

**30th MEETING OF THE PZJA TORRES STRAIT TROPICAL
ROCK LOBSTER RESOURCE ASSESSMENT
GROUP (TRLRAG 30)**

WEDNESDAY 16 December 2020

**9:00 AM – 12:00 PM AEST
1:00 PM – 3:00 PM (if required)**

Video Conference

DRAFT AGENDA

1 PRELIMINARIES

1.1 Welcome and apologies

The Chair will welcome members and observers to the 30th meeting of the RAG.

1.2 Adoption of agenda

The RAG will be invited to adopt the draft agenda.

1.3 Declaration of interests

Members and observers will be invited to declare any real or potential conflicts of interest 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 RAG will be invited to note the status of action items arising from previous meetings.

1.5 Out-of-session correspondence

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

2 UPDATES FROM MEMBERS

2.1 Industry & Scientific members

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

2.2 Government agencies

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

2.3 PNG National Fisheries Authority

The RAG will be invited to note a verbal update from the PNG National Fisheries Authority.

2.4 Native Title

The RAG will be invited to note a verbal update from Malu Lamar (Torres Strait Islander) Corporation RNTBC.

3 CATCH AND EFFORT ANALYSES FOR THE 2019-20 FISHING SEASON

The RAG will be invited to discuss TRL Fishery catch and effort data for the 2019-20 fishing season, including catch-per-unit-effort (CPUE) analyses to be presented by the CSIRO.

4 RESULTS OF THE NOVEMBER 2020 PRE-SEASON SURVEY

The RAG will be invited to discuss the results of the November 2020 pre-season survey to be presented by the CSIRO.

5 RECOMMENDED BIOLOGICAL CATCH

The RAG will be invited to provide advice on a recommended biological catch (RBC) for the TRL Fishery for the 2020-21 fishing season, based on estimates derived through the application of the empirical harvest control rule (eHCR) under the TRL Harvest Strategy.

6 OTHER BUSINESS

The RAG will be invited to raise other business for consideration.

7 DATE AND VENUE FOR NEXT MEETING

The RAG will be invited to discuss a suitable date for the next meeting.

The Chair must approve the attendance of all observers at the meeting. Individuals wishing to join the meeting as an observer must contact the Executive Officer – Georgia Langdon (georgia.langdon@afma.gov.au)

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video conference)	MEETING 30 16 December 2020
PRELIMINARIES Welcome and apologies	Agenda Item 1.1 For NOTING

RECOMMENDATIONS

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

BACKGROUND

2. As at 2 December 2020, apologies were received from:
 - a. Tom Roberts, Fisheries Queensland

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video conference)	MEETING 30 16 December 2020
PRELIMINARIES Adoption of agenda	Agenda Item 1.2 For DECISION

RECOMMENDATIONS

1. That the RAG consider and **ADOPT** the agenda.

BACKGROUND

2. This meeting was flagged with members at TRLRAG 27 (10-11 Dec 2019) and TRLRAG 28 (7 May 2020) with key agenda items including:
 - a. consideration of the results of the November 2020 pre-season survey;
 - b. consideration of the CPUE analyses for the 2019-20 fishing season; and
 - c. consideration of the recommended biological catch (RBC) estimates derived through the application of the empirical harvest control rule (eHCR) under the final Harvest Strategy and provision of advice on a RBC for the 2020-21 fishing season.
3. A draft agenda was circulated to members on 13 November 2020.
4. No comments were received on the draft agenda.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video Conference)	MEETING 30 16 December 2020
PRELIMINARIES Declaration of interests	Agenda Item 1.3 For Decision

RECOMMENDATIONS

1. That RAG members and observers:
 - a. **DECLARE** all real or potential conflicts of interest in the Torres Strait Rock Lobster Fishery at the commencement of the meeting (**Attachments 1.3a** and **1.3b**);
 - b. **DETERMINE** whether the member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict;
 - c. **ABIDE** by decisions of the RAG regarding the management of conflicts of interest; and
 - d. **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

2. 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.
3. RAG members are asked to confirm the standing list of declared interests (**Attachments 1.3a** and **1.3b**) is accurate and provide an update to be tabled if it is not.
4. FMP1 recognises that members are appointed to provide input based on their knowledge and expertise and as a consequence, may face potential or direct conflicts of interest. Where a member has a material personal interest in a matter being considered, including a direct or indirect financial or economic interest; the interest could conflict with the proper performance of the member's duties. Of greater concern is the specific conflict created where a member is in a position to derive direct benefit from a recommendation if it is implemented.
5. When a member recognises that a real or potential conflict of interest exists, the conflict must be disclosed as soon as possible. Where this relates to an issue on the agenda of a meeting this can normally wait until that meeting, but where the conflict relates to decisions already made, members must be informed immediately. Conflicts of interest should be dealt with at the start of each meeting. If members become aware of a potential conflict of interest during the meeting, they must immediately disclose the conflict of interest.
6. Where it is determined that a direct conflict of interest exists, the forum may allow the member to continue to participate in the discussions relating to the matter but not in any decision making process. They may also determine that, having made their contribution to the discussions, the member should retire from the meeting for the remainder of discussions on that issue. Declarations of interest, and subsequent decisions by the forum, must be recorded accurately in the meeting minutes.

TRLRAG Declarations of interests from most recent meetings

Name	Position	Declaration of interest
Members		
Dr Ian Knuckey	Chair	<p>Chair/Director of Fishwell Consulting Pty Ltd and Olrac Australia (electronic logbooks). Chair/member of other RAGs and MACs. Conducts various AFMA and FRDC funded research projects including FRDC Indigenous Capacity Building project. Nil interests in TRL Fishery and no research projects in the Torres Strait.</p> <p>In 2019, delivered components of TSRA Induction Program for Traditional Inhabitant members on PZJA advisory committees.</p> <p>Full declaration of interests provided at Attachment 1.3b.</p>
Dr Eva Plaganyi	Scientific Member	Lead scientist for PZJA funded TRL research projects conducted by CSIRO.
Dr Andrew Penney	Scientific Member	<p>Director of Pisces Australis Pty Ltd, an Australian registered marine/coastal research and management consultancy based in Canberra - interests in any opportunities in this regard.</p> <p>Currently Principal Investigator on FRDC Projects Nos 2017-180: Design and implementation of an Australian National Bycatch Report: Phase 1 – Scoping; and 2019-036: Implementation of dynamic reference points and harvest strategies to account for environmentally-driven changes in productivity in Australian fisheries, potentially red leg banana prawns or TRL.</p> <p>Independent scientific member on the AFMA Southeast RAG, the Tropical Rock Lobster RAG and the Small Pelagic Fishery RAG. Member of the AFMA ERA Technical Working Group.</p> <p>No shareholding and hold no positions relating to any other companies, including any fishing companies or industry associations.</p>
Aaron Tom	Traditional Inhabitant Member	Traditional Inhabitant Gudumalulgal and TIB licence holder.
Les Pitt	Traditional Inhabitant Member	Traditional Inhabitant Kemer Kemer Meriam, TIB licence holder and runs an independent freezer facility on Erub Island.
Harry Nona	Traditional Inhabitant Member	Traditional Inhabitant Kaiwalagal and TIB licence holder.
James Ahmat	Traditional Inhabitant Member	Traditional Inhabitant Maluialgal and TIB licence holder.

James Billy	Traditional Inhabitant Member	Traditional Inhabitant Kulkalgai, TIB licence holder, Coxwains holder and free diver.
Brett Arlidge	Industry Member	General Manager MG Kailis Pty Ltd. MG Kailis Pty Ltd is a holder of 5 TVH licences. Seafood buyer from Torres Strait, QLD and PNG TRL fisheries.
Dr Ray Moore	Industry Member	Torres Strait Master Fisherman licence holder and East Coast TRL Fishery licence holder.
Mark Anderson	TSRA Member	Nil. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them.
Samantha Miller	QDAF Member	To be declared.
Selina Stoute	AFMA Member	Nil.
Georgia Langdon	Executive Officer	Nil.
Observers		
Yen Loban	TSRA Board Member and TSRA Portfolio Member for Fisheries	TIB licence holder.
Maluwap Nona	Malu Lamar (Torres Strait Islander) Corporation RNTBC	To be declared.
Judy Upston	CSIRO	Nil pecuniary interests. Project staff for PZJA funded TRL research projects.
Roy Deng	CSIRO	Nil pecuniary interests. Project staff for PZJA funded TRL research projects.
Dr Leo Dutra	CSIRO	To be declared.
Nicole Murphy	CSIRO	Nil pecuniary interests. Project staff for PZJA funded TRL research projects.
Steven Edgar	CSIRO	To be declared.
Dr Laura Blamey	CSIRO	To be declared.

Declaration of interests
Dr Ian Knuckey – October 2020

Positions:

Director –	Fishwell Consulting Pty Ltd
Director –	Olrac Australia (Electronic logbooks)
Deputy Chair –	Victorian Marine and Coastal Council
Chair / Director –	Australian Seafood Co-products & ASCo Fertilisers (seafood waste)
Chair –	Northern Prawn Fishery Resource Assessment Group
Chair –	Tropical Rock Lobster Resource Assessment Group
Chair –	Victorian Rock Lobster and Giant Crab Assessment Group
Chair –	Victorian Central Zone Abalone Fisheries Resource Advisory Grou
Chair –	Gulf of St Vincent's Prawn Fishery MAC Research Scientific Committee
Scientific Member –	Northern Prawn Management Advisory Committee
Scientific Member –	SESSF Shark Resource Assessment Group
Scientific Member –	Great Australian Bight Resource Assessment Group
Scientific Member –	Gulf of St Vincent's Prawn Fishery Management Advisory Committee
Scientific Member –	Tropical Tuna Resource Assessment Group
Scientific participant –	SEMAC, SESSF Resource Assessment Group

Current projects:

AFMA 2020/0807	Bass Strait Scallop Fishery Survey – 2020-22
FRDC 2017/069	Indigenous Capacity Building
FRDC 2016/116	5-year RD&E Plan for NT fisheries and aquaculture
Traffic Project	Shark Product Traceability
FRDC 2018/021	Development and Evaluation of SESSF multi-species harvest strategies
FRDC 2017/014	Informing structural reform of South Australia's Marine Scalefish Fishery
NT Fisheries	Design and implementation of a tropical snapper trawl survey
Sea Cucumber Ass.	Design and implementation of a sea cucumber dive survey
FRDC 2019-072	A survey to detect change in Danish Seine catch rates of Flathead and School Whiting resulting from CGG seismic exploration.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
PRELIMINARIES Action items from previous meetings	Agenda Item 1.4 For Noting

RECOMMENDATIONS

1. That the RAG:
 - a. **NOTE** the progress against actions arising from previous meetings (**Attachment 1.4a**)
 - b. **NOTE** the final meeting records for TRLRAG 28 (**Attachment 1.4b**) and TRLRAG 29 (**Attachment 1.4c**) held on 7 May 2020 and 6 October 2020 respectively.

BACKGROUND

Actions arising

2. Updates are provided on the status of actions arising from previous TRLRAG meetings and relevant TRLWG meetings at **Attachment 1.4a**.

Meeting records

3. The draft meeting record for TRLRAG 28 held on 7 May 2020 was provided out of session for comment on 12 May 2020. Minor comments were received from CSIRO.
4. The record was finalised out of session following the closure of the comment period and circulated to members on 27 May 2020. This included a track-change version showing the comments received. The final meeting record is provided at **Attachment 1.4b** for information.
5. The draft meeting record for TRLRAG 29 held on 6 October 2020 was provided out of session for comment on 21 October 2020. No comments were made on the record, and no changes were made.
6. The record was finalised out of session following the closure of the comment period and circulated to members on 13 November 2020. The final meeting record is provided at **Attachment 1.4c** for information.

Action items from previous TRLRAG meetings

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
1.	AFMA and CSIRO prepare a timeline of key events that have occurred in the Torres Strait Tropical Rock Lobster Fishery (e.g. licence buy backs, weather events and regulation changes) and provide a paper to TRLRAG.	TRLRAG14 (25-26 August 2015)	AFMA CSIRO	TRLRAG17 (31 March 2016)	<p>Ongoing</p> <p>A draft timeline was provided to TRLRAG 27 (10-11 Dec 2019). AFMA had a graduate student further developing this timeline in early 2020. An updated draft is provided at Attachment 1.4d.</p> <p>The timeline is intended to be a living document, to be updated as relevant management events in the fishery occur. AFMA welcomes any comments on the updated draft timeline.</p>
2.	CSIRO to investigate the length frequency conversion factors from the catch weight data provided by MG Kailis.	TRLRAG25 (11-12 December 2018)	CSIRO	2019	<p>Ongoing</p> <p>CSIRO to address when resources become available. This is a lower priority as the outcomes of this work will not affect the RBC calculations for the 2020-21 fishing season.</p>
3.	Considering assessment timelines, PNG NFA to provide CSIRO with a best estimate of PNG catches by mid-November. CSIRO to liaise closely with PNG regarding reporting timeframes and provision of catch data. In parallel, the RAG data sub-group to examine ways to adjust the stock assessment model to account for delayed catch data from PNG.	TRLRAG25 (11-12 December 2018)	PNG NFA CSIRO AFMA RAG Data Sub-Group	2019	<p>Ongoing</p> <p>PNG NFA provided an update on some of the missing catch data (for Nov and Dec 2019) to AFMA on 7 July 2020. The updated catch data brought the January 2019 – December 2019 total reported catch to 167,137.17kg.</p> <p>This is 137.17kg more than the RAG calculated total catch based on using a monthly average catch amount for the missing months of Dec 2018 and Nov 2019.</p> <p>PNG have since provided an update on TRL catches for 2020 to AFMA on 7 September 2020. This catch summary was circulated to the RAG on 13 November 2020 and is provided at Attachment 3d.</p>

Attachment 1.4a

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
					<p>The RAG may need to consider using a similar approach to estimating total PNG catch in the absence of complete data sets on an ongoing basis – for discussion under Agenda items 3 and 5.</p> <p>AFMA continues to liaise with PNG NFA to obtain best estimate catch data and logbook data as inputs to the eHRC calculations.</p>
4.	That the TRL RAG data subcommittee discuss which TVH CPUE series are the best to use within the model.	TRLRAG25 (11-12 December 2018)	AFMA RAG Data Sub-Group	2019	<p>Ongoing</p> <p>The RAG Data Sub-Group last met on 18 June 2019, however this item was not considered. This item remains on the agenda for the Data Sub-group. Due to COVID-19 impacts, AFMA temporarily ceased face-to-face meetings during 2020 and had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.</p> <p>To be placed on the agenda for the next RAG Data Sub-group meeting – to be discussed under Agenda Item 7.</p>
5.	CSIRO to undertake further investigations to improve the GLM approach, and present the findings to the next meeting of the RAG.	TRLRAG26 (5 February 2019)	CSIRO	TRLRAG27	<p>Ongoing</p> <p>Updated GLM results were presented at TRLRAG 27 however CSIRO will aim to present final analyses at future TRL RAG meetings.</p>
6.	AFMA and CSIRO to work closely with industry to develop an index or key of diver names and 'clean up' the data diver name dataset to feed in to the next seasons' CPUE standardisation.	TRLRAG27 (10-11 Dec 2019)	AFMA CSIRO	TRLRAG29	<p>Ongoing.</p> <p>Due to COVID-19 impacts, AFMA temporarily ceased face-to-face meetings during 2020 and had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.</p>

Attachment 1.4a

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
7.	The RAG to refer back to an earlier CSIRO report from 2011 on social indicators in the Torres Strait TRL fishery to help identify what indicators may be useful in understanding management changes in future.	TRLRAG27 (10-11 Dec 2019)	AFMA TRLRAG TRLWG	TRLWG11	Ongoing. The RAG has not yet considered the CSIRO report. This is due to COVID-19 impacts and a reprioritisation of management needs in the short term. However, AFMA has compiled a basic summary of statistics on participation in the TIB sector (Attachment 3b), to be discussed under Agenda Item 3 .
8.	That the RAG (or RAG Data Sub-Group) determine whether there are better measures of effort in the fishery (hours vs days; time spent travelling, searching and actively fishing), and clarifying “number of fishers/divers” on TDB02 catch disposal record book.	TRLRAG27 (10-11 Dec 2019)	TRLRAG Data Sub-group	TRLRAG29	Ongoing. Due to COVID-19 impacts, AFMA temporarily ceased face-to-face meetings during 2020 and had to re-prioritize management needs at least in the short-term. This has impacted progress against this item. Timing for the next TRLRAG Data Sub-group will be discussed under Agenda Item 8 .
9.	AFMA to provide all available information and data on the Torres Strait Prawn Fishery (TSPF) observer program for further analysis by CSIRO and the RAG to examine the impacts of the TSPF on the TRL Fishery.	TRLRAG27 (10-11 Dec 2019)	AFMA CSIRO	TRLRAG29	Ongoing. AFMA has provided CSIRO with all available data, however due to COVID-19 impacts, AFMA and CSIRO have had to temporarily re-prioritize management needs at least in the short-term. This has impacted progress against this item.
10.	Industry member Brett Arlidge to provide size distribution data on tailed PNG product to CSIRO when available.	TRLRAG28 (7 May 2020)	Brett Arlidge, industry member	TRLRAG30	Brett Arlidge to provide an update on this item at this meeting.

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
11.	AFMA to approach known TRL buyers and request the sharing of price data to support CSIRO's catch and effort data analysis.	TRLRAG29 (6 Oct 2020)	AFMA	TRLRAG30	Ongoing. AFMA has reached out to key buyers in the Fishery to request price data. No responses have yet been received.

Relevant action items from previous TRLWG meetings*

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
1.	Discard reporting and estimation be considered by the RAG (possibly by the RAG data subgroup)	TRLWG8 (8 November 2018)	AFMA RAG Data Sub-Group	2019	Ongoing The RAG Data Sub-Group met on 18 June 2019, where this issue was considered. A report from the Sub-Group was considered at TRLRAG 27. Due to COVID-19 impacts, AFMA temporarily ceased face-to-face meetings during 2020 and had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.
2.	RAG to consider the merit and options for improving the index of 0+ lobster abundance, through logbooks or other means. The Working Group noted that this would may be relevant to the RAG data sub-committee.	TRLWG8 (8 November 2018)	AFMA RAG Data Sub-Group	2019	Ongoing The RAG Data Sub-Group met on 18 June 2019, where this issue was considered. A report from the Sub-Group was considered at TRLRAG 27. Due to COVID-19 impacts, AFMA temporarily ceased face-to-face meetings during 2020 and had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.

*TRLWG actions not relevant to TRLRAG have not been included in the above.

Attachment 1.4b

Torres Strait Tropical Rock Lobster Resource Assessment Group Meeting 28

Meeting Record

7 May 2020

Video Conference

Note all meeting papers and record available on
the PZJA webpage: www.pzja.gov.au



Australian Government

Australian Fisheries Management Authority

Contents

Meeting participants	3
Members	3
Observers	4
1 Preliminaries.....	4
1.1 Welcome and apologies	4
1.2 Adoption of agenda.....	4
1.3 Declaration of interests	4
1.4 Action items from previous meetings	5
1.5 Out-of-session correspondence	5
2 Updates from members	5
2.1 Industry and Scientific members	5
2.2 Government agencies.....	6
2.3 PNG National Fisheries Authority	7
2.4 Native Title	7
3 Final 2019 Stock Assessment Results	7
4 TRL Data and Pre-season Survey Considerations	8
5 Date and venue for next meeting.....	9

Meeting participants

Members

Name	Position	Declaration of interest
Ian Knuckey	Chair	Chair/Director of Fishwell Consulting Pty Ltd and Olrac Australia (electronic logbooks). Chair/member of other RAGs and MACs. Conducts various AFMA and FRDC funded research projects including FRDC Indigenous Capacity Building project. Nil interests in TRL Fishery and no research projects in the Torres Strait. In 2019, delivered components of TSRA Induction Program for Traditional Inhabitant members on PZJA advisory committees. Full declaration of interests provided at Attachment A .
Georgia Langdon	AFMA Executive Officer	Nil.
Dr Andrew Penney	Scientific member	Research consultant (Pisces Australis) with potential interest in a wide range of fisheries research or management related projects. However, no current involvement in any research projects in the Torres Strait. No involvement and no pecuniary interest in any fishing activities in the Torres Strait or elsewhere. Appointed independent scientific member of TRL RAG, SE RAG and SPF RAG.
Dr Éva Plagányi	Scientific member	Lead scientist for PZJA funded TRL research projects conducted by CSIRO.
Aaron Tom	Traditional Inhabitant member	Traditional Inhabitant Gudumalulgal and TIB licence holder.
Harry Nona	Traditional Inhabitant member	Traditional Inhabitant Kaiwalagal and TIB licence holder
James Billy	Traditional Inhabitant member	Traditional Inhabitant Kulkalgal, TIB licence holder, Coxwains holder and free diver.
Brett Arlidge	Industry member	General Manager MG Kailis Pty Ltd. MG Kailis Pty Ltd is a holder of 5 TVH licences.
Dr Ray Moore	Industry member	Torres Strait Master Fisherman licence holder and East Coast TRL Fishery licence holder.
Selina Stoute	AFMA member	Nil.
Allison Runck	TSRA member	Nil. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them.
Danielle Stewart [^]	QDAF member	Nil.

[^] joined the meeting at Agenda Item 2

Observers

Name	Position	Declaration of interest
Yen Loban	TSRA Board Member and TSRA Portfolio Member for Fisheries.	TIB licence holder.
Mark Tonks	CSIRO	Nil pecuniary interests. Project staff for PZJA funded TRL research projects.
Judy Upston	CSIRO	Nil pecuniary interests. Project staff for PZJA funded TRL research projects.
Roy Deng	CSIRO	Nil pecuniary interests. Project staff for PZJA funded TRL research projects.
Keith Brightman	TSRA observer	Nil. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them.

