	Subject to funding this will require additional workshops with members and broader industry stakeholders including the FFRAG.	This remains a high priority, to be progressed further at the proposed harvest strategy workshop scheduled for March 2023.	<p>In progress.</p> <p>FFRAG 9 noted an update from QDAF on the development of the East Coast Spanish Mackerel Fishery harvest strategy, and the current QLD Reef Line Fishery harvest strategy: 2020-2025.</p> <p>FFRAG 10: Developed a scope for an MSE project to finalise a harvest strategy for the Spanish mackerel fishery.</p> <p>FFWG Dec 2021: Remains a high priority</p> <p>FFRAG 12: RAG to identify outstanding refinements to be progressed at a harvest strategy workshop in March 2023. Refinements/HCRs to be developed through MSE project (approved for funding in 2023-24. RAG also noted the East Coast Spanish Mackerel Harvest Strategy.</p> <p>2023 update</p> <p>No proposals received for MSE project. Harvest strategy/MSE workshop postponed until the RAG reassess the most appropriate workplan to develop HCRs for testing in a future MSE project.</p>
2	Supporting possible changes to the Western Line Closure	The RAG noted a number of risks and considerations with lifting the northern part of the	The WG acknowledged the aspirations of several community members in Maluligal and Kaiwalagal Kaureg clusters to extend the recently amended 'western line' area to provide an additional fishing opportunity to these communities. The WG	Progressed: Based on a final round of advice from the FFRAG and FFWG in 2021, and community consultation, the PZJA decided in March 2022 to amend the boundary of the

Priority		FFRAG 4-5 Nov 2020 comments	FFWG 7-8 December 2022 comments	Progress to date and further comments
		<p>closure and supported a suggestion that a targeted round of consultation occurs in Gudumalulgal to discuss the three options to support opening the reef line fishery in this area:</p> <ol style="list-style-type: none"> 1. Opening with data collection and monitoring 2. Survey before opening 3. Adaptive management 	<p>supports future consultation on this subject, agreeing that this remains an important matter.</p> <p>The WG agreed to list this as a low priority, noting that immediate consultation is not required. The priority to progress with formal community consultation will be guided by further advice from TIB members.</p>	<p>Western Line Closure. This decision came into effect on May 1 2022.</p> <p>As per FFRAG advice, catch records will be monitored carefully to assess the level of effort.</p>
3	Update the daily fishing logbook (TSF01) in line with recommendations from the FFRAG.	The RAG supported the logbook changes recommended by AFMA to various aspects of the TSF01 logbook to improve Sunset sector catch and effort data and support spatial reporting by the TIB sector.	Not discussed at FFWG meeting 7-8 December 2022	Ongoing. AFMA to progress an updated TSF01 logbook for the 2024/25 season.
5	Formalising total allowable catches for the Finfish fishery	N/A	The WG recalled that an enforceable TAC is a management arrangement that would formally limit the catch of the TIB sector, noting that current arrangements require catch data to be monitored against the 'Olympic' TAC. A formalised TAC would mitigate the current requirement to reactively close the fishery to ensure that the TAC isn't exceeded. A formalised TAC	FFWG 2022: Remains a medium priority

