

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
PRELIMINARIES Meeting preliminaries	Agenda Item No. 1.1 FOR NOTING

RECOMMENDATIONS

That the Finfish RAG **NOTE**:

1. the Chairperson's acknowledgement of traditional owners and welcome address; and
2. apologies received from members unable to attend:
 - a. Apologies have been received from FFRAG QDAF member Tom Roberts and Industry Member Kenny Bedford.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27 - 28 November 2019
PRELIMINARIES Adoption of agenda	Agenda Item No. 1.2 FOR NOTING

RECOMMENDATIONS

That the FFRAG **NOTE** and **ADOPT** the draft agenda.

BACKGROUND

1. Key items for a draft agenda for FFRAG 6 were circulated to members and other participants via email on 21 August 2019. No comments were received from members on the key items for discussion.
2. A full draft agenda (**Attachment A**) was circulated together with papers, to members on 20 November 2019.

SIXTH MEETING OF THE PROTECTED ZONE JOINT AUTHORITY TORRES STRAIT FINFISH FISHERY RESOURCE ASSESSMENT GROUP

27 - 28 November 2019 (8:30 am – 5:00 pm)

TSRA Boardroom, Thursday Island, Torres Strait

DRAFT AGENDA

The meeting will open at 8.30am on Wednesday 27 November 2019 at 8:30 am.

AGENDA ITEM 1 PRELIMINARIES

1.1 Acknowledgement of Traditional Owners, welcome and apologies

The Chair will welcome FFRAG members, permanent observers, invited participants and any casual observers to the sixth Torres Strait Finfish Resource Assessment Group meeting.

1.2 Adoption of agenda

The FFRAG is invited to consider and adopt the draft agenda.

1.3 Declarations of interest

FFRAG members must declare any real or potential conflicts of interests to the group 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 note the status of action items arising from previous RAG meetings.

AGENDA ITEM 2 STOCK ASSESSMENT

2.1 Updated Spanish mackerel stock assessment, Recommended Biological Catch for 2020-21 season and estimates of catch taken outside the Fishery.

Expected outcome: FFRAG are to discuss and provide advice to the Finfish Working Group and PZJA on the updated stock assessment for Spanish mackerel delivered by Dr. O'Neill and Dr Buckworth. Having consider the stock assessment outcomes and latest catch data, FFRAG are to discuss and provide advice on a Spanish mackerel **Recommended Biological Catch for the 2020-21 season** and best estimates of catches taken outside the fishery to the Finfish Working Group and PZJA.

2.2. Coral trout Recommended Biological Catch for 2020-21 season and estimates of catch taken outside the Fishery.

Expected outcome: FFRAG are to discuss and provide advice on a Coral trout **Recommended Biological Catch for the 2020-21 season** to the Finfish Working Group and PZJA on the basis of the last stock assessment (March 2019) and any additional 2018-19 season information provided by AFMA.

AGENDA ITEM 3 HARVEST STRATEGY

3.1 Draft Torres Strait Finfish Fishery Harvest Strategy Framework

FFRAG will continue work from FFRAG 5 in reviewing the outcomes from the project *Harvest Strategies for the Torres Strait Finfish Fishery* led by CSIRO.

Expected Outcome: The FFRAG will examine the draft harvest strategy components and provide advice on any outstanding matters.

AGENDA ITEM 4 MANAGEMENT AND SCIENCE

4.1 Review of Western Line Closure

The FFRAG are asked discuss and provide advice to the PZJA on the outcomes of the round of community consultation and public comment on the proposal to review the Western Line Closure which prohibits commercial fishing for reef-line finfish species (trout, trevally etc) in the Western part of the Torres Strait Protected Zone.

Expected Outcome: The FFRAG will discuss and provide advice to the Finfish Working Group and PZJA on any scientific issues (e.g. habitats, species interactions) that arose during community consultation on reviewing the closure.

4.2 Use of Vessel Monitoring Systems to support Finfish Fishery data needs

FFRAG are asked to discuss and provide advice on the potential scientific benefits from using Vessel Monitoring System data to address fishery data needs such as stock assessments.

AGENDA ITEM 5 UPDATES

5.1 FFRAG Member Updates

FFRAG are asked to note any updates from industry, government agencies, science members, PNG NFA or Malu Lamar RNTBC (invited participants) in addition to those tabled at the FFRAG 5 meeting on 31 Oct to 1 Nov 2019.

AGENDA ITEM 6 OTHER BUSINESS

6.1 Other Business

The FFRAG is invited to nominate any other business for discussion.

6.2 Date and venue for next meeting

The FFRAG will confirm arrangements for FFRAG 7, tentatively scheduled for 2-3 September 2020 in Cairns with key business being reviewing 2019-20 season catch data and any preliminary advice from the Spanish mackerel stock assessment team on the updated assessment. FFRAG will consider the full Spanish mackerel stock assessment which is scheduled to be presented at FFRAG 8 (tentatively scheduled for 14-15 October 2020) to support FFRAG RBC advice for 2021-22 season).

CLOSE OF MEETING

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
PRELIMINARIES Declarations of interests	Agenda Item No. 1.3 FOR ACTION

RECOMMENDATIONS

That the Finfish RAG:

1. **DECLARE** all real or potential conflicts of interest in Torres Strait Finfish Fisheries at the commencement of the meeting;
2. **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;
3. **ABIDE** by decisions of the RAG regarding the management of conflicts of interest; and
4. **NOTE** that the record of the meeting must record the fact of any disclosure, and the determination of the RAG 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

1. Consistent with the *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.
2. RAG members are asked to provide the executive officer with a list of declared interests.
3. 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.
4. 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.
5. 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.
6. Interests declared at the last FFRAG meeting (FFRAG 5) are provided at **ATTACHMENT A**.

FFRAG6 1.3a, FFRAG Standing Register of Declared Interests

Name	Organisation	Declaration of interest
David Brewer – RAG Independent Chairperson	Independent chair	Director – Upwelling P/L (David Brewer Consulting) which has no current Torres Strait projects or pecuniary interests. 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, Redlands City Council. Co-investigator on non-commercial take fishery project.
Selina Stoute – AFMA member	AFMA	No interests declared.
Tom Roberts – QDAF member	QDAF	No interests declared.
Allison Runck - TSRA member	TSRA	No pecuniary interests declared noting TSRA holds access rights to the Finfish Fishery and generates revenue on behalf of Traditional Inhabitants through seasonally leasing access.
Rocky Stephen – industry member	Kos and Abob Fisheries, Ugar Brother Bear Fisheries, Ugar. Torres Strait Island Regional Council.	Councillor for Ugar, TSRA Member for Ugar, Chairperson of Kos and Abob Fisheries Ugar, Works with brother in a commercial fishing business on Ugar, Eastern cluster member on the PZJA Finfish Working Group. Sits on Prawn MAC and TS Scientific Advisory Committee. Does not hold a TIB licence.
Kenny Bedford – industry member	Debe Mekik Le Consultancy	Runs a consultancy business which has recently delivered the infrastructure audit to TSRA.
John Tabo – industry member	Industry, TSRA	Commercial coral trout fisher. Holds a Torres Strait Traditional Inhabitant Boat Licence. Member of the Torres Strait Regional Authority Finfish Quota Management Committee.
Tenny Elisala –	Industry, TSRA	TSRA Ranger Dauan, TIB licence holder.

Name	Organisation	Declaration of interest
industry member		
Paul Lowatta – industry member	Industry.	Full time commercial fisher. Holds a Torres Strait Traditional Inhabitant Boat Licence.
Tony Vass – industry member	Industry.	No financial interests in the Torres Strait. Does not own or operate a licence in Torres Strait. Former mackerel fisher in Torres from 1990 to 2008.
Michael O'Neill – scientific member	QDAF	Principal scientist for TSSAC recommended project to develop a harvest strategy for the Torres Strait Finfish Fishery. Co-investigator on TSSAC recommended Spanish mackerel assessment project. Scientific member of PZJA Finfish Working Group.
Ashley Williams – scientific member	Australian Bureau of Agricultural and Resource Economics James Cook University	ABARES fishery scientist under Department of Agriculture and Water Resources. Involved in previous TS research, is an author on the ABARES Fishery Status Reports.
Rik Buckworth – scientific member	Sea Sense Consultancy	Independent Fisheries Scientist with Sea Sense Consultancy, adjunct at Charles Darwin University, ex NT Fisheries, AFMA Northern Prawn RAG, AFMA South East RAG. Principal investigator on TSSAC approved TS Spanish mackerel assessment project.
Andrew Trappett	AFMA, Finfish RAG Executive Officer	Involved as co-investigator on TSSAC approved projects for mackerel assessment and ageing - stakeholder liaison, communication and data services roles.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27 - 28 November 2019
PRELIMINARIES Action items and record from last meeting	Agenda Item No. 1.4 FOR NOTING

RECOMMENDATIONS

1. That the Finfish Fishery RAG **NOTE** the:
 - a. the progress of actions arising from previous FFrag meetings; and
 - b. draft meeting record of the FFrag 5 meeting on 31 Oct - 1 Nov 2019 as circulated for member comment on 19 November 2019.

KEY ISSUES

Actions arising

1. Progress against the draft actions arising from FFrag 5 is detailed in **Table 1**
2. Progress against the actions arising from FFrag 4 is detailed in **Table 2**
3. Progress against the actions arising from FFrag 3 is detailed in **Table 3**

Meeting record

4. The draft meeting record from FFrag 5 was circulated for member comment on 19 November 2019 with the period for comments to close on 3 December 2019.

ATTACHMENTS

Attachment A - Finfish RAG Meeting 5, 31 Oct - 1 Nov 2019, Draft Meeting Record as circulated for member comment on 19 November 2019.

Table 1. Status of draft actions arising from FFRAG 5 meeting 31 Oct - 1 Nov 2019

Number	Agenda item	Action	Status update
FFRAG 5, Action 1	2.1 RAG Updates	AFMA are to advise on appropriate information streams and resources to help the FFRAG to consider the impacts of climate change on the Torres Strait Finfish Fishery.	Ongoing
FFRAG 5, Action 2	2.1 RAG Updates	AFMA are to confirm that TIB licence holders are receiving text message, catch-watch updates from AFMA linking fishers to the reports on the PZJA website.	Ongoing
FFRAG 5, Action 3	2.1 RAG Updates	AFMA to update the FFRAG on the outcomes of Torres Strait case study fisheries adaption to climate change case study to be presented once complete (it was noted that it may be appropriate for AFMA to arrange an expert to present to the FFRAG on this report at an upcoming meeting).	Ongoing
FFRAG 5, Action 4	2.1 RAG Updates	TSRA to forward FFRAG a link to AIMS water temperature self-serve portal.	Ongoing
FFRAG 5, Action 5	3.1 Harvest strategy and 5.2.2 Spanish mackerel stock assessment.	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 To be addressed under FFRAG 6 Agenda Item 2.1
FFRAG 5, Action 6	5.2.2 Spanish mackerel stock assessment	Obtaining accurate catch and effort data from the TIB sector is a key data need. AFMA and TSRA are to continue supporting industry in collecting voluntary effort data in catch disposal records and work on progressing compulsory logbook reporting as a priority.	Ongoing

FFRAG 5, Action 7	5.2.2 Spanish mackerel stock assessment	FFRAG are to consider retrospective analyses for Spanish mackerel and how these can be built in to the assessment	Ongoing To be addressed under FFRAG 6 Agenda Item 2.1.
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Table 2. Status of actions arising from FFRAG 4 meeting 13-14 March 2019.

Number	Agenda Item	Action	Status update for FFRAG 5	Status update for FFRAG 6
FFRAG 4, Action 1.	5. Fishery data needs	AFMA to circulate a draft yearly data cycle detailing key dates for the fishery data and assessments to support season openings for RAG member comment.	In progress – to be sent out-of-session ahead of FFRAG 5 for consideration and comment.	Ongoing - update provided in-session at FFRAG 5 under next meeting and again tabled at FFRAG 6.
FFRAG 4, Action 2.	2.2.1 Mackerel assessment	AFMA to work with QDAF on clarifying differences between data reported by AFMA from database (Agenda item 2.2.1 update) to stock assessment data summaries.	Ongoing – AFMA to work with mackerel assessment team during scheduled project work in Oct 2019 to compare data rules ahead of FFRAG 6, 27-28 Nov 2019.	Ongoing - No progress on this action.

Table 3. Status of actions arising from FFRAG 3 meeting 19-20 Nov 2018.

Number	Agenda Item	Action	Status reported at FFRAG 4	Status update for FFRAG 5 (AFMA EO)
FFRAG 3, Action 1.	3. Harvest Strategy update	HS Project Team to provide information on performance indicators to inform stakeholders ahead of next RAG/stakeholder meeting e.g. performance figures from recent season's kg per operation day etc. This relates at this stage to Spanish mackerel only. 25kg/day was originally put on the table. Catch rate that TIB wish to have a target that meets their fishing operational targets.	In progress – being developed as part of HS project and to be presented at next dedicated HS stakeholder meeting.	Complete – considered during harvest strategy development and presented at industry harvest strategy workshops for consideration (June 2019).
FFRAG 3, Action 3.	4. Coral trout assessment	QDAF, UQ and AFMA to review Coral Trout data sources to examine whether there is any duplication with TDB01 docket book data (e.g. JCU island ledgers).	In progress – as part of data characterisation for the coral trout assessment these data have been analysed by the HS Project Team with duplicate records removed (fishers filling out island ledger data plus docket books).	Complete – analysis and suggested treatment presented by UQ (Matt Holden) at FFRAG 4.
FFRAG 3, Action 5.	4. Coral trout assessment	QDAF, UQ and AFMA to investigate the reported 1995 peak in coral trout catch rates (evident in Williams et.al 2007 MSE) (RAG queries whether this was targeted fishing for live trout)	In progress – Subject to consideration under HS project and assessment update.	Incomplete – requires further analysis as part of next funded work on coral trout assessment.
FFRAG 3, Action 6.	4. Coral trout assessment	AFMA to work on characterising trout fisher behaviour - how far do dories travel from the primary boat?	In progress – To be actioned ahead of next dedicated stakeholder meeting for Harvest Strategy development scheduled for April/May 2019.	In progress – initial consultation with industry suggests tenders do travel a significant distance from primary vessel and may visit a number of coral bombies in a fishing day.
FFRAG 3, Action 7.	4. Coral trout assessment	AFMA to report on rationale and timing for ban on live trout fishing in Torres Strait.	In progress – To be presented at FRAG 4 under agenda item 3.1.	Complete – report provided by AFMA EO at FFRAG 4: 3 October 2001 – PZJA decision to limit expansion in reef-line fishery by implementing ban on retaining live finfish. 15 January 2003 – Fisheries Management Notice No. 63 implemented which banned retention of live finfish. 21 August 2007 – PZJA approved removal

				<p>of FMN No. 63 once the Finfish Management Plan is put in place.</p> <p>27 January 2011 – PZJA decision to Amend Fisheries Management Notice 78 to allow live take rather than wait for Plan to come into effect.</p> <p>26 August 2011 – Fisheries Management Instrument No. 8 in place (replaces series of notices FMN 78, FMN 75, FMN 63) which now no longer includes retention of live finfish, thereby lifting the ban.</p> <p>Regulations to ban retention of live finfish in place from 15 January 2003 to 26 August 2011 (lifted towards start of 2011-12 fishing season).</p>
FFRAG 3, Action 8.	4. Coral trout assessment	RAG and trout assessment team are to consider issue of whether boats targeting live trout have a different effect on the coral trout model than those boats working fillets.	In progress – some initial discussion minuted at FRAG3. The report “ <i>A review of reef line fishing in the Eastern Torres Strait, Mapstone (2003)</i> ” has been circulated by AFMA. AFMA has provided the assessment team with data from boats recently targeting live trout in Torres Strait.	Ongoing – data provided by AFMA to HS project team and some preliminary analysis performed as part of data characterisation. Further work required in next assessment when funded.
FFRAG 3, Action 9.	4.& 5. stock assessments	AFMA to report to RAG and HS Project Team on when island community freezers have been operational.	In progress – to be presented at FRAG 4 under agenda item 3.1.	Incomplete. Not yet considered as a factor in stock assessments.
FFRAG 3, Action 11.	5. Spanish mackerel assessment	QDAF to run a sensitivity analysis on the mackerel model using the GBR effort creep assumed figure.	In progress – to be presented at FRAG 4 under agenda item 3.2.	Complete – model runs in assessment update at FFRAG 4 incorporated effort creep effects.
FFRAG 3, Action 12.	5. Spanish mackerel assessment	QDAF to examine whether analyses can be performed on dory driver (reliant on data being provided by AFMA) and if this is a useful factor in the mackerel model.	In progress – considered at Finfish Data Meeting 1 and would likely be a layer of analysis that could improve the models utility. Paper logbooks for key boats driving the CPUE series have been pulled from storage to facilitate analysis of number of dories active and skipper/dory driver names	In progress – AFMA data services team has pulled historic datasheets from storage and is presently punching dory driver name. Data to be provided to assessment team when available.

			over time. This analysis could be performed during the 2019-20 cycle with RAG support and AFMA resourcing.	
FFRAG 3, Action 13.	5. Spanish mackerel assessment	QDAF to work with AFMA and Tony Vass on continuing examination of number of boats fishing and CPUE from the pre-buyout period (2002-2005) to see if 'paper-fish' are evident in the data.	In progress – some progress at Finfish Data Meeting 1 with examination of boat tables, input from Mr Vass on a time series of skippers and boats active over time. Several boats for analysis were identified and their paper logbooks have been pulled from storage for potential analysis during next assessment update during 2019-20 cycle noting this will be an intensive exercise.	In progress – to be actioned during 2019 stock assessment update.
FFRAG 3, Action 14.	5. Spanish mackerel assessment	AFMA to investigate when the Community Development Program stopped incorporating fishing using TDB01 docket books (fishers being paid by CDP through dockets).	In progress – to be presented at FRAG 4 under agenda item 3.1.	Complete – consultation with industry suggests that CDP ceased fishing as an activity using TBD01 docket books around 2008-09.

PZJA Torres Strait Finfish Fishery Resource Assessment Group

<https://www.pzja.gov.au/torres-strait-finish-groups>



Australian Government

Australian Fisheries Management Authority

Agenda Item 1 – Preliminaries

1.1 Preliminaries

The fifth meeting of the PZJA Torres Strait Finfish Fishery Resource Assessment Group (FFRAG) was commenced at 8:40 am. FFRAG Chairperson, Mr David Brewer, welcomed participants and acknowledged the Traditional Owners of the land on which the meeting was held. Tom Roberts from QDAF was noted as an apology.

The RAG were advised that AFMA was recording the meeting for the purpose of ensuring an accurate record is produced. The recording is kept secure and is deleted once the final meeting record is published.

The RAG Chairperson provided a presentation on the role of the RAG, terms of reference for providing advice to the PZJA (including consensus model) and procedures for declaring and managing conflicts of interest.

1.2 Adoption of agenda

The agenda (**Attachment A**) was adopted noting that the order of the agenda would be amended to ensure highest priority items were completed, commencing with industry updates followed by the main focus of the meeting - the Harvest Strategy Agenda item. It was noted that, if time permits, additional agenda items would be covered, including research priorities. No other business was raised and the revised agenda was accepted by FFRAG.

Additionally TIB industry members attended the QLD Department of Primary Industries Cairns Laboratory (Northern Fisheries Centre) to participate in Spanish mackerel biological sampling on the morning of Friday 1 November 2019.

1.3 Declarations of interests

Table 1. Attendance and declarations of interest – Finfish RAG members

Name and position	Organisation	Declaration of interest
David Brewer, Independent Chair	Upwelling P/L (David Brewer Consultancy).	Director – Upwelling P/L (David Brewer Consulting) which has no current Torres Strait projects or pecuniary interests. 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, Redlands City Council. Co-investigator on non-commercial fish fishery project
Belinda Norris Acting Executive Officer	Australian fisheries Management Authority	No interests
Andrew Trappett, RAG Acting AFMA member	Australian Fisheries Management Authority	Involved in TSSAC pre-proposal project for Spanish mackerel stock assessment as data

		services and industry liaison role. Unpaid by project.
Rocky Stephen, Industry Member	Kos and Abob Fisheries, Ugar Brother Bear Fisheries, Ugar Torres Strait Island Regional Council.	Councillor for Ugar, Chairperson of Kos and Abob Fisheries Ugar, Works with brother in a commercial fishing business on Ugar, Eastern cluster representative on the PZJA Finfish Working Group. Sits on Prawn MAC and TS Scientific Advisory Committee. Does not hold a TIB licence. Elected TRSRA member for Ugar
Tenny Elisala, Industry Member	Industry, Torres Strait Regional Authority	TSRA Ranger Dauan, TIB licence holder.
Paul Lowatta, Industry Member	Industry	Full time commercial fisher. Holds a Torres Strait Traditional Inhabitant Boat Licence.
Kenny Bedford, Industry Member	Debe Mekik Le Consultancy	Runs a consultancy business which has recently delivered the infrastructure audit to TSRA
John Tabo, Industry Member	Industry, Torres Strait regional Authority	Commercial coral trout fisher. Holds a Torres Strait Traditional Inhabitant Boat Licence. Member of the Torres Strait Regional Authority Finfish Quota Management Committee.
Allison Runck, TSRA Member	Torres Strait Regional Authority	No pecuniary interests declared noting that TSRA holds access rights to Torres Strait Finfish Fishery and generates revenue on behalf of Traditional Inhabitants through seasonally leasing access.
Tony Vass, Industry Member	Industry	No financial interests in the Torres Strait. Former mackerel fisher in Torres Strait 1990 to 2008, does not own or operate a licence in Torres Strait.
Michael O'Neill, Scientific Member	Queensland Department of Agriculture and Fisheries	Principal scientist for TSSAC recommended project to develop a harvest strategy for the Torres Strait Finfish Fishery and pre-proposal for stock assessment work. Member of PZJA Finfish Working Group.
Tom Roberts, QDAF member	Queensland Department of Agriculture and Fisheries	No Interests declared
Ashley Williams, Scientific Member	Australian Bureau of Agricultural and Resource Economics James Cook University	ABARES fishery scientist under Department of Agriculture and Water Resources. Involved in previous TS research, is an author on the ABARES Fishery Status Reports.
Rik Buckworth, Scientific Member	Sea Sense (Consultancy)	Independent Fisheries Scientist with Sea Sense Consultancy, adjunct at Charles Darwin University, ex NT Fisheries, AFMA Northern Prawn RAG,. Principal investigator on a proposal seeking funding for TS Spanish mackerel assessment work. Chair of NT Research Advisory Committee for FRDC

Yen Loban	Industry	TIB licence holder, TSRA Fisheries portfolio members, TSRA member, Traditional inhabitant Torres Strait
Trevor Hutton	CSIRO	CSIRO receives research funding. Principal investigator for TSSAC recommended project to develop a harvest strategy for the Torres Strait Finfish Fishery. AFMA Northern Prawn Fishery RAG regular observer and PI for the NPF stock assessment project.
Jo Langstreth	QDAF monitoring program	Manager of enhancing biological data inputs to Torres Strait Spanish mackerel stock assessment

Consistent with the *Protected Zone Joint Authority Fisheries Management Paper No. 1 (FMP 1)*, which guides the operation and administration of PZJA consultative forums, the RAG noted the requirement to declare all interests, perceived or real. Each member declared their interest in the fishery as documented in Table 1 (above). In line with the AFMA standard for declaring conflicts of interest in Commonwealth MACs and RAGs to best protect the integrity of advice, members with grouped interests (industry, science, TSRA) were sequentially asked to leave the room to allow the remaining RAG members to:

- freely comment on the declared interests
- agree if the interests precluded the members from participating in any discussions and
- agree to any methods to treat the declared interest (e.g. the member provides preliminary input but leaves the room when any advice is formed).

Scientific members and invited participants

Scientific members, the Harvest Strategy project team and those involved with TSSAC research pre-proposals left the room (Rik Buckworth, David Brewer, Andrew Trappett, Trevor Hutton, Ashley Williams, Michael O'Neill and Allison Runck). The group considered their declared interests, noting the involvement of some in the Spanish mackerel stock assessment, harvest strategy project team and the Non-commercial fish fishery project.

The remaining Group considered the declared interests stated by the researchers and scientific members. The Group noted the potential conflicts of interest needed to be balanced against their subject matter expertise. The particular focus of this meeting was to develop harvest strategies for the Spanish mackerel and coral trout fisheries. It was considered that the input for the researchers and scientific members would be valuable during the development of these documents. The Group noted that much of the science was quite technical for non-science members and that the scientists should slow down their discussions and explanations.

The Group agreed that all these members and invited participants should participate in all discussions as their expertise would likely be required. If a clear conflict arose, the scientific members would leave the room and not participate in that discussion. The scientific members and researchers re-joined the meeting, were briefed on the discussion and meeting expectations and reminded that if they thought of any other areas of interests that they wished to have recorded that they could do so at any time.

Industry members

Industry members and other industry invited participants (Kenny Bedford, Paul Lowatta, Tenny Elisala, John Tabo, Rocky Stephen, Tony Vass and Yen Loban) left the room.

The remaining Group discussed that the fishers were an integral part of the development of the harvest strategies, as the access to the finfish fisheries are 100 per cent owned by traditional inhabitants. The Group noted that the advice from the FFRAG would support decisions being made about the fishery, therefore, needed to include expert advice from industry.

The Group discussed the declared interests of the members and participants that had left the room and noted that the potential conflicts were not just at the personal level, but could include if an industry member advocated for a particular cluster or community to have more benefit from a management arrangement than other areas of the fishery. The Group agreed to remind the industry members of this possible conflict.

The Industry members and participants were invited back into the room, briefed on the discussion and meeting expectations and reminded that if they thought of any other areas of interests that they wished to have recorded that they could do so at any time.

Government

Government employees and those on the TSRA Quota Management Committee (Allison Runck, Andrew Trappett, Kenny Bedford, Yen Loban, Tom Roberts and Belinda Norris) left the room. The Group discussed the declared interests of the members and participants that had left the room. The Group noted that the TSRA had declared their holdings of finfish entitlements and that the revenue generated from leasing these entitlements (Sunset Licences) and that this revenue was invested in the development of the fisheries in the region.

The Group agreed that the Government members and participants were important in forming advice to the PZJA and should participate in discussions and that members and participants could be asked to leave if a direct conflict of interest applied to a particular agenda item.

Government employees and TSRA Quota Management Committee members were invited back into the room, briefed on the discussion and meeting expectations and reminded that if they thought of any other areas of interests that they wished to have recorded that they could do so at any time.

1.4 Actions arising from previous FRAG meetings

The RAG noted the agenda paper detailing actions from FRAG 4 (13-14 March 2019) and agreed to take the paper as read. AFMA is updating the Finfish webpage on the PZJA website and this is where all documents relating to the meetings are stored.

Agenda Item 2 – RAG Updates

2.1 Industry update

The RAG noted during this discussion that, in considering the future of the Fishery, the impacts of climate change will be a priority and there is a need for:

- Improved understanding of RAG members in interpreting climate change trends and impacts
- Data collection on impacts of climate change
- Need for the Torres Strait communities and PZJA advisory groups to be kept abreast of:
 - key developments and research across the broader Great Barrier Reef
 - how stakeholders can receive information on research and
 - data trends and how these developments may impact the Torres Strait.

The RAG noted that there is dashboard temperature tracking available for the Torres Strait through The Australian Institute of Marine Science, which would likely be a useful tool for fishers to track changes in water temperature (e.g. being used by Tropical Rock Lobster fishery in relation to avoiding cray deaths in cages in hot water during transit).

RAG also noted that remote sensing information was available on the National Oceanic and Atmospheric Administration (NOAA) website¹ regarding water temperature anomalies which stakeholders could freely access. Suggestion was made that the FFrag should be monitoring trends and anomalies rather than absolute water temperature values.