1 Preliminaries

1.1 Welcome and apologies

1. The meeting was opened in prayer by James Billy at 9:15 am on Thursday 7 May 2020. Attendees were welcomed by the Chair, Dr Ian Knuckey who stated an Acknowledgement of Country.
2. Attendees at the RAG are detailed in the meeting participant tables at the start of this meeting record.
3. Apologies were received from James Ahmat, Maluiligal Traditional Inhabitant member; Les Pitt, Kemer Kemer Meriam Traditional Inhabitant member; Joseph Posu, Papua New Guinea National Fisheries Authority and Maluwap Nona, Chairperson of Malu Lamar.

1.2 Adoption of agenda

4. The draft agenda was adopted without change (**Attachment B**).
5. Due to the potential challenges of a video conferencing format, the RAG agreed that all papers for 'noting' were assumed to be taken as read, unless specific questions were raised by members.

1.3 Declaration of interests

6. As provided in PZJA Fisheries Management Paper No. 1 (FMP1), all members of the RAG must declare all real or potential conflicts of interest in the Torres Strait TRL Fishery at the commencement of the meeting.
7. The Chair requested that members update the record of declarations by exception. These are detailed in the meeting participant tables at the start of this meeting record. The RAG accepted each member and observers' declared interests and agreed that there were no concerns with all members participating in each agenda item discussion. No members objected to this process.
8. Where it is determined that a direct conflict of interest exists, the RAG may allow the member to continue to participate in the discussions relating to the matter but may also determine that, having made their contribution to the discussions, the member should retire from the meeting for the remainder of the discussions on that issue.

9. The RAG agreed that all members and observers could be present for each of the agenda items.

1.4 Action items from previous meetings

10. All updates on the status of actions items arising from previous TRLRAG, and where relevant, TRL Working Group meetings (**Attachment C**) were taken as read and were not explicitly discussed.

1.5 Out-of-session correspondence

11. All out of session correspondence on RAG matters since the previous meeting was taken as read and were not explicitly discussed.

2 Updates from members

2.1 Industry and Scientific members

12. The RAG noted updates provided by industry members and observers on the performance of the TRL fishery during the 2019-20 season, with particular emphasis on the impacts of COVID-19, in particular:
- The prices of product have been impacted. Prices earlier on in the season were similar to the lowest prices on record in 2002-03 (when the targeting of live product recommenced), however since the live market has slowly reopened, prices are starting to recover. Price per kilogram varies depending on the region. The Kulkaigal traditional inhabitant member advised that there is good competition and higher prices ranging from \$31-\$40 per kilogram (depending on size grade) in the Central Islands, while Thursday Island prices are reportedly lower (\$30-\$36 per kilogram). Price is also impacted by the quality of the crayfish, particularly if more than 4 legs are damaged or they are 'double skinned', in which case the product is generally tailed and frozen, though most fishers are targeting live lobsters. The RAG noted that although there are signs of improvement in the market, social distancing requirements in China mean that restaurants are not yet operating at full capacity. Industry advised that prices are unlikely to completely return to normal for some time yet.
 - The temporary closure of the live export market to China prior to the 2020 Chinese New Year was the first time MG Kailis were unable to sell live product in over 20 years. TVH boats in the Torres Strait and Queensland East Coast boat were forced to cease fishing for a period of time, however, to provide some livelihood to industry, and in particular the TIB sector in the Torres Strait, whole frozen product was accepted at a reject price, which subsequently flooded the domestic market during the month of February. As COVID-19 began to impact regions beyond China and Hong Kong, other elements were impacted, including freight routes out of the Torres Strait, and internationally. Fortunately, as the live market has now begun to reopen and with some government assistance on freight routes, more live product is able to be sent to Chinese markets.
 - Some fishers report that accessing local freight out of the Torres Strait region has been a challenge and with limited freight options, the cost of freight has hindered some operations, particularly in the top western islands.
 - Despite the market challenges, which are easing as prices recover and additional international freight options come online, members reported that both the quality and quantity of crayfish has been high, with plenty of crayfish on the grounds. Although fishers in the central islands have been advised by Police authorities that they are only able to dive with 2 people in the dinghy, free dive catch rates have not been impacted and generally, fishing effort has been similar to the 2018-19 season. It was noted that the 2-person limitation does not represent a substantial change to how free divers have been

fishing in recent years. Catches of crayfish so far indicate the stock abundance reflects the 2019 pre-season survey and preliminary stock assessment results accurately.

- e) In light of abundance and good catch rates, one industry member expects both the TIB and TVH to take their catch allocations.
- f) Water temperatures have been reportedly high in recent months, resulting in increased mortality of crayfish held in tanks, however reports from the central islands indicate that recent increased cloud cover has lowered the water temperature and the quality of crayfish is improved. Similarly, some mortality has been experienced by fish receivers in the inner islands who are moored in areas exposed to freshwater runoff from the mainland, or nearby islands. Reduced salinity on the surface water is being pumped into tanks and causing crayfish to die.
- g) The 2019-20 season crayfish have been notably smaller than usual with very few observations or catches of larger residual 3+ lobsters that would typically be caught earlier on in the season. Very small crayfish (~600g) were being landed at the start of the season, however sizes are now starting to increase with more 800g-1kg lobsters coming through. The RAG noted that this indicates fishers have almost exclusively been catching new 1+ recruits this season.
- h) Fishing has continued in Papua New Guinea with reportedly similar stock abundances in PNG waters adjacent to the Torres Strait. However, despite the live market reopening in Asia, PNG have been unable to move live or tailed product out of PNG due to constraints in air freight. More recently, PNG fishers have been increasing their catches of frozen tailed product which is slowly being shipped out to buyers in Australia via Port Moresby. An industry member from MG Kailis committed to collecting some size sample data on this product and providing it to CSIRO.

13. The RAG noted general scientific updates provided by the CSIRO scientific member Dr Eva Plaganyi, in particular that:

- a) Similar impacts from COVID-19 have been experienced elsewhere, including the South African lobster fishery, and the West and South Australian lobster and abalone fisheries.
- b) To highlight some of the issues that fisheries, in particular the Torres Strait, experienced during the initial stages of the coronavirus period, CSIRO wrote an article entitled 'Coronavirus is killing Australia's lobster export market' which was published in [The Conversation online](#) on 19 February 2020.
- c) Each of the international conferences that were to be attended by local Torres Strait stakeholders has been postponed for 12 months due to COVID-19 disruptions. CSIRO will continue to keep RAG members updated on the status of these conferences.

ACTION ITEM

Industry member Brett Arlidge to provide size distribution data on tailed PNG product to CSIRO when available.

2.2 Government agencies

- 14. A written update provided by AFMA was taken as read and members were invited to ask questions of AFMA regarding the update. Nothing further was discussed.
- 15. The RAG also that noted written updates from both the TSRA and Fisheries Queensland regarding activities relevant to the TRL Fishery were emailed to members on 6 May 2020.
- 16. The RAG noted the following verbal update provided by the TSRA member:
 - a) The TSRA is continuing to maintain a listening brief on freight forwarding and export issues impacting the Torres Strait (via the Seafood Trade Advisory Group (STAG) working group meetings); the TRL beach price; and the views of TIB fishers as it relates to the impact of COVID-19;

- b) The TSRA is developing a two-year recovery action plan to help position the fishing industry to respond to the impacts from the coronavirus, particularly on the TRL industry. The Plan will also progress key outcomes of the Seafood Export and Branding project completed in 2019; and
- c) TSRA continues to progress the setup of an independent community entity to hold and manage commercial fishing assets in the Torres Strait. A Fisheries Summit to seek broad community input on the business plan has been postponed, and the Steering Committee for the project is currently progressing the set-up with an interim body until the Summit can be held.

17. The RAG noted the following verbal update from the Fisheries Queensland (QDAF) member:

- a) In late January 2020, in response to the initial outbreak of COVID-19, Fisheries Queensland was approached by industry to investigate the possibility of expanding the East Coast Rocklobster and Crayfish Fishery area south.
- b) Under the *Fisheries Act 1994*, there is capacity to make an Authorising Declaration in response to a natural disaster, accident or another event. Authorising declarations are temporary in nature and can only be made for a maximum of three months.
- c) The objective of the authorising declaration is to support fishing businesses to continue to operate and keep people in jobs while markets are responding to the impacts of the coronavirus. Allowing fishers to access more southern waters drastically reduces the distance to travel to fishing grounds and therefore the cost of fishing.
- d) The Declaration was made on 10 March 2020 and applies only to existing east coast lobster fishers holding an R symbol. The declaration will expire at midnight 10 June 2020.
- e) Lobster fishing activity has picked up on the east coast in response to increased demand for product from Asian markets, however securing freight has been challenging for exporters as well as managing the increased freight charges. Fisheries Queensland continues to support exporters via departmental response groups as well as help fishers navigate the various freight and financial support packages announced by the State and Commonwealth Governments.
- f) The regulatory reform package prepared by Fisheries Queensland in 2019 is still awaiting Cabinet consideration. Release of the draft East Coast Rocklobster and Crayfish Harvest Strategy for public consultation will be determined by the outcomes of Cabinet.

2.3 PNG National Fisheries Authority

18. No update was provided as a PNG National Fisheries Authority representative was not in attendance.

2.4 Native Title

19. No update was provided as a Malu Lamar (Torres Strait Islanders) Corporation RNTBC representative was not in attendance.

3 Final 2019 Stock Assessment Results

- 20. The RAG considered a summary of the final 2019 stock assessment results, presented by Dr Eva Plaganyi from CSIRO and emailed to members on 30 April 2020.
- 21. Following additional analysis and checking by CSIRO since the preliminary results were presented at TRLRAG 27 (10-11 December 2019) only minor changes in the catch records for 2019 have been made. As such, the revised assessment model and final results indicate no overall change to the assessment results.

22. The RAG noted that a complete stock assessment report would be provided to members in the milestone report in the weeks after the meeting.
23. Having regard for future RBC advice, the RAG:
- a) In response to a question from an Industry member, considered the potential utility of the model-estimated forecast RBC for the 2020-2021 season, should a 2020 pre-season survey not be possible due to COVID-19. The RAG noted that the model-estimated forecast RBC value of 596 tonnes for the 2020-21 fishing season is influenced mainly by the 0+ observations from the 2019 pre-season survey, and by previous stock assessment biomass estimates. It is accepted, however, that the 0+ estimates are relatively unreliable. The RAG noted that although this parameter is a standard assessment output, it would unlikely be used as an alternative RBC output in the absence of a pre-season survey. This is because the model has very little basis to make predictions without essential data inputs from the survey. In the unlikely event that the pre-season survey did not go ahead, and staying within the remit of the empirical Harvest Control Rule, substantial additional analyses would need to be undertaken to supplement any model estimated RBC forecasts, including the use of an updated assessment model that included the 2019-20 catches.
 - b) Noted the possible scenario of no pre-season survey must be considered very carefully, particularly in relation to relative weightings of the other data inputs, and options for how to manage the data within the Harvest Strategy and eHCR. **The RAG acknowledged that should the cancellation of the 2020 pre-season survey eventuate, an extraordinary RAG meeting would need to be convened ahead of the regular December RAG meeting to further discuss those extenuating circumstances.** However, the RAG also noted that CSIRO were undertaking all possible measures to ensure the survey does go ahead (which was discussed in more detail under Agenda Item 4 below) as well as assessing all of the options of data analysis in the event that it doesn't.
 - c) Recommended that in a future meeting the RAG assess the likely impact and where necessary possible options, for calculating an RBC following seasons where catches may have been constrained substantially below the TAC, for reasons other than stock availability. The eHCR is designed to dampen any highly variable input signals (e.g. CPUE), however should the average total catch multiplier be uncharacteristically lower than expected, it may inhibit the eHCR from operating as it should.
24. **Considering the summary of final stock assessment results, and in accordance with the TRL Harvest Strategy, the RAG agreed that no revisions to the empirical Harvest Control Rule were required, nor the application of the eHCR to determine the 2019-20 TAC.**

4 TRL Data and Pre-season Survey Considerations

25. The RAG noted that due to COVID-19 impacts, the 2019-20 fishing season may be deemed uncharacteristic of a standard fishing season and therefore have a potential impact on the fishery dependent and independent data inputs used when calculating a Recommended Biological Catch (RBC) for the 2020-21 season.
26. Accordingly, the RAG was asked to discuss and provide advice on potential implications for setting an RBC for the TRL fishery next season, noting potential COVID-19 impacts on total catch and CPUE, and the ability to conduct a pre-season survey.

Total catch and Catch per Unit Effort data

27. As discussed under Agenda Item 3, the end-of-season total catch will need to be considered carefully as it may still be too early to assess whether there will be any impacts on total catch in 2020. The RAG noted that as at 7 May 2020, the total reported catches for Australian TRL Fishery 2019-20 season to date were:
- a) Traditional Inhabitant Boat (TIB) sector: 105.4 tonnes; and

b) Transferable Vessel Holder (TVH) sector: 54.6 tonnes.

28. No in-season catch updates were available from PNG National Fisheries Authority at the time of this meeting, however AFMA reaffirmed its commitment to continue liaising with PNG NFA to obtain catch information and data on the PNG TRL fishery.
29. The RAG noted that due to COVID-19 disruptions, some variability in the CPUE indices is expected, whilst it is difficult to predict in advance of the analyses, given that fishing activity has returned to a more normal pattern, there may be fewer impacts expected to the CPUE data series or total catch.
30. The RAG noted that the CPUE standardisation process does account for changes in fishing effort by “month” and “processed form” (i.e. whole frozen, live or tailed), however further adjustments may be required depending on any further feedback from industry on changes to fishing patterns throughout the remainder of the season. Having regard to the feedback from industry provided under Agenda Item 2.1, with brief periods of no fishing, a slight positive bias in the CPUE data may be expected. This is because it is assumed that in a period of no fishing, the lobsters may tend to aggregate, which could result in higher catch rates when fishing is resumed. However, a negative bias might also be implied if when once fishing resumed, the CPUE index reflected lower than the expected stock biomass. Similarly, reported changes in size distribution of the catch may impact on the CPUE index.
31. The RAG noted that even if some adjustments are required to account for all potential biases and other impacts on CPUE this season, the eHCR remains robust to uncertainty in CPUE in the short term. This is because the eHCR uses the trend averaged over the last five years, and the two CPUE indices contribute only 10 per cent each in the eHCR data calculation.

Pre-season Survey

32. The RAG noted that the CSIRO team has been developing detailed contingency plans to cover a range of concerns relating to the ability to undertake the annual pre-season survey. The preferred option is to proceed with the survey as planned, however additional precautionary measures and risk assessments may need to be carried out.
33. A summary of additional survey planning measures includes:
 - a) A direct request for tender on the survey vessel, with proposed 2020 survey dates scheduled from 1–14 November 2020 during favourable neap tides;
 - b) An extended dive team (6 staff including two back-ups) with requirements to undertake COVID-19 medical testing in the days prior to the survey commencing;
 - c) Vessel, charter crew and dive team risk management plans including increased PPE and isolation requirements where necessary; and
 - d) Assessing options for travel to and from the Torres Strait including Council entry approvals, charter flights, or voyaging on the survey vessel itself.
34. The RAG noted previous RAG concerns regarding changes in survey-diver experience having a potential influence on the survey results. CSIRO noted that it is standard practice to pair up the most experienced divers with the least experienced divers, and it will be the least experienced divers who remain as back-ups, rather than the core dive team.
35. **The RAG agreed that all members should commit to reporting back to the RAG on any significant changes in relation to catches and CPUE, fishing patterns, or the pre-season survey over the coming months.**

5 Date and venue for next meeting

36. The RAG agreed that the next TRLRAG (29) is scheduled for 15-16 December 2020, unless an extraordinary RAG meeting is required sooner.
37. The RAG also noted that subject to COVID-19 restrictions, the second TRLRAG Data Sub-Group meeting date is still to be confirmed, and will likely be sometime in 2021.

38. The 28th TRL RAG meeting was closed in prayer at 11:15am on Thursday 7 May 2020.

Declaration of interests

Dr Ian Knuckey – November 2019

Positions:

Director –	Fishwell Consulting Pty Ltd
Director –	Olrac Australia (Electronic logbooks)
Deputy Chair –	Victorian Marine and Coastal Council
Chair / Director –	Australian Seafood Co-products & ASCo Fertilisers (seafood waste)
Chair –	Northern Prawn Fishery Resource Assessment Group
Chair –	Tropical Rock Lobster Resource Assessment Group
Chair –	Victorian Rock Lobster and Giant Crab Assessment Group
Chair –	Victorian Central Zone Abalone Fisheries Resource Advisory Group
Chair –	Gulf of St Vincent's Prawn Fishery MAC Research Scientific Committee
Scientific Member –	Northern Prawn Management Advisory Committee
Scientific Member –	SESSF Shark Resource Assessment Group
Scientific Member –	Great Australian Bight Resource Assessment Group
Scientific Member –	Gulf of St Vincent's Prawn Fishery Management Advisory Committee
Scientific Member –	Tropical Tuna Resource Assessment Group
Scientific participant –	SEMAC, SESSF Resource Assessment Group

Current projects:

AFMA 2020/0807	Bass Strait Scallop Fishery Survey – 2020-22
FRDC 2017/069	Indigenous Capacity Building
FRDC 2016/116	5-year RD&E Plan for NT fisheries and aquaculture
Traffic Project	Shark Product Traceability
FRDC 2018/021	Development and evaluation of SESSF multi-species harvest strategies
FRDC 2017/014	Informing structural reform of South Australia's Marine Scalefish Fishery
NT Fisheries	Design and implementation of a tropical snapper trawl survey
Sea Cucumber Ass.	Design and implementation of a sea cucumber dive survey
FRDC 2019-072	A survey to detect change in Danish Seine catch rates of Flathead and School Whiting resulting from CGG seismic exploration.

**28th MEETING OF THE PZJA TORRES STRAIT TROPICAL
ROCK LOBSTER RESOURCE ASSESSMENT
GROUP (TRLRAG 28)**

THURSDAY 7 May 2020 | 9:00 AM – 12:00 PM

Video Conference

ADOPTED AGENDA

1 PRELIMINARIES

1.1 Welcome and apologies

The Chair will welcome members and observers to the 28th meeting of the RAG.

1.2 Adoption of agenda

The RAG will be invited to adopt the draft agenda.

1.3 Declaration of interests

Members and observers will be invited to declare any real or potential conflicts of interest 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 RAG will be invited to note the status of action items arising from previous meetings.

1.5 Out-of-session correspondence

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

2 UPDATES FROM MEMBERS

2.1 Industry & Scientific members

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

2.2 Government agencies

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

2.3 PNG National Fisheries Authority

The RAG will be invited to note an update from the PNG National Fisheries Authority

2.4 Native Title

The RAG will be invited to note an update from Malu Lamar (Torres Strait Islander) Corporation RNTBC.

3 SUMMARY OF 2019 FINAL STOCK ASSESSMENT RESULTS

The RAG will be invited to consider a summary of the final 2019 stock assessment results presented by CSIRO.

4 TRL DATA AND PRE-SEASON SURVEY CONSIDERATIONS

The RAG will discuss and provide advice on options and implications for setting a Recommended Biological Catch for the TRL Fishery in the 2020-21 fishing season, noting potential COVID-19 impacts on:

- a. fishery dependent data in the 2019-20 fishing season (i.e. total catch, CPUE indices); and
- b. the ability to conduct a pre-season survey.

5 DATE AND VENUE FOR NEXT MEETING

The RAG will be invited to discuss a suitable date for the next meeting.



Action items from previous TRLRAG meetings

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
1.	AFMA and CSIRO prepare a timeline of key events that have occurred in the Torres Strait Tropical Rock Lobster Fishery (e.g. licence buy backs, weather events and regulation changes) and provide a paper to TRLRAG.	TRLRAG14 (25-26 August 2015)	AFMA CSIRO	TRLRAG17 (31 March 2016)	Ongoing A draft timeline was provided to TRLRAG 27. AFMA has a graduate student currently working on further developing this timeline to be finalised before the end of the financial year.
2.	CSIRO to investigate the length frequency conversion factors from the catch weight data provided by MG Kailis.	TRLRAG25 (11-12 December 2018)	CSIRO	2019	Ongoing CSIRO to address when resources become available. This is a lower priority as the outcomes of this work will not affect the RBC calculations for the 2019-20 fishing season.
3.	Considering assessment timelines, PNG NFA to provide CSIRO with a best estimate of PNG catches by mid-November. CSIRO to liaise closely with PNG regarding reporting timeframes and provision of catch data. In parallel, the RAG data sub-group to examine ways to adjust the stock assessment model to account for delayed catch data from PNG.	TRLRAG25 (11-12 December 2018)	PNG NFA CSIRO AFMA RAG Data Sub-Group	2019	Ongoing PNG NFA did not attend TRLRAG27 where the RAG agreed to use average monthly catch values as proxies for missing months of data (December 2018 and November 2019). AFMA continues to liaise with PNG NFA to obtain best estimate catch data as inputs to the eHRC calculations.
4.	That the TRL RAG data subcommittee discuss which TVH CPUE series are the best to use within the model.	TRLRAG25 (11-12 December 2018)	AFMA RAG Data Sub-Group	2019	Ongoing The RAG Data Sub-Group met on 18 June 2019, however this item was not considered. A report from

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
					<p>the Sub-Group was considered under Agenda Item 3 at TRLRAG 27.</p> <p>To be placed on the agenda for the next RAG Data Sub-group meeting – which has been postponed until further notice.</p>
5.	CSIRO to undertake further investigations to improve the GLM approach, and present the findings to the next meeting of the RAG.	TRLRAG26 (5 February 2019)	CSIRO	TRLRAG27	<p>Ongoing</p> <p>Updated GLM results were presented at TRLRAG 27 however CSIRO will aim to present final analyses at future TRL RAG meetings.</p>
6.	AFMA to liaise with Dr Ray Moore to seek additional information for inclusion in the draft TRL fishery management history document.	TRLRAG27 (10-11 Dec 2019)	AFMA	TRLRAG28	<p>Completed.</p> <p>AFMA met with Dr Ray Moore on 2 March 2020 to seek additional information for inclusion in the draft TRL fishery management history document. AFMA continues to develop the document out of session and will look to provide a draft at the next TRL RAG meeting.</p>
7.	That AFMA clarify with TVH licence holders as soon as practicable that the 'Hours-Fished' field on TRL04 logbooks should be completed based on time spent underwater.	TRLRAG27 (10-11 Dec 2019)	AFMA	As soon as practicable.	<p>Completed.</p> <p>A letter to all TVH licence holders with new instructions for two TRL04 logbook fields was issued on 6 February 2020. AFMA is continuing to follow up with licence holders and skippers about these changes.</p>
8.	AFMA and CSIRO to work closely with industry to develop an index or key of diver names and 'clean up' the data diver name dataset to feed in to the next seasons' CPUE standardisation.	TRLRAG27 (10-11 Dec 2019)	AFMA CSIRO	TRLRAG29	<p>Ongoing.</p> <p>Due to COVID 19 impacts, AFMA has temporarily ceased face-to-face meetings and has had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.</p>

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
9.	The RAG to refer back to an earlier CSIRO report from 2011 on social indicators in the Torres Strait TRL fishery to help identify what indicators may be useful in understanding management changes in future.	TRLRAG27 (10-11 Dec 2019)	AFMA TRLRAG TRLWG	TRLWG11	Ongoing. Due to COVID 19 impacts, AFMA has temporarily ceased face-to-face meetings and has had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.
10.	That the RAG (or RAG Data Sub-Group) determine whether there are better measures of effort in the fishery (hours vs days; time spent travelling, searching and actively fishing), and clarifying “number of fishers/divers” on TDB02 catch disposal record book.	TRLRAG27 (10-11 Dec 2019)	TRLRAG Data Sub-group	TRLRAG29	Ongoing. Due to COVID 19 impacts, AFMA has temporarily ceased face-to-face meetings and has had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item. Timing for the next TRLRAG Data Sub-group will be discussed under Agenda Item 5 .
11.	AFMA to provide all available information and data on the Torres Strait Prawn Fishery (TSPF) observer program for further analysis by CSIRO and the RAG to examine the impacts of the TSPF on the TRL Fishery.	TRLRAG27 (10-11 Dec 2019)	AFMA CSIRO	TRLRAG29	Ongoing. AFMA has provided CSIRO with all available data, however due to COVID-19 impacts, AFMA has temporarily had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.