Priority		FFRAG 4-5 Nov 2020 comments	FFWG 7-8 December 2022 comments	Progress to date and further comments
			<p>would also support the aspired utilisation of the entire TAC by the TIB sector.</p> <p>The WG acknowledged the views of TIB members, who maintain strong opposition to individual quota unit allocation options. TIB members expressed a preference to maintain an Olympic TAC style system, pending further review by the TSRA. The WG noted that the TSRA continue to lead a review into the allocation of TRL resources, and that the outcomes from this process will guide future advice on the allocation of finfish catch allowances.</p> <p>The WG agreed that it is not appropriate for the WG to provide formal advice on the process of allocation while the review is being undertaken, noting that the PZJA will consider the outcomes of the review before recording a decision.</p> <p>The WG suggested that AFMA conduct a review of the Torres Strait Finfish Fishery Management Plan 2013 to assess whether an amendment to this plan could provide for an enforceable TAC. The WG also suggested that future harvest strategy documents could capture the inclusion of catch triggers against the current Olympic TAC to formalise the current process to reactively close the fishery. The WG agreed that these points should be discussed further at the HS workshop scheduled for early 2023.</p> <p>The WG agreed to maintain this item as an ongoing medium priority, noting that further action is pending the review process lead by the TSRA.</p>	
7	Potential application of VMS on tenders	FFRAG provided advice on the potential scientific benefits from using VMS data to address data needs in the fishery at	<p>The WG recommended to increase this from low priority to high priority.</p> <p>The WG agreed that the application of VMS on tenders in the sunset sector would introduce several benefits to the fishery, including the collection of fishing-effort data to reduce</p>	FFWG 2022: Upgraded to high priority

Priority		FFRAG 4-5 Nov 2020 comments	FFWG 7-8 December 2022 comments	Progress to date and further comments
		meeting 6 (27-28 November 2019). AFMA will continue to prepare information, including implementation costs across all licence holders to support further consideration of this initiative.	<p>uncertainty in standardised catch rates. It would also serve as a compliance tool to monitor specific spatial and temporal closures which apply to this sector. The WG agreed that these closures were implemented for significant cultural and environmental reasons.</p> <p>The WG noted that VMS data is being utilised in adjacent jurisdictions to refine the stock assessments of several fisheries. The member for QDAF agreed to distribute to members a copy of the Vessel Tracking Post Implementation Review which is currently out for public consultation. This review contains a cost/benefit summary of the application of VMS.</p> <p>The WG noted advice from TIB members that the Traditional Inhabitant sector may wish to pursue the use of VMS on TIB vessels <6 metres in the future, noting the perceived benefits of high-quality data collection. It was discussed whether there are mechanisms for dual-licensed fishers to operate in separate fisheries with the same VMS device. This would be relevant for those wishing to fish for TRL within the finfish closure area. The AFMA member confirmed that there are established mechanisms in Commonwealth fisheries to account for such scenarios.</p>	

Table 2. Key dates for the Finfish Fishery for 2022 and 2023.

Key date	Activity
December 2023	<ul style="list-style-type: none"> • Finfish Working Group meeting • Spanish Mackerel Total Allowable Catch Advice for the 2024-25 Season • Coral Trout Total Allowable Catch Advice for the 2024-25 Season • Torres Strait Finfish Fishery management priorities
Jan/Feb 2024	<ul style="list-style-type: none"> • PZJA meeting to decide TAC for Spanish mackerel and coral trout for 2024/25 season.
01 September 2024	<ul style="list-style-type: none"> • Annual WTO report due to the Department of Climate Change, Energy, the Environment and Water.
September 2024	<p>FFRAG 16</p> <ul style="list-style-type: none"> • Review the data for the Spanish mackerel stock assessment. * • Non-commercial catch estimate. • Research priorities <p>*If stock assessment project occurs in 2024</p>
November 2024	<p>FFRAG 17 – RBC meeting</p> <ul style="list-style-type: none"> • Review updated Spanish mackerel stock assessment. * • Spanish mackerel - Recommended Biological Catch for 2025-26 Season. • Coral trout - Recommended Biological Catch for 2025-26 Season. • Priorities for the RAG <p>*If stock assessment project occurs in 2024</p>
November 2024	<p>Finfish Working Group meeting</p> <ul style="list-style-type: none"> • Spanish Mackerel Total Allowable Catch Advice for the 2025-26 Season • Coral Trout Total Allowable Catch Advice for the 2025-26 Season • Torres Strait Finfish Fishery management priorities

Torres Strait Finfish Fishery Resource Assessment Group	Meeting 15 29-30 November 2023
OTHER BUSINESS	Agenda Item 7 For Discussion

RECOMMENDATION

1. That RAG members **NOMINATE** and **DISCUSS** any additional items of business for the meeting.