FFrag noted a number of updates from industry members:

- Fishers on Ugar have had little participation in the Finfish Fishery for the last six months due to unfavourable weather. Recent mackerel fishing has resulted in a range of different sized fish present in the catches.
- Erub Community Freezer is back online and presently purchasing finfish species from community fishers (TIB).
- A round of community visits have been undertaken by AFMA along with PZJA industry members. Focus of this round was to provide feedback to communities about the fish receiver system and data collection (outcomes detailed on page 115 to 161 of the meeting papers).

¹ <https://www.ospo.noaa.gov/Products/ocean/sst/anomaly/>

FFRAG 5, Action 1	AFMA are to advise on appropriate information streams and resources to help the FFRAG to consider the impacts of climate change on the Torres Strait Finfish Fishery.
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Scientific

- There will be a new Queensland East Coast stock assessment for coral trout in 2020.
- A new stock assessment has been commissioned for Gulf of Carpentaria Spanish mackerel and will be published by QDAF in 2020.
- The next East Coast Spanish mackerel full assessment has been scheduled for 2021.

Government.

TSRA provided the following updates to the FFRAG:

- TSRA is working on the use of towed underwater cameras for visual survey as part of the upcoming Beche-de-mer survey and is looking at towing cameras on vessels and undertaking machine learning. FFRAG noted this approach may be useful for coral trout abundance surveys in future.
- TSRA is also looking at trialling baited cameras next year, which could potentially add information for coral trout surveys (a signal of trout abundance).
- TSRA are supporting PZJA advisory committee members to travel in each cluster and lead presentations on the fisheries. These will become annual visits.
- QLD state minister announced a package of 90 traineeships each year in the Torres Strait Fisheries over the next two years aimed at increasing indigenous participation in fisheries. Additional support is being provided to existing facilities to have three paid positions over an 18 month period (freezer manager, resources manager and admin position). Fishing boats and equipment will be provided as a part of the package with Erub Community Freezer as the first trial of this package.
- TSRA has supported a new micro enterprise development officer position on Thursday Island.
- TSRA has finalised an export and branding project and has made handbooks available, including to the FFRAG.
- TSRA is progressing with the establishment of a new commercial entity (planned for July 2020) which is aiming to hold access rights on behalf of traditional inhabitants (transferred from TSRA).

The AFMA member advised FFRAG that the agenda paper summarised AFMA updates and provided some key points to the group:

- AFMA noted that little TIB fishing effort has occurred so far in the 2019-20 season due to poor fishing weather and little finfish data has been received so far this season through the Fish Receiver System (FRS). The round of community visits (detailed in agenda papers) had seen good engagement from fishers with the FRS.
- Sunset licence holders report that the start of the season has yielded good daily catch rates at Bramble Cay.
- A number of sunset licenced vessels have had mechanical issues meaning fishing effort in the fishery has been low so far this season. It is expected these vessels will join later in the season than normally planned, meaning overall harvests may be lower than normal seasons.

FFRAG5, Action 2	AFMA are to confirm that TIB licence holders are receiving text message, catch-watch updates from AFMA linking fishers to the reports on the PZJA website.
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FFRAG5, Action 3	AFMA to update the FFRAG on the outcomes of Torres Strait case study fisheries adaption to climate change case study to be presented once complete (it was noted that it may be appropriate for AFMA to arrange an expert to present to the FFRAG on this report at an upcoming meeting).
FFRAG5, Action 4	TSRA to forward FFRAG a link to AIMS water temperature self-serve portal.

Native title update

FFRAG noted that Malu Lamar, RNTBC, had accepted the PZJAs invitation to attend the meeting but was not in attendance.

Agenda Item 3 – Harvest Strategy

3.1 Draft Torres Strait Finfish Fishery Harvest Strategy Framework

The FFRAG noted that the Harvest Strategy project has now closed and the final report has been provided to AFMA. The FFRAG noted the summary table provided by AFMA with AFMA's views on the project outputs, outlining a number of outstanding points for progression ahead of implementing the Spanish mackerel and coral trout harvest strategies. Led by the AFMA member, the FFRAG worked through most components of the table and provided advice to support progression of the harvest strategy, as detailed at **Attachment B**.

Harvest strategy for Spanish mackerel

Key outstanding points that the FFRAG elected to revisit and provide advice on from the framework were:

- Confirming the B48 target reference point (and providing advice around B60 being an aspirational target for the future)
- Confirming the approach under the harvest strategy should the Spanish mackerel stock drop below B LIMIT (20 per cent of unfished biomass)
- Developing Decision rules (harvest control rules) and building rates for when the stock is above B LIM but below B TARGET - how the stock is to be moved towards target based on stock assessment outcomes
- Considering assessment cycle for Spanish mackerel under the Harvest Strategy, certainty and risk.

The FFRAG noted reference points had been agreed by stakeholders and captured in the project outputs. FFRAG considered that the key component that needed progressing was development of decision rules for building the stock to the target reference point.

The harvest strategy project team presented a hockey stick decision rule for consideration mapping a proposed relationship between harvest rate and biomass and how this relationship could be built into the stock assessment to set Recommended Biological Catches (RBCs) ($RBC = \text{biomass} \times \text{harvest rate}$). It was agreed for this to be further developed into a matrix and considered at FFRAG 6 in the context of the Spanish mackerel stock assessment, with consideration being given to how RBC setting and decision rules might work under different possible scenarios under the Strategy.

The FFRAG advised that forward projections based on the model of how the stock would perform under different scenarios should be analysed and the RAG could examine risk to the stock based on the number of model runs where the stock is predicted to drop below the limit reference point of B20, noting the model uses a range of 35 model runs with maximum likelihood estimates.

FFRAG5, 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).
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Issues with low data levels under the harvest strategy

Noting that the indicator of Spanish mackerel stock abundance in the fishery is mainly driven by data from a small number of sunset boats (and that the same applies for coral trout), the RAG considered a future scenario for the fishery where these sunset fishers were no longer active (i.e. low abundance and small available TAC might mean no leasing, boat break downs or these fishers working other fisheries like QLD east coast). The RAG considered that this scenario would mean a loss of the signal of stock abundance and would require urgent development of alternative options for data collection to support ongoing understanding of the stock.

The suggestion was made that, if this scenario arose, a sunset boat could be contracted as a fishery dependent survey boat accessing set areas of the fishery; examining catch-rates at set locations, taking biological samples and performing tagging work. FFRAG did not recommend this as a firm option, but as a suggested method for consideration in future.

The PZJA Torres Strait Finfish Resource Assessment group **RECOMMEND** that if catch rate data (e.g. catch and effort data from sunset daily fishing logbooks) are no longer available from the fishery the RAG support investigation of alternative options for data collection.

The FFRAG recognised a key need for the future of the fishery would be to build a time series of TIB catch and effort data that marries with the sunset data series to support future assessment scenarios. It was noted that it would be challenging to standardise the two data streams given that the TIB sector fished different areas with different fishing effort patterns

The TSRA Fisheries Portfolio Member suggested that, as a management priority, there is a need for the development of a statement to help fishers and community leaders understand the need for building TIB catch and effort data to support understanding the health of the Spanish mackerel and the harvest strategy, especially if Sunset licences are not active in the fishery. It was suggested that this should be publically released with a communications strategy e.g. in the Torres Strait News.

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.

Harvest Strategy for Coral Trout

Given the meeting focus had been on progressing the harvest strategy for Spanish mackerel, the FFRAG agreed to continue reviewing the draft coral trout harvest strategy framework at FFRAG 6, but briefly touched on a few key issues.

FFRAG noted that the outputs of the harvest strategy project had recommended a 'holding pattern' approach for coral trout (based on the preliminary assessment suggesting there was currently 80 per cent of unfished biomass available and that a number of technical issues had been identified with the assessment for progressing) while further data was collected from the Fish Receiver System to support future analysis of the stock and harvest strategy options.

FFRAG noted the project outputs, based on stakeholder advice, suggest two triggers which may indicate changes in the risk profile for the stock:

1. Catches from TIB + Sunset sector exceeding 90t (being two thirds of the constant catch TAC of 134.9 t)
2. If the standardised catch rate per day drops below 90.6 kg per primary vessel day².

Either of these two triggers being met will 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.

Noting the next stock assessment is planned for 2021-22 (TAC advice for 2022-23) FFRAG advised that, until this time, the best practice would be for the RAG to examine standardised catch rates (rather than raw/nominal catch rates) in the intervening years to check how the stock is tracking and whether the trigger for stock status change has been met.

FFRAG strongly 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.

3.2 Consultation and implementation of the Harvest Strategy

This item was deferred until FFRAG 6 meeting.

Agenda Item 4 – Management and Science

4.1 Review of Western Line Closure

This item was deferred until FFRAG 6 meeting.

4.2 Australian Spanish mackerel stock assessments

This item was deferred until FFRAG 6 meeting.

4.3 Use of vessel Monitoring systems to support Finfish Fishery data needs

This item was deferred until FFRAG 6 meeting.

Agenda Item 5 – Research

5.1 Outcomes from the Torres Strait Scientific Advisory Committee (TSSAC) meeting

The RAG noted that:

- Nine projects were recommended for funding and funded through AFMA and TSRA budgets
- The AFMA funded projects have fully committed AFMA research funds for 2019-20 and approximately \$365,000 (of a possible \$411,000) for 2020-21.
- TSSAC will have approximately \$45,000 for any urgent tactical project during 2020-21 financial year (the FFRAG research priorities may suggest projects to be funded against this amount).

5.2 Research Updates

5.2.1 Enhancing biological data inputs to Torres Strait Spanish mackerel stock assessment

QDAF Monitoring Program, Dr Jo Langstreth, provided an update to the RAG on the status of the funded project. The RAG noted that the project has had a good start by collecting fish frames from

² 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.

Sunset vessels and establishing channels to begin collection of TIB sector frames (with sample expected soon). Given peak fishing for the season is beginning, the project is on track to reach its targets with the following samples collected:

- Lengths: 37% of target reached - 551 supplied.
- Catches: 22% of target reached - 11 sampled.
- Otoliths: 16% of target reached - 78 fish sampled and otoliths extracted. More frames are en-route to Northern Fisheries Centre for sampling.

The sampling program will continue collecting frames and length-frequency data until March 2020 and then ageing of collected otoliths (ear bones) will be undertaken.

FFRAG noted that QDAF are taking tissue samples from the Spanish mackerel frames being donated which will likely be appropriate for future genetic testing, should funding become available. RAG suggested that consultation with genetic experts would be required to provide information on how many samples and from what areas would be required to support a broader project on Spanish mackerel stock structure, e.g. close kin genetic sampling to understand abundance of mackerel. In the context of research priorities (Agenda Item 5.3) it was suggested that a broader research project, perhaps funded by FRDC, might examine gene-tagging or close-kin genetic abundance techniques across northern Australia to address reported declines in abundance from 2010. It was noted that storage of Torres Strait tissue samples from the current project was a good step to support future research.

5.2.2 Torres Strait Spanish mackerel stock assessment with appraisal of environmental drivers

Dr Michael O'Neill and Dr Rik Buckworth presented on the funded project. FFRAG Science Member Dr Rik Buckworth noted the pronounced decline in the Torres Strait stock and that the project was attempting to expand the assessment to include environmental aspects such as river flow, tide, primary production and climatology, such as sea surface temperature. It was noted that effort has been low in the fishery since the 2007 buyout so the project will consider other factors besides fishing mortality (which is not suspected to be significantly impacting these declining catch rates).

FFRAG Science Member Dr Michael O'Neill presented an overview on the preliminary data analysis, including updated data from 2018-19 fishing season received from AFMA:

- Analysis of total annual harvest from 2018-19 season has been completed
- Fishery level catch rates have been standardised and 2018-19 season appears to have a similar standardised catch rate to the previous season (2017-18) despite reports from industry that catch rates might have been improved
- Biological information (older ageing and length frequency data) has been assessed, noting that the missing 2005 data has been located and will be supplied to the stock assessment team for inclusion. QDAF also advised that some additional late 90's Torres Strait length-frequency data (and potential associated ageing otolith data) had recently been discovered and will be reviewed to see if it can be included in the assessment.

Dr Michael O'Neill advised that the Queensland Government is working towards forming 'core' stock assessments for key commercial species that will be automated and produced on a yearly basis, based on updated data.

The stock assessment team flagged an apparent data issue with the FFRAG - that the Bureau of Meteorology wind data received from Poruma (Coconut) Island weather station appeared to have declined since 2010 to a factor of about half of its long term average intensity. The FFRAG advised that these data seemed incorrect especially given that the Horn Island weather station data appeared to have consistently higher average daylight hours wind strength through the same period. An industry member from Masig Island, nearby to Poruma, confirmed that there did not appear to be an evident drop in wind strength in central Torres Strait over the period flagged and it was likely faulty recording equipment. The assessment team agreed to investigate discounting these data from use in the assessment model due to this uncertainty and using Horn Island data instead.

The RAG noted that Spanish mackerel catch rates presented from Queensland managed east coast and Gulf of Carpentaria fisheries did have evident decline in catch rate trends. The RAG noted that Spanish mackerel stocks are known to be supported by strong recruitment events (evidenced by tracking classes of recruits in the Queensland east coast mackerel fishery over time through their monitoring program) which in turn may be driven by environmental drivers.

FFRAG5, Action 5	Obtaining accurate catch and effort data from the TIB sector is a key data need. AFMA and TSRA are to continue supporting industry in collecting voluntary effort data in catch disposal records and work on progressing compulsory logbook reporting as a priority.
FFRAG5, Action 6	Spanish mackerel stock assessment team are to develop a matrix of harvest strategy scenarios to support FFRAG consideration of RBC setting options (35 runs for each scenario with maximum likelihood estimate); and to examine what risks these RBC options may pose to the stock (number of runs below the limit reference point) and how long each option will take to build the stock to the target reference point.
FFRAG5, Action 7	FFRAG are to consider retrospective analyses for Spanish mackerel and how these can be built in to the assessment

5.2.3 Developing an approach for measuring the non-commercial fishing in Torres Strait in order to improve fisheries management and promote sustainable livelihoods

FFRAG noted an update from funded project Principle Investigator, and FFRAG Industry Member, Kenny Bedford on the project. It was advised that the project will be investigating the design of a catch monitoring system, will examine past monitoring approaches and will report on data needs across the various sectors and stakeholders in Torres Strait Fisheries (noting the project does not apply solely to finfish species).

5.3 Five Year Fishery Research Plan

The PZJA Torres Strait Finfish Resource Assessment group **RECOMMEND** that the priority tactical research needs for funding in 2020-21 were:

1. Further biological sampling (ageing and length frequency) for Spanish mackerel. The RAG recommended this data collection ideally occurs for an additional three to four years; and
2. Updating the Standardised CPUE series for coral trout with additional catch and effort data to track how the stock is tracking

In forming their 2019 Fishery Five Year Research Plan, the RAG reviewed their input to the 2018 plan and what identified research priorities were at that time. The RAG noted good progress with funding secured to support development of the Fishery harvest strategy, stock assessments for Spanish mackerel and coral trout, as well as biological sampling and environmental risk assessment for Spanish mackerel. The main gaps identified that had not been progressed since 2018 were Management Strategy Evaluation Testing for the Harvest Strategy (noting AFMA advice that this would be considered based on the outputs from the funded project) and understanding stock structure for Spanish mackerel. The FFRAG noted that a number of points have previously been raised in relation to the Spanish mackerel data and stock assessment (paper fish, hyperstability - Bramble Cay centric data) which were being investigated through the two-year funded project.

Beyond tactical projects for potential funding in the 2020-21 financial year, the RAG considered a range of research needs for the fishery as detailed in **Table 1** below. AFMA advised that these research needs would be translated to the five year research plan and circulated out of session for RAG comment and that the identified tactical research needs (Spanish mackerel biological sampling and coral trout standardised CPUE analysis) would be presented to TSSAC at their late November 2019 meeting to be considered as scopes for 2020-21 research funding.

Table 1: Summary of FFRAG 5 considerations on Finfish Fishery research priorities.

Research	RAG Comments	Priority / How to action
Biological sampling for Spanish mackerel	RAG confirmed the need for biological data collection to support the Spanish mackerel stock assessments, build a time series and aid demonstrating that the stock is building towards the target reference point. RAG recommends three to four additional years of sampling to build a time series to attempt to understand changes in the stock age structure over time i.e. recruitment variation.	High priority data need to address the need to understand the declining catch rate trend (and noting the age of available data)- Immediate priority for tactical research funding through TSSAC. ESSENTIAL
Biological sampling for coral trout.	Suggested that a future project could expand existing Spanish mackerel collection protocols to collect coral trout frames for ageing, sexing and length frequency analysis and that this would help address the species basket issue by providing firm identification and catch composition data. It was also suggested that the project could include fishers sending in photographs of whole catches of coral trout for catch composition and species identification.	Important to develop an indicator of stock abundance aside from CPUE from the limited number of active sunset sector trout boats. Not recommended as an immediate priority for funding noting Spanish mackerel is the higher priority focus at present given declining biomass.
Examining standardised CPUE for coral trout	Until additional work flagged on the coral trout stock assessment occurs, the only way to understand stock performance (changes in abundance) is to examine standardised CPUE. Examining raw (nominal) CPUE from logbooks will likely provide a false indication of stock performance. Therefore, a small project is required to put new catch and effort data into the standardised catch rate series and report on catch for a standardised unit of fishing effort (accounting for factors like time of day, wind strength, tide, moon-phase etc.).	Important to consider standardised CPUE as an indicator of stock performance and understand stock trends. Considered a relatively simple project with an additional year of CPUE data to be input into the existing standardisation. To be progressed by TSSAC as a high priority tactical research need. ESSENTIAL
Management Strategy Evaluation (MSE) testing of the fishery harvest strategy.	Noted that MSE testing is best practice ahead of implementing a harvest strategy to test if the Strategy is achieving the stated objectives for the fishery. AFMA has advised that funding for MSE testing will be dependent on the outputs of the HS Project and whether there is sufficient mechanical decision rules developed for testing. RAG advised that a project could be formed to conduct MSE testing and setup a mechanism to feedback the results from this testing into development, refinement and evaluation of different decision rules.	FFRAG considered that a project could be formed to conduct testing and evaluation/development of decision rules. FFRAG noted that the requirement for this approach would depend on the outcomes of the FFRAG 6 meeting where further consideration of harvest strategy options would occur.
Stock structure and broader ecological understanding of Spanish mackerel.	Testing the assumption of single Torres Strait management unit (single stock) noting most assessment data comes from Bramble Cay. In investigating potential environmental drivers of mackerel abundance, it is important to understand where recruits to the fishery are coming from, the structure within Torres Strait stock as well as level of connectedness with adjacent stocks in other fisheries. It is also important to understand the related ecological factors - what is driving recruitment (spawning success), feeding patterns, where spawning aggregations occur and to use this info to manage the Torre Strait stock e.g. predict where good fishery	Noted as scientifically important but not recommended as a priority for the fishery at this stage. Recommended for TSSAC to discuss, progress potentially through FRDC channels as a broader project and look for collaboration with state governments noting other reports of declining Spanish mackerel catch rates across northern Australia.

	catch rates might occur, where/when protection may be required.	
Shark depredation	Study to investigate increased shark interaction with fishery operations and depredation impacts on Finfish Fishery catch rates (how to capture and track over time, potential mitigation options). RAG noted that this would be a good, broad level project that could investigate a number of fisheries that lose catch to sharks and could be funded by FRDC for example.	Recommended for TSSAC to discuss, progress potentially through FRDC channels as a broader project with further collaboration opportunities for other stakeholders.
Fishery independent survey data	<p>Given the small number of boats supplying fishery dependent data (for mackerel and trout) as indicators and the risk of losing these signals of stock abundance should sunset harvest cease (e.g. reduced TAC resulting in no leasing, break downs, boats leaving the fishery) there is a need for a project to consider options for understanding Spanish mackerel and coral trout biomass. Suggestion that biological sampling for Spanish mackerel has industry collecting frames from which tissue samples are being taken and stored which might form the basis for an ongoing project to develop and conduct gene-tagging³ and/or close-kin genetic analysis (c.f. blue-fin tuna) to understand stock dynamics and abundance of mackerel over time. Though noted as expensive, it was also suggested that traditional tagging/recapture may be another valid approach.</p> <p>Additionally, a key input to the east coast coral trout assessment is abundance counts from underwater visual surveys. The Torres Strait assessment model uses values from the east coast model to assume coral trout abundance per hectare per reef habitat type. There is a need for survey work to validate these assumptions for use in Torres Strait stock assessment.</p>	<p>General RAG support for consideration of a project to look at alternatives to fishery dependent data though not recommended as an immediate priority for funding/progression given higher priorities for the fishery at this stage.</p> <p>Noted that an underwater visual survey for coral trout would be challenging in Torres Strait but underwater drone technology and baited cameras may help augment the dive survey approach. A future project could be formed to examine the feasibility and design of an approach to achieve an UWVS for coral trout in Torres Strait to prepare for when funding might become available to progress this work (given Spanish mackerel is the focus for research funding for now).</p>
Otolith morphology	Suggested that more cost-effective long-term sampling for Spanish mackerel might be achieved by developing an index of mackerel ages based on the shapes and sizes of otoliths recorded so far. It was considered that development of this technique might mean less time is spent reading each otolith in future but cost would still be incurred in collecting each sample from industry and extracting the otoliths, meaning the return on such an investment may be low.	Not recommended as a priority for progression at this stage based on consideration of costs-benefits.
Optimum ratio B MSY to B MEY for Spanish mackerel	While stakeholders may select a higher future target reference point (e.g. B60) to support good catch rates and stock sharing, noted this will mean a trade-off for a lower RBC as less harvest will occur to keep more fish in the water and less boats will be active in the fishery. RAG supported a desktop study (e.g. applying Pascoe et al. ⁴ work to the Torres Strait Spanish mackerel stock c.f.	General RAG support for this work as a smaller desktop study potentially in-line with future reviews of the harvest strategy. Not recommended for progression as an immediate research priority.

³ <https://www.csiro.au/~media/OnA/Files/Southern-Bluefin-Tuna-Gene-tagging-factsheet-06-2018.pdf?la=en&hash=A51A86269A01BBDCD74754C74E687D61B48B5301>

⁴ *Estimating proxy economic Target Reference Points in Data-poor single-species fisheries*, Pascoe, Thebaud & Vieira, Marine and Coastal Fisheries Dynamics, Management and Ecosystem Science 6:247-259 (2014)
<http://dx.doi.org/10.1080/19425120.2014.966215>

	QDAF east coast work) to determine the optimum ratio between B MSY and B MEY and the appropriate proxy economic target for the fishery.	
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Agenda Item 6 – Other business

6.1 Other business

FFRAG discussed the option of developing a five minute video summary of the outcomes from the meeting for circulation in Torres Strait communities (e.g. to be played at community meetings). A video summary was not actioned for this meeting due to time constraints but members were supportive of future meetings attempting to capture this summary if possible.

6.2 Next meeting and meeting close

The RAG noted that FFRAG 6 is confirmed for 27-28 November 2019 on Thursday Island.

In closing the meeting, the FFRAG Chair thanked all of the participants for their input with a lot of good productive discussion.

Meeting closed 17:00 Friday 1 November 2019.

Attachments

Attachment A: FFRAG 5 Agenda

Attachment B: FFRAG 5 Review of draft Spanish mackerel harvest strategy components

Attachment B: FFRA 5 Review of draft Spanish mackerel harvest strategy components

Table 1. Status of Spanish mackerel draft harvest strategy components.

Guiding principles and key fishery attributes – factors that helped shape the development of the Harvest Strategy		RAG Comments
Recommended	Consistent 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).	AGREED
	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, Kulkalgal Sabe.	AGREED AFMA queried whether the Kaurareg nation was included in this statement. Traditional Owners present advised that Maluailgal Sabe law reference includes the inner western communities.
	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.	AGREED - with minor change. RAG suggested that the word 'future' is added to reference sustainability.
	TACs should vary according to stock status (up and down): <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. 	RAG noted that 'banking' fish was challenging to capture in the decision rules of a harvest strategy with stocks generally building towards a target reference point in a prescribed way based on assessment outcomes. RAG noted that the prescription for this in-principle objective from traditional owners was for potential increases in catches to be interpreted as having consideration for the position of the TIB sector first by not necessarily increasing catches leased to sunset

		fishers which might impact TIB sector catch rates closer to home reefs and fishing grounds. RAG also advised that this approach and wording should also consider the level of certainty and precaution underlying future decision making. RAG suggested that this wording required greater clarity in the final harvest strategy but the spirit of the objective was understood and would likely only apply to the fishery when the stock has eventually build above the Target Reference Point and increases in TACs (via a potential fish-down of the stock to B Target by increasing harvests) are suggested by the assessment estimate of biomass. It was considered that clear decision rules to implement this stakeholder desire would need to be developed with stakeholders, potentially as the Strategy is reviewed over time.
	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.	AGREED. FFRAG noted that the Strategy has a focus on the immediate future of the fishery given present stock condition. It was noted that a 94 t RBC is not conservative and balances sustainability with socio-economic impacts; and that a 94 t RBC based on present biomass (31 per cent of unfished) might take 17 years to build to the B48 target reference point.
	Torres Strait Spanish mackerel stock are assumed separate from other regional stocks. They do not mix have limited mixing with the Queensland East Coast and the Gulf of Carpentaria stocks (see Buckworth et al. 2007 and Newman et al. 2009).	AGREED minor wording change to reflect limited mixing with adjacent stocks.
	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.	AGREED with minor wording additions

	Spanish mackerel are a shared resource important for subsistence, commercial, traditional, charter and recreational sectors.	AGREED - Minor wording additions to acknowledge shared stock with PNG under the Torres Strait Treaty. and agreed to move this point to higher up in the table to give it higher precedence.
Outstanding	None identified at this time. Subject to any further FFRAG and Working Group advice	(none).

Operational objectives What we want the harvest strategy to achieve.		RAG comments
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.	AGREED
	Maintain stocks above the limit biomass level (B_{LIM}), or an appropriate proxy, at least 90 per cent of the time.	AGREED
	Reduce fishing levels if a stock is below B_{TARG} but above B_{LIM} .	AGREED
	Implement rebuilding strategies, if the stock moves below B_{LIM} .	AGREED - considered further below in the context of decision rules if B LIM triggered.
Outstanding	None identified at this time. Subject to any further FFRAG and Working Group advice	FFRAG agreed with the operational objectives captured by the draft Harvest Strategy.

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)	RAG Comments
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). (not considered by FFRAG 5)
Outstanding (1)	Fishing mortality (B) based indicators. The stock assessment model can estimate a level of F to move the stock towards the target. There was some consideration from the FFRAG of using an F-based indicator in the harvest strategy. Advice is sought from the FFRAG on whether there is value in further exploring this as an option. (not considered by FFRAG 5)

Reference points			RAG Comments
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.	AGREED
	Short-term target (B_{TARG}) reference point = B_{48}	B_{48} ⁵ is the default target (a proxy for B_{MEY} - biomass at maximum economic yield) in the Commonwealth HS Policy and the project team advise that B_{48} is less than B_{MEY}.	AGREED with B_{48} as target reference point and removal of line as B_{48} is known to be less than B_{MEY} .
	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 ⁶ .	AGREED
Outstanding (2)	B_{48} is less than B_{MEY}	The HS project team advise the current target of B_{48} is less than B_{MEY}. FFRAG discussion and advice on this calculation is required to ensure a common and clear understanding.	FFRAG supported the B_{48} target reference point and outlined the following rationale for adopting this value. FFRAG noted that the most recent assessment update was estimating B_{MSY} for the stock as being close to the

⁵ Comm HSP: The target reference point for key commercial fish stocks is the stock biomass required to produce maximum economic yield from the fishery (B_{MEY}). 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 B_{MEY} is unknown or not estimated, a proxy of 0.48 times the unfished biomass, or 1.2 times the biomass at maximum sustainable yield (B_{MSY}), should be used. Where B_{MSY} 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.