Relevant action items from previous TRLWG meetings*

#	Action Item	Meeting	Responsible Agency/ies	Due Date	Status
1.	Discard reporting and estimation be considered by the RAG (possibly by the RAG data subgroup)	TRLWG8 (8 November 2018)	AFMA RAG Data Sub-Group	2019	Ongoing The RAG Data Sub-Group met on 18 June 2019, where this issue was considered. A report from the Sub-Group was considered at TRLRAG 27. Due to COVID 19 impacts, AFMA has temporarily ceased face-to-face meetings and has had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.
2.	RAG to consider the merit and options for improving the index of 0+ lobster abundance, through logbooks or other means. The Working Group noted that this would may be relevant to the RAG data sub-committee.	TRLWG8 (8 November 2018)	AFMA RAG Data Sub-Group	2019	Ongoing The RAG Data Sub-Group met on 18 June 2019, where this issue was considered. A report from the Sub-Group was considered at TRLRAG 27. Due to COVID 19 impacts, AFMA has temporarily ceased face-to-face meetings and has had to re-prioritizes managements needs at least in the short-term. This has impacted progress against this item.

*TRLWG actions not relevant to TRLRAG have not been included in the above.

Torres Strait Tropical Rock Lobster Resource Assessment Group Meeting 29

Final Meeting Record

6 October 2020

Video Conference

Note all meeting papers and record available on
the PZJA webpage: www.pzja.gov.au



Australian Government

Australian Fisheries Management Authority

Contents

Meeting participants	3
Members.....	3
Observers	4
1 Preliminaries.....	4
1.1 Welcome and apologies.....	4
1.2 Adoption of agenda	4
1.3 Declaration of interests	4
2 Updates from members	5
2.1 Industry members	5
2.2 Scientific members.....	5
2.3 Government agencies.....	6
3 TRL Fishery Research Priorities	7
4 Date and venue for next meeting	9

Meeting participants

Members

Name	Position	Declaration of interest
Ian Knuckey	Chair	<p>Chair/Director of Fishwell Consulting Pty Ltd and Olrac Australia (electronic logbooks). Chair/member of other RAGs and MACs. Conducts various AFMA and FRDC funded research projects including FRDC Indigenous Capacity Building project. Nil interests in TRL Fishery and no research projects in the Torres Strait.</p> <p>In 2019, delivered components of TSRA Induction Program for Traditional Inhabitant members on PZJA advisory committees.</p> <p>Full declaration of interests provided at Attachment A.</p>
Dr Andrew Penney	Scientific member	<p>Director of Pisces Australis Pty Ltd, an Australian registered marine/coastal research and management consultancy based in Canberra - interests in any opportunities in this regard.</p> <p>Currently Principal Investigator on FRDC Projects Nos 2017-180: Design and implementation of an Australian National Bycatch Report: Phase 1 – Scoping; and 2019-036: Implementation of dynamic reference points and harvest strategies to account for environmentally-driven changes in productivity in Australian fisheries, potentially red leg banana prawns or TRL.</p> <p>Independent scientific member on the AFMA Southeast RAG, the Tropical Rock Lobster RAG and the Small Pelagic Fishery RAG. Member of the AFMA ERA Technical Working Group.</p> <p>No shareholding and hold no positions relating to any other companies, including any fishing companies or industry associations.</p>
Dr Éva Plagányi	Scientific member	Lead scientist for PZJA funded TRL research projects conducted by CSIRO.
Aaron Tom	Traditional Inhabitant member	Traditional Inhabitant Gudumalulgal and TIB licence holder.
Dr Ray Moore	Industry member	Torres Strait Master Fisherman licence holder and East Coast TRL Fishery licence holder.
Selina Stoute	AFMA member	Nil.
Mark Anderson	TSRA member	Nil. Employee of TSRA. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them.

Name	Position	Declaration of interest
Tom Roberts ¹	QDAF member	Nil.
Georgia Langdon	AFMA Executive Officer	Nil.

Observers

Name	Position	Declaration of interest
Judy Upston	CSIRO observer	Scientist for PZJA funded TRL research projects conducted by CSIRO.
Quinten Hirakawa	TSRA observer	TIB licence holder.

1 Preliminaries

1.1 Welcome and apologies

- The meeting commenced at 2:10pm on Thursday 6 October 2020. Attendees were welcomed by the Chair, who made an Acknowledgement of Country on behalf of each participant joining the meeting.
- Attendees at the RAG meeting are detailed in the meeting participant tables at the start of this meeting record.
- Apologies were received from:
 - Brett Arlidge, Industry member
 - Harry Nona, Traditional inhabitant member, Kaiwalagal
 - Yen Loban, TSRA Fisheries Portfolio member, permanent observer
- Members and permanent observers not in attendance were:
 - James Ahmat, Traditional Inhabitant member, Maluiligal
 - Les Pitt, Traditional Inhabitant member, Kemer Kemer Meriam
 - Malu Lamar RNTBC representative, permanent observer
 - Papua New Guinea National Fisheries Authority representative, permanent observer

1.2 Adoption of agenda

- The draft agenda was adopted without change (**Attachment B**).

1.3 Declaration of interests

- As provided in PZJA Fisheries Management Paper No. 1 (FMP1), all members of the RAG must declare all real or potential conflicts of interest in the Torres Strait TRL Fishery at the commencement of the meeting.
- The Chair requested that members update the record of declarations by exception. These are detailed in the meeting participant tables at the start of this meeting record. The RAG accepted each member and observers' declared interests and agreed that all members could participate in each agenda item discussion. No members objected to this process.

¹ Joined the meeting at 2.30pm

8. Where it is determined that a direct conflict of interest exists, the RAG may allow the member to continue to participate in the discussions relating to the matter but may also determine that, having made their contribution to the discussions, the member should retire from the meeting for the remainder of the discussions on that issue.
9. The RAG followed a process whereby each group of members with similar interests was asked to leave the meeting to enable the remaining members to:
 - a) Freely comment on the declared interests;
 - b) Discuss if the interests precluded the members from participating in any discussions; and
 - c) Agree on any actions to manage declared conflicts of interests (e.g. the member may be allowed to participate in the discussions relating to the matter but not in the formulation of final advice).
10. Given the focussed discussion on research priorities, the RAG agreed that the scientific members and observers be permitted to participate in discussions under agenda item 3 but not in the formulation of RAG recommendations relating to research priorities.

2 Updates from members

2.1 Industry members

11. The RAG noted verbal updates provided by industry members and observers on the performance of the TRL fishery during the 2019-20 season, with emphasis on the impacts of COVID-19, in particular that:
 - a) there had been very little fishing in the top western islands (Gudumalugal nation) and issues with finding crew had made it difficult to go out fishing.
 - b) During recent community visits, TSRA staff were advised that the 2019-20 season had been good until the last month (September) when the number of crays began to decrease.
 - c) Before the impacts of COVID-19 were felt significantly and prices dropped, there was low fishing effort earlier on in the season, however the full-time fishers continued throughout the COVID-19 period.
 - d) An increased uptake in the Job Seeker payments and participation in the Community Development Program (CDP) has reduced participation in the fishery, with bad weather and poor visibility also contributing.
 - e) An increase in new purchases of boats, and engines may be a by-product of either those continuing to receive a good income from fishing, or the COVID-19 income support provided by the Government i.e. access to superannuation and Job Seeker payments.
12. The AFMA member added that due to COVID-19 impacts, the PNG TRL industry had been limited by logistics and only shipping frozen, tailed product via Australia.
13. Noting that price can be a driver for fishing effort, the CSIRO scientific member queried whether price data would be available to support the analysis of fishing effort throughout the 2019-20 season. This was caveated by the fact that the data can be confounded, as larger lobsters later in the season would likely have attracted higher prices. Therefore, a timeline of prices at discrete intervals throughout the season would be useful.

ACTION: AFMA to approach known TRL buyers and request the sharing of price data to support CSIRO's catch and effort data analysis.

2.2 Scientific members

14. The RAG noted general scientific verbal updates provided by the scientific member from CSIRO Dr Éva Plagányi, in particular that:
 - a) Planning for the pre-season survey, scheduled for 1-14 November 2020 is underway, and despite the current circumstances, is likely to proceed. The survey team has developed

a series of COVID-safe plans to protect the communities of the Torres Strait, the survey team and the charter boat crew. The plans include a range of contingencies in the event that COVID-19 circumstances change or that one of the staff becomes infected. This includes having additional back up divers to reduce stress on the core dive team, and additional training to account for any variation in diver efficiencies.

- b) CSIRO has been given preliminary approval from the Fisheries Research Development Corporation (FRDC) to support the participation of PZJA Traditional Inhabitant members to attend fisheries-related conferences. CSIRO is also looking at other co-investment options to support more opportunities for Traditional Inhabitant engagement in the longer term.

2.3 Government agencies

- 15. The RAG noted verbal updates from each of the government agency members.

Australian Fisheries Management Authority

- 16. AFMA has been preparing a report to the Department of Agriculture, Water and Environment (DAWE) to support further export approval for the TRL Fishery under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The current export approval is due to expire on 18 December 2020. The draft report was provided to both TRLRAG and TRLWG members for comment between 23 September and 6 October 2020. Following submission to DAWE, the report will be made available for public comment for a period of four weeks, before further assessment by DAWE, and final consideration by the Minister for approval.
- 17. 30 September 2020 marked the end of the first TRL season under the quota management system since quota was allocated. As at 5 October the reported catches against the TAC for the TIB and TVH sectors for the 2019-20 season were as follows:
 - a) TIB sector: 204.22 tonnes (70.99%) caught, with 83.51 tonnes remaining.
 - b) TVH sector: 142.50 tonnes (96.97%) caught, with 4.45 tonnes remaining.
- 18. The RAG noted that some catch disposal records (CDRs) were still outstanding. The RAG further noted that AFMA's compliance operations covering the fishery closure were positive with no compliance breaches detected across the fishery.
- 19. Reported catches from PNG were provided to AFMA by the PNG NFA in early September and included catches from January through to the end of August 2020. Total reported (whole weight) catch by PNG was 90.47 tonnes. The RAG noted this figure is the combined total of 43.2 tonnes inside the Torres Strait Protected Zone (TSPZ) and 47.2 tonnes outside the TSPZ.
- 20. The RAG acknowledged that the issue of clarifying the extent of PNG catch inside and/or outside the TSPZ is still outstanding, and is part of ongoing bilateral discussions between AFMA and PNG NFA.
- 21. The RAG noted that the draft amendment to the *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan 2018* was out for public comment until 15 October 2020. The PZJA will then consider the outcomes of the public consultation period at their meeting scheduled for 23 November 2020.

Torres Strait Regional Authority

- 22. Other than updates on advice from industry in relation to how the TRL season fared, no other updates were provided by TSRA.

Fisheries Queensland

- 23. Queensland Cabinet recently passed the second regulatory reform package for Fisheries Queensland. The new regulations include changes to licensing arrangements and quota reporting but do not impose substantial change on the way the East Coast TRL Fishery operates.
- 24. Fisheries Queensland have been endorsed to pursue development of a harvest strategy for the East Coast Rock Lobster and Crayfish Fishery, commencing in 2021.

25. The East Coast Rock lobster and Crayfish Fishery has had a disruptive year under the impacts of COVID-19. Accessing the expanded area of the East Coast Rock lobster and Crayfish Fishery in response to the initial outbreak of COVID-19 proved challenging. Great Barrier Reef Marine Park Authority permitting processes and overlapping native title community grounds meant that the fishable area was restricted and very little catch was taken in the expanded area. Boats were tied up during all of February before additional Government subsidised flights were scheduled to help improve the movement of product. Total catch at the end of the season was 111 tonnes, 3 per cent of which comprised tailed product.

3 TRL Fishery Research Priorities

26. The RAG discussed and provided advice on research priorities for the 2021/22 financial year and other research needs identified for the TRL Fishery under the Rolling Five Year Research Plan 2021/22 - 2025/26 (the Research Plan).
27. The RAG noted that approximately \$290,000 of the expected 2021/22 AFMA Research Budget is pre-committed to a multi-year TRL project (the annual pre-season survey over three years – AFMA research project 2019/0825). This means there is approximately \$120,000 of the AFMA research budget available for additional research priorities in the 2021/22 financial year across all Torres Strait fisheries, not just TRL.
28. Noting the latest TRLRAG (27) and TRLWG (10) advice and the draft Rolling Five Year Research Plan for 2021/22 to 2025/26 (refer to agenda item paper 3a), **the RAG agreed to not put forward any additional research priorities for the 2021/22 financial year for consideration by the Torres Strait Scientific Advisory Committee (TSSAC).**
29. When considering research priorities beyond 2021/22, the RAG considered and discussed the following:
- a) **Fishery surveys, stock assessment, harvest control rule and RBC**
 - i. To retain as the highest “essential” priority to the fishery, noting the project is unfunded beyond 2021/22.
 - b) **Ecological Risk Assessment (ERA)**
 - i. To retain as an essential priority, noting that undertaking an ERA for the TRL fishery is currently listed as a medium priority fishery under a broader AFMA/CSIRO project².
 - ii. The RAG agreed that because the Fishery is based on a single species, collected by hand, there is unlikely to be any significant change in the ecological risk factors relating to the TRL fishery since the last ERA was undertaken in 2007.
 - c) **Improvement of data collection**
 - i. To retain as an essential priority, noting that much of this work is to be pursued by the TRL RAG Data Sub-group, funded under the annual TRL fishery AFMA budget.
 - d) **Understanding fisher behaviour**
 - i. To retain as an essential priority.
 - ii. The RAG agreed that an element of this work should also include capturing information on the impacts of COVID-19 on the fishery to ensure that analysis of fishery data is accounting for potential ‘COVID noise’. Collecting data and information from this anomalous COVID period may provide an insight in to what could be expected if the fishery experiences more anomalous periods, referred to

² Following the meeting, AFMA clarified with members that depending on available funding, and efficiencies gained through automated assessment processes, an updated ERA is likely to be scheduled in 2022. It has also been determined that an ERA is not required to achieve WTO export approval.

as “shocks to the system”. It will also help to better understand trends in CPUE if there are future conflicts between CPUE and the survey results.

- iii. The RAG noted that commencing initial conversations with industry now, to capture qualitative information on fishing activities, would be a useful approach. This would also assist in beginning to **Understand changes to fishing power through time**, which the RAG agreed to keep as a desirable priority for now. Following initial qualitative data collection, more specific resources can be dedicated towards the project to develop a representative and structured annual fishing power survey. This will be better facilitated when face-to-face stakeholder engagement is more feasible, allowing for trusted relationships with industry to be built up over time
- iv. The RAG supported incorporating such preliminary work, including development of a fishing power survey, into the scope of the TRL RAG Data Sub-group, supplemented by additional AFMA funding for additional meetings if required. The AFMA member added that AFMA staff could commence initial discussions with stakeholders on this issue during upcoming community visits around the Torres Strait in late October and early November 2020.

e) **Understanding connectivity, environmental drivers and adaptation strategies**

- i. The RAG noted comments from the CSIRO scientific member that with more frequent and intense El Niño weather patterns forecasted, it is likely the fishery will be subjected to more “shocks to the system”. Collecting more data during anomalous periods (e.g. COVID-19, or environmental change) will allow better forward predictions and data standardisation, particularly if trying to discern the impacts of a quota management system from the impacts of COVID-19 or other environmental changes.
- ii. The independent scientific member reiterated that understanding environmental drivers will become very important and that an explicit dot point on this should be included in the ‘detail’ column of the Research Plan. This work should start with the collection of information on temperature and other large-scale perturbations that may impact on lobster recruitment, availability and aggregations.
- iii. The RAG noted that the currently-funded climate project work led by CSIRO (Leo Dutra) will provide greater insights into the available environmental information, and advice on what information should be collected to develop downscaled climate effects models for Torres Strait fisheries.
- iv. An industry member expressed support for maintaining **Understanding connectivity** as an essential research priority (though not for the 2021/22 financial year), noting that the most recent tagging study is over 30 years old. He noted that any disparity between the pre-season survey data, and the fishery catch data is likely to stem from a lack of understanding on connectivity of Torres Strait with the East Coast fishery. He suggested that industry could be engaged to undertake a discrete tagging project of 0+ (recently settled) and 1+ (juvenile) lobsters to examine movement from the East Coast into the Torres Strait. Although there is some understanding of larval convection in the region, there are knowledge gaps in relation to East Coast spawning grounds. The RAG noted that while East Coast daily fishing logs do not capture information on berried female lobsters, a proposed industry-funded lobster survey on the Queensland East Coast could provide some useful information to help understand East Coast spawning grounds and their connection with Torres Strait. The RAG noted that the collaborative development of a harvest strategy or survey for the East Coast could yield benefits for the management of TRL in both jurisdictions.
- v. The CSIRO scientific member added that Papua New Guinea is also a good source of information when understanding connectivity, and other technologies including Remote Operated Vehicles (ROVs) may aid in reducing the cost of future connectivity studies.

f) **Science peer review**

- i. The RAG noted that the scope of the science peer review was to only cover the TRL Fishery survey design, which would make the review more cost effective. The RAG also noted that perhaps the original driver for this research need is now less important, and therefore could be moved down in terms of priority against other research needs.
- ii. The Chair and independent scientific member agreed to finalise the Terms of Reference for the review out-of-session.

30. Having regard to the RAGs discussion above, an updated Five-Year Rolling Research Plan for the TRL Fishery 2021/22 – 2025/26 is provided at **Attachment C**.

4 Date and venue for next meeting

2. The RAG noted that the next TRLRAG (30) is scheduled for 15-16 December 2020. Pending COVID-19 travel restrictions, AFMA will liaise with members on possible face to face meeting options over the coming weeks.
3. The 29th TRLRAG meeting was closed at 4:05pm on Thursday 6 October 2020.

Declaration of interests

Dr Ian Knuckey – October 2020

Positions:

Director –	Fishwell Consulting Pty Ltd
Director –	Olrac Australia (Electronic logbooks)
Deputy Chair –	Victorian Marine and Coastal Council
Chair / Director –	Australian Seafood Co-products & ASCo Fertilisers (seafood waste)
Chair –	Northern Prawn Fishery Resource Assessment Group
Chair –	Tropical Rock Lobster Resource Assessment Group
Chair –	Victorian Rock Lobster and Giant Crab Assessment Group
Chair –	Victorian Central Zone Abalone Fisheries Resource Advisory Group
Chair –	Gulf of St Vincent's Prawn Fishery MAC Research Scientific Committee
Scientific Member –	Northern Prawn Management Advisory Committee
Scientific Member –	SESSF Shark Resource Assessment Group
Scientific Member –	Great Australian Bight Resource Assessment Group
Scientific Member –	Gulf of St Vincent's Prawn Fishery Management Advisory Committee
Scientific Member –	Tropical Tuna Resource Assessment Group
Scientific participant –	SEMAC, SESSF Resource Assessment Group

Current projects:

AFMA 2020/0807	Bass Strait Scallop Fishery Survey – 2020-22
FRDC 2017/069	Indigenous Capacity Building
FRDC 2016/116	5-year RD&E Plan for NT fisheries and aquaculture
Traffic Project	Shark Product Traceability
FRDC 2018/021	Development and Evaluation of SESSF multi-species harvest strategies
FRDC 2017/014	Informing structural reform of South Australia's Marine Scalefish Fishery
NT Fisheries	Design and implementation of a tropical snapper trawl survey
Sea Cucumber Ass.	Design and implementation of a sea cucumber dive survey
FRDC 2019-072	A survey to detect change in Danish Seine catch rates of Flathead and School Whiting resulting from CGG seismic exploration.

**29th MEETING OF THE PZJA TORRES STRAIT TROPICAL
ROCK LOBSTER RESOURCE ASSESSMENT
GROUP (TRLRAG 29)**

Tuesday 6 October 2020 | 2:00 PM – 4:00 PM

Video Conference

ADOPTED AGENDA

1 PRELIMINARIES

Welcome and apologies

The Chair will welcome members and observers to the 29th meeting of the RAG.

Adoption of agenda

The RAG will be invited to adopt the draft agenda.

Declaration of interests

Members and observers will be invited to declare any real or potential conflicts of interest 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.

2 UPDATES FROM MEMBERS

Industry, scientific and government agency members and observers will be invited to provide verbal updates on matters concerning the TRL Fishery.

3 TRL FISHERY RESEARCH PRIORITIES

The RAG will discuss and provide advice on research priorities for the 2021/22 – 2025/26 five year period.

The Chair must approve the attendance of all observers at the meeting. Individuals wishing to join the meeting as an observer must contact the Executive Officer – Georgia Langdon (georgia.langdon@afma.gov.au)



Rolling Five Year Research Plan

2021/22-2025/26

Torres Strait Tropical Rock Lobster Fishery



Compiled by AFMA

Last updated October 2020

ABOUT THIS PLAN

The Torres Strait Scientific Advisory Committee (TSSAC) seeks input from each fishery advisory body (Resource Assessment Group (RAG), Management Advisory Committee (MAC) or Working Group (WG)) to identify research priorities over five-year periods from 2021/2022 to 2025/26. This template is to be used by the relevant advisory body to complete their five-year plan. The plans are to be developed in conjunction with the TSSAC Five-year Strategic Research Plan (SRP) with a focus on the three research themes and associated strategies within the SRP.

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

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

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

RESEARCH PRIORITIES

Table 1. Five-year Torres Strait Tropical Rock Lobster Fishery research plan for 2021/22 to 2025/26.

Note: light blue shading indicates a project that has been funded under the AFMA Research Budget.

Proposed Project	Objectives and component tasks	Year project to be carried out and indicative cost*						Other funding bodies ¹	Evaluation		
		2021/22	2022/23	2023/24	2024/25	2025/26	Notes on project timings		Priority essential / desirable	Priority ranking (1-5 – 1 being highest priority)	Theme
Fishery surveys, stock assessment, harvest control rules and recommended biological catch (RBC)	<ul style="list-style-type: none"> ➤ Monitor ongoing changes in the fishery and update or develop fishery performance indicators as required. ➤ Recommend a recommended biological catch (RBC) annually for each season. ➤ Every third year, update and implement the long-term stock assessment. ➤ Conduct a pre- season survey in November each year, including seabed habitat monitoring. ➤ Continue development of a harvest strategy for the TRL Fishery including an empirical harvest control rule. ➤ Facilitate data sharing with PNG. ➤ Development of a tiered harvest strategy for the TRL Fishery. 	\$290,824 (funded under AFMA Research Project 2019/0825)	~\$240,000 (not yet funded)	~\$240,000 (not yet funded)	~\$240,000 (not yet funded)	~\$240,000 (not yet funded)	Nil	AFMA CSIRO PNG NFA Industry	Essential	1	1
Ecological risk assessment (ERA)	<ul style="list-style-type: none"> ➤ Conduct an update to the 2007 ERA for the TRL Fishery. 	0	\$20,000 (identified for potential assessment under broader AFMA Research Project)	0	0	0	Assessment dependent on remaining funding once high priority fisheries have been assessed.	AFMA CSIRO	Essential	1	1
Improvement of data collection	<ul style="list-style-type: none"> ➤ Improved monitoring of commercial catch and effort in all sectors of the fishery. 	Funding for sub-group meetings to be sourced from RAG		0	0	0	Sub-group of the RAG to progress	AFMA PNG NFA	Essential	1	1,3

	<ul style="list-style-type: none"> ➤ Estimate of non- commercial take of TRL. ➤ Alternative monitoring techniques of effort, for example GPS tracking. 	budget				alongside RAG meetings				
Understanding fishing behaviour	<ul style="list-style-type: none"> ➤ Understanding impacts of COVID-19 ➤ Understanding the drivers and incentives in determining fishing behaviour in all sectors. ➤ Understanding fishing behaviour under output controls: the impact of ITQs or competitive quota on the fishery (including social impacts); the extent and impact of discard mortality; the effect of changing market preferences on fishing behaviour under output controls; the extent of value adding e.g. moving to live product, targeting different sizes; the extent of high grading under output controls. 	Funding for sub-group meetings to be sourced from RAG budget	TBA	TBA	TBA	Sub-group to commence initial conversations with industry and collection of qualitative data, with a view to developing a structured quantitative survey over time.	AFMA	Essential	2	1
Understanding changes to fishing power through time	<ul style="list-style-type: none"> ➤ Understanding changes in fishing behaviour and power over time (e.g. changes to the size of engines, use of GPS, gear, areas fished, time fished, experience of divers), to inform the standardisation of CPUE data. 	funding for sub-group meetings to be sourced from RAG budget	TBA	TBA	TBA	Sub-group to commence initial conversations with industry and collection of qualitative data, with a view to developing a structured quantitative survey over time..	AFMA CSIRO	Desirable	2	1
Understanding connectivity, environmental drivers and adaptation strategies	<ul style="list-style-type: none"> ➤ Understanding of migration of different age classes of lobsters between, and within, jurisdictions (e.g. PNG, QLD East Coast and Torres Strait). ➤ Understanding of recruitment connectivity between, and within, jurisdictions, including key areas of larval release within each jurisdiction. ➤ Management implications of movement and recruitment connectivity between, and within, 	Possible use of industry boats, collaboration with QDAF on potential future QDAF lobster survey				Nil	AFMA PNG NFA CSIRO QDAF	Essential	2	1

	➤ jurisdictions. Understanding large scale environmental perturbations and their impacts on lobster recruitment, availability and aggregations.										
Science peer review	➤ Consistent with best practice Guidelines for quality assurance of Australian fisheries research and science information (the Guidelines), a peer review be conducted of the TRL Fishery survey design.	0	60,000-80,000 (dependent on final scope)	0	0	0	Terms of reference to be developed and considered by the TRLRAG in 2019/20	AFMA	Desirable	2	1
Mid-year survey Note: unless triggered under the Harvest Strategy for the TRL Fishery, this project is not a priority for the TRL Fishery.	➤ Conduct mid- year survey, as required under the Harvest Strategy for the TRL Fishery.	0	0	0	0	0	To be conducted only if requirement to undertake a mid-year survey is triggered under the Harvest Strategy – indicative cost \$110,000 with in-kind contribution from CSIRO	AFMA CSIRO PNG NFA Industry	Only if triggered under the Harvest Strategy, priority = essential	Only if triggered under the Harvest Strategy, priority ranking = 1	1

Timeline of key events in the Torres Strait Tropical Rock Lobster Fishery¹

Commonly used acronyms and terms:

- **FMN** means Torres Strait Fisheries Management Notice.
- **FMI** means Torres Strait Fisheries Management Instrument.
- **LN** means Logbook Notice
- **PZJA** means Protected Zone Joint Authority.
- **TRL** means Tropical Rock Lobster.
- **TRL Fishery** means the Torres Strait Tropical Rock Lobster Fishery.
- **Instrument** means the *Torres Strait Fisheries (Tropical Rock Lobster) Management Instrument 2018*
- **Management Plan** means the *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiaar)) Management Plan 2018*

Time period	Topic/Keywords	Description	Source
1960	Fishery development	Commercial fishing for TRL by the non-Traditional Inhabitant sector began in the Torres Strait	i
1970s-1980s	Fishery development	Traditional Inhabitant fishers begin to enter the fishery.	Attachment C
Dec-1978	Treaty, PNG	Torres Strait Treaty signed	Attachment F
Feb-1985	Legislation, regulations, PZJA	Torres Strait Treaty entered into force, <i>Torres Strait Fisheries Act 1984</i> and <i>Torres Strait Fisheries Regulations 1985</i> commenced and the PZJA is established	Attachment G
Feb-1985	Regulations	Under FMN 1: <ul style="list-style-type: none"> • Method restrictions introduced - only diving, collection by hand and use of spear permitted 	Attachment 3E
Feb-1985	PNG, catch sharing	Agreement between PNG and Australia for the joint management of the TRL fishery concluded.	Attachment N

¹ This is a draft document and is to be updated as key events happen. Additional work is planned to update this document to reference key licensing changes that have affected access to the TRL Fishery.

Time period	Topic/Keywords	Description	Source
Jul-1985	Regulations	Under FMN 9 (replaced FMN 1): <ul style="list-style-type: none"> Method restrictions amended to introduce a time period within which the method restrictions are in place – only diving, collection by hand and use of spear permitted between 15 Jul-31 Oct 	Attachment 3E
Jan-1986	Management arrangements	Introduction of prohibition on prawn trawlers taking TRL during the annual migration period (1 Jul-31 Oct) in order to reduce fishing pressure on the lobster population - in place until 1987, when all prawn trawlers were prohibited from taking TRL	ii
Jun-1986	Regulations	Under FMN 12 (replaced FMN 9): <ul style="list-style-type: none"> Method restrictions amended to change the dates between which methods are restricted – only diving, collection by hand and use of spear permitted between 1 July - 31 October only 	Error! Bookmark not defined.
Mar-1988	Regulations	Under FMN 19: <ul style="list-style-type: none"> Introduction of prohibition on the take, processing or carrying of TRL by boats with a prawn endorsement 	Error! Bookmark not defined.
Jun-1988	Regulations	Under FMN 22: <ul style="list-style-type: none"> Minimum size limit introduced - 100 mm tail length 	Error! Bookmark not defined.
Oct-1988	Regulations	Under FMN 24 (replaced FMN 12): <ul style="list-style-type: none"> Method restrictions amended - only diving, collection by hand and use of spear permitted, no underwater breathing apparatus except hookah, no underwater mechanical propulsion Introduction of exemption which can be sought for some method restrictions, specifically the use of underwater breathing apparatus and underwater mechanical propulsion Traditional fishing bag limits introduced - 3 per person up to 6 per boat 	Error! Bookmark not defined.
October 1988	Management objectives	PZJA agrees to six key management objectives for the fishery: <ul style="list-style-type: none"> - To conserve the stock of tropical rock lobster 	Attachment J

Time period	Topic/Keywords	Description	Source
		<ul style="list-style-type: none"> - To maximise the opportunities for traditional inhabitants of both countries to participate, including by managing the fishery for tropical rock lobster as a dive fishery - To promote the dive fisheries for tropical rock lobster in Torres Strait - Encouragement and facilitation of participation by Australian traditional inhabitants for whom future expansion of the fishery should be reserved - Containment of the capacity of the existing commercially licensed fleet and elimination of entrepreneurial speculation and subsequent upgrading/replacement of commercially licensed dinghies with large boats - To minimise impact of any new management measures on existing operators. 	
March 1989	Traditional Inhabitant access, identification, definition	Tropical Rock Lobster Working Party agrees to Island Coordinating Council suggestion that “amnesty” Papua New Guineans be considered Traditional Inhabitants for fisheries management purposes. Following this, PZJA agrees to “measures to be used for identifying those Papuans resident in Torres Strait who should be treated as Australian traditional inhabitants for all fisheries management and enforcement purposes, including community fishing rights” in the fishery.	Attachments J and M
Aug-1989	Regulations	Under FMN 31 (replaced FMN 24): <ul style="list-style-type: none"> • No substantive changes to FMN 24 	Error! Bookmark not defined.
November 1989	PNG, catch sharing, cross-endorsement	Catch-sharing arrangements for the fishery agreed by PNG and Australia. 27 PNG lobster dinghies to be allowed to operate in Australian TSPZ waters, while Australian operations in PNG waters are precluded.	Attachment O
1989	Management arrangements, fishery surveys	Fishery independent surveys commence in the TRL Fishery	Attachment J
February 1990	PNG, catch sharing, cross-endorsement	Catch-sharing arrangements come into effect 15 February, but no PNG boats begin fishing.	PZJA 1989-1990 Annual Report
Oct-1990	Regulations	Under FMN 34 (replaced FMN 22): <ul style="list-style-type: none"> • No substantive changes to FMN 22 	Error! Bookmark not defined.

Time period	Topic/Keywords	Description	Source
1991-1992	Traditional Inhabitant access, identification, definition	PZJA establishes a working group to consider the involvement in PZJA fisheries of Torres Strait Islanders and Aboriginals living in the Northern Peninsula Area of Cape York and Australian citizens of Papua New Guinean origin.	Attachment K
June 1991	PNG, catch sharing, cross-endorsement	Cross-endorsements issued to 4 PNG mother ships with 18 dinghies on 14 June. PNG boats agreed to respect home reefs closures, not go ashore on Australian territory, and make no contact with Australian inhabitants, Australian vessels, or PNG traditional fishers.	Attachment K
Jun-1992	Native title	Mabo High Court decision recognises existence of native title (Aboriginal and Torres Strait Islander rights and interests to land and waters according to their traditional law and customs)	iii
1993	Community licensing	Concerns about the current licensing systems run by the PZJA and Queensland for community fishing begin to be raised by Island Coordinating Council. Concerns include that Traditional Inhabitants living outside the Island Coordinating Council area are excluded from obtaining licences, the administrative and financial burden placed on island councils by the systems, a lack of detailed information to inform fisheries management decisions, and the fact that island chairmen rather than individual fishers are legally responsible for any fishing violations.	Attachment P
February 1993	PNG, catch-sharing, cross-endorsement	New PNG catch-sharing arrangements commence on 15 February 1993 for a three year period to 14 February 1996. Allow for cross-endorsement of 27 PNG dinghies and associated freezer boats. Nominations received for cross-endorsement of 3 PNG TRL freezer boats with 27 associated dinghies.	Attachment 3F
Oct-1993	Regulations	Under FMN 38 (replaced FMN 31): <ul style="list-style-type: none"> • Introduction of prohibition on taking TRL using hookah between 1 Oct-30 Nov • Traditional fishing bag limits amended - 3 without a boat, 3 with 1 person in a boat, 6 with more than 1 person in a boat • All other requirements remained unchanged - method restrictions 	Error! Bookmark not defined.
Dec-1993	Native title, legislation	<i>Native Title Act 1993</i> commences, legislating the framework for recognition of native title (including over maritime areas) in Australia following the High Court's Mabo decision. The Act covers the determination of whether native title exists, acts affecting native title, and compensation for acts affecting native title.	Attachment 3B

Time period	Topic/Keywords	Description	Source
1994	Logbooks	Noted under LN 8: <ul style="list-style-type: none"> Tropical Rock Lobster Logbook TRL02 implemented – voluntary, records frozen tails only 	Attachment 3G
1994	Legislation, TSRA	Torres Strait Regional Authority established under the <i>Aboriginal and Torres Strait Islander Commission Act 1989</i>	Attachment 3H
April-June 1995	Single jurisdiction, licensing	PZJA establishes Task Force to investigate the feasibility of introducing single jurisdiction fisheries management and to advise on matters such as eligibility criteria for entry to the newly created fisheries. Investment warning is issued.	Attachment S
Jul-1995	Regulations	Under FMN 42 (amended FMN 38): <ul style="list-style-type: none"> No changes to regulation of fishing provided under FMN 38. Amendments made to correct a drafting error that excluded several words from the section relating to bag limits for traditional fishing. 	Error! Bookmark not defined.
October 1996	Single jurisdiction, licensing, community licences, TIB licensing	PZJA endorses single jurisdiction (the management of all Torres Strait fisheries by the PZJA, rather than a division of responsibility between the PZJA and the Queensland government) and the Task Force's recommendations for licensing reform. Due to opposition from Islander representatives, related to broader issues such as autonomy and the desire for a regional agreement for Islander control over Torres Strait waters, the implementation of these reforms was delayed and then boycotted until agreement was reached in 1999.	Attachment V, Z, 2A, P, 2B and 2C
Mar-1997	Regulations	Under FMN 44 (amended FMN 38): <ul style="list-style-type: none"> Method restrictions amended - only collection by hand, use of spear or other handheld implement permitted, no underwater breathing apparatus except hookah, no underwater mechanical propulsion 	Error! Bookmark not defined.
May-1997	Logbooks	Under LN 8: <ul style="list-style-type: none"> Tropical Rock Lobster Logbook TRL03 implemented – both TRL02 and TRL03 mandatory for boats with freezing capacity, records both live and frozen tails 	Attachment 3G

Time period	Topic/Keywords	Description	Source
Apr-1998	Regulations	Under FMN 48 (replaced FMN 34): <ul style="list-style-type: none"> Minimum size limits amended - 80 mm carapace length, 100 mm tail length 	Error! Bookmark not defined.
1999	Traditional Inhabitant access, identification, definition	PZJA agrees that children of “amnesty” Papua New Guineans be considered Traditional Inhabitants, following the 1989 decision to include “amnesty” people within the definition of Traditional Inhabitants.	Attachment L
July-December 1999	Single jurisdiction, licensing, community licences, TIB licensing	Islander representatives propose a series of principles to underlie community licensing, consistent with the previously proposed system.	Attachment P
Apr-2000	Single jurisdiction, licensing, community licences, TIB licensing	Following a meeting between the PZJA and Islander representatives, the Traditional Inhabitant Boat (TIB) licence is introduced for a one year trial period.	iv, Attachment P
Nov-2001	Regulations	Under FMN 58 (replaced FMN 38, 42, 44, 48): <ul style="list-style-type: none"> Introduction of fishery closure from 1 Oct-30 Nov (revoking previous prohibition on taking TRL using hookah between 1 Oct-30 Nov). Exemption from closure but bag limits apply - 3 without a boat, 3 with 1 person in a boat, 6 with more than 1 person in a boat Introduction of prohibition on taking or carrying of TRL while using, or in the possession of, hookah gear between 1 Oct-31 Jan All other requirements remained unchanged - method restrictions, minimum size limits 	Error! Bookmark not defined.
2002	Legislation, TSRA, PZJA	<i>Torres Strait Fisheries Act 1984</i> is amended to make the Torres Strait Regional Authority Chairperson a member of the Protected Zone Joint Authority	Error! Bookmark not defined.
Nov-2002	Latent effort, fishery participation	A 30% reduction in the number of tenders attached to each non-Traditional Inhabitant licence package was implemented, except where only 1 tender exists, in which case the tender will be entitled to continue working. This was done in order to reduce latent effort in	v

Time period	Topic/Keywords	Description	Source
		the fishery and restrict expansion of effort by non-Traditional Inhabitant fishers. This arrangement was in place until 2011.	
November 2002	Traditional Inhabitant access, Skehill report, management objectives	Skehill report – “A Fair Share of the Catch” – is delivered, evaluating Torres Strait fisheries and establishing an order of priority for their management. Recommends Traditional Inhabitants be given priority of access to the TRL Fishery.	Attachment 2F
Dec-2002	Regulations	Under FMN 62: <ul style="list-style-type: none"> • Introduction of prohibition of processing or carrying TRL meat removed from the shell on a boat. Exemption provided for traditional fishing. 	Error! Bookmark not defined.
Dec-2003	Latent effort	Cap on Traditional Inhabitant licences for boats greater than 6 m with a TRL Fishery endorsement – in place until 2006	vi
Late 2003	Logbooks	Torres Strait Seafood Buyers and Processors Docket Book (TDB01) implemented – voluntary	iv
Jun-2003	Logbooks	Under the <i>Torres Strait Fisheries Logbook Instrument No. 1</i> : <ul style="list-style-type: none"> • Tropical Rock Lobster Logbook TRL04 implemented – mandatory for all non-Traditional Inhabitant operators 	Attachment 3I
Jan-2005	Management arrangements	Moon-tide hookah closures (a periodic closure on the use of hookah gear three days either side of the full or new moon each month during between February and September) introduced – first implemented in 2005 as a way to reduce fishing effort to levels recorded in 2002. In 2013 the closures were removed following a buy-out of non-Traditional Inhabitant licences however were reintroduced in 2014 following agreement from both the sectors, and continue to date	vii
Jul-2005	Management plan	PZJA agreed to create a plan of management to implement a quota management system in the fishery.	viii
July 2005	Allocation	PZJA agrees to transition to initial 50:50 sectoral split in the fishery, brought about by government funded buyout, with a later goal of a 70:30 split between Traditional Inhabitants and non-Traditional Inhabitants, funded by an “open market and self-funded tender process”.	Attachment 2G

Time period	Topic/Keywords	Description	Source
2006	TAC	Notional total allowable catches implemented (notional as allocation had not yet been undertaken nor a management plan developed)	ix
Mar-2006	Regulations	<p>Under FMN 73 (replaced FMN 58, 62):</p> <ul style="list-style-type: none"> • Introduction of fishery closure from 1-30 Nov (revoking previous fishery closure from 1 Oct-30 Nov). Exemption from closure for traditional fishing only but bag limits apply - 3 without a boat, 3 with 1 person in a boat, 6 with more than 1 person in a boat • Introduction of prohibition on carriage of diving equipment between 1900-0600 AEST. Exemption can be sought, but all diving equipment (face mask and fins) in possession of that person, or on board the boat, is stowed and secured during the prohibited hours. ES states that this was implemented in response to concerns that night diving may occur in the Fishery • All other requirements remained unchanged - method restrictions, prohibition of processing or carrying TRL meat, minimum size limits, hookah gear restrictions 	Error! Bookmark not defined.
April 2006	IAAP, allocation	PZJA agrees to create an Independent Allocation Advisory Panel (IAAP) to advise on the appropriate basis for the allocation of fishing concessions in the non-Traditional Inhabitant sector.	Attachment 2G
Sep-2006	Regulations	<p>Under FMN 80 (replaced FMN 73):</p> <ul style="list-style-type: none"> • Correction made to error in FMN 73 regarding the fishery closure, reinstated to 1 Oct-30 Nov. Exemption from closure for traditional fishing only but bag limits apply - 3 without a boat, 3 with 1 person in a boat, 6 with more than 1 person in a boat • All other requirements remained unchanged - method restrictions, prohibition of processing or carrying TRL meat, minimum size limits, hookah gear restrictions, prohibition on carriage of diving equipment between 1900-0600 AEST 	Error! Bookmark not defined.
Jun-2007	IAAP, allocation	PZJA agrees to final Independent Allocation Advisory Panel (IAAP) report and a sectoral catch share ratio of 35:65 between the Traditional Inhabitant and non-Traditional Inhabitant sectors as detailed in the 'Report to stakeholders on the data used to establish the historical catch ratios of the Community and non-community sectors'	Attachment 2H
Apr-2008	Buyback, structural adjustment	Australian Government buy-back of non-Traditional Inhabitant licences. 13 primary licences and 29 associated tenders removed from the TRL Fishery. Based on the provisional	Attachment 2J