⁶ Comm HSP: All stocks must be maintained above their biomass limit reference point (B_{LIM}) 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>Commonwealth Harvest Strategy Policy of B40 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> <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>
Outstanding (3)	Long term B TARG = B ₆₀	Advice from the HS project team and RAG scientific members is sought on the suitability of B60 as a long-term B TARG, in comparison to other target biomass levels above B _{MSY} having regard for the biology of the	FFRAG agreed that B60 should not be included as part of the final harvest strategy and was aspirational only at this stage in the fisheries development.

		<p>species and performance of the Strategy in meeting its objectives.</p> <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}. Having regard for any advice from the HS project team advice is sought however, RAG advice on the suitability of B_{60} against other possible higher target biomass levels. 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 is sought to enable more evidence-based advice and decision making on the longer-term target.</p>	<p>FFRAG are supportive of a future research project to determine what the optimum biomass for the fishery might be, noting, while aspirational, a value as high as B_{60} would likely trade off available catches and might limit the number of boats that could feasibly fish. FFRAG agreed that future research could focus on developing an optimum biomass in line with future reviews of the Strategy.</p>
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Decision Rules (<i>also called Harvest Control Rules</i>)			RAG comments
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}).	<p>AGREED</p> <p>FFRAG noted that before the biomass dropped below B_{20} the RBCs would be very small to move the stock away from this point.</p>

	Re-opening the Fishery ⁷	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.	AGREED
Outstanding (4)	If the stock is above the limit reference point but below the target reference point.	<p>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).</p> <p>An outstanding action has been for the FFRAG to consider scenarios with multiple timeframes to build the stock to reach B₄₈. Specifically to examine a 12 year recovery time (equivalent to 3 times the average age of maturity) and explore 10 and 8 year recovery periods as alternatives.</p> <p>Having regard for any advice from the HS project team, advice is sought from the RAG on appropriate building rates to incorporate into the HS decision rules and/or a work plan for examining options noting scenarios will be examined and presented by the Spanish mackerel stock assessment team (<i>AFMA funded project 2019/0831</i>) as part of the next stock assessment update to be presented at the FFRAG planned for 27-28 November 2019.</p>	<p>FFRAG noted that the best way to build the stock to target was to reduce harvests but this approach needs to be balanced against socio-economic impacts when setting TACs based on the current state of the stock.</p> <p>Noted that as the fishery is open-access for TIB and with extra infrastructure coming online to support participation and potential low seasons in TRL/BDM there may be increasing fishing pressure which may impact building rates in the fishery.</p> <p>FFRAG noted that if the harvest control rules were applied at present with the stock currently at B₃₁ to build the stock to B₄₈ a harvest rate of approximately 9% would be recommended. The RBC for B₃₁ would be 63t if strictly applied and the RBC once the stock reaches B₄₈ would be 129t (an 18% harvest rate). However, during building to the BTARG the RBC should increase each year as the stock moves closer to BTARG.</p> <p>FFRAG noted the proposal to examine building rates of 8, 10, 12 year timeframes and what these would mean for the fishery (catches and catch rates). It was noted that the logic supporting a particular value as a building timeframe came from the harvest strategy policy and only applied (in the</p>

⁷ 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.

			<p>older HS Policy version) to when a stock was below B_{LIM}.</p> <p>FFRAG noted that the funded mackerel assessment project would have building timeframes (forward projections) as a standard output and that FFRAG 6 could examine these rates in the context of the assessment update.</p>
Outstanding (5)	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 now 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>FFRAG to provide advice 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 confirmed that under the HS targeted fishing will cease for mackerel if the estimate of biomass shows the level of the stock is below B_{LIM} and a FFRAG will have a key role in developing a rebuilding strategy should this occur (in line with Commonwealth Harvest Strategy Policy).</p> <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>

Outstanding (6)	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. Additionally, at the last FFRAG/FFWG meeting 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> <p>FFRAG are asked to confirm this approach and consider how future decision rules may incorporate increased growth of the TIB sector.</p>	(not discussed)
Outstanding (7)	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 the last 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</p>	Not specifically discussed by the RAG. However, at other items it was considered that focus would need to be on building the stock to B40 and development of harvest control rules in future to address this stakeholder desire when biomass is proven to be above B TARG.

		advice on how to progress change-limiting rules if necessary.	
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Monitoring and assessment cycle		RAG comments
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} .	AGREED.
Outstanding (8)	<p>Subject to any further advice from the HS project team, FFRAG advice is sought on:</p> <ul style="list-style-type: none"> a) An appropriate assessment cycle when the stock is above B_{40} and/or methods for evaluating future assessment cycles. b) Likely data needs to support monitoring stock performance under the Strategy over time, noting that some biological data is to be sampled in 2019 and 2020 as a snapshot to augment our understanding and assessment of the stock but no monitoring program advice has been developed or presented to date. c) Standard procedures for applying the decision rules to the stock assessment outcomes, and, any other minimum stock assessment scenarios, and/or, sensitivities that should be examined to support 2019-20 season TAC setting (e.g. FFRAG 4 used a methodology of selecting the median of a range of plausible stock assessment scenarios to recognise a range of uncertainty). 	<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 once MSE testing had been conducted, and the stock could be demonstrated to be at or above B_{40} (as a B_{MSY} proxy), yearly stock assessments are required.</p> <p>QDAF advised that conducting assessments over the next two years will be semi-automated and hence, it will not be unreasonable to run annually, provided data supply is</p>

		consistent (i.e. just inputting new seasons catch and effort data).
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PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
STOCK ASSESSMENTS Updated Spanish mackerel stock assessment and Recommended Biological Catch for 2020-21 season	Agenda Item No. 2.1 FOR DISCUSSION and ADVICE

RECOMMENDATIONS

That the Finfish Resource Assessment Group:

1. **NOTE** the updated stock assessment for Torres Strait Spanish mackerel based on data up to June 2019 to be provided by FFRAG Science Members Dr Michael O'Neill and Dr Rik Buckworth under the funded project "*Torres Strait Spanish mackerel stock assessment with appraisal of environmental drivers*";
2. **DISCUSS** and **PROVIDE ADVICE** to the Spanish mackerel stock assessment team on the methodology and outcomes of this assessment;
3. **NOTE** for the 2018-19 season the RAG recommended an RBC based on applying a Maximum Sustainable Yield (MSY) fishing reference point based on the 2017-18 exploitable biomass;
4. **NOTE** the FRAG and Finfish Working Group recommended as a joint meeting on 27-28 June 2019 that from the 2020-21 season, TAC should be set to allow the stock to build to B48;
5. **DISCUSS** and **PROVIDE ADVICE**, having regard for the stock assessment outcomes, on a Recommended Biological Catch (RBC) for Spanish mackerel for the 2020-21 season;
6. **REVIEW** previous RAG advice on best available estimates of Spanish mackerel catches taken outside of the Fishery and taking into account any other available information, **DISCUSS** and **PROVIDE ADVICE** on best available estimates to apply for the 2020-21 season.

KEY ISSUES

7. The AFMA funded project "*Torres Strait Spanish mackerel stock assessment with appraisal of environmental drivers*" will complete two updates to Spanish mackerel stock assessments to support decision making in the 2020-21 and 2021-22 season.
8. The objectives and performance indicators of the project as follows:
 - a. Characterise the Torres Strait Spanish Mackerel fishery, reviewing and updating the assessment with 2018-19 and 2019-20 seasons' data, presented at 2019 and 2020 Finfish Fishery Resource Assessment Group (FFRAG) meetings.
 - b. Review environmental associations with Torres Strait Spanish mackerel, e.g. by comparing environmental data such as temperature, rainfall, productivity etc, with catch patterns, recruitment anomalies, and trends in catchability, presented at the 2019 RAG meetings.
 - c. Conduct an assessment of the fishery including new 2018-19 season catch and effort information acquired to 30 June 2019, presented at the 2019 RAG meetings.
 - d. Conduct an assessment of the fishery including new 2019-20 season catch and effort information acquired to 30 June 2020, presented at the 2020 RAG meetings for technical review, ahead of a final presentation and report to the Finfish Working Group.

- e. Provide recommendations on research and monitoring needs to support future assessments.
9. Additional Spanish mackerel catch and effort data from Daily Fishing Logbooks (TSF01 completed by sunset fishers) and Catch Disposal Records (TDB02 completed by Traditional Inhabitant Boat Fishers and sunset fishers) from data up to 2017-18 were provided by AFMA to the Spanish mackerel assessment team and QDAF under a deed of confidentiality to inform and again update the stock assessment model.
10. At its last meeting (31 Oct - 1 Nov 2019) FFRAG considered preliminary analyses from the stock assessment team. The RAG recommended that the project team provide the RAG with a matrix of scenarios with risk [number of model runs dropping below B LIMIT (B20)], benefits (RBC) and time for the stock to reach B TARGET to assist the RAG with;
 - assess an appropriate RBC for 2020-21 season; and
 - consider options for decision rules under the draft harvest strategy (Agenda Item 3.1).
11. RAG advice is sought on whether the outcomes from the updated assessment are likely reflective of the stock status and whether the outcomes can support a recommendation for a RBC for the 2020-21 season starting 1 July 2020.
12. For the 2019-20 season the RAG recommended an RBC based on applying a Maximum Sustainable Yield (MSY) fishing reference point based on the 2017-18 exploitable biomass (see detail in section below).
13. At a joint meeting on 27-28 June 2019 the FFRAG and Finfish Working Group recommended that from the 2020-21 season, the TAC should be set to allow the stock to build to B48.

The Group reviewed what was agreed for the Spanish mackerel harvest strategy at the previous meeting and provided the following recommendations for the draft Spanish mackerel harvest strategy:

A stock assessment should be conducted each year until the biomass is greater than B40. It is assumed that the stock will take a few years to build to B40 at the current TAC. The industry participants noted that setting a lower TAC would allow for the stock to build faster. The ongoing regularity of stock assessments will be set once B40 has been reached.

B TARG (interim) was recommended to be B48. This is an interim B TARG that will be reviewed once it has been reached. The Group were unable to settle on a higher BTARG, given the current indicative biomass (B31) and the long term (>12 years) at current TAC levels, or significant catch reduction required for the stock to rebuild above B48. Industry expressed a strong preference for management to focus on building the biomass in the coming years, before tackling any other scenarios.

The TAC will be set to reach the target reference point (B TARG) by a determined year. From the 2020-21 season, the TAC will be set to allow the stock to build to B48. The FRAG will consider which year should be the aim for reaching B TARG prior to setting the 2020-2021 TAC. The scientists and industry noted that in determining the target year, the social/economic impacts of a low TAC would need to be weighed against building the stock quickly.

14. Having regard for advice from FFRAG 4, at their 15 March 2019 meeting the FFWG agreed to recommend to the PZJA a TAC of 82 tonnes for the 2019-20 season noting the RBC advice of 94 tonnes and that the best estimates of Spanish mackerel catches taken

outside the Fishery are 10 tonnes for traditional (subsistence) fishing and 2 tonnes for recreational fishing (total 12 tonnes).

15. PZJA Meeting No. 31 on 1 April 2019, noted FFRAG and FFWG advice and decided that the TAC for Spanish mackerel for 2019-20 season would be 82 tonnes.
16. Advice from the FFRAG will be tabled with the Finfish Fishery Working Group (FFWG) for consideration on 29 November 2019. FFRAG and FFWG advice will support PZJA consideration and decision on a TAC for the 2020-21 fishing season. AFMA is seeking to confirm a PZJA meeting to consider this decision in January 2020.

2019-20 season assessment update and FFRAG RBC advice

17. FFRAG 4 (13-14 March 2019) recommended a 94 tonne RBC for Spanish mackerel 2019-20 season (the present season) based on an updated stock assessment. Under AFMA project no. 2016/0824 "*Harvest Strategies for the Torres Strait Finfish Fishery*" the Spanish mackerel stock assessment was updated and presented to FFRAG 4 (using data up to 2017-18 season).
18. This assessment update was used by FFRAG 4 to provide advice to the FFWG and PZJA to support a decision on an appropriate sustainable TAC for 2019-20 season.
19. The updated stock assessment included catch and effort data up to 2017-18 season and older age and length data from Torres Strait from the early 2000's.
20. FFRAG 4 noted the results of the updated stock assessment show:
 - Biomass is on a down cycle (decline). The standardised catch rate of legal sized Spanish mackerel (the abundance index), using logbook data from sunset fishing operations, had declined since 2010-11. Standardised catch rates have reached near historic low levels in 2017-18.
 - The estimated 2017–2018 biomass was between 15% and 45% (B15 and B45) of original unfished biomass (B0) measured in 1940–1941. Four of 39 model scenarios estimated biomass in the 2017-2018 fishing season to be below B20– the Commonwealth Fisheries Harvest Strategy Policy limit reference point. The RAG considered this situation (4 of 39 scenarios) to be equivalent to the Harvest Strategy Policy guideline for harvest strategies to ensure stocks remain above the limit reference point approximately 90 per cent of the time.
 - Recent fishing pressures are unlikely to be exceeding FMSY. This means overfishing is unlikely to be occurring. The biomass decline may be associated with factors other than fishing. The RAG noted advice from scientific members that similar unexplained declines over the last four to five years were reported for other Spanish mackerel stocks in Western Australia, Northern Territory and Queensland suggesting that broader environmental factors could be driving trends in these fisheries.
21. To guide advice on a 2019–2020 RBC, the RAG recommended:
 - Applying a Maximum Sustainable Yield (MSY) fishing reference point on current 2017–2018 exploitable biomass. This interim management guide recognised that at the status of the stock, that B60 is not quickly achievable, and the fishery economic/data needs. A time to build the stock to this target reference point still needs to be evaluated with stakeholders as part of developing a harvest strategy. The RAG noted that the new Harvest Strategy Policy does not specify rates for building stocks that are above BLIM and below BTARG.
 - Equilibrium yields were previously used to calculate RBCs. The equilibrium yield approach is only useful if stock is at an equilibrium reference point or above. Hence, the equilibrium yield approach is no longer used. Consistent with the Harvest Strategy Policy

the recommended approach is to advise on yields for current estimates of spawning biomass.

22. Based on outcomes of the stock assessment and applying an interim reference point of FMSY, the FFRAG recommended an RBC of 94 t for the 2019-2020 season. The 94 t represents the average over all 39 model-scenarios and this setting notes a decline in the stock and need for some precaution.
23. Noting there is no agreed harvest strategy in place for the Finfish Fishery, the FFRAG considered fish-population projections for a range of RBCs to evaluate risks (Figure 1 and Table 1). Risk was interpreted as the proportion of scenarios below B20 in 2029 (as a percentage of all scenarios). The year 2029 was 2017 plus three times the average age of mature female fish (4 years) – a standard and accepted approach for assessing the timeframe to guide fishery stock status.

Table1. FFRAG Decision Table based on model scenarios outputs for four RBC levels

Risk profile	RBC (t)	Number (and per cent) of runs out of 39 below limit reference point (B ₂₀) in 2029.	Interpretation
“Low” risk	80	0	Precautionary but some implications for economics
Precautionary risk	94	0	Balancing for sustainability and risk
“Moderate” risk	110	3 (8 %)	Moderate risk
“High” risk	120	10 (26 %)	Unacceptable risk

*(B20 agreed interim, 20 per cent of virgin biomass) in 2029 (which is 2017 plus three times the average age of mature female fish (4 years) and generation time). Last estimate in 2017 + (3 x 4 years).

ESTIMATING CATCHES TAKEN OUTSIDE THE FISHERY

24. 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) (previously referred to as ‘total kill’ by the FWG) for the species minus expected catches to be taken outside of the fishery.
25. Estimates of other sources of mortality were used to revise the Spanish mackerel notional TAC for 2017-18, 2018-19 and 2019-20 seasons.
26. FFRAG 4 (13-14 March 2019) provided advice on best estimates for catches taken outside of the commercial fishery and FFRAG supported the use of the values shown in **Table 1** below.

Table 1. FFRAG 4 Summary advice of available information on catches outside of the commercial Spanish mackerel fishery.

Source of catches	Expected catch (t)	Comments
Subsistence catch (kai kai) by traditional inhabitants	10	Based on data from <i>Busilacchi 2013</i> this includes total of catch estimates for Mer, Masig and Erub Islands. The FWG agreed in July 2016 that the catch figures from the <i>Busilacchi 2008</i> research are the best estimates of traditional take of finfish. While originally reported by CSIRO as 12 t this was further refined to 5.155 t. The RAG recommended that an estimate of 10 t be used for decision making noting data was only from three islands, the number of TIB fishing endorsements has increased and effort creep may be occurring. NOTING that anecdotal information presented at the FRAG by TIB industry members infers this number generally may have gone down.
Recreational	2	RAG advised that based on the available evidence from QDAF recreational survey results recreational catches are likely to be minimal. Changed now - based on QDAF survey (2013) which included TS.
Charter	Likely to be minimal	Available QLD logbook records show Charter boat line catches are low. Logbook records for the period between 1995 and 2014 report a total of 19.58 tonnes of mixed species taken from Torres Strait waters. RAG has advised based on the available evidence from QDAF logbook data from charter catches are likely to be minimal.
PNG catch sharing	0	PNG-NFA declined to enter into catch sharing arrangements under the Treaty for 2018-19 fishing season.

27. At the Finfish RAG 1 meeting on 9-10 November 2017 the following advice was provided on catches taken outside of the commercial fishery:

- Recreational sector catches are likely to be minimal based on available evidence from the QDAF surveys.
- Charter sector catches are likely to be minimal based on available evidence provided from QDAF catch data. The RAG noted that there is no evidence to suggest the number of charter boat operations/licences is increasing.
- RAG recommended the estimate of subsistence take of Spanish mackerel used for TAC setting be increased from 5.155 tonnes to 10 tonnes based on the following points:
 - Data underlying the estimate was ageing and was available from only three islands
 - The number of TIB (commercial) sector fishing endorsements has increased since the Busilacchi study.
 - Effort creep may have been occurring from the 1990s CSIRO studies to the Busilacchi study and may still be occurring.
 - Torres Strait population has likely decreased since the Busilacchi study.
- RAG considered that there was no requirement to provide a recommended subsistence take deduction from the coral trout TAC given the amount of available information and that an assessment would likely be conducted on the species in 2018.
- RAG did not recommend any work on improving the estimates of mortality at this time though some options were considered.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
STOCK ASSESSMENTS Coral trout stock Recommended Biological Catch for 2020-21 season	Agenda Item No. 2.2 FOR ADVICE

RECOMMENDATIONS

That the Finfish Fishery Resource Assessment Group:

1. **DISCUSS** and **PROVIDE ADVICE** on a Recommended Biological Catch (RBC) for coral trout for the 2020-21 season noting that the current notional TAC of 135 t has been in place since 2008 and is based on average catches between 2001 and 2005;
2. **NOTE** FFRAAG 4 (13-14 March 2019) recommended maintaining the 134.9 t¹ tonne TAC for the present 2019-20 season;
3. **REVIEW** previous RAG advice on best available estimates of Coral trout catches taken outside of the Fishery and taking into account any other available information, **DISCUSS** and **PROVIDE ADVICE** on best available estimates to apply for the 2020-21 season; and
4. **PROVIDE ADVICE** on future assessment needs for the Torres Strait coral trout stock.

KEY ISSUES

5. Under the funded project “*Harvest Strategies for the Torres Strait Finfish Fishery*” a preliminary formal stock assessment for the Torres Strait coral trout stock was performed by QDAF and UQ stock assessment scientists and presented to FFRAAG 4 (13-14 March 2019).
6. The RAG accepted the assessment as preliminary noting the stage of development of the assessment and the range of uncertainties within the assessment. Further peer review and development is recommended. The RAG strongly recommended that ongoing work be undertaken to ensure the assessment can be developed and made available for future management decisions.
7. The RAG accepted the methodology of the assessment of using biomass estimates from known Great Barrier Reef (GBR) habitats and inferring and scaling these values to Torres Strait habitats based on satellite mapping data to model the population and create an estimate of abundance.
8. The RAG noted that GBR values were an input to the model together with a catch per unit effort data series from the sunset licence sector daily fishing logbooks.
9. The RAG noted that although the values used as inputs to the assessment were estimates from an adjacent fishery and had some uncertainty associated with them. The outputs of the model were still useful in scaling the present level of effort, risk and catches in the Torres Strait Fishery.

¹ Note: the PZJA decision for a nominal TAC was the exact value of 134.9 t. AFMA advises that to aid stakeholder understanding of catch limits this value will publically be reported as 135 t for simplicity.

10. Through the preliminary assessment, the RAG noted that the outputs suggest that the Torres Strait coral trout stock is presently healthy with around 80 per cent of virgin biomass available and that this outcome was validated by advice from industry members that the stock appears healthy. The RAG noted that all of the model estimates of current spawning biomass were above 65 per cent estimated virgin biomass.
11. In considering the available information and likely risks to the stock from recent catch levels the RAG recommended maintaining the current 135 t Total Allowable Catch. The RAG noted that the stock assessment once developed, together with an agreed harvest strategy would provide an effective basis to reconsider the current TAC.
12. Having regard for FFRAG advice at their 15 March 2019 meeting the FFWG agreed to recommend maintaining the 134.9 t TAC for coral trout for the 2019-20 season noting likely stock status and that recent catches have been substantially below the TAC. Assuming current catch levels remain unchanged, the FWG supported maintaining this TAC until it can be reconsidered in light of an agreed harvest strategy and stock assessment. The FFWG noted FFRAG advice that the current stock assessment is preliminary.
13. PZJA Meeting No. 31 on 1 April 2019, noted FFRAG and FFWG advice and decided that there would be no change to the current coral trout TAC of 135 tonnes in light of the likely status of the stock and recent catches being substantially below the TAC.
14. Catch levels in the 2019-20 season were low with levels of total catch and sunset sector fishing effort relative to previous seasons with less than 20 t of coral trout harvested by both sectors combined.

BACKGROUND

Stock assessment model

15. The data that informs this model was provided by fishers to AFMA through daily fishing logbooks (TSF01), the current TDB02 Catch Disposal Records and the older (now defunct) TDB01 docket book. Data from both Traditional Inhabitant Boat fishers, island freezers and non-traditional inhabitant fishers is captured. These fishing data have been provided to CSIRO, QDAF and UQ under a strict deed of confidentiality and are treated with the utmost confidentiality.
16. Fishing data were used to produce a standardised Catch Per Unit Effort (CPUE) time series which enables stakeholders to track how the fishery harvests have performed over time.
17. Mapping data (Geographic Information System, GIS) for Torres Strait coral reefs has been used to measure the amount of suitable coral trout habitat within Torres Strait.
18. Estimates of trout per hectare from the northern most areas of the Great Barrier Reef (for which there is available survey data) have been overlaid across habitat types in the Torres Strait to provide an estimate of absolute biomass for coral trout.
19. A number of other assumptions are used to inform the model e.g. age at sexual maturity, length at age which are drawn from proven east coast assessment methodologies.

Previous considerations of stock status and catch limits

20. Prior to the delivery of the 2019 preliminary stock assessment, the status of the coral trout stock has been evaluated against the results of Management Strategy Evaluation (MSE) work (Williams *et al.* 2007, 2011). In this MSE work 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.
21. The biomass in 2004 was estimated to be more than 60 per cent of unfished levels (Williams *et al.* 2011, 2007).
22. 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).
23. The results of the 80 t catch simulation indicated that the stock would increase to more than 80 per cent of the unfished biomass within 20 years at that catch level (Williams *et al.* 2007, 2011 **Figure 1** below).
24. Until the 2019 preliminary stock assessment, this MSE work was used to support decision making on stock status and has supported the 135 t notional TAC for coral trout which has been maintained. The MSE work suggested that catches up to 170 t would support a healthy biomass with building occurring.

ESTIMATING CATCHES TAKEN OUTSIDE THE FISHERY

25. At its 9-10 November 2017 meeting (FRAG 1) the RAG:
 - advised that based on the available evidence from QDAF recreational survey data and charter sector logbook data, both recreational and charter catches are likely to be minimal; and
 - considered that there was no requirement at present to deduct coral trout subsistence catches given the amount of available information and that an assessment would likely be conducted on the species in 2018.

FUTURE ASSESSMENT ADVICE

26. FFRAG has recommended to the 25 November 2019 Torres Strait Scientific Advisory Committee Meeting a draft research scope for TSSAC support to fund a small project to update the trout standardised CPUE series in 2020-21 (based on data up to June 2020) as a means to examine how the fishery is tracking in the absence of a full stock assessment.
27. The project "*Harvest Strategies for Torres Strait Finfish Fisheries*" is in the final stages of delivery and, based on stakeholder advice, has suggested the next full assessment for coral trout is to be carried out in three years time (2021-22 to support management in 2022-23 season). This period is recommended to allow extra catch and effort data to be submitted by the TIB sector and for work to occur on issues identified with the preliminary assessment. The additional data priorities are:
 - a) analysing the identified 1994-95 CSIRO fish survey data
 - b) improved TIB catch and effort data;
 - c) a new catch or underwater visual survey.
28. The RAG is asked to provide advice to AFMA at this agenda item on suggested future assessment and monitoring needs for coral trout.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
HARVEST STRATEGY Torres Strait Finfish Fishery Harvest Strategy	Agenda Item No. 3.1 FOR DISCUSSION and ADVICE

RECOMMENDATIONS

1. That the Finfish Fishery RAG **DISCUSS** and **PROVIDE ADVICE** on the components of the draft harvest strategies and advise on an appropriate work plan to resolve any outstanding matters identified in **Table 1** (Spanish mackerel) and **Table 2** (coral trout).

KEY ISSUES

1. The AFMA funded project “*Harvest Strategies for the Torres Strait Finfish Fishery*” project (the HS project) has now closed. A final project report was submitted to AFMA on 14 June 2019 and updated on 18 October 2019 following the June stakeholder HS meetings and will be provided to members pending final editing by the Principal investigator, Dr Trevor Hutton.
2. Key outcomes of the HS project include updating and further progressing the Spanish mackerel stock assessment, undertaking the first stock assessment for coral trout and recommending a range of components for the HS based on stakeholder input and project team expertise and analysis. The project outcomes are a useful basis to guide further work required to finalise the draft HS’s for consideration by the PZJA.
3. FFRAG 5 (31 Oct - 1 Nov 2019) considered and analysed a summary table of components of the draft Harvest Strategy, and outstanding areas for work identified by AFMA, with a focus on the Spanish mackerel strategy. A summary of the draft FFRAG advice on the strategy is below.
4. **Tables 1** and **2** provide summaries of:
 - a) each harvest strategy component recommended by the FFRAG and FFWG to date and captured in the final report; and
 - b) outstanding matters identified by AFMA requiring further advice from the FFRAG and FFWG.

These tables include suggested changes to the text of the final report (blue text) and FFRAG 5 comments against certain components outlining issues for progression.
5. Having regard for any further advice from the Harvest Strategy project team, FFRAG advice is required on outstanding matters listed in the tables and any others matters that may be identified by members.
6. FFRAG advice is sought on a possible work plans to undertake any necessary further work.

FFRAG 5 DRAFT OUTCOMES (31 Oct - 1 Nov 2019): HARVEST STRATEGY CONSIDERATION

Harvest strategy for Spanish mackerel

Key outstanding points that FFRAG 5 elected to revisit and provide advice on from the framework were:

- Confirming the B48 target reference point (and providing advice around B60 being an aspirational target for the future)

- Confirming the approach under the harvest strategy should the Spanish mackerel stock drop below B LIMIT (20 per cent of unfished biomass)
- Developing Decision rules (harvest control rules) and building rates for when the stock is above B LIM but below B TARGET - how the stock is to be moved towards target based on stock assessment outcomes
- Considering the assessment cycle for Spanish mackerel under the Harvest Strategy with associated certainty and risk.