Time period	Topic/Keywords	Description	Source
		allocations associated with the 'bought-out' licences the sectoral catch share between the Traditional Inhabitant and non-Traditional Inhabitant sectors changed to 53.5:46.5.	
2008	Conversion factor	TRL tail to whole weight conversion ratio (2.677) implemented	ix
2009	Harvest strategy	Interim Harvest Strategy implemented for the TRL Fishery in response to the planned transition to a quota management system, laying out the biological objectives for the fishery and how this could be achieved.	ix
Mar-2010	Environment	Torres Strait coral bleaching event	x
Aug-2011	Regulations	<p>Under FMI 9 (replaced FMN 80):</p> <ul style="list-style-type: none"> • Application of arrangements extended to PNG Treaty endorsed operators • All other requirements remained unchanged – method restrictions, prohibition of processing or carrying TRL meat, minimum size limits, hookah gear restrictions, prohibition on carriage of diving equipment between 1900-0600 AEST, fishery closure. <p>FMI 9 was intended to amend an administrative oversight that had excluded cross-endorsed fishers from the provisions of FMN 80.</p>	Error! Bookmark not defined.
Apr-2012	Buyback, structural adjustment	Based on a further buy-out of one licence (1 primary and 1 tender) the sectoral catch share between the Traditional Inhabitant and non-Traditional Inhabitant sectors changed to 56.2:43.8	Attachment 2K
7-Aug-2013	Native title, sea claim	The High Court hands down decision regarding Torres Strait Sea Claim Part A. The decision overturned the Full Federal Court decision from March 2012 and found that the native title rights in the sea claim area include the right to take fish for commercial or trading purposes. This was found to be a non-exclusive right, and native title holders are still required to hold the appropriate licences and abide by the relevant laws and regulations.	Attachments 3C and 3D
2014	Fishery participation, Traditional Inhabitant access, 100% ownership	The Protected Zone Joint Authority acknowledges and supports the aspiration of Torres Strait Communities to own 100% of access to commercial Fisheries in the Australian area of the Torres Strait Protected Zone	Attachment 2L

Time period	Topic/Keywords	Description	Source
May-2014	Native title	Malu Lamar (Torres Strait Islander) Corporation is appointed as the Registered Native Title Body Corporate for the Sea Claim Area Part A.	xi
Mar-2016	Environment	Torres Strait coral bleaching and sea cage mortality event	x
Oct-2016 to Oct-2017	Buyback, structural adjustment	Based on a further buy-out of three licences (3 primaries and 7 tenders) the sectoral catch share between the Traditional Inhabitant and non-Traditional Inhabitant sectors changed to 66.17:33.83	Attachments 2M and 2N
Jul-2017	Vessel monitoring	Vessel monitoring system (VMS) implemented – mandatory for primary boat and/or operating with a Carrier Boat License (Class A, B, or C). Vessels operating for freight shipping are exempt from installing VMS. Exemptions may also be provided for carrier vessels that are six meters or less in length.	xii
Dec-2017	Logbooks	Torres Strait Fisheries Catch Disposal Record (TDB02) implemented – mandatory for all Torres Strait licence holders	xii
10-Apr-2018	Management arrangements	Following a low Recommended Biological Catch, additional moon-tide hookah closures introduced covering all new and full moon periods for the remainder of the 2017-18 fishing season, in order to slow down fishing effort and provide the TIB sector with the longest possible fishing season, avoiding an early closure of the fishery.	xiii
27-Apr-2018	Management arrangements, hookah	Prohibition on the carriage and use of hookah gear for the remainder of the 2017-18 fishing season.	xiii
29-Jun-2018	Management arrangements, hookah	Federal Court of Australia order to revoke prohibition on the carriage and use of hookah gear – reverted to additional moon-tide hookah closures.	xiii
20-Jul-2018	Regulations	Under the TRL Management Instrument 2018 (replaced FMI 9): <ul style="list-style-type: none"> Traditional fishing bag limits removed. Noted that PZJA does not have jurisdiction in relation to traditional fishing conducted by Traditional Inhabitants Introduction of capacity to close the TRL Fishery early to commercial fishing, when the total allowable catch is reached Introduction of capacity to prohibit the use of hookah gear (i.e. moon-tide hookah closures) during the hookah season (1 Feb-30 Sep) 	xiii

Time period	Topic/Keywords	Description	Source
		<ul style="list-style-type: none"> All other requirements remained unchanged – method restrictions, prohibition of processing or carrying TRL meat, minimum size limits, hookah gear restrictions, prohibition on carriage of diving equipment between 1900-0600 AEST, fishery closure 	
31-Jul-2018	Management arrangements	TRL Fishery closed for the remainder of the 2017-18 fishing season due to total allowable catch being reached.	xiii
1-Dec-2018	Management plan	<i>Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan 2018</i> commenced	Error! Bookmark not defined.
1-Dec-2018	Regulations	<p>Under the TRL Management Instrument 2018 (amendment to Jul-2018 Instrument):</p> <ul style="list-style-type: none"> Ability to close the TRL Fishery early to commercial fishing revoked Implementation of a split of the total allowable catch for the TRL Fishery between the Traditional Inhabitant (66.17% of the total allowable catch) and non-Traditional Inhabitant sectors – applied from 1 Dec 2017-30 Sep 2018 only Introduction of capacity to close of the TRL Fishery to the Traditional Inhabitant sector once their part of the total allowable catch is reached – applied from 1 Dec 2017-30 Sep 2018 only Provide for individual transferrable quota arrangements to be established for the non-Traditional Inhabitant sector via licence conditions – applied from 1 Dec 2017-30 Sep 2018 only Provide for the operation of the proposed Management Plan should the quota allocation process be finalised before the start of the 2019-20 fishing season All other requirements remained unchanged – method restrictions, prohibition of processing or carrying TRL meat, minimum size limits, hookah gear restrictions, prohibition on carriage of diving equipment between 1900-0600 AEST, fishery closure, moon-tide hookah closures 	Error! Bookmark not defined.
16-Sep-2019	Management plan, allocation	<p>Quota units allocated under the Management Plan:</p> <ul style="list-style-type: none"> 662,016 quota units to the Torres Strait Regional Authority (TSRA) comprising: 562,000 to hold for the benefit of the traditional inhabitant sector; and 100,016 for the TVH licences it holds 337,981 quota units to the remaining TVH principal licence holders 	xiii

Time period	Topic/Keywords	Description	Source
19-Nov-2019	Harvest strategy	PZJA adopts final Harvest Strategy for the TRL Fishery	xiii
1-Dec-2019	Management plan, management arrangements	TRL Fishery commences operation under a quota management system as per the Management Plan	Error! Bookmark not defined.

ⁱ History of Torres Strait Commercial Fisheries accessible on the Torres Strait Regional Authority (TSRA) website at www.tsra.gov.au

ⁱⁱ Records for Protected Zone Joint Authority (PZJA) meetings and out-of-session decisions for 1986-87, accessible by contacting the PZJA Executive Officer

ⁱⁱⁱ Accessible on the High Court of Australia website at www.hcourt.gov.au

^{iv} *A Guide to Management Arrangements for Torres Strait Fisheries* (June 2004), accessible on the PZJA website at www.pzja.gov.au

^v Records for PZJA meetings and out-of-session decisions for 2002-2011. PZJA decision records from 2009 onwards are accessible on the PZJA website at www.pzja.gov.au. PZJA decision records prior to 2009 are accessible by contacting the PZJA Executive Officer

^{vi} Records for PZJA meetings and out-of-session decisions for 2003-2006, accessible by contacting the PZJA Executive Officer

^{vii} Records for PZJA meetings and out-of-session decisions for 2005-2019. PZJA decision records from 2009 onwards are accessible on the PZJA website at www.pzja.gov.au. PZJA decision records prior to 2009 are accessible by contacting the PZJA Executive Officer

^{viii} PZJA Meeting 18 record, accessible by contacting the PZJA Executive Officer

^{ix} TRLRAG meeting records for 2006-2019. TRLRAG meeting records from 2013 onwards are accessible on the PZJA website at www.pzja.gov.au. TRLRAG meeting records prior to 2013 are accessible by contacting the TRLRAG Executive Officer

^x Personal communication with Darren Dennis

^{xi} Accessible on the Office of the Registrar for Indigenous Corporations website at www.oric.gov.au

^{xii} Accessible on the PZJA website at www.pzja.gov.au

^{xiii} Accessible on the PZJA website at <https://www.pzja.gov.au/the-fisheries/torres-strait-tropical-rock-lobster-fishery>

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video Conference)	MEETING 30 16 December 2020
PRELIMINARIES Out-of-session correspondence	Agenda Item 1.5 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the correspondence sent out-of-session since the last TRLRAG meetings held on 7 May 2020 (TRLRAG 28) and 6 October 2020 (TRLRAG 29).

BACKGROUND

2. The following correspondence was circulated out-of-session since the last TRLRAG meetings held on 7 May 2020 (TRLRAG 28) and 6 October 2020 (TRLRAG 29). Copies of this correspondence can be requested at any time from the TRLRAG Executive Officer.

Date	Item
17 April 2020	AFMA announced TRLRAG 28 (Video conference) scheduled for 7 May 2020, seeking availability of members and comments on a draft agenda.
7 May 2020	For information only – AFMA circulated a media release regarding an additional freight route for the seafood industry.
12 May 2020	For comment – AFMA circulated the draft TRLRAG 28 meeting record for member comment. Members could provide comments until 26 May 2020.
27 May 2020	For information only – AFMA circulated the final TRLRAG 28 meeting record.
5 June 2020	For information only – AFMA circulated an update on catch sharing arrangements with PNG and cross-endorsement in 2020.
8 June 2020	For information only – AFMA circulated the final TRL Stock Assessment Report from CSIRO.
30 July 2020	AFMA circulated a general Torres Strait TRL RAG update to members, which included updates on: <ul style="list-style-type: none"> • Cross-endorsement; • The 2020-21 start of season 200 tonne TAC; • A catch update; and • The next TRLRAG meeting (at the time, was planned for December)

4 September 2020	<p>AFMA circulated information on the 2020-21 TRL fishing season management arrangements and other fishery updates, including:</p> <ul style="list-style-type: none"> • A letter to licence holders regarding the 2020-21 start of season 200 tonne TAC determination; • Formal notice of the 2020-21 moontide hookah closures; • Notification that the draft amendment to the TRL Management Plan was out for public comment; • Notification that the PZJA agreed to remake a legislative instrument relating to the furnishing of logbooks; and • The release of the 2020-21 National Compliance and Enforcement Program
22 September 2020	AFMA contacted RAG members seeking availability for a video conference on Tuesday 6 October to discuss research priorities for the TRL Fishery.
23 September 2020	For comment – AFMA circulated a copy of the draft submission to the Department of Agriculture, Water and Environment for a further export approval for the Torres Strait Tropical Rock Lobster Fishery under Part 13A of the <i>Environmental Protection, Biodiversity and Conservation Act 1999</i> .
25 September 2020	AFMA circulated meeting papers for TRLRAG 29 to members and permanent observers.
21 October 2020	<p>For comment and information – AFMA circulated the draft TRLRAG 29 meeting record to members and observers for comment. Members were able to provide comment until 5 November 2020.</p> <p>This correspondence also included updates, including:</p> <ul style="list-style-type: none"> • The release of the ABARES Fishery Status Reports for 2020; and • That the Wildlife Trade Operation reassessment application for the TRL fishery was available for public comment until 18 November.
13 November 2020	AFMA circulated the final TRLRAG 29 meeting record to members. AFMA also announced the arrangements for TRLRAG 30, and circulated a draft TRLRAG 30 meeting agenda for comments.
26 November 2020	AFMA circulated a copy of a letter to TRL Fishery licence holders regarding the PZJA decision to amend the TRL Management Plan to extend the period for the PZJA to review the allocation of quota to the TIB sector.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
UPDATES FROM MEMBERS Industry & Scientific members	Agenda Item 2.1 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** updates provided by industry and scientific members.

BACKGROUND

2. Verbal reports are sought from industry and scientific members under this item, with particular emphasis on COVID-19 related impacts to the fishing season.
3. It is important that the RAG develops a common understanding of any strategic issues, including economic, fishing and research trends relevant to the management the TRL Fishery. This includes within adjacent jurisdictions. This ensures that where relevant, the RAG is able to have regard for these strategic issues and trends.
4. RAG members are asked to provide any updates on trends and opportunities in markets, processing and value adding. Industry is 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 in future.
5. At the last meeting of the RAG (TRLRAG 29), the RAG noted updates provided by industry members and observers regarding the performance of the TRL Fishery during the 2019-20 season, in particular that:
 - a. there had been very little fishing in the top western islands (Gudumalulgal nation) and issues with finding crew had made it difficult to go out fishing.
 - b. During recent community visits, TSRA staff were advised that the 2019-20 season had been good until the last month (September) when the number of crays began to decrease.
 - c. Before the impacts of COVID-19 were felt significantly and prices dropped, there was low fishing effort earlier on in the season, however the full-time fishers continued throughout the COVID-19 period.
 - d. An increased uptake in the Job Seeker payments and participation in the Community Development Program (CDP) has reduced participation in the fishery, with bad weather and poor visibility also contributing.
 - e. An increase in new purchases of boats, and engines may be a by-product of either those continuing to receive a good income from fishing, or the COVID-19 income support provided by the Government i.e. access to superannuation and Job Seeker payments.
6. The RAG also noted an update from Scientific member Dr Éva Plagányi that CSIRO has been given preliminary approval from the Fisheries Research Development Corporation (FRDC) to support the participation of PZJA Traditional Inhabitant members to attend fisheries-related conferences. CSIRO is also looking at other co-investment options to support more opportunities for Traditional Inhabitant engagement in the longer term.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video Conference)	MEETING 30 16 December 2020
UPDATES FROM MEMBERS Government agencies	Agenda Item 2.2 For NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the updates provided by the Australian Fisheries Management Authority (AFMA), the Torres Strait Regional Authority (TSRA); and Fisheries Queensland (QDAF).

AFMA UPDATE

Fisheries bilateral meeting between AFMA and Papua New Guinea National Fisheries Authority (PNG NFA)

2. On Friday 27 November 2020, AFMA CEO Wez Norris met virtually with the Acting Managing Director of PNG NFA, Mr Noan Pakop and other NFA staff to discuss fisheries bilateral issues. This included:
 - a. general updates on fisheries;
 - b. catch sharing arrangements for TRL, pearl shell, prawn and Spanish mackerel;
 - c. updates on catch data from the PNG TRL fishery;
 - d. whether PNG catches deemed as outside the Torres Strait Protected Zone (TSPZ) are within the area AFMA understands to be the PNG 'outside but near' area;
 - e. opportunities for research collaboration; and
 - f. fisheries compliance updates.
3. The key outcomes of the meeting are as follows:
 - a. Agreement on the catch sharing timeline for TRL in 2020-21 (**Attachment 2.2b**) with a likelihood that PNG industry will be interested in taking up cross-endorsement opportunities depending on border circumstances in 2021;
 - b. Agreement that neither AFMA or NFA would pursue catch sharing arrangements in Spanish mackerel, prawn or pearl shell fisheries in 2021;
 - c. NFA are currently preparing a data summary of fishing effort in the TRL fishery to sit alongside the catch data already provided to AFMA;
 - d. The management of catches in 'outside but near' areas remains an ongoing matter for discussion to ensure consistency across jurisdictions;
 - e. NFA expressed a keen interest in being closely involved in Torres Strait research, particularly for future beche-de-mer and lobster surveys; and
 - f. NFA expressed an interest in discussions regarding joint compliance patrols with AFMA.
4. AFMA expects to meet with PNG NFA again in late January 2021 to seek agreement on the global TRL total allowable catch (TAC) following TRLRAG and TRLWG advice on a recommended biological catch and TAC for the 2020-21 season.

Compliance outcomes for the 2019-20 season

5. From 1 July 2018, AFMA has been delivering domestic compliance functions in the Torres Strait in accordance with the National Compliance and Enforcement Program. There are three compliance officers based in the Thursday Island office delivering both domestic and foreign compliance outcomes.
6. In March 2020 all AFMA field duties were suspended due to COVID-19, however AFMA continued to monitor fishing operations via electronic means including vessel monitoring systems (VMS), remote monitoring, surveillance, intelligence and other sources of data.
7. AFMA has recommenced operational field activities and will continue to conduct these in accordance with best practise, mandatory social distancing and hygiene and in accordance with guidelines developed for field activities.
8. Despite some operational challenges in 2020, AFMA fisheries officers have delivered the following outcomes between July 2019 – November 2020:
 - a. 17 ports/freight hubs visits;
 - b. 66 fish receiver Inspections;
 - c. 70 vessel inspections;
 - d. Regular monitoring of seafood movements throughout the Torres Strait that have resulted in several investigations;
 - e. As a result of these and other investigations three prosecutions relating to the beche-de-mer fishery have been concluded. Four other matters are before the courts at present with three of those matters relating to the TRL fishery. Four further cases, three involving the TRL fishery, are currently under consideration by the Commonwealth prosecutors and will likely be dealt with next year.
9. AFMA compliance conducted several fish receiver inspections on 1 October 2020, following the closure of the 2019-20 TRL season. There were no detections of non-compliance, demonstrating a high level of commitment by the Torres Strait fisher and fish receiver licence holders.
10. To better target priority risks in Torres Strait fisheries, AFMA have established a specialised multi-disciplinary Compliance Risk Management Team (CRMT). Priority risks specific to the Torres Strait include unlicensed fishing, unlicensed fish receiving and non-compliance with catch/landing reporting to AFMA. Failing to report catch or landings is considered quota evasion and results in the undermining of the ongoing sustainable management of the Torres Strait Fisheries.
11. Further details are contained in AFMA's National Compliance and Enforcement Program document accessible on the AFMA website at: <https://www.afma.gov.au/domestic-compliance>. This document explains AFMA's compliance program priorities and objectives for the 2020-21 financial year.

ABARES fishery status report

12. Each year, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) compiles fishery status reports which provide an independent assessment of the biological status of fish stock and the economic status of fisheries managed, or jointly managed by the Australian Government (Commonwealth fisheries).
13. The ABARES Fishery Status Report 2019 (covering the performance of fisheries in 2019) was released in October 2020. The reports assess all key commercial species from Commonwealth managed fisheries and examines the broader impact of fisheries on the environment, including on non-target species.
14. In summary, the TRL Fishery has been assessed for the 2019 period as follows:

Status	2018		2019		Comments
Biological status	Fishing mortality	Biomass	Fishing mortality	Biomass	
Tropical rock lobster (<i>Panulirus ornatus</i>)	Not subject to overfishing	Not overfished	Not subject to overfishing	Not overfished	Spawning stock biomass at the start of 2019 was above the biomass target reference point. Fishing mortality in the 2018–19 fishing season was less than the recommended biological catch.
Economic status	Net economic returns in the fishery are uncertain, although positive economic improvements are likely to have occurred in the 2018–19 fishing season as a result of significant increases in total allowable catch and gross value of product.				

15. ABARES fishery status reports can be accessed on the ABARES website at:

<https://agriculture.gov.au/abares/research-topics/fisheries/fishery-status-2020>.

Export approval under the Environment Protection Biodiversity and Conservation Act 1999

16. On 13 October 2020, AFMA submitted an application to the Department of Agriculture, Water and the Environment (DAWE) seeking further export accreditation of the TRL Fishery under the EPBC Act. The application was prepared to address the Australian Government *Guidelines for the ecologically sustainable management of fisheries - 2nd edition* and to provide updates on the implementation of any conditions or recommendations made in the previous Australian Government assessment. The application is being used to assess the operation of the fishery for the purposes of Part 13 and Part 13A of the EPBC Act.
17. TRLRAG and WG members were provided an opportunity to comment on the draft submission between 23 September and 6 October. The draft submission were then made available for public comment from the DAWE website until 18 November 2020. No public comments were made.
18. AFMA is now working with DAWE to negotiate any conditions or recommendations that may be placed on the fishery to retain export approval for a further period. The current export approval expires on 18 December 2020.

Tropical Rock Lobster Management Plan Amendment

19. At its meeting on 23 November the PZJA agreed, having considered outcomes of public consultation, to amend the *Torres Strait Fishers (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan 2018* (the TRL Plan). Licence holders were notified of this decision by letter, email and SMS on 26 November 2020.
20. Importantly, the amendment does not relate to, or change, any of the fishing rules for the fishery. The purpose of the plan amendment is to provide an extended timeframe for reviewing the allocation of quota units to the Traditional Inhabitant sector under subsection 17 of the TRL Plan by the PZJA. The plan amendment extends the period for the PZJA to commence the review to within four years.

21. On 2 September 2020, AFMA, on behalf of the PZJA wrote to all licence holders inviting comment on the proposed draft amendment. Public consultation ended on 15 October 2020.

Management arrangements for the 2020-21 fishing season

22. A letter was sent to all Torres Strait Tropical Rock Lobster Fishery (TRL Fishery) licence holders on 2 September 2020 (**Attachment 2.2a**). The letter detailed key management arrangements that will apply for the 2020-21 fishing season, including moontide hookah closures and the start of season 200 tonne TAC, as well as details of the draft amendment to the TRL Management Plan.
23. Enclosed to the letter was a copy of the new Tropical Rock Lobster Fishery Management Arrangements Booklet 2020-21 which was also made publically available on the [PZJA website](#).