The FFRAG noted reference points had been agreed by stakeholders and captured in the project outputs. FFRAG considered that the key component that needed progressing was development of decision rules for building the stock to the target reference point.

The harvest strategy project team presented a 'hockey stick' decision rule for consideration, mapping a proposed relationship between harvest rate and biomass and how this relationship could be built into the stock assessment to set Recommended Biological Catches (RBCs) ($RBC = \text{biomass} \times \text{harvest rate}$). It was agreed for this to be further developed into a matrix and considered at FFRAG 6 in the context of the Spanish mackerel stock assessment, with consideration being given to how RBC setting and decision rules might work under different possible scenarios under the Strategy.

The FFRAG advised that forward projections based on the model of how the stock would perform under different scenarios should be analysed and the RAG could examine risk to the stock based on the number of model runs where the stock is predicted to drop below the limit reference point of B20, noting the model uses a range of 35 model runs with maximum likelihood estimates.

FFRAG5, 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).
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Issues with low data levels under the harvest strategy

Noting that the indicator of Spanish mackerel stock abundance in the fishery is mainly driven by data from a small number of sunset boats (and that the same applies for coral trout), the RAG considered a future scenario for the fishery where these sunset fishers were no longer active (i.e. low abundance and small available TAC might mean no leasing, boat break downs or these fishers working other fisheries like QLD east coast). The RAG considered that this scenario would mean a loss of the signal of stock abundance and would require urgent development of alternative options for data collection to support ongoing understanding of the stock.

The suggestion was made that, if this scenario arose, a sunset boat could be contracted as a fishery dependent survey boat accessing set areas of the fishery; examining catch-rates at set locations, taking biological samples and performing tagging work. FFRAG did not recommend this as a firm option, but as a suggested method for consideration in future.

<p>The PZJA Torres Strait Finfish Resource Assessment group RECOMMEND that if catch rate data (e.g. catch and effort data from sunset daily fishing logbooks) are no longer available from the fishery the RAG support investigation of alternative options for data collection.</p>

The FFRAG recognised a key need for the future of the fishery would be to build a time series of TIB catch and effort data that marries with the sunset data series to support future assessment scenarios. It was noted that it would be challenging to standardise the two data streams given that the TIB sector fished different areas with different fishing effort patterns

The TSRA Fisheries Portfolio Member suggested that, as a management priority, there is a need for the development of a statement to help fishers and community leaders understand the need for building TIB catch and effort data to support understanding the health of the Spanish mackerel and

the harvest strategy, especially if Sunset licences are not active in the fishery. It was suggested that this should be publically released with a communications strategy e.g. in the Torres Strait News.

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.

Draft Harvest Strategy for Coral Trout

Given the FFRAG 5 meeting focus had been on progressing the draft harvest strategy for Spanish mackerel, the FFRAG agreed to continue reviewing the draft coral trout harvest strategy framework at FFRAG 6, but briefly touched on a few key issues:

- FFRAG noted that the outputs of the harvest strategy project had recommended a 'holding pattern' approach for coral trout (based on the preliminary assessment suggesting there was currently 80 per cent of unfished biomass available and that a number of technical issues had been identified with the assessment for progressing) while further data was collected from the Fish Receiver System to support future analysis of the stock and harvest strategy options.
- FFRAG noted the project outputs, based on stakeholder advice, suggest two triggers which may indicate changes in the risk profile for the stock:
 - Catches from TIB + Sunset sector exceeding 90t (being two thirds of the constant catch TAC of 134.9 t)
 - If the standardised catch rate per day drops below 90.6 kg per primary vessel day¹.
- Either of these two triggers being met will 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.
- Noting the next stock assessment is planned for 2021-22 (TAC advice for 2022-23) FFRAG advised that, until this time, the best practice would be for the RAG to examine standardised catch rates (rather than raw/nominal catch rates) in the intervening years to check how the stock is tracking and whether the trigger for stock status change has been met.
- FFRAG strongly 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.

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.

Table 1. Status of Spanish mackerel draft harvest strategy components with draft comments from FFRAAG 5 meeting (31 Oct - 1 Nov 2019)

Guiding principles and key fishery attributes – factors that helped shape the development of the Harvest Strategy		Draft FFRAAG 5 Comments (green shading indicates sufficient RAG advice has been provided)
Recommended	Consistent 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).	AGREED
	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, Kulkalgal Sabe.	AGREED AFMA queried whether the Kaurareg nation was included in this statement. Traditional Owners present advised that Maluailgal Sabe law reference includes the inner western communities.
	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.	AGREED - with minor change. RAG suggested that the word 'future' is added to reference sustainability.
	TACs should vary according to stock status (up and down): <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. 	RAG noted that 'banking' fish was challenging to capture in the decision rules of a harvest strategy with stocks generally building towards a target reference point in a prescribed way based on assessment outcomes. RAG noted that the prescription for this in-principle objective from traditional owners was for potential increases in catches to be interpreted as having consideration for the position of the TIB sector first by not necessarily increasing catches leased to sunset fishers which might impact TIB sector catch rates closer to home reefs and fishing grounds. RAG also advised that this approach and wording should also consider the level of certainty and precaution underlying future

		decision making. RAG suggested that this wording required greater clarity in the final harvest strategy but the spirit of the objective was understood and would likely only apply to the fishery when the stock has eventually build above the Target Reference Point and increases in TACs (via a potential fish-down of the stock to B Target by increasing harvests) are suggested by the assessment estimate of biomass. It was considered that clear decision rules to implement this stakeholder desire would need to be developed with stakeholders, potentially as the Strategy is reviewed over time.
	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.	AGREED. FFRAG noted that the Strategy has a focus on the immediate future of the fishery given present stock condition. It was noted that a 94 t RBC is not conservative and balances sustainability with socio-economic impacts; and that a 94 t RBC based on present biomass (31 per cent of unfished) might take 17 years to build to the B48 target reference point.
	Torres Strait Spanish mackerel stock are assumed separate from other regional stocks. They do not mix have limited mixing with the Queensland East Coast and the Gulf of Carpentaria stocks (see Buckworth et al. 2007 and Newman et al. 2009).	AGREED minor wording change to reflect limited mixing with adjacent stocks.
	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.	AGREED with minor wording additions
	Spanish mackerel are a shared resource important for subsistence, commercial, traditional, charter and recreational sectors.	AGREED - Minor wording additions to acknowledge shared stock with PNG under the Torres Strait Treaty. and agreed to move this point to higher up in the table to give it higher precedence.
Outstanding	None identified at this time. Subject to any further FFRAG and Working Group advice	(none).

Operational objectives What we want the harvest strategy to achieve.		RAG comments
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.	AGREED
	Maintain stocks above the limit biomass level (B_{LIM}), or an appropriate proxy, at least 90 per cent of the time.	AGREED
	Reduce fishing levels if a stock is below B_{TARG} but above B_{LIM} .	AGREED
	Implement rebuilding strategies, if the stock moves below B_{LIM} .	AGREED - considered further below in the context of decision rules if B_{LIM} triggered.
Outstanding	None identified at this time. Subject to any further FFRAG and Working Group advice	FFRAG agreed with the operational objectives captured by the draft Harvest Strategy.

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)	RAG Comments
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). (not considered by FFRAG 5)
Outstanding (1)	Fishing mortality (B) based indicators. The stock assessment model can estimate a level of F to move the stock towards the target. There was some consideration from the FFRAG of using an F-based indicator in the harvest strategy. Advice is sought from the FFRAG on whether there is value in further exploring this as an option. (not considered by FFRAG 5)

Reference points			RAG comments
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.	AGREED
	Short-term target (B_{TARG}) reference point = B_{48}	B_{48} ² is the default target (a proxy for B_{MEY} - biomass at maximum economic yield) in the Commonwealth HS Policy and the project team advise that B_{48} is less than B_{MEY}.	AGREED with B_{48} as target reference point and removal of line as B_{48} is known to be less than B_{MEY} .
	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 ³ .	AGREED
Outstanding (2)	B_{48} is less than B_{MEY}	The HS project team advise the current target of B_{48} is less than B_{MEY}. FFRAG discussion and advice on this calculation is required to ensure a common and clear understanding.	FFRAG supported the B_{48} target reference point and outlined the following rationale for adopting this value. 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

² Comm HSP: The target reference point for key commercial fish stocks is the stock biomass required to produce maximum economic yield from the fishery (B_{MEY}). 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 B_{MEY} is unknown or not estimated, a proxy of 0.48 times the unfished biomass, or 1.2 times the biomass at maximum sustainable yield (B_{MSY}), should be used. Where B_{MSY} 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.

³ Comm HSP: All stocks must be maintained above their biomass limit reference point (B_{LIM}) 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>catches) focused on maximising sustainable harvest (yield) from the fishery.</p> <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>
Outstanding (3)	Long term B _{TARG} = B ₆₀	<p>Advice from the HS project team and RAG scientific members is sought on the suitability of B60 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.</p> <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>FFRAG agreed that B60 should not be included as part of the final harvest strategy and was aspirational only at this stage in the fisheries development.</p> <p>FFRAG are supportive of a future research project to determine what the optimum biomass for the fishery might be, noting, while aspirational, a value as high as B60 would likely trade off available catches and might limit the number of boats that could feasibly fish. FFRAG agreed that future research could focus on developing an optimum biomass in line with future reviews of the Strategy.</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}. Having regard for any advice from the HS project team advice is sought however, RAG advice on the suitability of B_{60} against other possible higher target biomass levels. 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 is sought to 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.			RAG comments
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}).	AGREED FFRAG noted that before the biomass dropped below B_{20} the RBCs would be very small to move the stock away from this point.
	Re-opening the Fishery ⁴	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.	AGREED
Outstanding (4)	If the stock is above the limit reference point but below the target	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	FFRAG noted that the best way to build the stock to target was to reduce harvests but this approach needs to be balanced against socio-economic

⁴ 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.

	reference point.	<p>reference point or the rate of building near the target or limit).</p> <p>An outstanding action has been for the FFRAG to consider scenarios with multiple timeframes to build the stock to reach B_{48}. Specifically to examine a 12 year recovery time (equivalent to 3 times the average age of maturity) and explore 10 and 8 year recovery periods as alternatives.</p> <p>Having regard for any advice from the HS project team, advice is sought from the RAG on appropriate building rates to incorporate into the HS decision rules and/or a work plan for examining options noting scenarios will be examined and presented by the Spanish mackerel stock assessment team (<i>AFMA funded project 2019/0831</i>) as part of the next stock assessment update to be presented at the FFRAG planned for 27-28 November 2019.</p>	<p>impacts when setting TACs based on the current state of the stock.</p> <p>Noted that as the fishery is open-access for TIB and with extra infrastructure coming online to support participation and potential low seasons in TRL/BDM there may be increasing fishing pressure which may impact building rates in the fishery.</p> <p>FFRAG noted that if the harvest control rules were applied at present with the stock currently at B_{31} to build the stock to B_{48} a harvest rate of approximately 9% would be recommended. The RBC for B_{31} would be 63t if strictly applied and the RBC once the stock reaches B_{48} would be 129t (an 18% harvest rate). However, during building to the BTARG the RBC should increase each year as the stock moves closer to BTARG.</p> <p>FFRAG noted the proposal to examine building rates of 8, 10, 12 year timeframes and what these would mean for the fishery (catches and catch rates). It was noted that the logic supporting a particular value as a building timeframe came from the harvest strategy policy and only applied (in the older HS Policy version) to when a stock was below B_{LIM}.</p> <p>FFRAG noted that the funded mackerel assessment project would have building timeframes (forward projections) as a standard output and that FFRAG 6 could examine these rates in the context of the assessment update.</p>
Outstanding (5)	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 now 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 confirmed that under the HS targeted fishing will cease for mackerel if the estimate of biomass shows the level of the stock is below B_{LIM} and a FFRAG will have a key role in developing a rebuilding strategy should this occur (in line with Commonwealth Harvest Strategy Policy).</p> <p>FFRAG noted that four years would likely be the minimum possible recovery time (based on biology</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>FFRAG to provide advice 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>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>
Outstanding (6)	<p>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.</p>	<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. Additionally, at the last FFRAG/FFWG meeting 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> <p>FFRAG are asked to confirm this approach and consider how future decision rules may incorporate increased growth of the TIB sector.</p>	<p>(not discussed)</p>

	utilisation of the resource).		
Outstanding (7)	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 the last 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>	Not specifically discussed by the RAG. However, at other items it was considered that focus would need to be on building the stock to B40 and development of harvest control rules in future to address this stakeholder desire when biomass is proven to be above B TARG.

Monitoring and assessment cycle		RAG comments
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 .	AGREED.

Outstanding (8)	<p>Subject to any further advice from the HS project team, 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, noting that some biological data is to be sampled in 2019 and 2020 as a snapshot to augment our understanding and assessment of the stock but no monitoring program advice has been developed or presented to date. c) Standard procedures for applying the decision rules to the stock assessment outcomes, and, any other minimum stock assessment scenarios, and/or, sensitivities that should be examined to support 2019-20 season TAC setting (e.g. FFRAG 4 used a methodology of selecting the median of a range of plausible stock assessment scenarios to recognise a range of uncertainty). 	<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 once 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> <p>QDAF advised that conducting assessments over the next two years will be semi-automated and hence, it will not be unreasonable to run annually, provided data supply is consistent (i.e. just inputting new seasons catch and effort data).</p>
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Table 2. Status of Coral trout draft harvest strategy components.

Guiding principles and key fishery attributes Factors that helped shape the development of the Harvest Strategy	
Recommended	Consistent 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, Kulkalgal 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 fishers to make money and to protect the traditional way of life, livelihoods and cultural values.
	Coral trout are a shared resource important for subsistence, commercial, traditional, charter and recreational sectors.
	TACs in the Torres Strait Finfish Fishery should vary according to stock status (up and down): <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.
	Since the 2007 Government funded licence buyback there has been limited effort in the fishery and the available total allowable catch has been under-caught.
	Four coral trout species commercially caught in Torres Strait. These four species (Common, Islander, Passionfruit and Blue-spot) are managed under a 'species group arrangement with a shared total allowable catch. There is a risk of local depletion of any of the four species in the Coral trout 'species group' as the existing assessment model assumes all four species are one stock.
Outstanding	None identified at this time. Subject to any further FFRAG and Working Group advice

Operational objectives	
What we want the harvest strategy to achieve.	
Recommended	Maintain the stock at current levels given: <ul style="list-style-type: none"> the assessment is preliminary meaning it does not supply enough evidence to support changing the TACs without further development and catch data to support it; and noting the present high estimate of biomass and recent low harvests, industry are supportive of a conservative B_{TARG} for the stock to manage the fishery at a level which leaves more fish in the water than a straight MSY target rate⁵.
	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} .
Outstanding	None identified at this time. Subject to any further FFRAG and Working Group advice.

Indicators	
Indicators provide information on the state of the stock and how the stock is doing against agreed reference points (reference points are listed 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).
Outstanding (9)	The current stock assessment is considered preliminary and as a result, the biomass calculation is not yet relied on as an accurate indicator of abundance or biomass. The FFRAG/FFWG did recommend a CPUE proxy for B_{80} to be used as a trigger for future stock assessment (see <i>Monitoring and Assessment</i> below). Further discussion and advice is sought from the FFRAG on development of these and other indicators.

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 set out where we want (target) and don't want (limit) the desired stock levels in the fishery to be.

Recommended	Unfished biomass (B_0) = $B_{1950} = 100\%$.	The year 1950 is considered to be 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_{60}	<p>The target biomass B_{TARG} is the spawning biomass level equal to 60% of B_0 to take account of the fact that the resource is important for the traditional way of life and livelihood of traditional inhabitants, is leased to sunset licence holders and the target biomass level must be biologically and economically acceptable.</p> <p>The current agreed B_{TARG} is based on the assumption that B_{MSY} is 50% of B_0 for this species and B_{TARG} should be set at $1.2 B_{MSY}$.</p> <p>Stakeholders were supportive of a target that can take into account the patchiness of the stock (small areas with good trout catch rates separated by large areas of desert), the preliminary nature of the stock assessment, the risk of localised depletion, the basket of four species and that a proportion of the stock is not available.</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 ⁶ .
Outstanding (10)	Consideration of alternative approaches to guide decision making in the fishery.	<p>Reference points for coral trout have been agreed though, as per below, additional work is required on development of decision rules to move the stock relative to these points.</p> <p>Given that the initial stock assessment model does not provide a sufficient basis to support formation of decision rules, FFRAAG advice is sought on possible alternative approaches for a strategy to guide decision making, for example the FFRAAG may want to consider tiered harvest strategies approaches from data-poor fisheries. Such tiered strategies may set out a precautionary base-level (or status quo) position, outline what data are required to progress the fishery and what the next tier may mean for a fishery in terms of improved understanding/decreased risks to the stock and less precautionary catch levels.</p>

⁶ Comm HSP: All stocks must be maintained above their biomass limit reference point (B_{LIM}) 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.

Decision rules (also called harvest control rules).

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

Recommended	Maintain current TAC until next Stock assessment	There is no current agreed decision rule for setting catch limits. The FFRAG/FFWG meeting recommended that the current constant RBC of 134.9 tonnes be adopted as the interim RBC until the stock assessment is updated. The current preliminary assessment indicates the stock is likely to be greater than 80% of the unfished biomass level. In the future the decision rules would recommend a harvest level (as a recommended biological catch -RBC) on the basis of evaluating the resource status.
	If stock falls below the limit reference point (B_{LIM}).	The Fishery is closed (all commercial fishing 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 ⁷	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.
Outstanding (11)	Maintain current TAC until next Stock assessment	FFRAG are to provide further advice on the operational objective for maintaining the stock at present levels, specifically what an appropriate level of harvest might be to maintain the present impact on the stock, noting: <ul style="list-style-type: none"> a. while the available TAC has been 134.9 t a maximum of 46 t of harvest has been reported taken per year since the 2007 buyout; b. potential risks to individual species within the species basket (the four different coral trout species) noting the species distribution and catch composition is not well understood which add uncertainty around the biomass estimates; c. there is no absolute certainty as to when additional data will be available to Fishery (improved TIB data, independent dive survey).
Outstanding (12)	If stock falls below B_{LIM}	Consistent with the Commonwealth HS policy the FFRAG and FFWG have recommended that commercial fishing for coral trout should cease if the stock falls below B_{LIM} . Further FFRAG discussion and advice is now sought to consider additional decision rules and actions required to

⁷ 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.

		<p>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 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>FFRAG to provide advice on:</p> <ul style="list-style-type: none"> c) A process to understand how the stock has rebuilt above B_{LIM} with certainty in the absence of commercial fishing e.g. model projections. a) whether a decision rule with a lower level of fishing pressure would be appropriate if the stock is above but close to B_{LIM}.
Outstanding (13)	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 a decision rule must be designed and agreed 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). FFRAG are to advise on a process for this decision rule to be developed.
Outstanding (14)	Harvest based decision rules (desired fishing intensity) a fishery may have indicators and reference points including spawning stock size (biomass) or the amount of harvest (F or fishing mortality).	Decision rules have not yet been established for harvest related performance metrics (measuring how the stock is being used) such as future 'target' catches or 'target' catch rates desired by industry per primary vessel or per TIB dory day. The focus so far has been placed on agreeing biomass based reference points and decision rules.
Outstanding (15)	Precautionary increases to total allowable catches.	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 a low present level of utilisation.

	<p>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 the last 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	<p>FFRAG has recommended that a stock assessment should be conducted during the 2021-22 season, once further data is available, ahead of setting catch limits for the 2022-23 season. Postponing the stock assessment for three years would allow enough time for additional data to be included. The additional data priorities identified are:</p> <ul style="list-style-type: none"> a) the 1994-95 CSIRO fish survey data which may form a valuable baseline datum; b) improved catch and effort data from TIB fishers; and c) fishery independent data such as an underwater survey or biological sampling. <p>Trigger reference points (or breakout rules) were recommended for the years between stock assessments. The agreed trigger reference points will use standardised CPUE data as a proxy for biomass and the yearly fishery catch data to ensure the maximum yield of the fishery zones are not being exceeded.</p> <p>The specific trigger points for when an assessment would be undertaken the next season are:</p> <ul style="list-style-type: none"> a) In line with the recommended target reference point ($B_{TARG} = B_{60}$) and taking into account the conservative approach preferred by industry, if the biomass of coral trout is less than B_{60} (B_{TARG}) then an integrated stock assessment will be conducted. To determine the biomass level, this trigger will use CPUE data as a proxy for biomass. It was agreed that the average CPUE from 2012 until 2017 (inclusive) would be used as an indicative reference point of the CPUE at B_{80} (average = 120.8 kg per vessel per day) from which the CPUE at B_{60} can be calculated and used as the trigger reference point. Given the ratio of 80:60 is equal to 0.75 then the trigger reference point which would activate the rule that an assessment must be undertaken is: <i>if the standardised CPUE falls below 90.6 kg per (primary) vessel per day</i> (computed as $0.75 \times 120.8 = 90.6$). b) If the combined yearly total catch of the four coral trout species from both commercial sectors is greater than 90 tonnes. Ninety tonnes was agreed because this 2/3 of the current constant RBC of 134.9 tonnes. <p>If either (a) or (b) above occurs, the stock assessment must be repeated the following year in order to monitor the condition of the stock.</p>
Outstanding (16)	FFRAG to provide advice on likely data needs to support monitoring stock performance under the Strategy over time.

The FFRAG advice should also take into account the possible scenario where assessments are able to be funded in accordance with the recommended cycle and/or the additional data recommended to support a further stock assessment are not readily available.

FFRAG to provide advice on procedures for interpreting the stock assessment outcomes under HS and how decision rules are to be applied based on these outcomes. While a stock assessment may be triggered through analysis of CPUE data in intervening years between assessment FFRAG advice is sought on what the process should be following this trigger being met and what decision rules should be applied based on the outcomes of this stock assessment i.e. whether the TAC should be changed to reflect this suggested change in biomass.

BACKGROUND

Harvest strategy project objectives

7. In developing these draft frameworks, the project has aimed to develop and ratify a clear and concise draft harvest strategy for the Torres Strait Finfish Fishery. It has aimed to provide guidance for sustainable fishing, the data requirements that underpins management strategies, options for flexibility to suit market and community needs, targets and limits and guidance for situations where these targets and/or limits are reached, and data requirements for potential fishery expansion. The project has aimed to:
 - a) Collate and analyse available coral trout and Spanish mackerel fishery data to estimate variability and assess whether there is sufficient information to develop time-series indicators of stock status. This includes linkage to the Finfish Monitoring Project (data links and sampling methodology).
 - b) Summarise and assess utility of updated stock assessments and reference points for coral trout and Spanish mackerel.
 - c) Present results and HS guidelines (including Harvest Control Rules) to the Finfish working group, with fishery managers and representative stakeholders to develop and evaluate key elements of the draft HS. It is the responsibility of the FWG to take the recommended draft HS and formally adopt it as the HS (noting implementation of the harvest strategy is addressed at FFRAG5 Agenda Item 3.2).
8. The Harvest Strategy project comprises four distinct tasks.
 - a) **Task 1** – Data collation and quality assessment (this task collates data and provides early consideration of harvest strategy options).
 - b) **Task 2** - Assessment minor revision (Spanish mackerel) and assessment development (Coral trout)
 - c) **Task 3** - Harvest Control Rule (HCR) specification – for all components of a Harvest Strategy, these being:
 - Indicators (full set of chosen indicators outlined) (here included in Task 1);
 - Current Monitoring and future monitoring (here included in Task 1, but future monitoring relevant to all Tasks);
 - Reference Points (for both stocks: Spanish mackerel and coral trout – the target and limit reference points will be defined and agreed to as part of Task 2, and this task);
 - Method of status evaluation (assessment and empirical). For each stock the actual method depends on data and is a cost/risk analysis that should be informed by resources available (AFMA to advise);
 - Decision rules.
 - d) **Task 4** - Summation of formal links with other projects e.g. Finfish Monitoring Project (mackerel ageing and length frequency sampling).

Harvest strategy development

9. As per Tasks 1 and 2, the project has delivered an updated stock assessment for Spanish mackerel using data up to June 2018 and has delivered a preliminary stock assessment for coral trout.
10. Through stakeholder meetings (FFRAG, FFWG, dedicated HS meetings), project team meetings and taking advice from industry the project has developed specification on components for the two harvest strategies. Key design principles provided from stakeholders in forming these strategies (page 8, Joint FFRAG-FFWG meeting 27-28 June 2019 meeting record) has been:

General design principles

1. TACs should vary according to stock status (up and down);
2. If biomass decreases be cautious. Stock is not to go below the limit;
3. If biomass is increasing be conservative; 'bank' fish.
4. For Spanish mackerel : a shorter-term target is required

Important considerations

Commercial fishing by traditional inhabitants is important for:

- local employment and economic development; and
- passing down traditional knowledge and cultural lore.

The Finfish harvest strategy should:

- Compliment cultural lore;
- Have regard for TIB participation;
- Ensure sustainability, enough fish are left in the water to make money and the protection of traditional livelihoods and cultural value

11. The last FFRAG meeting (joint FFRAG and FFWG meeting 27-28 June 2019: meeting record is at **Agenda Paper 2.2.1b, page 43-67**) provided advice to the project team and suggested actions to be progressed. AFMA will note updates from the project team on these items and take advice from FFRAG on progressing these actions. An excerpt of the meeting record detailing these actions is as follows:

The Group briefly discussed the action items from the previous meeting. It was agreed at the previous meeting (Harvest Strategy Meeting 11-12 June 2019) that the project team would take the following suggestions from industry away for further development prior to this meeting if possible:

- *Explore 15 per cent change decision rules in other fisheries where there is asymmetry (the rule applies when the recommendation is to decrease the TAC but not when the recommendation is to increase the TAC) and how these rules might apply to setting TACs in this fishery.*
- *Shorter recovery time approach for Spanish mackerel (e.g. 8 or 10 years for Spanish mackerel instead of 12 years used as a timeframe for building when below B TARG but above B LIM).*
- *In order for the RAG to explore a CPUE trigger rule for conducting a Coral trout assessment, provide the standardised CPUE over the reference period or a shorter time period (e.g. average of last three seasons). This point was discussed during the meeting and the time frame from 2012-2017 (inclusive) was agreed to.*

The Project team noted that these items were outstanding action items and would be completed for the next Finfish Resource Assessment Group to consider (although during this meeting – the CPUE trigger rule was discussed and a recent time-period was chosen).

Status of draft harvest strategies – Coral trout

12. Following advice from the two harvest strategy meetings held in June 2019, the project team has incorporated advice tabled from industry, FFRAG and FFWG and has supplied AFMA with a draft report.

13. Stakeholder advice from the 27-28 June 2019 meeting on development of the coral trout harvest strategy is as follows:

A stock assessment should be conducted in three years provided additional data available (during the 2021-22 season). The Group noted that postponing the stock assessment for three years would allow enough time for additional data to be included. The additional data priorities are: a) the 1994-95 CSIRO fish survey data b) improved TIB data; c) a new catch or underwater survey.

A regular stock assessment schedule should be determined. The Group agreed that between now and the next stock assessment, that analyses should be conducted to determine the appropriate schedule for conducting stock assessments in the Coral Trout Fishery.

The use of empirical trigger reference points was recommended for the years between stock assessments. The agreed trigger reference points will use CPUE data as a proxy for biomass and the yearly fishery catch data to ensure the maximum yield of the fishery zones are not being exceeded.

The specific trigger reference points were:

a) In line with the recommended target reference point (B TARG = B60), and taking into account the conservative approach preferred by industry, if the biomass of coral trout is less than B60 (B TARG) then an integrated stock assessment will be conducted. To determine the biomass level, this trigger will use standardised CPUE data as a proxy for biomass. It was agreed that the average CPUE from 2012 until 2017 (inclusive) would be used as an indicative reference point of the CPUE at B80 from which the CPUE at B60 can be calculated and used as the trigger reference point.

b) If the combined yearly total catch of the four coral trout species from both commercial sectors is greater than 90 t, an integrated stock assessment will be conducted. Ninety tonnes was agreed because this is the estimated potential yield of Zone 3 at B60 from the preliminary stock assessment, and where most of the common coral trout is caught. This level was chosen on the advice of the Science members to avoid the risk of localised depletion within any of the Zones.

Status of draft harvest strategies – Spanish mackerel

14. Stakeholder advice from the 27-28 June 2019 meeting on development of the Spanish mackerel harvest strategy is as follows:

The Group reviewed what was agreed for the Spanish mackerel harvest strategy at the previous meeting and provided the following recommendations for the draft Spanish mackerel harvest strategy:

A stock assessment should be conducted each year until the biomass is greater than B40.

It is assumed that the stock will take a few years to build to B40 at the current TAC. The industry participants noted that setting a lower TAC would allow for the stock to build faster. The ongoing regularity of stock assessments will be set once B40 has been reached.

B TARG (interim) was recommended to be B48. This is an interim B TARG that will be reviewed once it has been reached. The Group were unable to settle on a higher BTARG, given the current indicative biomass (B31) and the long term (>12 years) at current TAC levels, or significant catch reduction required for the stock to rebuild above B48. Industry expressed a strong preference for management to focus on building the biomass in the coming years, before tackling any other scenarios.

The TAC will be set to reach the target reference point (B TARG) by a determined year.

From the 2020-21 season, the TAC will be set to allow the stock to build to B48. The FRAG will consider which year should be the aim for reaching B TARG prior to setting the 2020-2021 TAC. The scientists and industry noted that in determining the target year, the social/economic impacts of a low TAC would need to be weighed against building the stock quickly.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
MANAGEMENT AND SCIENCE Review of Western Line Closure	Agenda Item 4.1 FOR ADVICE

RECOMMENDATIONS

That the Finfish RAG:

- a) **NOTE** the outcomes of public consultation on the proposal to remove the Western Line Closure; and
- b) **DISCUSS** and **PROVIDE ADVICE** to the PZJA on any scientific issues from the community consultation including possible impacts from changes to fishing effort, impacts on the Tropical Rock Lobster stock (coral trout-TRL interactions and habitat useage) and impacts on the available coral trout Total Allowable Catch.

KEY ISSUES

1. At its meeting in April 2019 the PZJA agreed to undertake public consultation on the removal of a closure to commercial fishing for finfish (not Spanish mackerel) west of Longitude 142°32'E (the Western Line Closure – Figure 1 below) (Attachment 4.1a).
2. Noting the removal of the western line closure requires the remaking of *Torres Strait Fisheries Management Instrument No. 8 - Torres Strait Finfish Fishery* the PZJA also advise that current fishing gear restrictions on Australian Traditional Inhabitants engaged in traditional fishing for finfish in the area of the Torres Strait Finfish Fishery will need to be removed at the same to reflect that the PZJA does not have jurisdiction to regulate traditional fishing.
3. The Western Line Closure reflects an historic jurisdictional boundary that was carried over when the Finfish Fishery was transferred to single jurisdiction under the PZJA. The closure is not based on a specific management need for the Fishery.
4. The Finfish Fishery Resource Assessment Group (FFRAG) has previously advised that the removal of the Western Line Closure is unlikely to cause additional stock impacts (FFRAG 4) and its removal was supported in-principle by the Finfish Working Group (FFWG March 2017)
5. FFRAG are asked to provide technical advice to the PZJA on the issues raised by communities, including possible impacts from changes to fishing effort, impacts on the Tropical Rock Lobster stock and impacts on the available coral trout Total Allowable Catch. FFRAG are asked to provide advice on the likelihoods of these impacts occurring and, if relevant, to provide advice on how these impacts might be mitigated or what work is required to better understand these impacts.

Next steps

6. The Finfish Working Group will also consider these public comments at their 29 November 2019 meeting and provide advice to the PZJA. The PZJA will consider these public views, together with advice from the RAG and Working Group at their 20 January 2020 meeting and make a decision on whether to remove the closure. AFMA will advise stakeholders on the outcome of this meeting.

BACKGROUND

Consultation

7. The public consultation process on the proposal to remove the Western Line Closure, comprised the following:

- a. A public consultation package was mailed (and emailed for those clients AFMA holds an email address for) to all Torres Strait licence holders, Native Title bodies and claimants, the Papua New Guinea National Fisheries Authority, the Australian and Papua New Guinea Co-chairs of the Traditional Inhabitants Meeting (TIM) under the Torres Strait Treaty, the Department of Agriculture and the Department of Environment and Energy formally seeking comment on the draft HS. The consultation package not only sought submissions on the draft Harvest Strategy for the BDM Fishery, but also the draft Harvest Strategy for the Torres Strait Tropical Rock Lobster (TRL) Fishery and the proposal to remove the Western Line Closure from the Torres Strait Finfish Fishery.
- b. The package also included an overview of harvest strategies more broadly, as well as a specific overview of the BDM and TRL Harvest Strategies, and a summary of the key elements being objectives, data and information; limits and reference points and decision rules.
- c. FFWG and FFRAG members were notified of the release of a public consultation package (email dated 9 April 2019) and traditional inhabitant members were invited to join AFMA in convening the community meetings.
- d. AFMA convened a round of visits to communities across the Torres Strait and Northern Peninsula Area between April-May 2019. TIB licence holders were advised about community meetings through community notices and SMS. Community visits were not undertaken at Iama, St Paul's, Kubin or Dauan due to a lack of community availability during the consultation period. The offer was also made to convene a public meeting in Cairns, though this offer was not taken up by stakeholders.
- e. The public consultation package was publicly available on the PZJA website and distributed it to attendees at community visits.
- f. Submissions were able to be made by in writing, over the phone and at community meetings. The period for submissions closed on 31 May 2019.

Written submissions

8. A written submission was received from Cape York Land Council (**Attachment 4.1b**). In their submission, the Cape York Land Council did not support removal of the closure and raised concerns about the potential impacts this may have on the Tropical Rock Lobster (TRL) stock and fishery. CYLC considered that more research and consultation should occur to establish the relationship between line fishing and TRL.

Community visits

9. Between 8 April and 22 May 2019, AFMA undertook visits to 13 communities. Community visits were not undertaken at Iama (Yam), St Paul's (Moa), Kubin (Moa) or Dauan due to a lack of availability in the period visits were conducted. However, licence holders in these communities were sent the public consultation package by mail. The offer was also made to convene a public meeting in Cairns, though this offer was not taken up by stakeholders.
10. During the community visits, communities expressed varied views on the proposed removal of the closure. Few communities were generally in favour of removing the closure. Some communities abstained from directly supporting the closure as it did not affect their area of waters but raised concerns on the impacts that lifting the closure may have on changing where fishing effort occurs in the fishery e.g. more TIB fishers targeting coral trout in Western communities may impact the stock and subsistence catch rates or fishers may move towards central or eastern communities to target trout in future. Concerns were also raised that more TIB fishers entering the fleet may impact on the available Total Allowable Catch or cause localised depletion leading to a drop in catch rates and availability to support subsistence catches.
11. Concerns were also raised that increased fishing for trout may have adverse impacts on the Tropical Rock Lobster stock and catch rates given likely interactions between these two species and shared habitats, although one community did provide advice that increased fishing for trout may relieve TRL from natural predation pressure from trout.
12. A summary of community views and concerns captured during the community visits is provided at **Attachment 4.1c**. A comprehensive report on all community visits is provided

at **Attachment 4.1d** including other agenda items other than the Western Line Closure. This report was circulated to those attendees of the meetings that AFMA had contact details for, as well as Torres Strait Island Regional Council (TSIRC) Divisional Managers and PBC Chairs for comment. No comments were received.

Native title representatives

13. On behalf of their clients, the Torres Strait Regional Authority's Native Title Office (NTO) requested a meeting with AFMA to discuss the matters contained in the public consultation package. AFMA made the offer to meet with the NTO and their clients at a time that suited their availability. However, a meeting did not proceed due to their client's lack of availability. AFMA continues to pursue opportunities to meet to discuss matters of concern to the NTO and their clients and has notified the NTO of this.

Previous FRAG and FWG advice

14. The removal of the western closure of the reef-line sector has been a long standing item which has been supported in-principle by the Finfish Working Group.
15. At the FFWG meeting (20 March 2012), TSRA indicated that there was community interest in removing the western closure.
16. At its July 2016 meeting the FFWG noted members had varying views on whether or not sufficient consultation on removing the closure had occurred. A key development since initial consultation on this issue has been the Native Title Determination on the Regional Sea Claim, and it was noted that notification to the relevant Registered Native Title Bodies Corporate groups would be undertaken prior to the PZJA making a decision.
17. At its March 2017 meeting the FFWG noted progress since the last FFWG meeting to remove the western line closure (as detailed in the agenda paper, work is ongoing to compile outcomes of previous consultation processes). An industry member advised that if the area of the western closure was to be reopened consideration should first be given to:
 - a. how much fishing the area could support noting that the fishing grounds are different from those in the east and concern that the area may not be able to support the number of licences in the fishery; and
 - b. the potential for alternative livelihoods or business opportunities for traditional owners such as ecotourism.
18. Other industry members were generally supportive of this proposal and advised that further community consultation should occur before the western area of the fishery was reopened, to gauge community aspirations on future usage.
19. Noting there are no existing agreements in place to guide resource sharing between sectors (fishing, tourism etc.) the FFWG agreed for following action:
 - a. AFMA, TSRA and Malu Lamar to meet out-of-session to consider an appropriate process to canvass community aspirations and considerations for removing the western line closure.
20. AFMA convened a meeting with Malu Lamar and TSRA on 5 April 2017. The following was agreed:
 - Removal of the western line closure is to be contingent on further community consultation with the western communities and consideration of any sustainability risks. The aim of the consultation will be to determine how communities may/or may not like the resources to be managed to benefit both commercial and tourism industries;

- TSRA will lead this consultation process (undertaking meetings / report findings etc). TSRA will undertake consultation opportunistically combining with other meetings (e.g. AFMA fish receiver meetings, top western projects);
- AFMA will seek scientific advice (through the future Finfish RAG) on the possible impacts of removing the closure on stocks, noting advice that the fishing grounds/habitat may be different in the west compared to the eastern area. There is concern that the reefs are shallower and possibly more susceptible to localised depletion.

21. AFMA sought preliminary technical advice from the Finfish RAG (FFRAG 1 9-10 Nov 2017) on what inter-session work will likely be required to assess the likely stock impacts from removing the western line closure. The RAG had limited amount of time available and RAG requested a further opportunity to consider the matter. The RAG did however provide the following preliminary observations:

- Management is not proposing to increase the TACs for coral trout. In line with this it was suggested that removing the closure might spread the current commercial fishing effort to a broader area.
- RAG noted previous considerations about coral trout catch rates and considered that economic impacts would likely come into effect (hook-shy fish leading to a drop in local catch rates) before ecological impacts might occur.
- Some consideration was given to how the western habitats may be shallower than eastern habitats but data would be required to assess this.
- More fishing operations and freezers may open in the western Torres Strait in line with the outcomes of the current TSRA infrastructure project meaning there may be a total increase in fishing effort with more fishers entering the sector.

22. At their FFRAG 4 meeting (13-14 March 2019) the RAG provided the following advice to support PZJA consideration on releasing a proposal to remove the closure for public comments:

The RAG noted advice from industry members that water turbidity means that fishers in Gudumalagal (top western) communities have fewer months of the year to target finfish compared to eastern, central and south-western Torres Strait communities. The RAG considered that western Torres Strait may be comprised of shallower reef habitats which may have lower carrying capacity than other areas of Torres Strait. Further Traditional Inhabitant boat sector licensed fishers will likely enter the fishery from Western Communities should the closure be removed. The RAG noted that catch data will be collected from operations in these waters through the mandatory Fish Receiver System which will allow monitoring of these extra harvests with analysis through future stock assessments.

The RAG provided the following advice on likely stock impacts from removing the Western Line Closure:

- a) Stocks impacts would likely be negligible, noting removal of the spatial closure would simply increase the total fishable area of the Fishery while all other management arrangements including recommended TACs for coral trout are to remain unchanged; and
- b) The boundary of the Western Line Closure is not likely to correspond to any natural stock boundary. Therefore there is no requirement for separate stock management arrangements within the Protected Zone for finfish species.

ATTACHMENTS

- 4.1a** Letter to stakeholders on harvest strategies and western line closure proposal.
- 4.1b** Written submission received from Cape York Land Council.
- 4.1c** Summary of community views and concerns raised during community visits to discuss the proposal to remove the Western Line Closure.
- 4.1d** Report on all community visits.



Australian Government

Australian Fisheries Management Authority

8 April 2019

Dear Torres Strait licence holder

I am pleased to advise that the Protected Zone Joint Authority (PZJA) agreed at its meeting on 1 April 2019 to release draft harvest strategies for the Torres Strait Protected Zone Tropical Rock Lobster (TRL) and Beche-de-mer (BDM) Fisheries for public comment. The PZJA also agreed to seek stakeholder views on removing the 'western line closure' in the Torres Strait Finfish Fishery.

The PZJA agreed to commence a review of how Developmental Permits are used for training purposes in all Torres Strait Fisheries. The TSRA will lead the review and it is expected this will be concluded by around September 2019. The PZJA agreed it will not consider any further applications for training under Developmental Permits until new arrangements are established, following the review. It is expected the review will lead to the creation of detailed criteria, against which any future applications for Developmental Permits will be assessed. The PZJA continues to acknowledge and support the aspirations of Traditional Inhabitants for 100 per cent ownership of access to commercial fisheries, and wants to be confident that the Developmental Permit arrangements are contributing to this goal. More details on the PZJA decision is enclosed.

Copies of the draft harvest strategies together with frequently asked questions (FAQs) about harvest strategies in general and brief overviews of each are enclosed. Also enclosed is information concerning the removal of the western line closure in the Torres Strait Finfish Fishery. Further copies of these documents may also be obtained from the PZJA website at www.pzja.gov.au or by contacting the AFMA Torres Strait Office on 07 4069 1990 or by email to FisheriesTI@afma.gov.au.

The PZJA looks forward to hearing from stakeholders on these proposed management initiatives. There are a number of ways you can provide your views to the PZJA. These are described below.

Canberra
PO Box 7051
Canberra Business Centre ACT 2610
P 02 6225 5555 F 02 6225 5500

Darwin
PO Box 131
Darwin NT 0801
P 08 8943 0333 F 08 8942 2897

Thursday Island
PO Box 376
Thursday Island QLD 4875
P 07 4069 1990 F 07 4069 1277

Public meetings

Subject to approval from Prescribed Body Corporate (PBC) Chairpersons, AFMA is planning to attend each Torres Strait and Northern Peninsula community to explain the draft harvest strategies and the proposal to remove the western line closure. A further meeting will be held in Cairns, subject to stakeholder interest, at a date and venue to be determined. All meetings will be concluded by 31 May 2019.

AFMA has written to all PBC Chairpersons to arrange these community meetings. Final meeting dates and locations will be advertised on the PZJA website and within each community as soon as details are finalised. If you are interested in meeting with AFMA in Cairns please register your interest with Georgia Langdon by phone on 07 4069 1990 or email at georgia.langdon@afma.gov.au.

Make a written submission

All written submissions need to be submitted to AFMA by close of business on 31 May 2019. Submissions can be sent to:

AFMA
Torres Strait Office
PO Box 376
Thursday Island, QLD, 4875
Australia

Or by fax to 07 4069 1277

Or by email to FisheriesTI@afma.gov.au

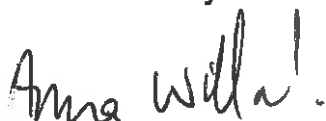
Please note that **all written submissions will be made public** unless confidentiality is requested.

Phone AFMA

If you wish to provide your views on the phone, please call the AFMA Torres Strait Office on 07 4069 1990.

Should you wish to discuss any of the matters contained in this letter, please contact the AFMA Torres Strait Office on 07 4069 1990 or by email to FisheriesTI@afma.gov.au.

Yours sincerely



Anna Willock
Executive Manager, Fisheries

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Enclosed documents

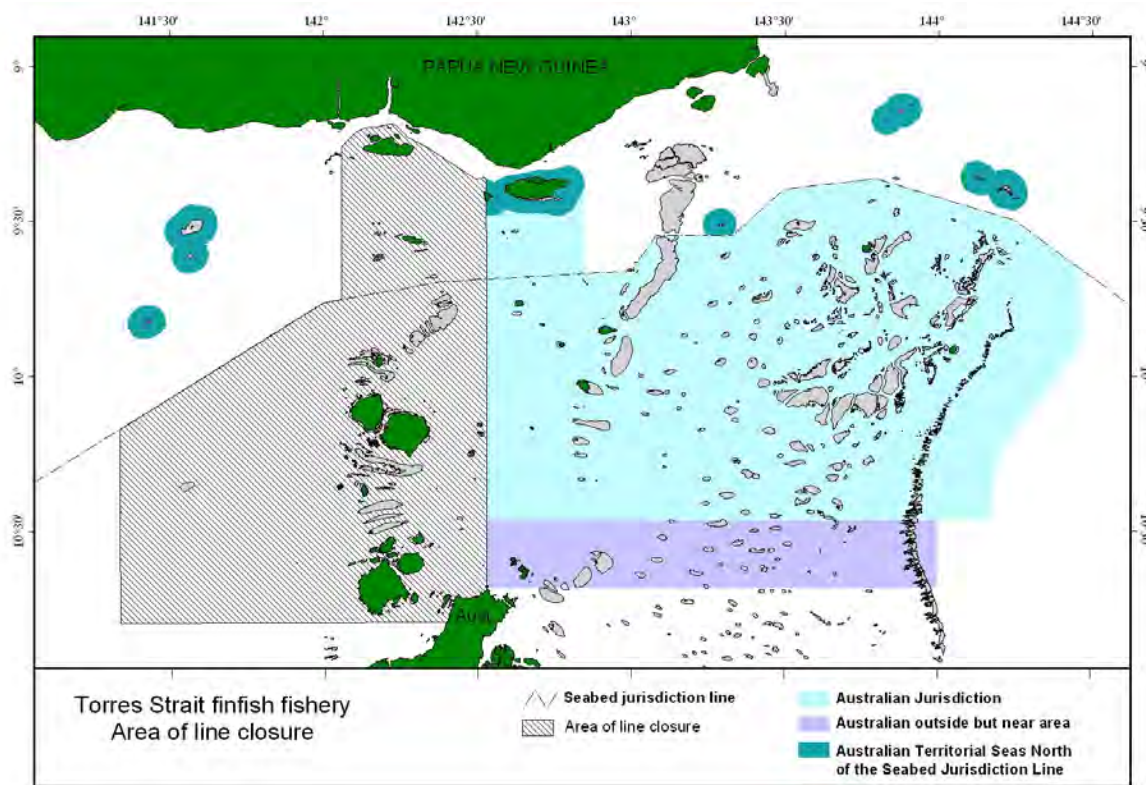
1. PZJA media release.
2. Frequently asked questions (FAQs) about harvest strategies
3. An overview, and copy of, the draft harvest strategy for the Torres Strait Tropical Rock Lobster Fishery
4. An overview, and copy of, the draft harvest strategy for the Torres Strait Beche-de-mer Fishery
5. Information concerning the removal of the western line closure in the Torres Strait Finfish Fishery

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WESTERN LINE CLOSURE FOR FINFISH An Overview



Commercial fishing for reef-line finfish species (e.g. coral trout, trevallies and emperors) is banned in the area of the Torres Strait Finfish Fishery west of 142° 32'E. This is referred to as the western line closure (see map above). The closure does not apply to mackerel commercial fishing or traditional fishing.

The closure affects all Traditional Inhabitant Boat licenced fishers who fish commercially for finfish species under a reef-line (LN) endorsement. Western communities including Boigu, the western half of Dauan, Mabuiag, Badu, Moa, Keriri, Ngurupai, Muralag and Waiben lie within the closure.

The closure does not serve a purpose in managing the fishery and reflects an historic boundary that was carried over when the Fishery was transferred to a single jurisdiction under the PZJA.

What will happen if the closure is removed?

If the closure is removed the area of the Fishery available for commercial reef-line fishers will increase.

AFMA will continue to monitor catches and participation in the fishery through the Fish Receiver System and will work with the PZJA Finfish Resource Assessment Group and Working Group to monitor how the fishery is performing.

Finfish Resource Assessment Group and Working Group advice

AFMA has gathered advice on potentially removing the western line closure from PZJA Finfish Resource Assessment Group and the PZJA Finfish Working Group. Both advisory groups support the removal of the closure.

Draft regulation to remove the closure

If communities support removing the closure the PZJA would need to make a new Fisheries Management Instrument.

In making a new instrument for the fishery, the current mesh net restriction on Australian Traditional Inhabitants engaged in traditional fishing for finfish will be removed to reflect that the PZJA's jurisdiction does not extend to traditional fishing.

If you have any questions contact AFMA on (07) 4069 1990 or via email FisheriesTI@afma.gov.au



7 June 2019

AFMA
Torres Strait Office
PO Box 376
Thursday Island QLD 4875

Email: FisheriesTI@afma.gov.au

Dear AFMA

Re: TSPZ Fisheries Management

Cape York Land Council (CYLC) functions as the Native Title Representative Body (NTRB) for the Cape York region. In that NTRB role we fulfil statutory functions under the *Native Title Act 1993* (Cth). In our broader Land Council role we support, protect and promote Cape York Aboriginal peoples' interests in land and sea to positively affect their social, economic, cultural and environmental circumstances and aspirations. In this capacity CYLC welcomes the opportunity to comment on AFMA's draft harvest strategies for the Torres Strait Protected Zone (TSPZ) Tropical Rock Lobster (TRL) and proposed removal of the "western line closure" in the TSPZ Finfish Fishery.

CYLC has an interest in management of Torres Strait fisheries for a number of reasons including that:

- we support the aspirations of Torres Strait Islanders for greater control over their traditional resources and their participation in mainstream commercial activity;
- the Cape York region adjoins Torres Strait and management of Torres Strait fisheries may set precedents for management of Cape York fisheries;
- Cape York Aboriginal people hold similar aspirations for greater control over their traditional resources and participation in mainstream commercial activity to support their social and economic development;
- many Cape York communities have many families with strong traditional and historical ties to Torres Strait communities and families;
- southern sections of TSPZ fisheries extend into waters that are the traditional country of Cape York Aboriginal people, and this southern TSPZ area is within the area of a CYLC native title sea claim, so Cape York Aboriginal people have plausible, and soon to be determined, rights to fisheries resources in this area;
- prospective Aboriginal holders of native title sea rights and interests will include some people who are currently eligible for access to TSPZ commercial fishing rights, but far from all of these prospective native title holders will have access to the TSPZ fishing rights in their traditional waters. Conversely, the current TSPZ Indigenous commercial fisher arrangements create rights for Indigenous people who will not be identified as native title holders through Cape York sea claims;
- AFMA must review the current TSPZ fisheries arrangements to ensure Cape York Aboriginal native title holders have a recognised interest in and access to the fisheries for those sea

areas where they hold or will hold native title, and that agreements are in place between Cape York Aboriginal native title holders and other parties who access fisheries in the seas where Cape York Aboriginal people hold native title rights.

TRL Fishery

CYLC is concerned that the objectives of the draft TRL harvest strategy, and the decision rules designed to achieve these objectives, may result in unsustainable levels of harvest that will cause a long term decline in TRL populations.

Because the TSPZ TRL fishery extends into the traditional waters of Cape York Aboriginal people, and they have aspirations to commercially harvest TRL, Cape York Aboriginal people have a strong interest in the sustainability of the TRL populations and submit that:

- the objectives of the draft TRL Harvest Strategy should be amended to seek to return the stock to 90 per cent of the original unfished size of the TRL spawning stock in 1973, and to maintain TRL stock above a lower limit of at least 50 per cent of the original unfished size; and
- Decision Rule 1 should set a maximum catch limit of 250 tonnes per season so that the above TRL population objectives may be achieved.

CYLC also supports the aspirations of traditional inhabitants to own 100 percent of the Torres Strait TRL Total Allowable Catch, as outlined in the 2014 Roadmap Agreement signed by TSRA, and that this target is achieved as soon as possible. AFMA should consider how the harvest strategy could be utilised to accelerate the transition to 100 per cent ownership of the TAC by traditional inhabitants.

CYLC also advocates that a native title corporation should hold, manage and allocate the Total Allowable Catch for TRL and other species for the Traditional Inhabitants Boat sector. The right of traditional inhabitants to take TRL for commercial purposes is partly based on their native title rights, so the Malu Lamar (Torres Strait Islander) Corporation, as the Registered Native Title Body Corporate (RNTBC), should be the management entity because it holds and manages Torres Strait Islander native title rights and interests.

CYLC is interested in management arrangements for the Torres Strait TRL fishery because similar arrangements should also apply to Queensland's east coast TRL fishery which operates almost exclusively on Cape York's east coast north of Cape Melville. However, unlike the Torres Strait TRL fishery, AFMA and other fisheries regulators responsible for Cape York waters have not established a TRL fishery management plan that allocates a Total Allowable Catch quota to the Cape York Traditional Inhabitants Boat sector. Consistent with the transition to 100 per cent ownership of the TSPZ TRL Total Allowable Catch quota by traditional inhabitants, the Cape York TRL Total Allowable Catch quota should be 100 per cent owned by Cape York traditional owners.

If such an arrangement existed for Cape York it would provide desperately needed opportunities for Aboriginal people to participate in this commercial fishery in their traditional waters. In the absence of such an arrangement the allocation of Cape York's allowable catch is effectively limited to large non-Indigenous fishing companies and Cape York Aboriginal people are effectively excluded.

Given that CYLC has registered native title claims over northern Cape York seas, and further sea claims will be lodged in the near future, AFMA must recognise that it must start working with other fisheries regulators to develop a Cape York TRL fishery management plan that reserves 100% of the Total Allowable Catch quota for Cape York Aboriginal people. CYLC requests that AFMA and other fisheries regulators meet with CYLC as soon as possible to discuss how to progress this important matter.

Western line closure for finfish

CYLC is very concerned about the proposed removal of the western line closure so that commercial line fishing may be undertaken for finfish species in western Torres Strait waters. We note comments in AFMA's Discussion Paper that the existing closure is based on a historic management boundary, and not a specific management need for the fishery. However, CYLC is concerned about widespread and consistent anecdotal evidence that TRL populations, and therefore the TRL commercial fishery, are negatively affected by the introduction of commercial line fishing.

Because of the possible risk to the TRL commercial fishery, the importance of this fishery to Traditional Inhabitant fishers, and because the TSPZ western fin fishery extends into the traditional waters of Cape York Aboriginal people, CYLC considers that more research and further consultation must be done before the closure can be removed to clearly ascertain and settle the current questions from fishers about the relationship between commercial line finfishing and TRL populations. CYLC submits that the precautionary principle must be applied in this situation and that the western line closure for finfish remain in place.

CYLC supports that access to the commercial line fishery, within the existing open area, is limited to Traditional Inhabitants because this arrangement makes an important contribution to Indigenous employment and economic development opportunities. However, as proposed by CYLC for the TRL fishery and other fisheries, the Total Allowable Catch for the finfish line fishery should be held, managed and allocated by the Malu Lamar (Torres Strait Islander) Corporation. If this was the arrangement then CYLC would also support the participation of non-Traditional Inhabitant fishers in the fishery through leasing of a temporary licence from Malu Lamar because the benefits from this arrangement would be redistributed to Malu Lamar's native title holder members. This will not be the case if the TSRA continues to manage licences for the Total Allowable Catch for the Traditional Inhabitant Boat sector.