Torres Strait Regional Authority (TSRA) Update

Zenadth Kes:

- Following the 2020 Fisheries Summit the TSRA is progressing with the creation of a new fishing entity called Zenadth Kes Fishing
- The company is due to be created on or about 1 December 2020.
- Membership of 25 comprised of 5 reps from each of the cluster nations.
- Led by a board of 5 to 7 directors.

24. *Wapil (Many Fish):*

- Funding in place to deliver fisheries related infrastructure and traineeships for 14 outer island communities
- Erub has begun and they have commenced trading in fish products (TRL, Coral Trout and Mackerel)
- The entity is Darnley Deep Seafoods.
- Saibai, Mabuyag, Masig and Mer are all in planning phase

Fisheries Queensland (QDAF) Update

Legislative amendments

25. A further round of fisheries regulation changes was announced on 30 September 2020 (<https://www.daf.qld.gov.au/business-priorities/fisheries/sustainable/fisheries-reforms>).
26. In 2019 after extensive consultation, the Queensland Government released the Discussion Paper on proposed changes to the Fisheries Regulation 2008, which outlined 102 proposed amendments across all fishing sectors.
27. A number of these proposals have already been implemented through changes to fisheries legislation on 1 September 2019.
28. Before the remainder of the proposed changes in the Discussion Paper could be fully considered for implementation, the novel Coronavirus (COVID-19) impacted on the viability of the fishing industry. Accordingly, implementation of the remaining proposals outlined in the Discussion Paper has given priority to changes that:
- a) support the commercial fishing industry's economic recovery from COVID-19 by reducing red tape and streamlining requirements, including:

- clarify the northern rocklobster and sea cucumber regulated waters by amending the description of the regulated waters to specify 'tidal waters'
 - remove permitted distance requirements for assistant fishers (tender) to be under the direction of a commercial fisher now that vessel tracking is in place on all commercial fishing vessels
 - Implement harvest strategies and meet the conditions of WTO approvals
 - Introduce a new streamlined reporting requirements (including logbooks, weight notices, and catch disposal records) that will apply consistently to all commercial species with a catch limit (i.e. ITQ or prescribed commercial catch).
- b) are necessary to implement harvest strategies and meet the conditions of the Commonwealth Wildlife Trade Operation (WTO) approvals under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*, including:
- Changes to net, crab, and trawl fisheries.
- c) clarify existing fishing rules to support ongoing fishing efficiency and compliance, including:
- creating a single commercial fishing licensing framework in Queensland
 - standardising and streamlining quota administration (existing species) for all commercial fisheries, including tropical rock lobster
 - enabling online licencing transactions
 - aligning vessel measurement requirements with marine safety legislation to remove ambiguity and streamline vessel requirements for businesses needing to comply with multiple regulatory frameworks
 - clarify the definition of aquaculture by excluding particular activities as being aquaculture activities which consequently do not require an aquaculture licence;
 - allowing court discretion to address third time offences.

Draft harvest strategies

29. Drafts for consultation were released at the same time, including:

- Draft Harvest strategy policy ([draft harvest strategy policy](#))
- Draft Lobster Fishery Harvest Strategy ([draft tropical rock lobster harvest strategy](#))

30. You are encouraged to have your say on these drafts. Consultation is temporarily suspended while the Queensland Government is in caretaker mode but will resume after the election is finalised.

Draft Developmental fishing Policy

31. A draft Developmental Fishing Policy 2020 was recently released for consultation (<https://daf.engagementhub.com.au/projects/download/6057/ProjectDocument>). Consultation is now closed.

32. Developmental fishing includes fishing for:

- a species that has been previously unexploited or significantly underutilised
- an existing commercial species using apparatus currently not permitted by legislation
- an existing commercial species or use of prescribed apparatus (or both) in locations where such activities have not previously occurred

33. The developmental fishing permit assessment process determines whether a potential new fishery is commercially viable, socially acceptable and ecologically sustainable.
34. The latest draft builds on the existing Developmental Fishing Policy 2015 (<https://www.business.qld.gov.au/industries/farms-fishing-forestry/fisheries/fisheries-profiles/developmental-fisheries/developmental-fishing-qld>).

Wildlife Trade Operation (WTO) for TRL Fishery

35. For the Commercial Crayfish and Rocklobster Fishery (formerly East Coast Tropical Rock Lobster Fishery) assessment, the Fishery export approval expires 28 August 2025.



02 September 2020

File reference: DOC20/14937

Dear Torres Strait Tropical Rock Lobster Fishery licence holder

Management Arrangements for the 2020-21 Fishing Season

The 2020-21 fishing season for the Torres Strait Tropical Rock Lobster Fishery (TRL Fishery) will commence on 1 December 2020. This letter details some key management arrangements that will apply this season.

Total Allowable Catch

On 27 August 2020, Senator the Hon. Jonathon Duniam determined a total allowable catch (TAC) of 200,000 kilograms of tropical rock lobster (TRL) in the Australian waters of the TRL Fishery for the 2020-21 fishing season. This TAC was agreed by the Protected Zone Joint Authority (PZJA) at its meeting on 27 August 2020 and will apply for the fishing season commencing 1 December 2020. It is expected that the TAC will be increased once the outcomes of the scientific assessment processes and the TAC sharing arrangements under the Treaty between Australia and Papua New Guinea (PNG) have been taken into account. Any increase in the TAC is expected to be determined by the end of February 2021.

Under this TAC, the value of each quota unit and available catch for each TRL Fishery sector is outlined in the table below. All weights are provided in unprocessed weight in kilograms.

TRL Fishery sector	TAC (kilograms)	Number of quota units	Value of each quota unit (kilograms)	Available catch per sector (kilograms)
Traditional Inhabitant Boat (TIB) licence holders	200,000	662,016*	0.200	132,403.597
Transferable Vessel Holder (TVH) licence holders		337,981		67,596.403

* Held by the Torres Strait Regional Authority (TSRA).

A further explanation of how TACs are determined for the TRL Fishery, how catch is shared between Australia and PNG, and how each sector's catches will be managed for the 2020-21 fishing season, is provided in the TRL Management Arrangements Booklet 2020-21.

Canberra
 PO Box 7051
 Canberra 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

Lakes Entrance
 PO Box 408
 Lakes Entrance VIC 3909
 P:0447 019 916

Moontide Hookah Closures

At its meeting on 26 November 2018, the PZJA reaffirmed existing management controls currently applied to the TRL Fishery, to be implemented under the *Torres Strait Fisheries (Tropical Rock Lobster) Management Instrument 2018* (the Instrument) and licence conditions. This includes periodic closures to the use of hookah gear for three days either side of the full or new moon each month based on the largest difference between high and low tides, known as 'moontide hookah closures'.

For the purpose of subsection 13(2) of the Instrument, I provide notice that the use, possession or control, on a boat, of hookah gear to take, process or carry TRL will not be permitted during the 2020-21 fishing season during the moontide hookah closure periods shown in the calendar provided in **Enclosure A** to this letter. The first scheduled moontide hookah closure period starts on 9 February 2021.

These moontide hookah closures are in addition to the hookah closure period from 1 December and 31 January each fishing season. Free-diving, lamp fishing and traditional fishing are permitted during all hookah closure periods.

Draft amendment to the TRL Management Plan open for public comment

At its meeting on 27 August 2020, the PZJA agreed to release the draft *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan Amendment 2020* (the Plan Amendment) for public comment (**Enclosure B**). The purpose of the Plan Amendment is provide an extended timeframe for reviewing the allocation of quota units to the Traditional Inhabitant sector under subsection 17 of the TRL Plan by the PZJA. The Plan Amendment extends the period for the PZJA to commence the review to within 4 years. Further information on the proposed amendment is attached.

TRL Fishery licence holders are encouraged to provide comment on the draft amendment enclosed to this letter. Comments may be submitted by email to fisheriesTI@afma.gov.au; by post to PO Box 376, Thursday Island QLD 4875 or by calling 07 4069 1990. Comments close on 15 October 2020.

Torres Strait Fisheries (Furnishing of Logbooks) Instrument 2020

At its meeting on 27 August 2020, the PZJA agreed to remake a legislative instrument relating to the furnishing of logbooks. The purpose of the Logbook Instrument, made under section 14 of the *Torres Strait Fisheries Act 1984* (the Act), is to require the master of a licenced boat, who uses that boat in the course of commercial fishing (other than community fishing) to complete a Daily Fishing Logbook. Relevantly, this applies to the Transferable Vessel Holder (TVH) sector of the Tropical Rock Lobster Fishery.

TVH operators should understand that the requirement to complete logbooks has not changed. Prior to remaking this instrument, the requirement to complete a Daily Fishing Logbook was enforced through licence conditions.

As always, licence holders should familiarise themselves with all management arrangements that apply in the TRL Fishery prior to commencing fishing. Further information can be found on the PZJA website at www.pzja.gov.au or by contacting AFMA.

Should you have any questions concerning the matters covered in this letter, please contact the AFMA Thursday Island office on 07 4069 1990 or FisheriesTI@afma.gov.au. If you would also like to receive future management updates by email or SMS please contact the AFMA Thursday Island office to update your contact details.

Yours sincerely



Wez Norris

Chief Executive Officer

Enclosures

- A TRL Fishery moontide hookah closure calendar for the 2020-21 fishing season
- B Exposure draft *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan Amendment 2020*

Background information and Exposure Draft *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan Amendment 2020*

Under subsection 17 of the TRL Plan, the PZJA must undertake a review of the allocation of quota units to the Traditional Inhabitant sector within two years of the TRL Plan commencement (which will be 30 November 2020).

Relevantly, at its meeting on 19 November 2019 the PZJA:

- a. agreed in principle that the review of allocation be undertaken by an Independent Allocation Advisory Panel (IAAP), in accordance with the PZJA's Fisheries Management Paper No. 2. Guidelines for the formation of allocation advisory panels for the allocation of fishing concessions in Torres Strait Protected Zone Joint Authority Fisheries where fisheries management arrangements change significantly (FMP 2); and
- b. directed the PZJA Standing Committee to provide draft Terms of Reference (ToR) for an IAAP, including its proposed membership and process, to the PZJA by April 2020 for the PZJA to confirm its in principle decision.

The Australian and State Government response to COVID-19 risks redirected the focus of state and Commonwealth public services on preparedness and assisting impacted industries and stakeholders. It also impacted the way the government has been able to conduct business with stakeholders. For the same reasons, the Torres Strait Regional Authority *Fisheries Regional Ownership Framework* (FROF) project has also been delayed. The PZJA agreed in November 2019 to commence the allocation review following the completion of the FROF project, which was anticipated at that time to be by 30 June 2020. For these reasons an IAAP process was not able to be properly resourced or effectively conducted before the end of the review period specified in the TRL plan (30 November 2020). In particular, central to an effective IAAP process will be consultation based heavily on face-to-face meetings, which in the current environment cannot be undertaken effectively.

Having regard to the above, the review period strikes a reasonable balance between an extended timeframe for reviewing the allocation and providing reassurance to stakeholders that the PZJA's original commitment to develop quota allocation approaches for the Traditional Inhabitant sector remains.



Torres Strait Tropical Rock Lobster Fishery Moontide Hookah Closures for the 2020-21 Fishing Season*

Dec-20	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	●	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jan-21	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	1	2	3	4	5	6	7	8	9	10	11	12	●	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Feb-21	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun			
	1	2	3	4	5	6	7	8	9	10	11	●	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			
Mar-21	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed
	1	2	3	4	5	6	7	8	9	10	11	12	●	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Apr-21	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	
	1	2	3	4	5	6	7	8	9	10	11	●	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
May-21	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon
	1	2	3	4	5	6	7	8	9	10	11	●	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Jun-21	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	
	1	2	3	4	5	6	7	8	9	●	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Jul-21	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6	7	8	9	●	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Aug-21	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue
	1	2	3	4	5	6	7	●	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Sep-21	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	
	1	2	3	4	5	6	●	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Oct-21	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun
	1	2	3	4	5	●	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
Nov-21	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Mon	Tue	
	1	2	3	4	●	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	

* The 2020-21 fishing season runs from 1 December 2020 through to 30 September 2021.

current as of 2 September 2020

KEY



New Moon



Fishery closure (commercial fishing not permitted)



Full Moon



Hookah closure (use of hookah gear not permitted)



Moon-tide hookah closure (use of hookah gear not permitted)



EXPOSURE DRAFT

Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan Amendment 2020

The Protected Zone Joint Authority make the following determination under paragraph 35(1)(a) of the *Torres Strait Fisheries Act 1984*, in accordance with a decision of its members under section 40 of the *Torres Strait Fisheries Act 1984*.

Dated

Senator the Hon Jonathon Duniam [**DRAFT ONLY - NOT FOR SIGNATURE**]
Member of the Protected Zone Joint Authority
Assistant Minister for Forestry and Fisheries
Parliamentary Secretary to the Minister for Forestry and Fisheries
for and on behalf of the Protected Zone Joint Authority

EXPOSURE DRAFT

Contents

1 Name.....	1
2 Commencement	1
3 Authority.....	1
4 Schedules	1
Schedule 1—Amendments	2

EXPOSURE DRAFT

1 Name

This instrument is the *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan Amendment 2020*.

2 Commencement

- (1) Each provision of this instrument specified in column 1 of the table commences, or is taken to have commenced, in accordance with column 2 of the table. Any other statement in column 2 has effect according to its terms.

Commencement information		
Column 1	Column 2	Column 3
Provisions	Commencement	Date/Details
1. <i>The whole of this instrument.</i>	<i>On the day after this instrument is registered.</i>	

Note: This table relates only to the provisions of this instrument as originally made. It will not be amended to deal with any later amendments of this instrument.

- (2) Any information in column 3 of the table is not part of this instrument. Information may be inserted in this column, or information in it may be edited, in any published version of this instrument.

3 Authority

This instrument is made under section 15A of the *Torres Strait Fisheries Act 1984* and subsection 33(3) of the *Acts Interpretation Act 1901*.

4 Schedules

Each instrument that is specified in a Schedule to this instrument is amended or repealed as set out in the applicable items in the Schedule concerned, and any other item in a Schedule to this instrument has effect according to its terms.

Schedule 1—Amendments

Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan 2018

1 Subsection 17(1)

Omit “within 2 years of the day this instrument commences, the Authority must review the allocation of quota units to the traditional inhabitant sector under paragraph 15(1)(a)”,

Substitute “within 4 years of the day this instrument commences, the Authority must commence a review of the allocation of quota units to the traditional inhabitant sector under paragraph 15(1)(a)”.

Proposed timeline and process for agreement on catch sharing arrangements for the Protected Zone Tropical Rock Lobster Fishery for the 2020-21 season.

Steps	Description	Deadline
PNG and Australian catch and effort data compiled	Australian and PNG catch and effort data are compiled ¹ .	By 31 October 2020
Agree timeline and process	AFMA and PNG to meet to agree on process for agreement on catch sharing arrangements for the Torres Strait Tropical Rock Lobster Fishery (TRL Fishery) for the coming fishing season.	November 2020
Agree global TAC, catch shares, cross endorsement allocations and any preferential entitlements.	<p>AFMA CEO and PNG NFA Director General to meet to agree, as per the terms of the Torres Strait Treaty, on:</p> <ul style="list-style-type: none"> - a final global total allowable catch (TAC)²; - catch shares as per article 22(1) (e.g. 15%:85% split); - cross-endorsement allocations as per articles 23(4) and 25. - preferential entitlement to any unfished cross-endorsement allocations as per article 25. <p>An exchange of letters required to formalise the agreement.</p>	By 31 January 2021
If relevant, submit any formal requests for cross-endorsement	<p>PNG and/or Australia to provide formal request to the other Party seeking cross-endorsement pursuant to article 26 of the Torres Strait Treaty. Request to include:</p> <ul style="list-style-type: none"> - a copy of the licence/s for which a Treaty endorsement is sought³; - a copy of any licence conditions in force for the licence/s; - boat particulars; 	By 31 March 2021

¹ These data are provided to CSIRO to update catch per unit effort indices used to calculate a recommended biological catch for the coming fishing season.

² CSIRO will use the empirical Harvest Control Rule detailed in the Torres Strait Tropical Rock Lobster Fishery Harvest Strategy to calculate a recommended biological catch. These calculations will be considered by the Protected Zone Joint Authority's Tropical Rock Lobster Resource Assessment Group and Working Group who will recommend a final global total allowable catch.

³ For PNG licence/s, each licence needs to be current at the time of the formal request, valid for the period for which a Treaty endorsement is sought and have the same details as that written in the formal request, and valid in PNG for the same fishery as it is proposed to operate in Australian waters.

	<p>- details for payment of applicable fees.</p> <p>It will take approximately 6 weeks for Australia to complete the domestic processes to issue a Treaty endorsement/s⁴.</p>	
If relevant, agree on preferential entitlements.	<p>AFMA CEO and PNG NFA Director General to meet to agree on preferential entitlement to any unfished cross-endorsement allocations as per article 25 of the terms of the Torres Strait Treaty.</p> <p>An exchange of letters required to formalise the agreement.</p>	10 April 2021

⁴ Australia's domestic process include requirements to undertake native title notification pursuant to sub-sections 24HA(2) and (7) of the Commonwealth *Native Title Act 1993*, which takes a minimum of 1 month, and to seek approvals to issue a Treaty endorsement/s.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video Conference)	MEETING 30 16 December 2020
UPDATES FROM MEMBERS PNG National Fisheries Authority	Agenda Item 2.3 For NOTING

RECOMMENDATIONS

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

BACKGROUND

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

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) (Video Conference)	MEETING 30 16 December 2020
UPDATES FROM MEMBERS Native Title	Agenda Item 2.4 For NOTING

RECOMMENDATIONS

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

BACKGROUND

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

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
CATCH AND EFFORT ANALYSES FOR THE 2019-20 FISHING SEASON	Agenda Item 3 For discussion and advice

RECOMMENDATIONS

1. That the RAG:

- a. **NOTE** the reported landed catch for the Australian Torres Strait Tropical Rock Lobster Fishery (TRL Fishery) (**Attachment 3a**), and the preliminary data summary of TIB sector participation (**Attachment 3b**);
- b. **NOTE** the reported landed catch for the PNG TRL Fishery for the 2019-20 fishing season provided at **Attachments 3d**;
- c. **DISCUSS** and **PROVIDE ADVICE** on the catch and catch per unit effort (CPUE) data analyses for the Australian TRL Fishery for the 2019-20 fishing season undertaken by CSIRO (**Attachments 3e-3g pending**).

KEY ISSUES

Australian TRL Fishery catch

2. The Australian TRL Fishery fishing season runs from 1 December through to 30 September the following year. There is a prohibition on the use of hookah gear from 1 December through to 31 January the following year and periodically each month throughout the remainder of the season.
3. The reported landed catch for the Australian TRL Fishery for the 2019-20 fishing season is 358,186.25 kilograms. All reported catches are from inside the Torres Strait Protected Zone (TSPZ) and Australia's declared outside but near area.
4. This equates to 82.38 per cent of Australia's 434,785 kilogram total allowable catch (TAC) for the 2019-20 fishing season. This catch data is sourced from the Torres Strait Fisheries Catch Disposal Record (TDB02) and covers the Traditional Inhabitant Boat (TIB) and Transferable Vessel Holder (TVH) sectors.
5. A summary of the reported landed catch for the Australian TRL Fishery is provided at **Attachment 3a**.
6. In response to discussions at TRLRAG 27 relating to social indicators for the fishery, AFMA have compiled some basic statistics on participation in the TIB sector (**Attachment 3b**). The RAG is invited to provide comments on the utility of these data summaries in the context of understanding participation as a social indicator.
7. An infographic showing the final catch sharing agreement between Australia and PNG is shown at **Attachment 3c**.

PNG TRL Fishery catch

8. The PNG TRL Fishery fishing season runs from 1 January through to 31 December each year. There is a prohibition on the use of hookah gear in the waters of Western Province and Torres Strait from 1 December through to 31 March the following year.

9. PNG National Fisheries Authority (NFA) has reported landed catches for the PNG TRL Fishery for 1 January through to 31 August 2020 (**Attachment 3d**). NFA is expected to provide updated catch figures.
10. The reported PNG landed catch as 31 August 2020 is 43,209.47 kilograms inside the TSPZ. A further 47,237.30 kilograms was reported from outside the TSPZ. AFMA is seeking confirmation from PNG NFA on the location of these catches deemed outside of the TSPZ, including whether they are within the area AFMA understands to be PNG declared an 'outside but near' area under the Torres Strait Treaty. Under the Treaty (Article 1(1)(h)), areas declared by either Australia or PNG as 'outside but near' are considered to be part of a Protected Zone commercial fishery. AFMA and NFA most recently met on Friday 27 November to discuss a range of fisheries matters (Agenda Item 2.2). Of relevance, NFA advised they are currently preparing a data summary of fishing effort in the TRL fishery to sit alongside the catch data already provided to AFMA; and the management of catches in 'outside but near' areas remains an ongoing matter for discussion to ensure consistency across jurisdictions.
11. The catch inside the TSPZ equates to 49.48 per cent of PNG's 87,315 kilogram TAC for 2020, with 4 months remaining in the PNG season. The total reported catch inside and outside the TSPZ equates to 103.58 per cent of PNG's TAC.