Issues with TSPZ fisheries management plans

As outlined above, CYLC supports that AFMA's TSPZ management plans provide greater commercial opportunities for Torres Strait Islander fishers in Torres Strait Islanders' traditional waters through the allocation of 100 per cent of total allowable catches to traditional inhabitants and the management of fishing allocations by the Malu Lamar RNTBC.

However, CYLC is concerned that management plans for TRL, finfish and other species provide rights for non-traditional owners in the traditional waters of Cape York Aboriginal people without their consent. This issue will become more critical as Cape York native title sea claims are determined and confirm the rights of Cape York Aboriginal people in these waters. AFMA must commence a process immediately to establish agreements between the traditional owners of these claimed waters and the parties who are accessing the fisheries in these waters.

Attachment 1 shows where native title has been determined to exist in Torres Strait, and Attachment 2 shows where native title has been claimed in Cape York seas. AFMA fisheries management plans must be more cognizant of these legally recognised rights and interests of native title holders and plans amended accordingly and agreements negotiated where necessary.

This issue would be partially resolved if AFMA and other fisheries regulator relevant to Cape York seas prepared fisheries management plans for a range of Cape York commercial species, whereby the Cape York fisheries management plans provided that:

- 100 per cent of the Total Allowable Catch is allocated to the Traditional Inhabitants Boat sector for each Cape York fishery;
- the Total Allowable Catch for the Traditional Inhabitants Boat sector is held, managed and allocated by the relevant RNTBC. For example, for waters within the amalgamated Cape York Aboriginal people's native title sea claim the relevant RNTBCs will be the Ipima Ikaya

Aboriginal Corporation RNTBC and the Kaurareg Native Title Aboriginal Corporation RNTBC. Further south, the Kuuku Ya'u Aboriginal Corporation RNTBC should hold and manage Total Allowable Catches for the waters where it holds native title. As other Cape York native title sea claims are lodged and determined the ensuing RNTBC should hold and manage fishing allocations for their relevant waters;

- for Cape York waters where a native title claim has not been lodged or determined, the CYLC has interim responsibility to hold, manage and allocate licences to the Traditional Inhabitants Boat sector, and to hold benefits from the allocation of licences pending transfer to the RNTBC upon establishment;
- eligibility for a Traditional Inhabitants Boat licence is restricted to the Aboriginal Traditional Owners of those waters;
- if the Total Allowable Catch has not been fully allocated to Traditional Owners, and no further expressions of interest are received from Traditional Owners, then non-Traditional Inhabitant fishers may lease a temporary licence from the RNTBC with the consent of the Traditional Owners;
- Traditional Owners are identified by the RNTBC for determined waters, and the TOs are identified by CYLC anthropology processes for claimed and unclaimed waters; and
- the RNTBC distributes benefits from the allocation of fisheries licences to the native title holder members of the RNTBC.

By implementing these proposed arrangements AFMA would make a significant contribution to the participation of Cape York Aboriginal people in mainstream economic activity, and help close the gap on Aboriginal socio-economic disadvantage.

CYLC requests that AFMA makes arrangements to meet with CYLC to discuss the matters raised in this submission with a view to progressing these proposals.

In the meantime, if you wish to discuss any matter raised in this submission please do not hesitate to contact me.

Yours sincerely



Richie Ah Mat
Chair
Cape York Land Council

ATTACHMENT 1

Document No: 7615206





Torres Strait Fisheries Community Visits Report

April - May 2019

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Glossary

Acronym	Definition
AFMA	Australian Fisheries Management Authority
BDM	Beche-de-mer
CDR	Catch Disposal Record
CPUE	Catch Per Unit Effort
CSIRO	Commonwealth Scientific and Industrial Research Organisation
FRAG	Finfish Resource Assessment Group
FRS	Fish Receiver System
FWG	Finfish Working Group
HCWG	Hand Collectables Working Group
NPA	Northern Peninsula Area
PBC	Prescribed Body Corporate
PZJA	Protected Zone Joint Authority
TAC	Total Allowable Catch
TDB02	The catch disposal record book
TIB	Traditional Inhabitant Boat
TRL	Tropical Rock Lobster
TRL RAG	Tropical Rock Lobster Resource Assessment Group
TRL WG	Tropical Rock Lobster Working Group
TSIRC	Torres Strait Island Regional Council
TSPZ	Torres Strait Protected Zone
TSRA	Torres Strait Regional Authority
TSSAC	Torres Strait Scientific Advisory Committee
TVH	Transferable Vessel Holder
WLC	Western Line Closure

Executive Summary

Between 8 April and 22 May 2019, AFMA undertook a round of visits to communities across the Torres Strait and Northern Peninsula Area to meet with interested stakeholders and community members and discuss a range of issues relating to Torres Strait fisheries. The purpose of the visits was to:

- provide a follow up education and awareness program in support of the newly implemented Fish Receiver System (FRS). Prior to implementation on 1 December 2017, AFMA had been working with fishers and industry members to rollout the new mandatory reporting system and acknowledged that a secondary round of community meetings was required to follow up with industry and identify any issues or barriers to adoption that users were experiencing;
- report back to industry on how the FRS had been working and what data was being reported;
- consult on three key fisheries management issues, specifically the draft Tropical Rock Lobster (TRL) harvest strategy, the draft Beche-de-mer (BDM) harvest strategy and a proposal to remove the Western Line Closure within the Finfish Fishery.

Familiarisation with the FRS varied greatly among communities depending on the level of active fishing occurring at each island/community. The summaries of what data had been reported in each fishery and from which areas was consistently well received and generated good discussions among communities about the level of fishing across the Torres Strait. Many were impressed with the vast improvements in catch and effort reporting coverage. Most attendees gained a good understanding of how important the provision of data is, and how that data is used to inform management decisions across Torres Strait fisheries.

These messages then supported following discussions about harvest strategies. Although the term 'harvest strategy' was unfamiliar for many, the link between data provision and how a harvest strategy requires that data to guide management decisions (i.e. setting a total allowable catch) was evident. Most communities expressed general support for both the draft TRL and BDM harvest strategies with no significant concerns or comments. Badu was the only community that expressed strong concerns about the BDM harvest strategy, highlighting that the current management arrangements in the BDM Fishery do not necessarily support growth of the fishery/industry.

Views on the Western Line Closure proposal varied, particularly between island clusters. Generally, Kemer Kemer Meriam communities abstained from providing comment on the proposal but expressed support for those communities that would be impacted by the proposal (e.g. Gudumalulgal, Maluialgal and Kaiwalagal). Gudumalulgal communities expressed a strong desire to remove the closure to enable fishers from those communities to have similar opportunities (e.g. to commercially fish for reef line species) as those further east. Kulkalgal communities expressed similar views. Contrastingly, communities within Kaiwalagal and Maluialgal expressed different concerns regarding the potential impacts of the proposal on the TRL stock should reef line species be commercially fished, or the ability to then fish for reef line species traditionally or for kai kai.

In addition, each community was advised of the public call for comments concerning the draft TRL and BDM harvest strategies and Western Line Closure proposal and the means to make a submission.

AFMA staff were accompanied by Protected Zone Joint Authority Traditional Inhabitant members to a number community visits. The involvement of consultative forum members was very valuable, not only in generating engagement within communities but in communicating some of the more complex issues.

This report summarises the discussions and views expressed at each community meeting. At the time of writing, community consultations had not taken place at Iama, St Paul's, Kubin village or Dauan due to a lack of availability in the period visits were conducted.

Summary of Community Views

Table 1. Summary of views by community on each key consulted.

Community	TRL harvest strategy	BDM harvest strategy	Western Line Closure	Other issues
Masig (Yorke)	No concerns raised	No concerns raised	Concerns with how removing the closure will impact on the distribution of sunset leases.	Advice sought on obtaining a TIB licence in the absence of owning a boat Concerns with the processing for achieving sign-off on Traditional Inhabitant ID forms Request that the PBC Chair should be a signatory to the ID forms instead of the Mayor
Erub (Darnley)	General support	General support	Not formally supported as the proposal does not directly apply to the Erub community however general support expressed for the western communities to remove the closure if they wish. General concern with how removing the closure may change where fishing effort is concentrated.	
Boigu	General support	General support, with some concern that additional restrictions (i.e. minimum size limits) may cause the BDM Fishery to be economically unviable.	Very supportive of the proposal to remove the closure and to open up access to the fishery for the Boigu community.	
Poruma (Coconut)	No concerns raised	No concerns raised	Limited interest in proposal as very little commercial finfish fishing occurs in Poruma. Concerns with how removal of the closure may impact the finfish TAC.	Number of questions regarding the TRL Management Plan
Badu	Not supported by Malu Lamar. Concern that HS should be designed for full time operators only.	Not supported by Malu Lamar.	Concern that removing the closure will impact the sustainability of TRL stocks. Proposal to remove the closure not supported by Malu Lamar nor a number of Badu fishers.	A range of other issues were raised relating to management arrangements in the BDM Fishery, including the prohibition on hookah and the 7m boat length restriction.

Community	TRL harvest strategy	BDM harvest strategy	Western Line Closure	Other issues
	No concerns raised by other attendees.		Outside of the meeting, some fishers expressed support to remove the closure.	
Ugar (Stephen)	No concerns raised.	No concerns raised however strong desire for traditional knowledge to be incorporated.	Community members withheld from making comment on proposal as not directly relevant to Ugar waters. Some concern that removing closure will result in more western community's access key eastern fishing grounds. Supportive of spatial controls.	Concern that the use of hookah in the TRL Fishery is unfairly impacting the free-diving sector. Suggestion for a cap to be implemented within the TIB TRL catch share to limit hookah catches.
Saibai	Not discussed.	Not discussed.	Generally supported.	
Warraber (Sue)	No concerns raised.	No concerns raised.	No concerns raised.	Concern that inner island fishers have a disproportionate influence on fisheries management processes over outer islands.
Mer (Murray)	No concerns raised.	Supported in recognition of how the HS guides re-opening of closed species (e.g. black teatfish)	Community members withheld from making comment on proposal as not directly relevant to Meriam waters. General comments that more coral trout fishing is desired to alleviate natural trout predation on TRL. Anecdotes that the more coral trout is fished, the more habitat is available for TRL.	Strong desire for a licensing review to implement area controls on licencing conditions (e.g. to prohibit non Meriam fishers fishing in Meriam waters). Concerns raised regarding the inability for the TIB sector to fill the finfish TACs and the desire to establish a program that aims to upskill TIB operators.
New Mapoon (NPA)	No concerns raised.	No concerns raised.	No formally expressed support or concerns raised.	Concern with the use of hookah on the tops of reefs.
Injinoo (NPA)	No concerns raised.	No concerns raised.	No formal support or concerns raised.	
Thursday Island (Torres Shire)	Not discussed at the request of attendees.	Not discussed noting that the BDM HS is not a high priority for stakeholders.	A number of concerns raised regarding the proposal to remove the closure: <ul style="list-style-type: none"> - Negative impact on TRL - Negative impact on availability of coral trout and ability to fish for subsistence (kai kai) 	Concerns with how the TSSAC identifies research priorities in the Torres Strait.
Mabuiag	No concerns raised.	Not discussed at the request of attendees noting that the community does not fish for beche-de-mer.	Generally supported.	

Masig (Yorke) Community

Date	8 April 2019
AFMA staff	Georgia Langdon and Natalie Couchman
Traditional Inhabitant Members	Hilda Mosby, Kulkalgal – FRAG Paul Lowatta, Kulkalgal – FWG
Attendance List	Refer to Table 2

Fish Receiver System

1. A number of attendees were not familiar with the FRS and so the delivery of information was simplified and messages about why AFMA collects data, how that data is used, and how fishers and fish receivers contribute to the overall process were reinforced.
2. Attendees were very interested in the data summaries for each fishery and reported that there is more TRL taken in the eastern areas than was represented in the data summary. It was noted that more than 50 per cent of voluntary location data is not reported on CDRs. Contrastingly, attendees agreed that the finfish data summary seemed more accurate. Others made comments in the margins of the meeting indicating that the catch of Prickly Redfish is under-reported.
3. Fishers acknowledged that if they want to be better represented in the data then they need to be providing the voluntary location data.
4. Some attendees suggested an option be developed to electronically submit CDRs as the post is deemed too slow and administratively onerous. AFMA advised that scanned copies or photos of CDRs are able to be submitted if they are clear and legible, and if that is the preference of the fish receiver, noting however that the AFMA does not have established systems in place to do this as the default at this stage. It was also noted that the original white copy is still required to be submitted to AFMA. One attendee recalled an earlier mention that the TSRA perhaps has scope to facilitate electronic reporting services through iPads.

ACTION ITEM – AFMA to follow up with TSRA regarding the status of proposed iPads for electronic reporting.

5. Some attendees suggested one option to improve the accuracy and completeness of data, would be by AFMA employing a person in each community to complete CDRs for all fishers in that community. While this is not within the remit of AFMA's role, attendees were informed that the FRS is flexible in that it could accommodate communities nominating a central fish receiver (e.g. community freezer) to weigh and record all catch landed in a community.
6. Some fishers sought clarity on the three day submission requirement for CDRs. There were some concerns that the three day timeframe is not workable if TRL are held in cages for up to two weeks after being caught and are not sold until sometime later. It was clarified that the submission of the data must be within three days of weighing and recording the data which must be done as soon as fish are brought to land (i.e. landing), and not within three days of catching the product. This was well understood.

Harvest Strategies

7. Many attendees were not familiar with or had a good understanding of current Torres Strait fisheries management arrangements or the development of harvest strategies. Again, the information presented was simplified, starting with simple explanations of TACs and other common terms used by fisheries managers. The effectiveness of harvest strategies was linked back to the importance of providing accurate and complete data to AFMA and reinforcing how that data is used in the overall management process.
8. Attendees did not raise any concerns regarding the harvest strategies. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

9. The proposal to remove the Western Line Closure in the Finfish Fishery was well understood. Some attendees raised concerns about the effect of removing the closure on finfish sunset licence lease money. Currently lease money from sunset licences are held in trust by the TSRA on behalf of the eastern communities. Attendees were concerned with how the lease money might be distributed further with other non-eastern communities if the closure is removed. Masig attendees expressed a strong view that the lease money should be allocated to eastern communities only (i.e. Erub, Ugar, Mer and Masig).
10. Some attendees sought to better understand when and why the Western Line Closure was originally implemented.

ACTION ITEM – AFMA to clarify and report back to Hilda Mosby about when and why the Western Line Closure was originally implemented.

Licensing

11. A number of attendees sought information on how a person can commercially fish if they do not own a boat (e.g. many younger fishers cannot afford their own boat). AFMA advised that under the current system, a boat needs to be nominated to a TIB licence, though there is provision under the legislation for hand collection licences (e.g. commercial fishing without the use of a boat), though the administrative procedures are not currently in place to issue these licences.
12. An alternative option discussed was to fish using another person's boat, and under that person's licence as an authorised agent.
13. A number of attendees expressed frustration regarding the delays they are experiencing in receiving sign-off from Mayor Gela (Regional Council Mayor) on Traditional Inhabitant Identification forms. It was advised that three people in the community have been waiting more than three months for sign-off and have had difficulty contacting the Mayor's office to follow up. AFMA offered to support the process and contact the TSIRC office to query the status of these forms, but also suggested that applications also needed to be followed up by the applicant.
14. A number of community members strongly suggested that the PBC Chair be able to sign-off on Traditional Inhabitant Identification forms, as they have a much better understanding of who is who in their community in comparison to the relevant Council Mayor (who may not know the Traditional Inhabitant background of the person in question).

ACTION ITEM – AFMA to follow up with TSIRC Mayor Gela's office regarding outstanding Traditional Inhabitant Identification forms.

Other Business

15. One community member advised that the TVH BDM licence currently held in trust by TSRA (originally owned by Nyall Ledger) should be 'given back' to the Masig community, who first held the licence under historical community licensing arrangements. The community members expressed frustration that the original owner, not the community, made \$1.5 million when the licence was sold.
16. AFMA advised that while the TSRA currently holds this licence in trust, it is not currently in use and TSRA would need to advise what will happen to this licence when the independent entity is established. Attendees were also advised that TSRA were to be visiting all Torres Strait communities in May 2019 to discuss the regional ownership and management of fisheries assets (i.e. the Entity).

ACTION ITEM – AFMA to raise the issue of TVH licences held in trust and associated monies with TSRA Fisheries Program ahead of their community visits in May 2019.

17. Community members encouraged AFMA staff to do an overnight visit next time to allow more time to consider the issues. An overnight stay would also allow more face to face time to address licensing queries and general fisheries questions.

Erub (Darnley) Community

Date	8 – 9 April 2019
AFMA staff	Andrew Trappett, Gabrielle Miller and Hannah Howard
Traditional Inhabitant Members	Rocky Stephen, Kemer Kemer Meriam – TSSAC, FWG, FRAG Michael Passi, Kemer Kemer Meriam – HCWG
Attendance List	Refer to Table 3

Fish Receiver System

18. Some attendees expressed concern that fish receivers are not submitting data to AFMA on time due to missing signatures from fishers. Several fish receivers' in attendance at the meeting acknowledged that it is difficult to fill in the paperwork with bloody or wet hands, and to get signatures from fishers while processing catches, if fishers want to leave the premises quickly. AFMA reminded attendees of the fisher and fish receiver joint responsibilities in landing and reported catches.
19. Attendees were very pleased with level of reported catches and agreed that the species composition data for BDM species looked accurate.
20. A number of attendees noted a general concern from some fishers about providing voluntary data about the area where fish are caught and suggested that greater awareness needs to be built about what happens with the data that is collected, who sees it and what it is used for. This would encourage more fishers to provide voluntary data. AFMA showed some key examples of how data is used in the most recent Spanish mackerel assessment.
21. Many attendees were familiar with the FRS. Key questions included:
 - a. the difference between commercial and traditional fishing;
 - b. when to land catch, i.e. if TRL is kept offshore in a cage, or if product is freighted or flown to Cairns/Horn Island. It was explained that catch needs to be landed to a licensed fish receiver as soon as it comes onto land;
 - c. who needs to complete a CDR. Some fishers were uncertain if they should complete a CDR, as their product was being flown/freighted to Cairns/Horn Island. It was explained that catch needs to be landed to a licensed fish receiver as soon as it comes onto land. Some fishers raised concerns that some product is not currently being landed correctly by the fish receivers/buyers in Cairns/Horn Island; and
 - d. the difference between a catch disposal record and a daily fishing logbook;

Harvest Strategies

22. Attendees noted both draft harvest strategies with general support for their structure and function. There was some confusion with technical language, e.g. empirical harvest control rules, though all agreed that this was the necessary language required.
23. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

24. The proposed removal of the Western Line Closure was noted as well as removal of traditional fishing rules (mesh netting). The community, led by the PBC Chair did not wish to formally support the removal noting it doesn't directly impact the Erub community however there was general support for those western communities to remove the closure should they wish. The key comment from the Erub community was that increasing the size of the Finfish Fishery may change areas where fishing is conducted, shift effort around and may affect how the available TAC is filled. Agreed with the AFMA advice that, should the closure be lifted, the focus will be on monitoring and data analysis through Finfish RAG.

Licensing

25. Some attendees queried the arrangements for using another person's boat undertake commercial fishing and if this was permitted under the current licensing system. The authorised agent system was explained involving the authorisation of a person to operate under another person's TIB licence. Feedback from attendees agreed that more awareness was required around authorised agents among communities.

ACTION ITEM: AFMA to develop and disseminate more information about authorised agents to communities.

Other Business

26. The Erub Fisheries Management Association freezer is the main receiver for finfish product (coral trout, Spanish mackerel) on Erub, receiving product from fishers from the other eastern islands. The freezer has not been operational in recent months, due to a delay in repairs. However when the freezer is fully operational it employs 3-5 staff. It was noted that fishers are unlikely to resume fishing for finfish while the freezer is non-operational.
27. The meeting noted the outcomes of the most recent Spanish mackerel assessment including the estimated level of biomass (approximately 32 per cent of pre-commercial fishing levels) the downwards trend in recent Catch Per Unit Effort estimates and the corresponding reduction in total allowable catch. Community members were concerned about the apparent decline in catch rates and also were concerned that the data supporting this stock assessment came mainly from non-indigenous fishers (sunset licence holders). Community noted that further data from the TIB sector would help improve the scientific understanding of the health of the Spanish mackerel stock.

Boigu Community

Date	17 April 2019
AFMA staff	Georgia Langdon and Gabrielle Miller
Attendance List	Refer to Table 4

Fish Receiver System

28. Attendees showed some knowledge of the FRS. It was understood by the active fishers that they need to land their catch to a fish receiver and that the fish receiver completes a CDR for them. A few attendees were confused as to whether they needed to have their own TBD02 book or not. This was clarified.
29. The fishers in attendance mostly land TRL to Seafari (a carrier boat and fish receiver anchored off Horn Island) as they fish south of Boigu. It was advised that sometimes fishers will transport their catch to Thursday Island to offload at a land based fish receiver. Fishers advised there are very limited times they can fish around Boigu as the waters are muddy and only clear enough to dive during a quarter moon.
30. Additional time was spent discussing what the requirements are for both fishers and fish receivers and explaining when the catch needed to be recorded in a CDR (i.e. when the catch is first brought to land).
31. There was a good response to the summary 'area fished' data presented. Fishers advised that they may not be giving accurate location data due to fear of their fishing spots becoming known. However, they agreed that the TDB02 area maps were broad enough that the exact reef could not be identified, and understood how useful this data is to the management of fisheries.

Harvest Strategies

32. Both the TRL and BDM harvest strategies were well received, with attendees agreeing that they were a good idea. They appeared to have a good understanding of the key differences between the two strategies in terms of what data and information is available and how this impacts on the level of management required in each fishery, including how the TACs are generated.
33. Some questions were asked about whether the full time commercial fishers were happy with the TRL harvest strategy. The group discussed more about how the strategies were developed over time with significant input from various stakeholders, particularly Gudumalugal PZJA traditional inhabitant members, Aaron Tom and Tenny Elisala.
34. PBC Chair, Keith Pabai raised concerns that the restrictions in the BDM Fishery may make it economically unviable for the fishers. Specifically, the proposed increase in minimum size limits and the prohibition on the use of hookah gear to access deeper species such as white teatfish.
35. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

36. Attendees were very supportive of the proposal to remove the Western Line Closure in the Finfish Fishery and were strongly supportive of opening up access to the fishery to enable their communities to have the same opportunities as others in the Torres Strait.

37. The PBC Chair advised that the TSRA is providing Boigu with a freezer through their Fisheries Infrastructure Project, and that local fishers should be able to commercially fish for coral trout (and Spanish mackerel) to utilise the resource and the freezer to its capacity.

Other Business

38. A number of attendees enquired about the new coxswains' requirement through the Australian Maritime Safety Authority (AMSA) and were instructed to directly contact Jade Morris at MyPathways.

Poruma (Coconut) Community

Date	11-12 April 2019
AFMA staff	Georgia Langdon and Natalie Couchman
Traditional Inhabitant Member	Patrick Bonner, Kulkaigal – HCWG
Attendance List	Refer to Table 5

Fish Receiver System

39. The majority of attendees were familiar with the FRS. The community hall also had FRS fact sheets in A3 size displayed on the walls.
40. Attendees sought clarification on the time frames for completing CDRs when TRL are being held in cages and then flown to Horn Island or Cairns. This discussion also touched on how authorised agents work within the FRS.
41. Attendees also enquired about what data requirements the TVH fishers are required to comply with. AFMA staff passed around a copy of the TRL04 daily fishing logbook for attendees to look at and explained how TVH fishers are required to fill in much more detailed information about what they are catching, how and when, each day they are out fishing, in addition to completing a CDR when they land their catch.
42. The group was very interested in the area fished data summaries, noting the areas are large enough not to reveal specific fishing locations, but small enough to understand general areas in which fish are being caught.
43. One attendee queried whether the CDR data could be used to support future allocation discussions amongst communities. AFMA advised that although this is not the reason why the data is collected, it is possible that if an allocation process was agreed to by communities, CDR data could be used. However, the group noted that such discussions have not been had yet, and TSRA is currently working to develop an Entity to hold and manage Torres Strait fisheries assets.

ACTION ITEM – AFMA to advise Patrick Bonner about the membership of the TSRA board sub-committee working on the Entity project.

44. Attendees reported that there is more TRL taken in the central area (e.g. Dungeness Reef/Area 14) than what is represented in the data summary, noting more than 50 per cent of location data was not reported.
45. Fishers agreed that the finfish data looked accurate but noted that Poruma fishers do not fish for finfish commercially, largely as there are no buyers, and that the processing is more intensive than for TRL. Others noted that there is good fishing grounds for finfish but no one is fishing it commercially.
46. Attendees also noted that fishing for BDM has recently declined. Patrick Bonner's operation is temporarily closed and most fishers on the island are fishing for TRL. Caroline Enterprises is processing BDM and sending it through to Independent Seafood Producers (ISP) in Cairns. Clarification was provided to attendees about the requirement for a CDR to be completed by a fish receiver at the point fish is first landed, not by the buyer.
47. Attendees gained a good understanding of the benefits of submitting voluntary data to assist in understanding the health of stocks and how fisheries are performing.

Harvest Strategies

48. Learning from earlier community visits, the discussion on harvest strategies started with a very simple overview of 'what is a harvest strategy?' Both harvest strategies were linked back to the importance of providing catch and effort data to AFMA and reinforcing how that data is used in managing each fishery. It was emphasised how harvest strategies were developed in consultation with PZJA forums and industry stakeholders and attendees were encouraged to take home the overview fact sheets and come back following day with any questions.
49. Key questions included what is the difference between a Management Plan and a harvest strategy? It was explained that management plans set out who can access a resource and a harvest strategy sets out how the PZJAs determines how much can sustainably be taken each season. Generally well received.
50. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

51. There was limited interest in the proposal to remove the Western Line Closure in the Finfish Fishery given the lack of commercial finfish fishing by Poruma fishers. Attendees supported the removal, recognising that reef-line species are community resources and all communities should have access.
52. Some attendees queried whether the removal of the closure will impact the finfish TAC. AFMA advised that removing the closure will likely impact where the TAC may be caught and may mean more fishers from the western islands become active in the reef line fishery, however the way the TAC is set each season will not change to reflect a larger area of the fishery. It was noted that preliminary advice from scientists has indicated removing the closure poses no risk to the sustainability of the stock.

ACTION ITEM – AFMA to report back to Poruma fishers about whether there any TIB operated finfish sunset licences.

Licensing

53. A number of attendees queried whether a person can commercially fish if they do not own a boat (e.g. many younger fishers can not afford their own boat, but can still go fishing e.g. reef walking).
54. AFMA advised that usually a boat needs to be nominated to a TIB licence, though there is provision for hand collection licences. Another option is to fish using another person's boat, and under that person's licence (as an authorised agent).

ACTION ITEM – AFMA to provide clear guidance on whether TIB licences can be issued without a boat.

Other Business

55. Some fishers expressed an interest in selling shark fin to Chinese buyers. The rules for fishing for sharks were explained (i.e. requiring reef-line endorsement, maximum size limits, finning at sea prohibitions and no take species). The group also discussed the rationale for these restrictions

including the importance of sharks in the ecosystem, their vulnerability to overfishing and optimal utilisation of whole animals.

56. Patrick Bonner advised that Mura Porumalgal Fishers Corporation recently held their Annual General Meeting. Patrick remains the President however there is a new board of Directors in place. He noted the Corporation was very pleased with the AGM outcomes and believes they have a good team on board now to achieve things.

ACTION ITEM: – AFMA to follow up with Patrick Bonner with details of who sits on the Poruma fisheries association and their contacts.