Total reported commercial catch for the TRL stock

12. The total reported commercial catch for the TRL stock is:

Area	Total (tonnes)	TAC (tonnes)
Australian TRL Fishery	358.18	434.78
PNG TRL Fishery - catches inside the TSPZ as at 31 August 2019	43.21	87.31
PNG TRL Fishery - catches outside the TSPZ as at 31 August 2019	47.23	
Total	448.63	582

Catch and catch per unit effort (CPUE) data analyses

13. The annual data summary to be presented by CSIRO under this agenda item and Agenda Item 4 reviews the nominal and standardised catch per unit effort (CPUE) from the TIB and TVH sectors, as well as total catch from all sectors, the size-frequency information provided from a sub-sample of commercially caught TRL and the fishery-independent survey indices of 0+ and 1+ age lobsters. The data summary is used as an indicator to identify if catches correspond to the RBC, and to monitor CPUE (section 2.9 of the final Harvest Strategy).
14. The RAG is asked to consider the following catch and CPUE analyses CSIRO has prepared for the 2019-20 fishing season and provide advice as appropriate:
 - a. *Catch and effort summary paper pending (Attachment 3e);*
 - b. *TIB CPUE analysis paper pending (Attachment 3f);*
 - c. *TVH CPUE analysis paper pending (Attachment 3g).*
15. These analyses will be presented by CSIRO at the meeting. The total catch data and standardised CPUE indices for the TVH and TIB sectors are key inputs to the empirical harvest control rule (eHCR) and integrated stock assessment.
16. Further analyses of the November 2020 pre-season survey data, including size-frequency data, will be presented under **Agenda Item 4**.

Table 1. Reported landed catch (kilograms whole weight) of Tropical Rock Lobster (TRL) for the Australian Torres Strait TRL Fishery by month and sector for the 2019-20 fishing season.
Source: Torres Strait Fisheries Catch Disposal Record (TDB02) as at 24 November.

Month	Traditional Inhabitant Boat (TIB) sector	Transferable Vessel Holder (TVH) sector	Total (kg)
Dec-19	25,862.53	11,244.24 #	72,358.10
Jan-20	13,608.49		
Feb-20	21,642.84		
Mar-20	30,052.04	16,382.04	46,434.09
Apr-20	30,959.25	28,075.22	59,034.47
May-20	24,214.99	23,134.84	47,349.84
Jun-20	25,815.86	15,857.93	41,673.79
Jul-20	18,072.54	26,860.46	44,933.00
Aug-20	17,035.81	14,334.44	31,370.26
Sep-20	8,421.12	6,611.60	15,032.72
Total reported catch (kg)	215,685.48	142,500.77	358,186.25
Reported catch as a per cent of the TAC*	74.93%	96.97%	82.38%

In accordance with AFMA's Information Disclosure policy (*Fisheries Management Paper 12*), catches by month have been aggregated for December 2019 through to February 2020, as less than 5 boats operated in the Transferable Vessel Holder (TVH) sector in each December 2019 and January 2020.

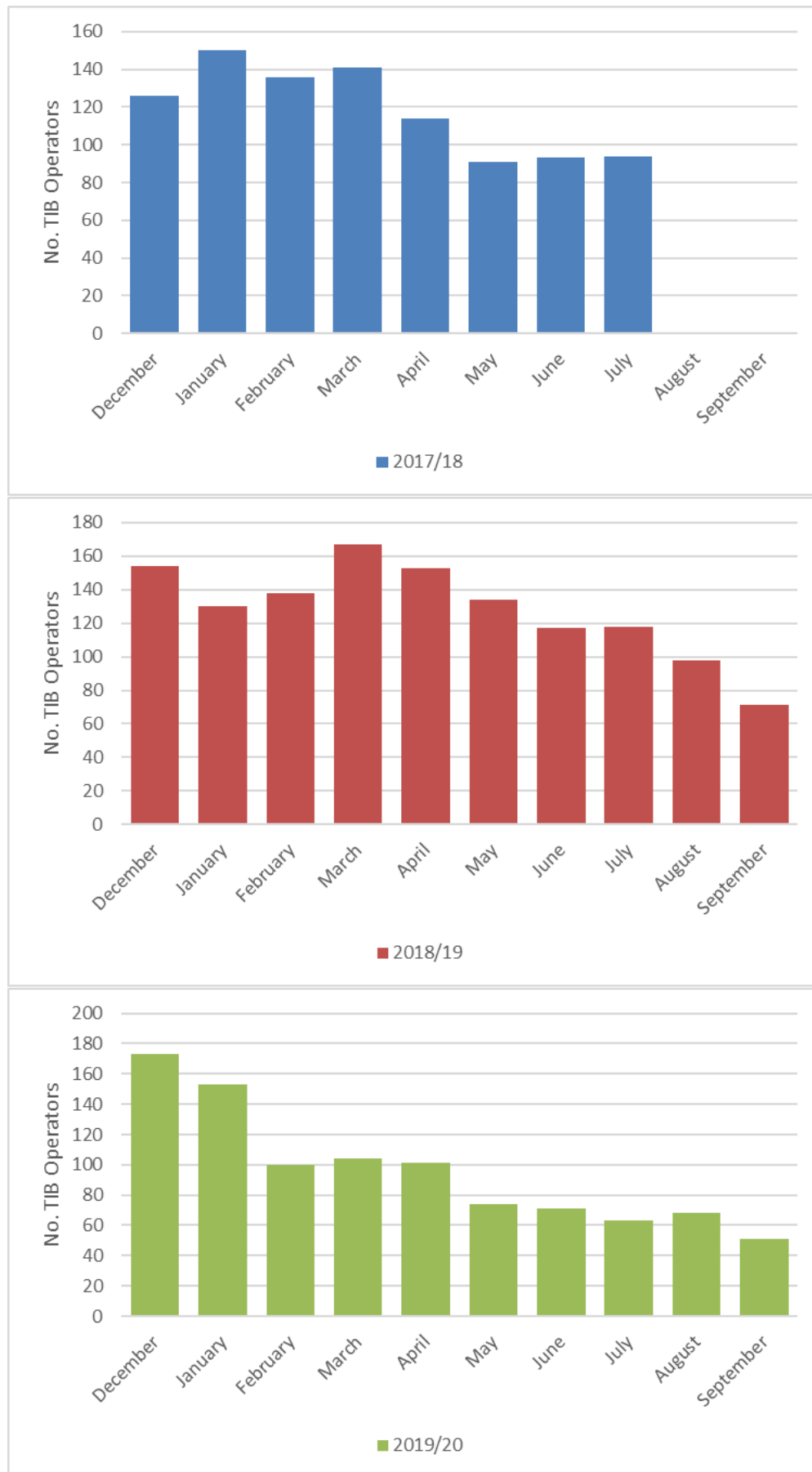


Figure 1. Total number of TIB operators per month over the past 3 fishing seasons. TIB operators is based on individual operator names, not boat symbols. This is because many records do not contain information on Boat Symbol, and a single operator may use multiple boats within a season.

Source: TDB02 records

Table 2. Total number of TIB operators by month and season. TIB operators is based on individual operator names, not boat symbols. This is because many records do not contain information on Boat Symbol, and a single operator may use multiple boats within a season.

Source: TDB02 records

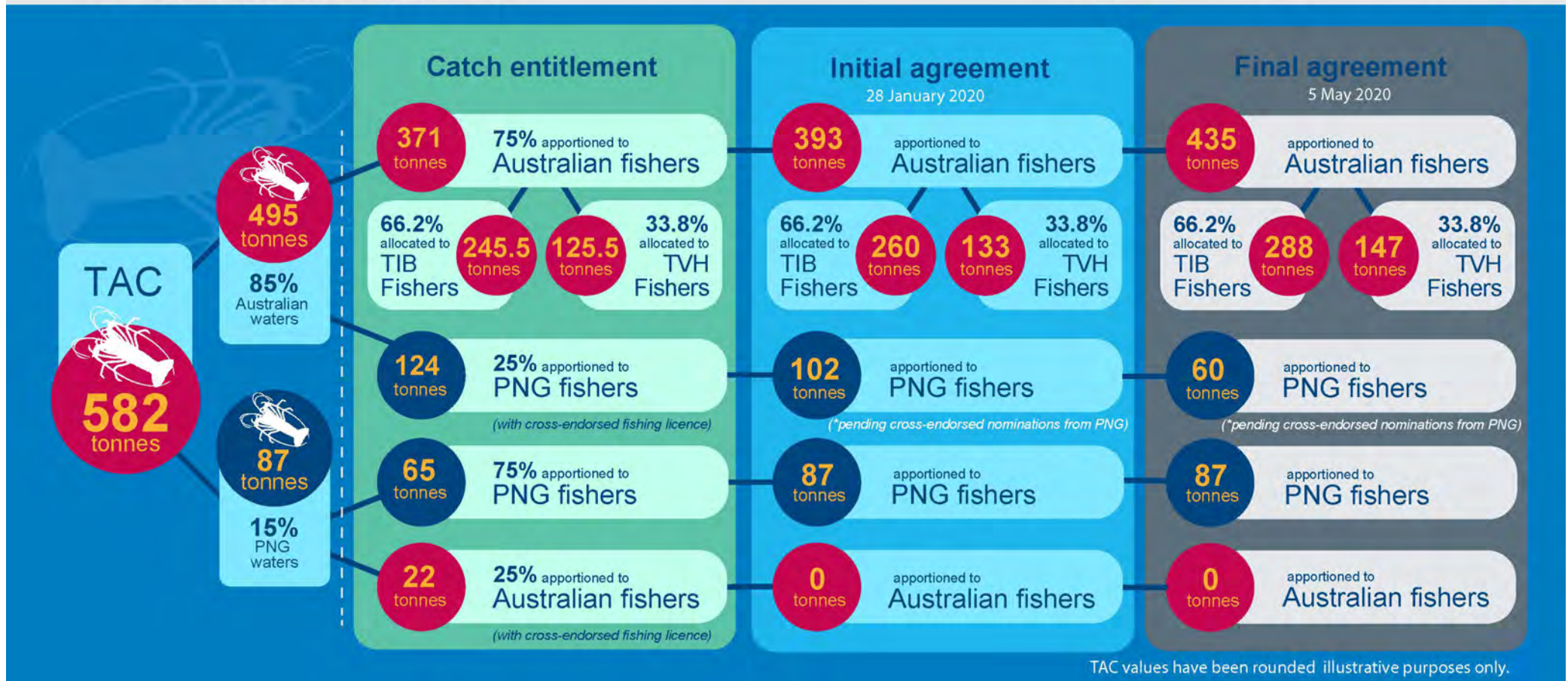
Month	2017/18	2018/19	2019/20
December	126	154	173
January	150	130	153
February	136	138	100
March	141	167	104
April	114	153	101
May	91	134	74
June	93	117	71
July	94	118	63
August	0	98	68
September	0	71	51
Unique Boat Symbols	217	245	234
Unique Operators	210	227	228

TORRES STRAIT TRL CATCH SHARING AGREEMENT 2019-20



Australian Government

Australian Fisheries Management Authority



PNG Data Summaries – received from PNG NFA on 7 September 2020

PNG Catch Total: Jan - Aug 2020				
Month (2020)	Tail weight (kg)	Tail wt converted to whole wt (C. factor 2.677)	Whole weight (kg)	Total Catch (kg)
JANUARY	5974.35	15,993.33	484.12	16,477.45
FEBRUARY	2627.25	7,033.15		7,033.15
MARCH	3249.49	8,698.88		8,698.88
APRIL	7436.96	19,908.74		19,908.74
MAY	8299.48	22,217.71		22,217.71
JUNE	2802.49	7,502.27		7,502.27
JULY	1727.73	4,625.13		4,625.13
AUGUST	1488.02	3,983.43		3,983.43
TOTAL	33,605.77	89,962.65	484.12	90,446.77

PNG Jurisdiction of the TSPZ: Jan - Aug 2020				
Month (2020)	Tail weight (kg)	Tail wt converted to whole wt (C. factor 2.677)	Whole weight (kg)	Total Catch (kg)
JANUARY	1892.57	5,066.41	484.12	5,550.53
FEBRUARY	1521.93	4,074.21		4,074.21
MARCH	1502.21	4,021.42		4,021.42
APRIL	2541.65	6,804.00		6,804.00
MAY	5126.83	13,724.52		13,724.52
JUNE	1527.11	4,088.07		4,088.07
JULY	1218.43	3,261.74		3,261.74
AUGUST	629.43	1,684.98		1,684.98
TOTAL	15,960.16	42,725.35	484.12	43,209.47

PNG Waters outside of TSPZ: Jan - Dec 2019				
Month (2018)	Tail weight (kg)	Tail wt converted to whole wt (C. factor 2.677)	Whole weight (kg)	Total Catch (kg)
JANUARY	4,081.78	10,926.93		10,926.93
FEBRUARY	1,105.32	2,958.94		2,958.94
MARCH	1,747.28	4,677.47		4,677.47
APRIL	4,895.31	13,104.74		13,104.74
MAY	3,172.65	8,493.18		8,493.18
JUNE	1,275.38	3,414.19		3,414.19
JULY	509.30	1,363.40		1,363.40
AUGUST	858.59	2,298.45		2,298.45
TOTAL	17,645.61	47,237.30	-	47,237.30

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
RESULTS OF THE NOVEMBER 2020 PRE-SEASON SURVEY	Agenda Item 4 For discussion and advice

RECOMMENDATIONS

1. That the RAG:
 - a. **DISCUSS** and **PROVIDE ADVICE** on the results of the November 2020 pre-season survey to be presented by CSIRO at the meeting, and summarised in a report provided at **Attachment 4a**.
 - b. **NOTE** that in accordance with the TRL Harvest Strategy, under section 2.10 Decision Rules (**Attachment 4b**), if in any year the pre-season survey 1+ index is 1.25 or lower (average standardised number of 1+ age lobsters per survey transect) it triggers a stock assessment.

KEY ISSUES

2. CSIRO conducted the annual pre-season survey from 1-14 November 2020. A total of 76 sites were surveyed, selected to provide for comparison with previous surveys. The amount of seabed biota (plants and some selected animals) and also substrate type was also recorded at each survey site. Length frequency data was collected from captured TRL.
3. The pre-season survey data is a key data input (with a 70 per cent weighting) in the empirical harvest control rule (HCR), and the integrated stock assessment when it is run (every three years under the TRL Harvest Strategy).
4. The results of the November 2020 pre-season survey will be presented by CSIRO at the meeting. A summary report of the pre-season population survey is provided at **Attachment 4a**.
5. The RAG is being asked to review the analysis and where relevant provide advice on the findings and/or need for further analysis.
6. Of particular relevance, section 2.10 of the Harvest Strategy (**Attachment 4b**) provides that:
 - a. If in any year the pre-season survey 1+ index is 1.25 or lower (average standardised number of 1+ age lobsters per survey transect) it triggers a stock assessment.

Torres Strait Tropical Rock Lobster 2020 Pre-season Population Survey Summary

Leo Dutra, Mark Tonks, Nicole Murphy, Kinam Salee, Steven Edgar, Judy Upston,
Roy Deng and Éva Plagányi

CSIRO Oceans and Atmosphere



Summary Report for Tropical Rock Lobster Resource Assessment Group - December 2020

INTRODUCTION

The 2020 Tropical Rock Lobster (TRL) Pre-season Population Survey was conducted between the 2nd and the 12th of November 2020. The mothership “Wild Blue” (Rob Benn Holdings) supported the CSIRO TRL Dive Team (Mark Tonks, Nicole Murphy, Kinam Salee, Steven Edgar and Leo Dutra) in completing 76 survey sites (Figure 1).

Conditions during the 11-day survey varied with winds ranging between 10-25 knots. Most days winds were between 15-20 knots. Underwater visibility averaged around 4m (range 1-8m) with neap tidal flows allowing for a good visual census and collection of TRL. Ninety-three percent of the dives had visibility greater or equal to 2m.

METHOD

The CSIRO TRL Dive Team used the standard 2000m² belt transect method (2 divers per site each scanning 2m by 500m) with transect distance measured using a Chainman® device. For a proportion of sites where the full 500m distance could not be swum the observed lobster counts were standardised to an area of 2000m². At the completion of each transect divers recorded:

- The number of lobsters caught per age-class;
- The number and age-class of those observed but not caught;
- Depth;
- Visibility;
- Current speed;
- Distance and direction swum from site co-ordinate.

In addition, species of interest (i.e. pearl oyster (*Pinctada maxima*), crown-of-thorns starfish and holothurian species) were counted and the habitat characterised using percent cover for the various substrate and biota types.

Caught lobsters were measured (tail width, TW) to provide fishery-independent size-frequency data.

Additional temperature/depth profiles were measured at all 76 sites using a small CTD Diver logger which was attached to a diver’s harness.

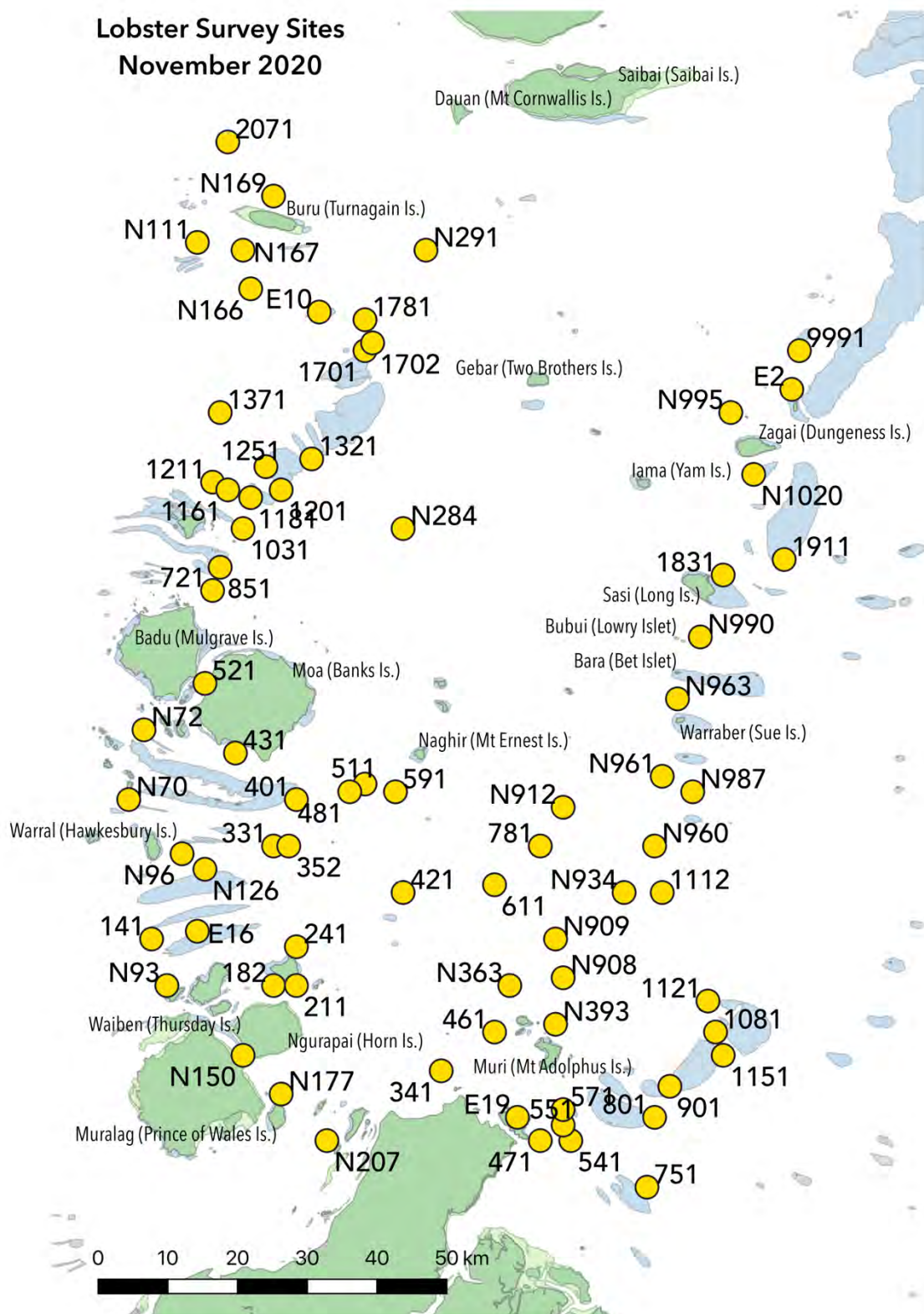


Figure 1 Map of western Torres Strait showing the sites surveyed during the 2020 TRL pre-season survey.

RESULTS

In total, 333 TRL were observed and categorised into age classes in the 2020 pre-season survey compared to 446 in 2019 and 306 in 2018 (Table 1). Of these, 179 were measured (TW) and their sex determined. Males comprised 45% of the measured lobster population and females 55%.

As in previous surveys, Age 2+ lobsters were rarely observed, as most fished lobsters have emigrated from Torres Strait during August/September to undertake the breeding migration.

Table 1. Comparison of lobster numbers per age class observed between 2018, 2019 and 2020 pre-season surveys.

Age	2018	2019	2020
0+	66	92	101
1+	234	350	225
2+	6	4	7
Total	306	446	333

ABUNDANCE INDICES

Recruiting lobster (Age 1+)

The recruiting lobster (Age 1+) abundance index for the mid-year only (MYO) sites (red line in Figure 2) for 2020 pre-season survey was 4.14 (range including one standard error: 3.39 to 4.89), which is similar to the long-term average (2005-2020) of 4.54 lobsters per site (dashed grey line; Figure 2). The 2020 index was similar to indices recorded in 2007 (abundance index 4.60, point estimate). The 2020 survey variance was roughly average as opposed to higher variances observed in the 2018 and 2019 surveys.