57. AFMA staff had a detailed conversation with one Poruma fisher regarding how Torres Strait legislation and policy works. They also discussed a desire of the Poruma community to have their cultural protocols respected out on the water and how AFMA/TSRA can support them in this. He advised the Fishers Corporation had a discussion on this issue at the AGM, in particular around non-Poruma fishers (largely TVH operators, but also some TIB) respecting protocols concerning anchoring near communities, seeking permission to fish on home reefs, using hookah on reef tops and anchoring near islands during certain cultural ceremonies. He explained concerns that boats anchoring near islands during coming of age ceremonies are scaring off dugongs/turtles which results in young people not able to successfully hunt as part of that ceremony.
58. AFMA advised that we need a better understanding of what their community protocols are, and then to have a broader discussion with all stakeholders on how we can work together to have them respected, whether at a community level or through regulation. Other options were discussed including developing a code of practice with TVH fishers, and that other fisheries in the Commonwealth operate under codes of practice developed through their industry associations.
59. One attendee questioned whether there will be enough TRL to get to the end of the season, noting catches to date. AFMA advised that more analysis is being done on the data now and that AFMA will flag with fishers if this is looking like a possibility.
60. Attendees questioned whether the sectoral catch shares could be overturned now by the PZJA if there were any appeals during the allocation phase under the TRL Management Plan. AFMA advised that TVH operators can only appeal their small slice of the 33.83 per cent pie but that if their small slice increases slightly, this does not mean that the overall TVH catch share increases rather that all other TVH operators 'slices' would need to be adjusted accordingly. AFMA also advised that depending on how long the appeals process takes, the PZJA may need to make another decision to keep the interim arrangements in place for coming seasons until the formal allocation process is completed. However, the PZJA remains committed to pursuing 100% ownership in the TRL Fishery and not renewing the interim arrangements while appeals are underway would not be consistent with this commitment.

Badu Community

Date	15-16 April 2019
AFMA staff	Georgia Langdon and Natalie Couchman
Traditional Inhabitant Members	James Ahmat, Maluialgal – TRL RAG Frank Loban, Maluialgal – HCWG
Attendance List	Refer to Table 6

Fish Receiver System

61. The majority of attendees were familiar with the FRS however there was a low level of engagement during discussions.
62. AFMA staff reinforced key messages concerning the need for voluntary data to better understand the health of stocks and how fisheries are performing. Attendees were very interested in the data summaries. Some people requested TVH and TIB catches be split out and shown. There was no other specific feedback on the FRS.

Western Line Closure

63. One attendee raised concerns that removing the Western Line Closure may impact on the sustainability of kaiar stocks and queried whether any research has been undertaken into the potential impacts of removing the closure. AFMA advised that this matter had been considered by the Finfish Resource Assessment Group and the Finfish Working Group and preliminary advice indicated there was no sustainability concerns at this time.
64. Some attendees went further to explain that coral trout are often found sharing the same habitat with TRL and questioned whether fishing coral trout would have a negative impact on TRL. AFMA advised that the outcomes from the FRAG and FWG consideration of sustainability impacts could be provided to the group out of session. It was advised that Malu Lamar would not support the removal of the western line closure until there is assurance that it won't create sustainability concerns. A number of other fishers at the meeting supported this, noting the importance of TRL to local fishers on Badu.
65. Contrastingly, on the second day of the AFMA visit, other fishers expressed support to remove the closure.

ACTION ITEM – AFMA to provide Malu Lamar with details of FRAG/FWG consideration of sustainability impacts of removing the western line closure.

Harvest Strategies

TRL Harvest Strategy

66. The Malu Lamar Chairperson claimed that the draft TRL harvest strategy should be designed around full-time operators and not those that fish part time so as to allow full time fishers to make the most of the resource.
67. AFMA explained that the harvest strategy was not designed to cater for any one sector over another. Instead the strategy recognises that the resource is shared and is important to the way of life and livelihoods of Traditional Inhabitants in the Torres Strait and Papua New Guinea. This

is reflected in the objectives, reference points and decision rules. The Chairperson advised that Malu Lamar do not support the harvest strategy and will write to the PZJA expressing this view.

BDM Harvest Strategy

68. The Malu Lamar Chairperson claimed the harvest strategy will be ineffective as accompanying management arrangements in the BDM Fishery force fishers to only “fish the top of the pyramid”. Further, currently fishers are limited to only a few species with low TACs resulting in a lot of fishing effort being concentrated on home reefs and observations of a decline in key target species such as prickly redfish. The view was expressed that two management rules exacerbate this problem specifically the prohibition on hookah and the 7m boat length restriction. The Malu Lamar Chairperson suggested that these restrictions be lifted in order to take the pressure off home reefs, and this needs to happen at the same time the harvest strategy is implemented otherwise it will be ineffective.
69. The Malu Lamar Chairperson advised that Malu Lamar do not support the BDM harvest strategy and will write to the PZJA expressing this view and their concerns regarding the management arrangements within the BDM Fishery.
70. Attendees were advised as to how they can make a submission in response to the public call for comment.

Other Business

Membership on PZJA forums

71. The Malu Lamar Chairperson expressed a strong desire for Malu Lamar to seek membership on all PZJA Forums and advised that their lawyers will be writing to the PZJA on this matter.

Consultation with Malu Lamar

72. The Chairperson requested that AFMA consult with Malu Lamar concerning any amendments to legislation. AFMA advised that Malu Lamar are consulted as per requirements under the *Native Title Act 1993*, and that AFMA had written to them directly concerning the latest management proposals (e.g. harvest strategies and Western Line Closure).

Compliance

73. Two attendees expressed concerns that the AFMA Compliance program is ineffective, alleging that TVH operators are fishing illegally to circumvent the sectoral catch shares arrangement. Allegations were made that TVH fishers are fishing in the Torres Strait and landing the product as Queensland product. Other allegations included primary vessels anchoring near the Southern jurisdictional line of the Protected Zone with tenders fishing in Torres Strait waters but landing the product as Queensland product. AFMA advised about how AFMA took over domestic compliance mid-2018 and highlighted how a range of tools (e.g. VMS, catch reporting, aerial surveillance, inspections and other compliance tools) are used to monitor TVH operations.
74. Attendees were advised to report any suspected illegal fishing to AFMA noting how these reports are important to an effective compliance program.

Use of hookah breathing apparatus

75. The Malu Lamar Chairperson expressed a strong desire for industry to fish for white teatfish using hookah. AFMA advised that this issue had been discussed at length at previous HCWG meetings, at which he was present. The HCWG advised there were some sustainability concerns around using hookah to fish for BDM that need to be addressed and this is exacerbated by the lack of data on the health of BDM stocks more broadly. The Chairperson noted a developmental permit was issued in 2011 to allow fishing for BDM species (largely white teatfish) to a non-Traditional Inhabitant operator, and advised that if that was allowed then it should be allowed now.
76. The Malu Lamar Chairperson advised that Malu Lamar will write to the PZJA on this matter and requested that the data from the developmental permit be released to communities. AFMA advised it had been considered in the HCWG.

ACTION ITEM – AFMA to assess whether the data summaries from the 2011 hookah developmental permit can be released to communities.

7m boat length restriction

77. The Malu Lamar Chairperson expressed a concern that the current 7m boat length restriction in the BDM Fishery prevents operators from fishing a greater area in the fishery, forcing them to fish only on home reefs. AFMA explained the origin of this rule as a blunt tool to control effort. Further, AFMA explained the biological vulnerabilities of BDM, which means that in lieu of more complex fisheries management arrangements (e.g. rotational fishing) blunter tools have been used to control effort in the fishery to prevent overfishing.
78. AFMA advised that good fisheries data is needed to support changes to current management settings, which until the FRS was implemented, the fishery was very data poor.
79. The Chairperson advised that Malu Lamar will write to the PZJA on this matter.

General

80. Some fishers expressed the view that PNG persons should not be eligible for a TIB licence. AFMA explained the current eligibility criteria under the *Torres Strait Treaty* and PZJA policy. There was also a query as to whether a PNG person with a TIB licence can have another PNG person working on their boat. AFMA advised this is only possible if that person is deemed a Traditional Inhabitant as defined by the *Treaty* and PZJA policy.
81. In the margins of the meeting, some fishers noted that the views expressed by Malu Lamar were not shared by all in attendance.

Ugar (Stephen) Community

Date	12 April 2019
AFMA staff	Andrew Trappett and Gabrielle Miller
Traditional Inhabitant Members	Rocky Stephen, Kemer Kemer Meriam – TSSAC, FWG, FRAG Michael Passi, Kemer Kemer Meriam - HCWG
Attendance List	Refer to Table 7

Fish Receiver System

82. Most attendees were generally familiar with FRS, however a significant misunderstanding was evident in terms of the function of authorised agents, and the issues with fishers receiving their own catch. The group discussed in detail the issue of requiring two separate parties verifying and signing off on the catches received and how an authorised registered agent can assist fishers who are also receivers in ensuring the Catch Disposal Records are filled out correctly.
83. Attendees were very interested in the volume of reports and reported catches in the TRL, Finfish and BDM Fisheries.
84. Attendees noted how the provision of BDM catch data will help support future openings for Black Teatfish, acknowledging that reported catches within the last the opening for black teatfish were significantly delayed resulting in an over-catch of the TAC.

Harvest Strategies

85. Generally, attendees were pleased with the level of involvement two of their community members (Rocky Stephen and William Stephen) had in developing the draft BDM harvest strategy in recent years.
86. Attendees expressed a strong need for traditional knowledge and on-water observations (seabed health for BDM) to be incorporated in the harvest strategy and in stock assessments. It was acknowledged that this sentiment is captured as an objective the draft BDM harvest strategy.
87. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

88. Community members from Ugar abstained from making comment on the proposal to remove the Western Line Closure, noting it was an issue not directly relevant to their waters.
89. Some expressed concern that removing the closure will result in more western community fishers accessing key eastern fishing grounds for coral trout and mackerel with larger boats in future.
90. Attendees advised that some spatial control on harvests will be required in future. As an example, during a black teatfish opening, it is not satisfactory that fishers are licensed to fish in the whole of Torres Strait noting that home reefs and community reefs traditionally fished need to be respected and reserved for those home communities.

Other Business

91. There appears to be a general lack of understanding of the Torres Strait Prawn Fishery with concern that the prawn trawl fleet is destroying seabed habitat, have unlimited catches, unlimited

fishing effort, no monitoring, and are catching bycatch of other finfish species which is impacting on Torres Strait finfish commercial catches. Attendees suggested that AFMA could provide general facts and information about the Torres Strait Prawn Fishery to help communities understand more about how the fishery operates and is managed.

92. Similarly, there appeared to be a general lack of understanding of the TRL Management Plan and how the new quota management system works (e.g. sectoral catch shares).
93. Attendees expressed concerns that hookah method is taking most of the TIB sector TRL catch and this unfairly impacts free-diving fishers. It was suggested that a cap or split be implemented within the TIB TRL sectoral catch share to retain catch available for free-diving fishers in years with low TACs.
94. Concerns that the new AMSA coxswains requirement will result in some TIB fishers leaving the fleet as they may not be able to pass coxswains course.

Spanish mackerel

95. The group discussed the Spanish mackerel assessment in detail and examined the downwards trend in CPUE and corresponding decrease in total allowable catch.
96. Some attendees expressed concern that sunset finfish fishers were impacting the breeding stock at Bramble Cay and these effects flow on and disadvantage the rest of the TIB fleet. The group was reminded of the current finfish management arrangements in already having secured 100 per cent TIB access to ownership.
97. After substantial discussion on potential factors causing the decline, attendees agreed that monitoring the fishery via reported catch data was the best way to improve our understanding of the fishery. Some fishers expressed a desire to contribute to the strength of the CPUE signal through voluntarily completing TSF01 Daily Fishing Logbooks. As a result, two TSF01 logbooks were issued to fishers.
98. Attendees noted that it is important for TIB sector catch and effort to be tabled for analysis as the sunset sector (and subsequent catch and effort data) comes from a substantially different area of waters (compared to the TIB sector) due to the 10nm closures around inhabitant eastern island communities.
99. TIB fishers present suggested recent mackerel catches have been strong on Ugar with good catch rates and good size class fish (~15kg).

Saibai Community

Date	1 May 2019
AFMA staff	Georgia Langdon, Natalie Couchman and John Jones
Attendance List	Not available

100. The consultation at Saibai did not go ahead in the same manner as other community visits. This was due to a lack of facilities available on Saibai on that day, in conjunction with an accidental double booking of Government agencies holding community meetings. The TSRA Land and Sea Management Unit offered AFMA staff a window to present to community members in the margins of their own meeting, which was preceded by a TSRA Fisheries Infrastructure Program presentation. While presentation time was limited, the access to a broader range of community members was welcomed.
101. A formal attendance list was not recorded, however attendees included TSRA rangers, fishers, My Pathways and respected elders of the Saibai community.

Fish Receiver System

102. The majority of attendees were not familiar with the FRS or general commercial fishing licensing requirements. AFMA staff took the opportunity to discuss primary licence conditions for commercial fishing in the Torres Strait and the requirement to land catches to a licenced Fish Receiver. AFMA staff also touched on the importance of the need for voluntary data fishing effort data to understand the health of stocks and how well fishers are operating.
103. Questions and suggestions from stakeholders included:
- Requiring the marking of cray cages, pots and nets to identify them as TIB fishing gear;
 - Requiring a fisher to be in possession of a licence card in order to legally fish with the intent to stop the misuse of commercial licences. This suggestion also included the introduction of magnetic strips on licence cards to be used to record catch through an electronic system.
 - Whether a licenced fisher can have unlicensed persons on their boat. AFMA staff advised this is possible, however such crew members are required to be traditional inhabitants. In the event a TIB boat is crewed by non-traditional inhabitants, it is the TIB licence holder who is liable if any fishing offence is made.
 - Whether a TIB licence can be issued without a boat. AFMA staff advised that if a person does not have a boat, they could use a licenced boat with the permission of the owner, however the owner is liable for the actions of the person using the boat. This arrangement can be made formal by registering an authorised agent to act on the licence holders behalf.

ACTION ITEM –Clear guidance to be developed on whether a TIB licence can be issued to a traditional inhabitant without a boat.

Harvest Strategies

104. Due to the nature of the community consultation and lack of facilities to show a powerpoint presentation, AFMA were unable to present on draft harvest strategies. Attendees were advised

that all TIB licence holders were mailed a package containing information on the draft harvest strategies out for public comment and encouraged people to provide comment.

Western Line Closure

105. The proposal to remove the Western Line Closure was understood. One of the TSRA Rangers was very useful in facilitating the discussion and outlining the issue. Those in attendance supported removing the closure, noting it would support the operation of the community freezer once up and running.

Other Business

Community freezer

106. A representative from the TSRA fisheries infrastructure project presented on the development of a Saibai community freezer:
- The Saibai freezer will be one of six freezers to be built across the Torres Strait region. A network of freezers will provide for improved continuity of fisheries product supply and potentially pooling of catch and other resources.
 - All freezers will be the same design to facilitate maintenance and repairs. Freezers will be built to accommodate both live and frozen product, occurring in 3-4 stages with building of the Saibai freezer to commence by the end of June over a 30 day contract period.
 - Fishers will be paid beach price immediately on landing and TSRA will fund 6 positions at the freezer (manager, book keeper and 4 filleters/processing staff).
 - Any profits from the freezer will be reinvested back into its operation.
 - Designed to meet domestic food safe requirements but will not meet export requirements. This is because export requirements are considered too expensive and not necessary as all product will pass through export grade facilities in Cairns before leaving Australia.

Biosecurity risks

107. The TSRA Land and Sea Management Unit gave a general awareness presentation regarding the biosecurity risks from PNG (various invasive fish species and plant diseases) or from south of Saibai (e.g. carried by Seaswift barges (cane toads)). The presentation also touched on existing controls for deer which are reportedly increasing in numbers and having detrimental impacts on local swamplands.

Warraber (Sue) Community

Date	11 April 2019
AFMA staff	Selina Stoute and Gabrielle Miller
Traditional Inhabitant Members	James Billy, Kulkaigal – TRL RAG
Attendance List	Refer to Table 8

Fish Receiver System

108. Attendees raised concern about confidentiality of location and effort data and queried whether fishers on Thursday Island or from the TVH sector see the spatial data.
109. Concerned that fish receivers are sharing fishing area information with others, some fishers questioned whether there are any rules preventing fish receivers from releasing data to others. AFMA advised no, no such rules exist.
110. Further, attendees questioned what information the TVH sector are required to supply and whether discarded catches are included in CDRs and accounted for under the TAC.

Harvest Strategies

111. No specific comments were made about the draft harvest strategies. AFMA staff advised that explanatory material has been provided to licence holders to assist and AFMA is available on phone anytime to discuss.

Western Line Closure

112. Attendees queried by the closure was first introduced. AFMA advised the closure is a carryover for a historical management boundary when QLD Fisheries solely managed fisheries in this region.
113. No formal support or opposition in relation to the Western Line Closure was expressed by the Warraber community.

Other Business

114. A fisher made anecdotal reports and observations of dumping mass quantities of dead crays in the Thursday Island harbour from a full cage.
115. Attendees expressed concern that Thursday Island based fishers have disproportionate influence in the fisheries management process without understanding the views of outer island communities. Attendees recommended that all communities should be informed about all meetings and consulted on all matters.
116. AFMA staff advised that the AFMA Thursday Island office has an open door policy, and stakeholders are encouraged to meet with AFMA when on Thursday Island, or contact AFMA staff by phone anytime. AFMA staff agree to the importance of meeting with communities to better understand outer island community views.
117. Further, views can be conveyed through PZJA advisory forums (e.g. TRL Working Group). Attendees noted that building effective communication and engagement is a joint

responsibility between AFMA and industry/communities. This is particularly effective where industry associations/organisations are in place.

118. By way of example, participants reiterated that the Malu Lamar court case decision in 2018 that overturned the hookah ban was not known about beforehand at Warraber and not supported by the Warraberalgal community.

Development permit

119. Attendees questioned a current Developmental Permit and raised concern that it was being used primarily for fishing not training. AFMA advised that at their most recent meeting in April, the PZJA agreed to commence a review of how developmental permits are used for training purposes in all Torres Strait fisheries. Further, the PZJA agreed that until a policy has been developed, the PZJA will not be considering any applications for developmental permits that seek an exemption of the policy for TIB boats to be fully owned and crewed by traditional inhabitants.

General questions – TRL

120. Attendees had a number of general questions and concerns about the TRL Fishery;
- a. How the quota system works, whether shares will change and whether the TVH boats will be able to lease quota from the TIB sector;
 - b. Concerns that TVH boats will fish for a full season when TAC is high (i.e. still be operating on TIB grounds) and if measures are able to be put in place to avoid this happening? AFMA advised any such measures are not possible through quota system, however other avenues may provide a pathway to address this concern. This includes the continued pursuit of 100% ownership, and industry codes of practice with TVH boats around home reefs. Under a more certain access agreement (i.e. quota allocation), industry codes of practice may be easier to develop;
 - c. Whether closures could be implemented to stop TVH entering some areas of the fishery. AFMA advised closures can be made however these need to be fair and consistent with objectives of the *Torres Strait Fisheries Act 1984*.
 - d. Whether AFMA consulted on the TRL management plan? AFMA staff advised that there were two full rounds of community visits and consultation in developing the TRL management plan in addition to the 2018 Fisheries Summit and form Native Title Notification;
 - e. What is QLD East Coast TRL Fishery TAC? AFMA advised the East Coast Fishery operates under a 195 tonne constant catch strategy. The East Coast does not benefit from an annual independent fishery survey, like the Torres Strait. Industry on the East Coast would need to fund a survey in order to move away from a constant catch strategy.
 - f. Concern that East Coast boats unload east coast catch in Thursday Island yet declare it as caught in Torres Strait. AFMA advised that a range of tools are used to monitor the activities of boats, including the Vessel Monitoring System (VMS), mandatory QLD pre-unload reports (when, how much and where) and verified landing reports noting that QLD is set to have VMS on all boats (primary and tender) for east coast TRL by the 2020 season.

Mer (Murray) Community

Date	18 April 2019
AFMA staff	Georgia Langdon and Andrew Trappett
Traditional Inhabitant Members	Rocky Stephen, Kemer Kemer Meriam – TSSAC, FWG, FRAG Michael Passi, Kemer Kemer Meriam - HCWG
Attendance List	Refer to Table 9

Fish Receiver System

121. Attendees were eager to see the reporting progress under the FRS and were satisfied with the level of reporting that was occurring, noting in particular how poor catch reports used to be prior to FRS implementation. Most were generally happy with the trends in the data with regards to areas reported.
122. Some attendee's role-played an example fish receiver transaction using the example pages from the TDB02 book. This method proved very useful in helping people to understand each field in the form and how to complete the record. Attendees appeared comfortable with the role of both fishers, fish receivers and authorised agents and the importance of providing details to one another to complete the form.
123. The Spanish mackerel assessment was used to demonstrate an example of how the voluntary effort data helps build the understanding of CPUE series, highlighting how and why AFMA collects catch and effort information. AFMA staff reiterated that the FRS supports fishers but only if fishers are supporting the FRS.
124. Attendees were vocal about sunset fishers harvesting near their waters and the group discussed the requirements sunset fishers have under their lease arrangements, including their permit conditions, VMS, logbooks, compliance inspections and spatial closures. Attendees expressed a strong desire to understand what the 'big boats' (sunset licences) are catching, with some assuming that the declining finfish catch rates are from the 'big boats'.
125. A member of the TSRA Finfish Quota Management Committee noted how important it is to have fish receiver data in the context of allocation for finfish, acknowledging tonnage is allocated to the TIB sector first, and the remainder is available to be leased to the sunset (TVH) sector.
126. It was suggested that AFMA should be paying people in communities to collect data on behalf of the fishers – there was general support from others about this.
127. Attendees also questioned why AFMA won't allow TIBs to have big boats and fish the way the sunset licensed boats do. AFMA staff advised that TIB fishers are able to operate a boat up to 20m in length, noting however that there are additional requirements (e.g. VMS) for larger boats.

Harvest Strategies

128. Attendees acknowledged the differences between the draft TRL and BDM Harvest Strategies, particularly regarding the level of data and information available in each fishery and how that impacts our understanding of the health of the respective stocks and in return impacts to the management in both fisheries.
129. Those in attendance supported the draft BDM harvest strategy noting it will help set out how to re-open closed species (i.e. black teatfish).

130. Attendees noted that a larger BDM survey across the Torres Strait may be occurring but is subject to funding. It was emphasised that a survey is not the only key for opening a species like black teatfish and that AFMA is still committed to pursuing an opening and how and what that opening looks like will be discussed at the next HCWG meeting.
131. The group discussed how communities can implement their own measures above and beyond the Harvest Strategy or other fishery rules (e.g. Mer & Erub agreement to let Big Mary, Little Mary reefs lie fallow to protect prickly redfish). AFMA reiterated that there is nothing prohibiting communities implementing their own complimentary fishery rules and that the beche-de-mer harvest strategy is designed to enable this.
132. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

133. The proposal to remove the Western Line Closure was well noted with general consensus to not provide specific advice on the proposal. It is considered a western islands issue and western communities should be the ones to decide what to do with the closure.
134. General comments indicated that western communities want more fishing for trout to alleviate predation TRL and to enhance the abundance of TRL. Some anecdotal comments were made indicating that the more coral trout is fished, the more habitat is opened for TRL (i.e. holes in the reef).
135. General comments were also made that Western communities should make sure to get their management settings in order before sunset licences might access their waters – referring to the tensions prior to the implementation of the 10nm radial closures excluding sunset fishing effort around Mer, Ugar, Massig and Erub communities.

Other Business

136. The PBC Chair stated that more generally that there is a need for licencing review to occur and for further area controls on licencing permits. Most fishers seemed dissatisfied that a TIB licence technically permits a fisher to access the whole fishery (Torres Strait wide) which is in conflict with cultural protocols. This issue results in community tensions during black teatfish openings or when primary-tender operations from the west, come to fish in Meriam waters.
137. A number of attendees queried whether there was to be a future establishment of an EEZ or territorial zones around inhabited islands, or changes to licence conditions to prohibit TIB boats from one particular island cluster fishing in another, and vice versa. Attendees advised this is currently ailan custom but that in order for it to be effective, it needs to be regulated through licencing conditions. If people want to fish in Meriam waters they should have to ask permission from the Meriam community. The issue was parked and suggested that the upcoming commercial entity formation would be the vehicle to progress this idea. All attendees were strongly encouraged to share these views with TSRA who are leading the development of a commercial fisheries entity.
138. Fishers expressed concerns and reports that they are having to travel further to find good catches of prickly redfish and that the sizes of prickly redfish are decreasing.
139. The PBC Chair advocated strongly for licensing reform, stating that Traditional Inhabitants own 100 per cent of the rights in most fisheries but don't have the capacity to fill the TACs (i.e. in finfish). He requested that the Australian Government work on a program that is designed to have clear outcomes for TIB taking more of the harvest using larger primary-tender operations

in major communities. Such boats need to be training boats, set up to upskill local fishers. Attendees suggested this concept was something the Entity could establish with AFMA's assistance.

140. A number of attendees expressed criticism about the TSRA holding finfish lease licence money and the lack of feedback to communities and transparency about what money was or was not being used for. It was noted that the funds are still being held in trust but that there has been political debates about how the funds are to be distributed. Those in attendance expressed strong support that the money should be put back in to communities to develop fishing capacity so that fishers are able to fish for finfish, to utilise the fishery better and therefore no longer need to lease licences to non-indigenous operators. AFMA suggested this issue be raised with the TSRA in the context of the formation of an Entity.
141. Further criticism was expressed in relation to the fisheries infrastructure renewal project. Given that there are land disputes on Mer, not all businesses will be able to benefit from a community based freezer, particularly if they have to travel onto another clan's land to access the establishment. Others advised that since the community freezer has been in disrepair since 2010 they have had to themselves invest in their own infrastructure and a community freezer will not benefit their business now they have gone an alternate route.
142. Attendees advised there is a general community ban on the use of hookah in Meriam waters in all fisheries including TRL.
143. A number of reports were made to AFMA regarding fisheries compliance:
 - Reports of Indonesian blue boats seen transiting through Meriam waters and Cumberland passage;
 - Concerns of possible illegal fishing in Area 20 (referring to TDB02 map) with reports that although those reefs have been deliberately left to fallow for over a year, fishers have returned the reefs to discover they have been completely fished out (BDM species).
 - Discovery of washed up bleach bottles over certain periods suggests to community members that offshore IUU fishing may be occurring using this destructive fishing practice.
144. All were consistently encouraged to report any suspected illegal fishing to AFMA with as much detail as possible in a timely manner, via the CRIMFISH hotline. Float keyrings were handed out to attendees with the CRIMFISH phone number and the AFMA Office phone number.

New Mapoon Community (NPA)

Date	9 May 2019
AFMA staff	Georgia Langdon, Kayoko Yamashita, John Jones and Natalie Jorna
Attendance List	Refer to Table 10

Fish Receiver System

146. Most attendees were not familiar with the FRS though some recalled the voluntary docket book system (TDB01). Some attendees were licenced TIB fishers but many had never held a TIB licence and there was a general lack of awareness in relation to PZJA managed fisheries within the Protected Zone versus areas of jurisdiction managed by Queensland Fisheries.
147. The group worked through the TDB02 example handouts in detail, with fishers reading through each field to understand the information that is being asked on each form. AFMA staff emphasised the need for voluntary data to understand the health of stocks and how well or poorly the fishery is performing. This was well received, and most understood the value in providing basic 'area fished' information, confident that the areas were broad enough to not give away their specific fishing spots.
148. Attendees were very interested in the maps of where fish were reportedly caught. There was a good understanding of how only part of the story is told with the 'area fished' data, particularly for TRL where almost 60% of the area fished data was not provided.

Harvest Strategies

149. The draft harvest strategies information was generally well received and understood in terms of how TACs are set and linked well with the importance of reporting catch and effort data.
150. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

151. No formally expressed support for the Western Line Closure however the proposal was generally well understood. Participants were encouraged to go away with information handouts and discuss further with their communities and provide comments back to AFMA with any views.

Other Business

152. Several attendees expressed concern regarding the use of hookah on the tops of reefs. AFMA advised that there are no formal rules about where hookah can be used (as opposed to rules about when, i.e. moon-tide hookah closures), however industry codes of conduct or 'gentlemen's agreements' are options that can be explored by communities with operators to establish rules about the use of hookah around community home reefs. AFMA advised that it would be very difficult to enforce rules relating to the depth of hookah use given current monitoring tools but that AFMA and/or the TSRA can support communities in establishing codes of conduct and facilitate communicating this information between communities and fishing operators.

153. Some concern expressed from attendees about keeping cray cages in coastal waters, stating they had been advised by Queensland Fisheries that the practice was prohibited. AFMA advised that this practice is common with fishers in the Protected Zone but that perhaps QLD Fisheries have particular rules about this in QLD coastal waters. AFMA were not able to provide firm advice on this matter.
154. Fishers queried whether it was legal to catch and sell barramundi from Mapoon on the west coast of Queensland. AFMA advised that under a TIB licence this is not permissible, however QLD Fisheries may have different rules about barramundi on the west coast.
155. Overall, there was general lack of awareness about PZJA/TIB fishing rules and Queensland Fisheries rules and jurisdictions. Communities would benefit greatly with some very clear maps and targeted communications about PZJA fisheries management arrangements.

<p>ACTION ITEM: AFMA to provide copies of the BDM Species ID Guide books to Michael Bond, Councillor of New Mapoon.</p>
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Injinoo Community (NPA)

Date	10 May 2019
AFMA staff	Georgia Langdon, Kayoko Yamashita and John Jones
Attendance List	Refer to Table 11

Fish Receiver System

156. Very few attendees were familiar with TIB licences, or the old voluntary docket book system. No one present had heard of the FRS and there was again a general lack of awareness about PZJA managed fisheries within the Protected Zone.
157. The presentation was simplified to basic licencing requirements in the Protected Zone, what a TIB licence permits a fisher to do, who AFMA are and who the PZJA are.
158. There was a lot of concern expressed about the Part B sea claim and how commercial fishing impacts the sea claim and Aboriginal rights in the NPA.
159. AFMA advised of the ability for traditional inhabitants of the five NPA communities to apply for a TIB licence, providing them the option to fish commercially within the Protected Zone and Outside But Near Areas.
160. Attendees were very interested in the effort data shown by area fished, however some were very concerned that the TDB02 map of Area Fished has arrows pointing south for Area 21 (east of Cape York). AFMA were unable to provide any advice as to why the arrows point down, or why there are any arrows at all. Attendees suggested that Area 21 should have more fish reported from that area.
161. Attendees then spent time examining detailed maps of the fisheries to better understand exactly where the area of the fisheries are, versus the Protected Zone, and the Outside But Near Area, in relation to where their communities are on the mainland NPA.

ACTION ITEM: AFMA to send copies of the BDM Species ID Guide to the Ipima Ikaya Secretary, Amanda Ewart.

Harvest Strategies

162. Despite presenting to a community that is quite unfamiliar with PZJA fisheries management arrangements or language, attendees appeared to have a good understanding of the importance of data collection and how it impacts management decisions.
163. Attendees were advised as to how they can make a submission in response to the public call for comment.

Western Line Closure

164. No formal support or opposition expressed by the group but attendees were encouraged to discuss further with their communities and other fishers not in attendance.
165. The Western Line Closure proposal generated a number of questions about the Finfish Fishery in terms of barramundi, netting restrictions, size limits and no take species. Summary information from *Torres Strait Fisheries Management Instrument No. 8* was provided to the PBC Secretary following the meeting.

Thursday Island (Torres Shire) Community

Date	20 May 2019
AFMA staff	Selina Stoute, Georgia Langdon, Natalie Couchman and Eva Plaganyi
Attendance List	Refer to Table 12

Fish Receiver System

166. Many people within the Torres Shire are very familiar with the FRS, and so only a brief overview was provided to those present.
167. No major concerns were raised with the FRS. One attendee queried whether discards or mortalities of TRL are recorded. AFMA advised that currently, this data is not captured on CDRs however there is a sub-group of the TRLRAG tasked with examining this issue.

Harvest Strategies

168. Harvest Strategies were not discussed at this meeting.

Western Line Closure

169. A number of concerns were raised in relation to the proposal to remove the Western Line Closure, including:
- Whether AFMA had already made a decision to remove it. AFMA advised that no decision had been made. Consultation on the issue was still on going, and that the outcomes of the consultation will then be put back to both the Finfish RAG and Working Group to discuss further.
 - Concern that coral trout are very territorial and don't move around reefs much, meaning that removing the closure may impact on the availability of coral trout in the area.
 - Whether lifting the closure could only apply to TIB operators. AFMA advised that this could be considered through advice from stakeholders and the Finfish Working Group.
 - Concerns that top western communities who have supported removing the WLC, won't actually utilise the opportunity to fish for reef line species if the closure is lifted.
 - Concern with the potential impact on TRL stocks and the ability for fishers to fish for coral trout for kai kai.
170. Other attendees noted that there is 'no trout on the grounds and no life on the bottom' around the inner islands this TRL season.

Other Business

171. Dr Eva Plaganyi from CSIRO delivered a comprehensive presentation about the science that underpins the management of the Torres Strait TRL Fishery and stock assessment, including the annual fishery independent survey. This was very well received by a number of industry members.
172. Some active fishers present noted that;
- the abundance of TRL around Thursday Island is worse than last season although the TAC is higher;
 - there a high numbers of 0+ lobsters being observed on reefs this season; and

c. habitats have changed around Thursday Island with more mud instead of reef.

173. Sandie Edwards, from Torres Straits Seafood offered to provide size samples of landed TRL to CSIRO to contribute to the length frequency data set used in the TRL stock assessment.
174. One attendee questioned who the members of the PZJA consultative committees are, particularly the Torres Strait Scientific Advisory Committee (TSSAC) and added that Torres Strait Islanders should be setting the agenda for what is researched in the Torres Strait. It was emphasised that the Chair of all Working Groups and RAGs should be Torres Strait Islanders. AFMA advised that a call for applications for all non-traditional inhabitant positions on PZJA fisheries consultative committees had recently been advertised.

Mabuiag Community

Date	21-22 May 2019
AFMA staff	Georgia Langdon, Natalie Couchman, Kylie McKillop and Hannah Howard
CSIRO staff	Dr Eva Plaganyi
Attendance List	Refer to Table 13

Fish Receiver System

175. Despite there being a number of active TIB fishers present, only some people recalled the voluntary docket book system and very few were familiar with the FRS. At the time of the community meeting, there were no licenced Fish Receivers based on Mabuiag, and fishers reported that they take their catches to Badu or down to Thursday Island to be received.
176. Fishers raised a number of technical queries around whether you can be a TIB fisher and a Fish Receiver at the same time. AFMA advised the importance of having two separate (ideally independent) parties sign the CDR and outlined the options for enlisting an Authorised Agent to ensure that two different parties are signing the paperwork.
177. Most attendees appeared comfortable with providing voluntary effort and area data and understood how useful that information can be in understanding the health of the stocks and how well the fishery is performing.
178. One industry member expressed concern over the Area Fished map in the TDB02 book, highlighting that the broad areas outlined do not reflect how the people of Mabuiag view their waters traditionally. It was suggested that the map would be more useful to communities if the map areas were divided up in to community boundaries as understood by communities. This would allow communities to use and understand their catch data more effectively, particularly if they want to make decisions about their own fisheries management. AFMA advised that the areas were originally devised based on habitat similarities across the Torres Strait, but agreed that there is scope to adjust the areas. As an example, in the TRL Fishery, the TDB02 areas do not align well with the areas used by CSIRO in the stock assessment and this issue was being considered by the TRLRAG.

Harvest Strategies

179. At the request of attendees, and noting that the community does not fish for BDM, only the draft TRL harvest strategy was presented.
180. Although no specific comments on the draft harvest strategy was made, the concept of how the harvest strategies guide the way TACs are sustainably set in the TRL Fishery was well received.
181. Attendees were advised as to how they can make a submission in response to the public call for comment.
182. The discussion on harvest strategies was followed up with a comprehensive presentation from Dr Eva Plaganyi from CSIRO on the science that underpins the management of the TRL Fishery in the Torres Strait. The group spent some time discussing the life cycle of TRL, in particular how the level of recruitment of young TRL is heavily influenced by environmental factors and not just fishing pressure.

Western Line Closure

183. AFMA introduced the proposal to remove the Western Line Closure and shared some of the diverse views already shared by other communities during previous consultations, in particularly the potential interplay between TRL and coral trout. In consideration of these issues, there was general support for the closure removal in principle through a show of hands. No firm opposition to the proposal was expressed. A TSRA Ranger advised that further discussions needed to be had within the Mabuiag community, particularly with the islands' elders.

Licensing

184. A number of licencing queries and applications were made, as well as queries about holding a TIB licence without a boat.
185. Some community members expressed frustration with the difficult in getting sign off from both their local Councillor and the Regional Island Council Mayor on Traditional Inhabitant ID forms.

Summary of Action Items

Description	Status	Comment
AFMA to follow up with TSRA regarding the status of proposed iPads for electronic reporting	Ongoing	AFMA has raised this with the TSRA Fisheries Program and is awaiting further advice.
AFMA to clarify and report back to Hilda Mosby about when the Western Line Closure came in to place.	Complete	Advice was provided to Ms Mosby via email on 15 July 2019.
AFMA to follow up with TSIRC Mayor Gela's office regarding outstanding Traditional Inhabitant ID Forms.	Ongoing	Mayor Gela's office has advised that all TIB ID applications should be sent directly to Ursula.nai@tsirc.qld.gov.au or through a local TSRIC office who can pass it directly to Mayor Gela's office.
AFMA to raise the issue of TVH licences held in trust and associated monies with TSRA Fisheries Program ahead of their community visits in May	Complete	The TSRA Fisheries Program has been made aware of this issue.
AFMA to develop and disseminate more information about authorised Registered Agents to communities.	Ongoing	AFMA has drafted some materials regarding this topic.
AFMA to report back to Patrick Bonner about the membership of the TSRA board subcommittee working on the Fisheries Entity project	Complete	Advice on the membership of the Entity project was provided on 27 June 2019 via email
AFMA to report back to Poruma fishers about whether there any TIB operated finfish sunset licences.	Complete	Advice on the membership of the Entity project was provided on 27 June 2019 via email
AFMA to provide clear guidance on whether TIB licences can be issued without a boat.	Ongoing	AFMA is seeking legal advice on this matter
AFMA to follow up with Patrick Bonner with details of who sits on the Poruma fisheries association and their contacts.	Complete	Nil.
AFMA to provide Malu Lamar with details of FRAG/FWG consideration of sustainability impacts of removing the western line closure	Complete	Copies of relevant meeting papers and meeting records of both FRAG and FWG meetings where the WLC was discussed was circulated to Malu Lamar via email on 27 June 2019
AFMA to assess whether the data summaries from the 2011 hookah developmental permit can released to communities.	Ongoing	AFMA is seeking advice on this matter.

Description	Status	Comment
AFMA to provide copies of the Beche-de-mer Species ID Guide books to Michael Bond, Councillor of New Mapoon.	Complete	Guides were posted on 28 June 2019.
AFMA to send copies of the Beche-de-mer Species ID Guide to the Ipima Ikaya Secretary, Amanda Ewart.	Complete	Guides were posted on 24 May 2019.

Attendance Lists

Table 2. Masig (Yorke) Community attendance list

Name	Organisation
Charles Asai	
Francis Nai	TSRA Land & Sea Management Unit – Ranger
Gabriel Nai	Police Senior Sargent
Hilda Mosby	Kulkalgal PZJA Traditional Inhabitant Member on Finfish Working Group
Laskem Samuel	My Pathway
Leroy Kris	My Pathway
Loretta Adidi	My Pathway
Mary Lowatta	My Pathway
Ned Mosby	IBIS
Ned Mosby	Masig PBC Deputy Chair
Paul Lowatta	My Pathway Fisher Kulkalgal PZJA Traditional Inhabitant Member on Finfish Resource Assessment Group
Percy Misi	My Pathway
Samson Mosby	My Pathway
Simon Naawi	TIB Licence Holder
William F Mosby	My Pathway/Fisher
Willie Gamia	TIB Licence Holder

Table 3. Erub (Darnley) Community attendance list

Name	Organisation
Amina Ghee	
Bert Matysek	Erub Fisheries Management Association
Chris Sailor	Erub Freezer
Dan Sailor	Finfish rep (Erub)
Eddie Savage	Erubam Le PBC
Harry Ghee	Torres Strait Island Regional Council
Jimmy Gela	Erubam Le PBC
Les Pitt	PZJA Traditional Inhabitant member for Kemer Kemer Meriam on TRL Working Group and Resource Assessment Group.
Mary Savage	
Michael Passi	Mike Passi Divers PZJA Traditional Inhabitant member for Kemer Kemer Meriam on Hand Collectables Working Group
Rocky Stephen	Brother Bear Fisheries PZJA Traditional Inhabitant member for Kemer Kemer Meriam on Finfish Resource Assessment Group and Working Group
Yana Gesa	

Table 4. Boigu Community attendance list

Name	Organisation
Kada Tom	My Pathway
Keith Pabai	PBC Chair
Pabai Pabai	My Pathway
Robert Gizu	My Pathway
Wusuru Wurukii	My Pathway

Table 5. Poruma (Coconut) Community attendance list

Name	Organisation
David Mari	Boat Decky
Douglas Gaidan	Builder
Francis Clark	Fisher
Francis Pearson	Poruma Councillor
Frank Faud	TSRA Board Member PBC Chair
Gibson Billy	Fisher
Harry Ketchell	Builder
Joseph Pearson	Builder/Fish Receiver
Lawrence Mosby	Fisher
Nicholas Pearson	Fisher
Patrick Bonner	Fisher/Fish Receiver
Timothy Faud	Fisher
Victor Billy	Fulltime diver
Wrench Larry	Fisher/Fish Receiver
Yessie M Pearson	Fisher

Table 6. Badu Community attendance list

Name	Organisation
Anthony Garnier	My Pathway
Barry Nona	Police Liaison Officer
Dick Williams	TSRA Ranger
Edmund Tamwoy	Fish Receiver
Emmanuel Simitzis	Australian Live Seafood
Frank Loban	PZJA Traditional Inhabitant Member for Maluialgal
George Asse	
Gerald Bowie	TSRA Ranger
James Ahmat	PZJA Traditional Inhabitant Member for Maluialgal
Jermaine Ruben	
Maluwap Nona	Chairperson of Malu Lamar
Philemon Nona	
Phyllis Tamwoy	
Troy Stow	TSRA Ranger
Youngas Bowie	Fish Receiver

Table 7. Ugar (Stephen) Community attendance list

Name	Organisation
Alapasa Panuel	Sol Fishers
Jennie Morris	
Michael Passi	Mike Passi Divers PZJA Traditional Inhabitant member for Kemer Kemer Meriam
Pau Stephen	Brother Bear Fisheries Biosecurity
Robert Modee	
Rocky Stephen	Brother Bear Fisheries PZJA Traditional Inhabitant member for Kemer Kemer Meriam
Victor Morris	
William Stephen	Sol Fishers

Table 8. Warraber (Sue) Community attendance list

Name	Organisation
Aken Baragud	TSRA Ranger
Alfred Billy	My Pathway
Boggo Billy	My Pathway
Elizabeth Mari	My Pathway
Ettie Gela	Torres Strait Island Regional Council
Ewelu Mene	My Pathway
Harold Pearson	Macoy Enterprise/TSIRC
Ian Larry	My Pathway
James Billy	Torres Strait Island Regional Council
James Bob	My Pathway
John Bob	My Pathway
John Bowie	My Pathway
John Larry	My Pathway
Joseph Mari	My Pathway
Kabay Tamu	Warraberalgal PBC Chair
Laura Pearson	Macoy Enterprise/TSRA Ranger
Nasona Bob	My Pathway
Nathan Pearson	Torres Strait Island Regional Council
Pattison Larry	My Pathway
Paul Mari	My Pathway
Peter Bob	Torres Strait Island Regional Council
Yessie Pearson	My Pathway
Young Bob	TSRA Ranger

Table 9. Mer (Murray) Community attendance list

Name	Organisation
Beimop Tapim	PBC
Ben Barsa	Fisher
Cyril Gabey	Gelam Tail Seafoods
Falen D Passi	PBC Chair
Fraser Wailu	Fisher/diver
Gawomi Passi	MDW Fishers
James Zaro	Fisher
John K Tabo	MDW Fisheries TSRA Fisheries Quota Management Committee PZJA Traditional Inhabitant member for Kemer Kemer Meriam
John S Tabo	PBC
Lyall Kelly	Fisher
Michael Passi	Mike Passi Divers PZJA Traditional Inhabitant member for Kemer Kemer Meriam
Nakimie Maza	Fisher/diver
R M Kaigey	
Rocky Stephen	Brother Bear Fisheries PZJA Traditional Inhabitant member for Kemer Kemer Meriam
Sabu Wailu	Fisher/diver

Table 10. New Mapoon Community (NPA) attendance list

Name	Organisation
Aaron Bamaga	
Albert Bond	
Billy Daniel	
Daniel Sebasio	
James Bond	
Mervyn Bond	
Michael Bond	Northern Peninsula Area Regional Council
Trevor Lifu	

Table 11. Injinoo Community (NPA) attendance list

Name	Organisation
Amanda Ewart	Ipima Ikaya RNTBC
Jerry Songoro	
Manihera Blarrey	
Nicolas Thompson	Deputy PBC Chair, Ipima Ikaya RNTBC
Roger Williams	

Table 12. Thursday Island (Torres Shire) Community attendance list

Name	Organisation
Charles David	
Graham Hirakawa	Fisher
Koro Samai	Fisher
Ned David	Gur A Baradharaw Kod Land and Sea Council (GBK)
Richard Takai	Fisher
Sandie Edwards	Torres Straits Seafood
Tony Shibasaki	Fisher
Yacoba	Fisher

Table 13. Mabuiag Community attendance list

Name	Organisation
Desmond Kris	
Deusia Ware	My Pathway
Douglas Bani	My Pathway
Evrardus Kaise	
Flora Warrior	TIB licence holder
Frank Whap	Community member
Gibson Joe	My Pathway
Harry Kris	
Jack Whap	My Pathway
Jimmy Kris	
Kadiab Gizu	Fisher
Noel Misi	My Pathway
Patrine Misi	
Phillip Billy	
Phillip Kepi	
Ricky Gizu	My Pathway
Ryan Kris	
Sarion Bani	My Pathway
Ted Whap	TSRA Ranger
Thomas J Holland	
Thomas Mene	Fisher
Tigi Bani	
Tyrus Fujii	My Pathway
William Gizu	Fisher
William Misi	My Pathway

Attachment 4.1c

Summary of community views and concerns raised during community visits to discuss the proposal to remove the Western Line Closure.

Community	Date of visit	Summary of views on Western Line closure review
Masig (Yorke)	8-Apr	Concerns with how removing the closure will impact on the distribution of sunset leases.
Erub (Darnley)	8-9 April	Not formally supported as the proposal does not directly apply to the Erub community however general support expressed for the western communities to remove the closure if they wish. General concern with how removing the closure may change where fishing effort is concentrated.
Boigu	17-Apr	Very supportive of the proposal to remove the closure and to open up access to the fishery for the Boigu community.
Poruma (Coconut)	11-12 April	Limited interest in proposal as very little commercial finfish fishing occurs in Poruma. Concerns with how removal of the closure may impact the finfish TAC.
Badu	15-16 April	Concern that removing the closure will impact the sustainability of TRL stocks. Proposal to remove the closure not supported by Malu Lamar nor a number of Badu fishers.
Ugar (Stephen)	12-Apr	Community members withheld from making comment on proposal as not directly relevant to Ugar waters. Some concern that removing closure will result in more western community's access key eastern fishing grounds. Supportive of spatial controls.
Saibai	1-May	Generally supported.
Warraber (Sue)	11-Apr	No concerns raised.
Mer (Murray)	18-Apr	Community members withheld from making comment on proposal as not directly relevant to Meriam waters. General comments that more coral trout fishing is desired to alleviate natural trout predation on TRL. Anecdotes that the more coral trout is fished, the more habitat is available for TRL.
New Mapoon (NPA)	9-May	No formally expressed support or concerns raised.
Injinoo (NPA)	10-May	No formal support or concerns raised.
Thursday Island (Torres Shire)	20-May	A number of concerns raised regarding the proposal to remove the closure: - Negative impact on TRL - Negative impact on availability of coral trout and ability to fish for subsistence (kai kai).
Mabuiag	21-22 May	Generally supported.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
MANAGEMENT AND SCIENCE Use of Vessel Monitoring Systems to support Finfish Fishery data needs	Agenda Item 4.2 FOR ADVICE

RECOMMENDATIONS

1. That the Finfish RAG **DISCUSS** and **PROVIDE ADVICE** on the potential scientific benefits from using Vessel Monitoring System (VMS) data to address data needs in the Finfish Fishery such as stock assessments.

KEY ISSUES

1. FFRAG are asked to provide advice on how VMS may potentially be used to support scientific understanding, stock assessments and address data needs in the Torres Strait Finfish Fishery including any advice on costs and benefits and comparison to other potential options. Finfish Fishery Working Group will be asked to provide advice on the management and compliance benefits that VMS may provide for the management of the Fishery.
2. Vessel Monitoring Systems (VMS) are used by AFMA for the delivery of near real time vessel information through satellite communications on all Commonwealth endorsed fishing vessels and have been mandatory on all licenced primary and carrier vessels fishing in the Torres Strait Protected Zone since 1 July 2017. VMS is not mandatory in Torres Strait on tenders (e.g. smaller dinghies operating in conjunction with a primary vessel).
3. FFRAG has previously identified (in the context of the coral trout stock assessment delivered at FFRAG 4, 12-13 March 2019) that limited information is available on areas fished by tenders associated with primary boats in the reef-line sector, mainly targeting coral trout. While location of the primary vessel is recorded in the daily fishing logbook, industry advise that the tenders for these vessels do roam over a broad area and may fish at a number of coral bomboes prior to returning to the primary vessel.
4. FFRAG 1 (meeting 9-10 November 2017) identified that spatial data for Spanish mackerel catches had limited utility in past assessments and recommended an action to address this data need would be to consider how VMS data might be analysed for stock assessment purposes (see Agenda Item 5.4, Table 2).
5. QDAF have advised that VMS data have been successfully used to address data needs in the east coast Scallop Trawl fishery. Since the year 2000, VMS data have been used by scientists in assessing the scallop fishery and has been used to identify hot spots of scallop abundance to inform the model which would be challenging to capture through a paper logbook. VMS data on place and duration of fishing effort from each scallop trawl vessel is correlated against reported catch in an assessment model.
6. Globally, data scientists and researchers are developing algorithms which, for example, can use VMS data alone to identify ship positions that are indicative of fishing vessel type and activity.
7. VMS technology has recently advanced to the point where small mobile units can cost effectively be fitted to tenders. Under the Queensland Government's *Sustainable Fisheries Strategy 2017-2027* and the *Vessel Tracking Policy, June 2018*¹ all commercial fishing boats (including primary and tender boats fishing under Commercial Fishing Boat Licences, Commercial Harvest Fishing Licences and Charter Fishing Licences) are required to have a vessel-tracking unit installed and operational while undertaking commercial and non-commercial activities. This obligation will commence from 1 January 2019 for all crab, net and

¹ <https://www.publications.qld.gov.au/dataset/vessel-tracking/resource/50f90160-d93c-49a4-83b2-863519ab87c5>

line boats, and from 1 January 2020 for all other commercial fishing boats. Fishing operations active in the Torres Strait (e.g. sunset primary-tender operations and TVH vessels in the TRL Fishery) hold licenses to operate in fisheries in the Torres Strait Protected Zone and in Queensland State managed fisheries such as east coast reef-line, Gulf of Carpentaria mackerel or east coast TRL fisheries.

8. No PZJA consideration has been given to the use of VMS on tenders in Torres Strait fisheries; such a decision would need to take into account a broader range of considerations such as implementation costs across all licence holders.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
RAG UPDATES FFRAG member updates	Agenda Item No. 5.1 FOR NOTING

RECOMMENDATIONS

That the RAG:

- a. **NOTE** any updates provided by FFRAG members in addition to those tabled at the recent FFRAG 5 meeting on 31 October - 1 November 2019.

BACKGROUND

1. Verbal reports will be provided by any FFRAG members under this item (industry members, science members, PZJA agencies members). The FRAG Chairperson may also welcome a short report from any invited participants and observers from industry at this agenda item.
2. 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.
3. FFRAG members are asked to provide any updates on trends and opportunities in global markets, processing and value adding. Industry members are 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.
4. At the previous meetings of the FFRAG and associated FFWG, members discussed a range of strategic issues affecting the management and development of Torres Strait fisheries. Summaries of these tabled updates are available in the meeting records available here: <https://www.pzja.gov.au/torres-strait-finfish-groups>.

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
OTHER BUSINESS	Agenda Item No. 6.1 FOR NOTING

RECOMMENDATION

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

PZJA Torres Strait Finfish Resource Assessment Group	Meeting 6 27-28 November 2019
NEXT MEETING and MEETING CLOSE	Agenda Item 6.2 For DISCUSSION and ADVICE

RECOMMENDATIONS

1. That the RAG **NOTE**:

- a. a joint FFRAG + FFWG meeting is tentatively scheduled for 26-27 February 2020 and will only be required if additional advice is required on harvest strategy development and TAC advice ahead of the 2020-21 season. Member will be advised in the first week of December 2019 whether this meeting will be required or not.
- b. that the next meeting of **FFRAG 7** is tentatively scheduled to be held in Cairns on 2-3 September 2020 with the key business being updates to the Spanish mackerel stock assessment based on updated biological data and environmental factors.
- c. a schedule for upcoming FFRAG, FFWG and PZJA meetings/decisions (**Table 1** overleaf); and
- d. closing remarks from the Chairperson.

Table 1. Upcoming Torres Strait Finfish Fishery dates: PZJA and advisory group meetings.

Date	Group	Key agenda items
27-28 November 2019	FFRAG 6	Spanish mackerel assessment update. RBC advice for 2020-21 season. Development of Harvest Strategy Advice on public comments on proposal to remove Western Line closure.
29 November 2019	FFWG	TAC setting advice for 2020-21 season. Advice on draft Harvest Strategy. Advice on public comments on proposal to remove Western Line closure.
20 January 2020 (TBC)	PZJA	Decision on 2020-21 season TACs. Decision on Western Line Closure. Decision on releasing draft harvest strategy for public comment.
(26-27 February 2020 ¹)	(Joint FFRAG and FFWG)	(Additional Joint FFRAG and Working Group meeting only if required to progress advice on Spanish mackerel assessment update. ***TBC first week December 2019).
6-7 May 2020	Joint FFRAG & FFWG	Consideration of public comment on Finfish Fishery Harvest Strategies. Advice to PZJA on implementation.
June 2020 (date TBC)	PZJA	Consideration of final draft Harvest Strategies for implementation to support decision making in the 2021-22 season.
1 July 2020 - Torres Strait Finfish Fishery 2020-21 Season Opens		
2-3 September 2020	FFRAG 7	Preliminary assessment update for Spanish mackerel.
14-15 October 2020	FFRAG 8	RBC advice for 2021-22
25-26 November 2020	FFWG	TAC advice for 2021-22 season.

¹ Originally members were asked to attend on Thursday 27th and Friday 28th February, members from both Finfish RAG and Finfish Working Group are now asked to consider availability to attend on Wed 26th and Thursday 27th to allow members to travel home on Friday rather than Saturday.