Recently-settled lobster (0+)

The recently-settled lobster (Age 0+) index for the MYO surveys has shown a steady increase from its lowest trough recorded in 2017 (0.47 lobsters per site) to 3.30 (range including one standard error: 2.58 to 4.02) in 2020 (Figure 3). The 2020 Age 0+ index is:

- similar to the 2014 index (3.46)
- above the long-term survey average index (dashed grey line; 2.48)

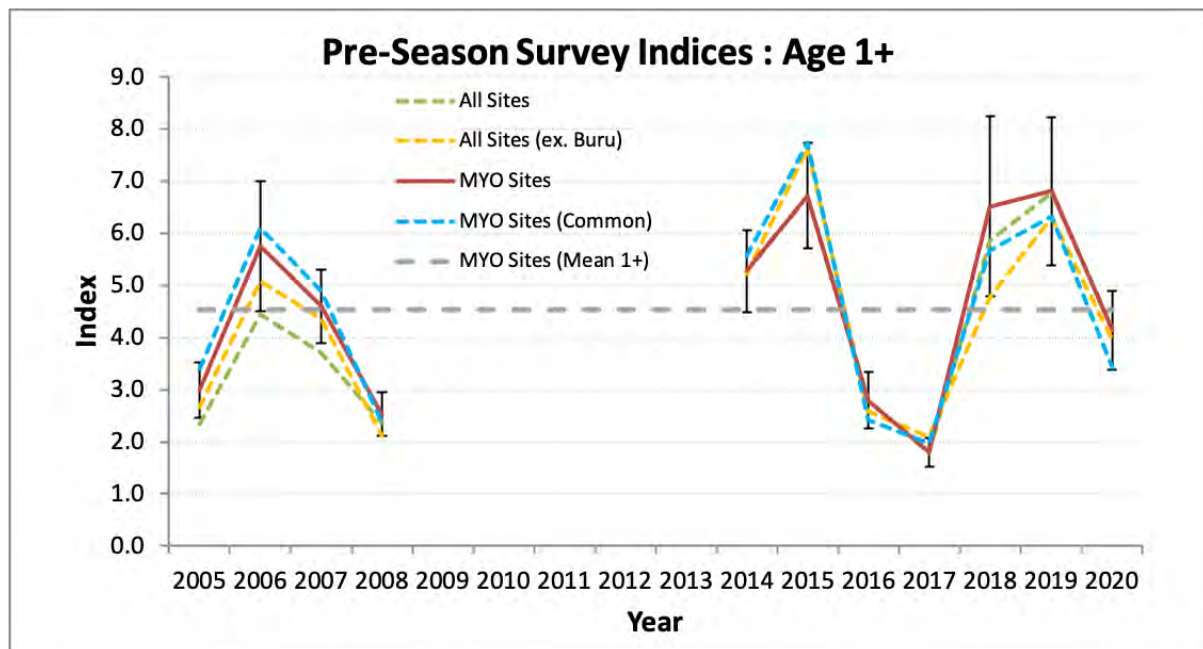


Figure 2 Abundance indices of recruiting (1+) tropical rock lobsters (*Panulirus ornatus*) recorded during pre-season surveys in Torres Strait between 2005 and 2020. The data represent abundance indices for all sites as well as reduced series including Midyear-Only Sites (MYO). The long-term average survey index (2005-2020) is also shown. Error bars of MYO indices represent standard errors. (Note: pre-season surveys were not conducted during 2009-2013).

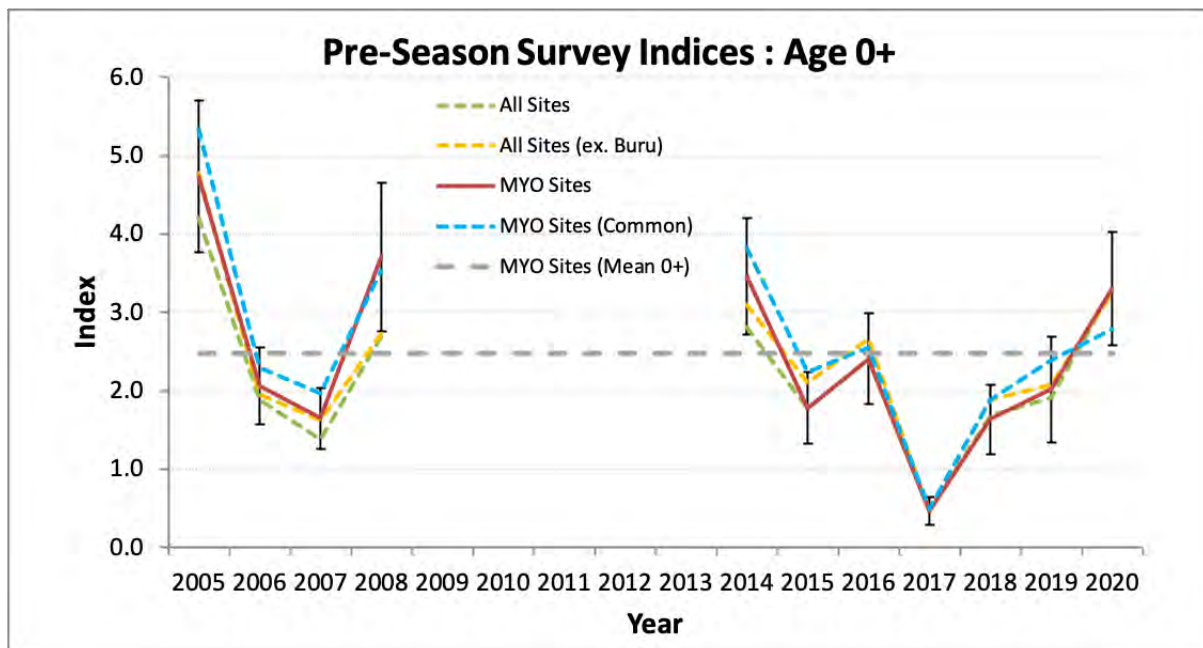


Figure 3 Abundance indices of recently-settled (0+) tropical rock lobsters (*Panulirus ornatus*) recorded during pre-season surveys in Torres Strait between 2005 and 2020. The data represent abundance indices for all sites as well as a subset including Midyear-Only Sites (MYO) and also includes the long-term survey average (2005-2020). Error bars of MYO indices represent standard errors. (Note: pre-season surveys were not conducted during 2009-2013).

DISTRIBUTION

Recruiting lobster (Age 1+) distribution

The abundance index for the recruiting (Age 1+) lobster per stratum in 2020 indicates that recruitment to the fishery is generally widespread across the different strata surveyed (Figure 4). The highest recruitment was recorded at sites in the Warraber Bridge, Kircaldie, and Buru (noting a wide standard error), while Mabuia recruitment was the lowest.

A comparison of the recruiting (Age 1+) abundance indices per stratum in the last 10 surveys (2006-2020) shows that the Warraber Bridge stratum recorded one of its highest indices in 2020. In 2020 the Age 1+ abundance index (point estimate) was:

- Close to average (2006-2020 average index is 4.70; dotted orange line in Figure 5) in Buru and Reef Edge
- Above average in Kircaldie Rubble and Warraber Bridge
- Below average in Mabuia, South-East and TI Bridge

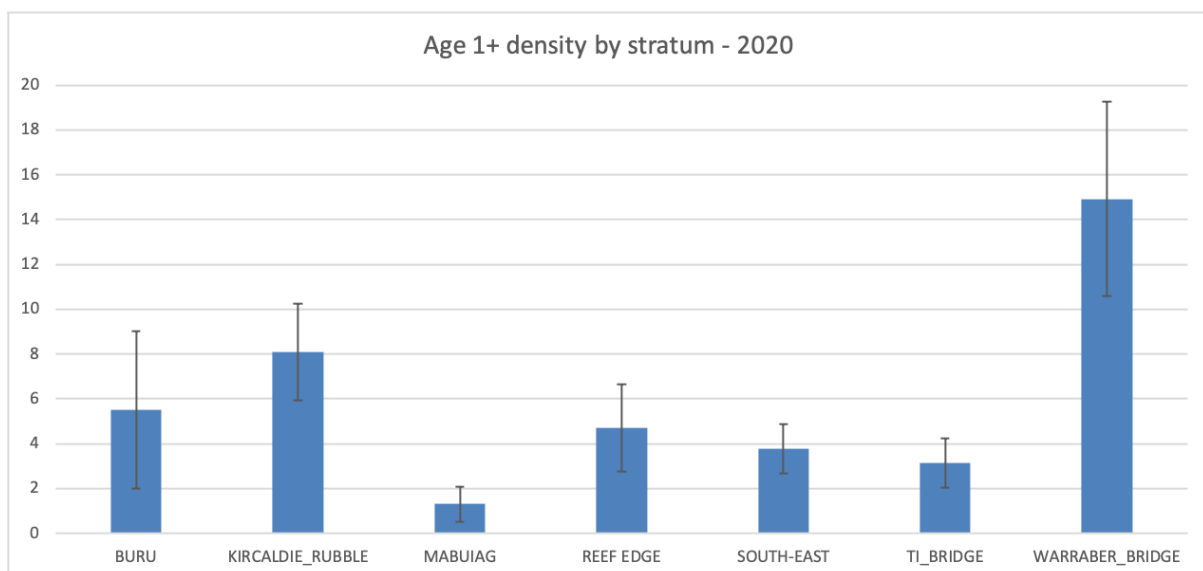


Figure 4 Abundance indices of recruiting (1+) ornate rock lobsters (*Panulirus ornatus*) recorded in each sampling stratum for the 2020 pre-season survey.

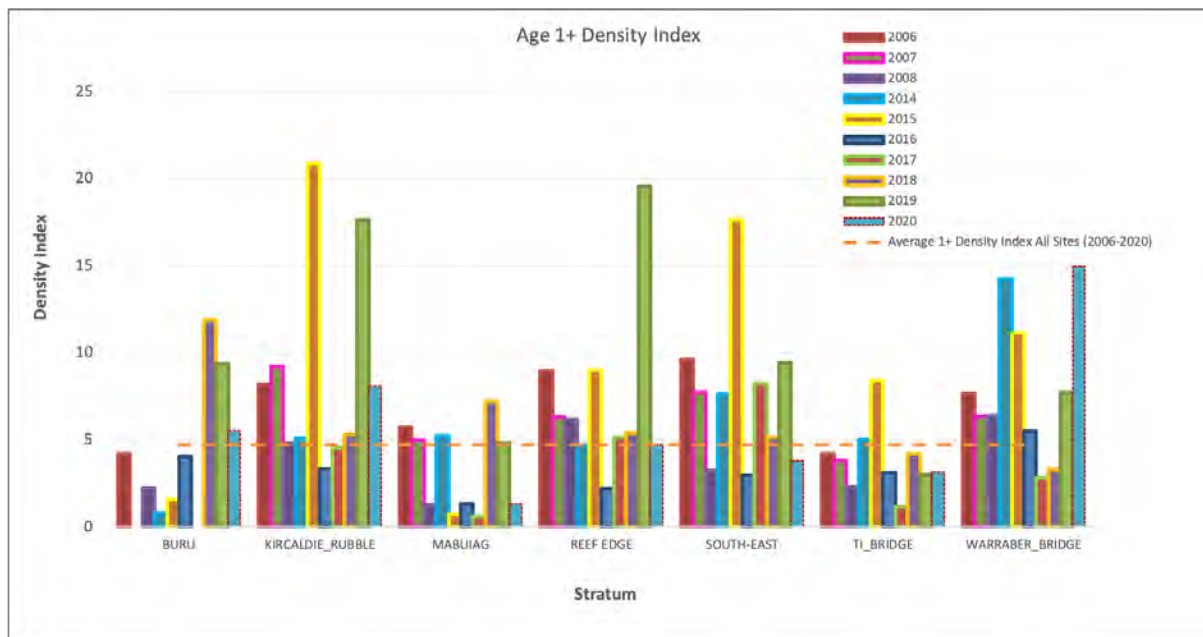


Figure 5 Abundance indices of recruiting (1+) ornate rock lobsters (*Panulirus ornatus*) recorded in each sampling stratum during pre-season surveys in Torres Strait between 2006 and 2020. (Note: pre-season surveys were not conducted during 2009-2013).

Recently-settled lobster (Age 0+) distribution

The 2020 results found the highest abundance indices recorded for Mabuiag and Buru, but unlike previous surveys Warraber Bridge on the Eastern side showed the third highest 2020 Age 0+ abundance index (Figure 6). Abundance indices were higher than average for Buru, Mabuiag and Warraber Bridge, and lower than average for Kirkaldie, South-East and TI Bridge. Historically, recently-settled (0+) lobsters were observed in higher numbers on the western side of the surveyed area (Figure 7).

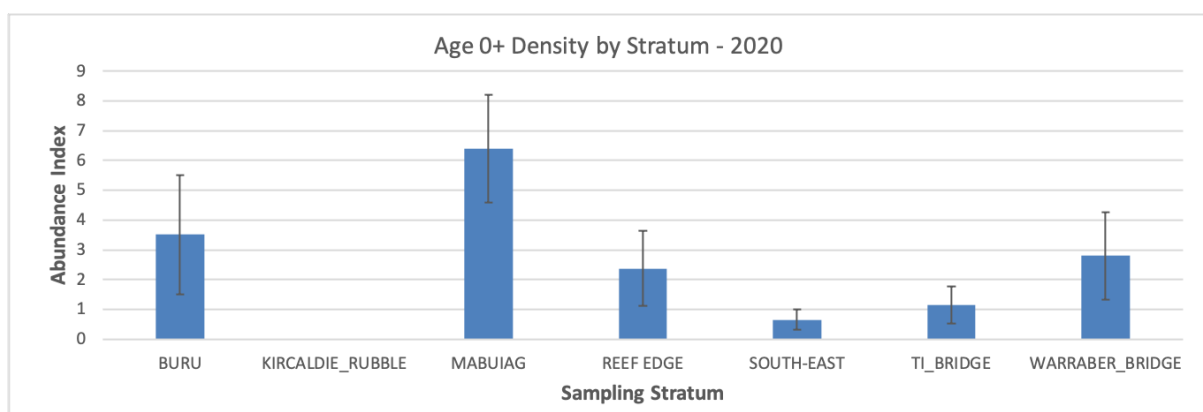


Figure 6 Abundance indices of recently-settled (0+) tropical rock lobsters (*Panulirus ornatus*) recorded in each sampling stratum for the 2020 pre-season survey.

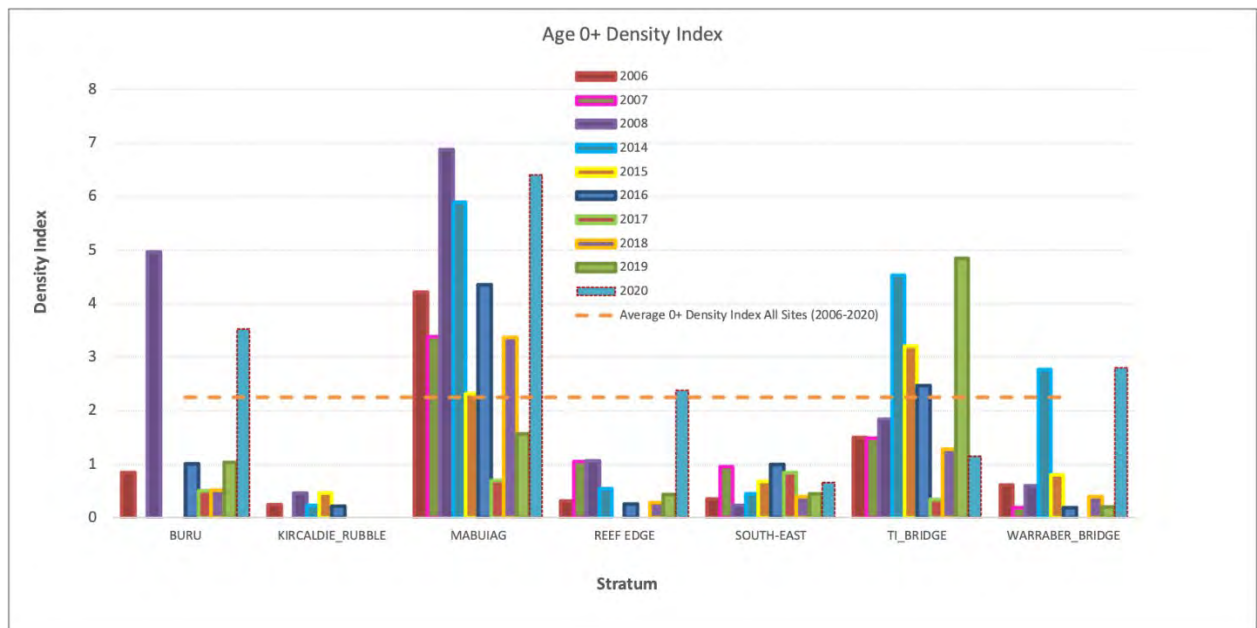


Figure 7 Abundance indices of recruiting (0+) tropical rock lobsters (*Panulirus ornatus*) recorded in each sampling stratum during the last 10 pre-season surveys in Torres Strait (between 2006 and 2020) (Note: pre-season surveys were not conducted during 2009-2013).

The abundance indices for recently-settled lobster (Age 0+) are usually highest at Mabuiag and TI Bridge and lowest at Kircaldie, Reef Edge, South-East and Warraber Bridge. The 2020 indices seem to be slightly different from these trends. Lobster settlement appears higher than usual in Reef Edge and Warraber Bridge and lower than usual for TI Bridge strata (Figures 6 and 7) and this preliminary finding will be investigated in our ongoing analyses.

Length frequency

The size distribution of lobsters sampled during the 2020 pre-season survey was similar to previous surveys, comprising mostly of Age 1+ lobsters (Figure 8). The number of Age 0+ lobsters observed in pre-season survey in 2020 (101) was considerably higher than in the previous two years (92 individuals in 2019 and 66 individuals in 2018).

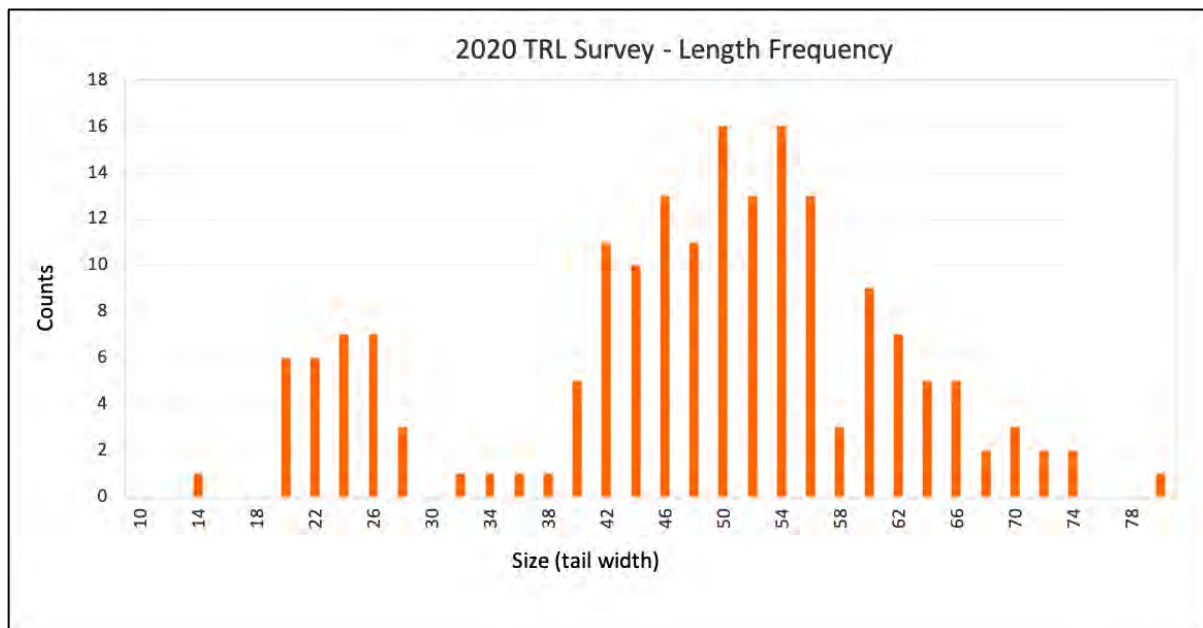


Figure 8 Length frequency distribution of lobster (*Panulirus ornatus*) sampled during the 2020 pre-season population surveys in Torres Strait. Note: 90mm CL \approx 60 mm tail width) (n=333).

We are currently reviewing the methods for standardising the survey index, and results of these further analyses will be presented at the next meeting

Acknowledgements

We wish to sincerely thank the master (Rob Benn) and crew (Ian Filmer) of the Wild Blue for excellent assistance in all aspects of the pre-season dive survey in Torres Strait, and in logistic support prior to and after the field survey. We gratefully acknowledge funding support for the survey from AFMA and CSIRO.

Attachment 4b



Australian Government

Australian Fisheries Management Authority

Torres Strait Tropical Rock Lobster Fishery Harvest Strategy

November 2019

This harvest strategy is based on outcomes from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) Oceans and Atmosphere Division project, *Torres Strait Tropical Rock Lobster (TRL) fishery surveys, stock assessment, harvest control rules and RBC*. The project was funded by the Australian Fisheries Management Authority (AFMA).

AFMA Project No. 2016/0822.

Project Authors: Éva Plagányi (Principal Investigator), Darren Dennis, Roy Deng, Robert Campbell, Trevor Hutton, Mark Tonks

www.csiro.au | www.afma.gov.au | www.pzja.gov.au

CONTENTS

CONTENTS	3
GLOSSARY	4
OVERVIEW	6
1 BACKGROUND	7
1.1 COMMONWEALTH FISHERIES HARVEST STRATEGY POLICY	7
1.2 DEVELOPMENT OF THE TRL HARVEST STRATEGY	8
2 TRL FISHERY HARVEST STRATEGY	9
2.1 SCOPE	9
2.2 OBJECTIVES	9
2.3 RECOMMENDING TACs FROM RBCs.....	9
2.4 MONITORING	10
2.5 INTEGRATED STOCK ASSESSMENT MODEL	10
2.6 EMPIRICAL HARVEST CONTROL RULE	11
2.7 REFERENCE POINTS.....	12
2.8 eHCR AND STOCK ASSESSMENT CYCLE	14
2.9 DATA SUMMARY	14
2.10 DECISION RULES	14
2.11 DECISION RULE SCENARIOS	15
2.12 GOVERNANCE.....	17
2.13 REVIEW	17
3 REFERENCES.....	18

GLOSSARY

Types of reference points:

Reference Point	Description
Metarule	A rule that describes how the RBCs obtained from an assessment should be adjusted in calculating a recommended TAC
Target	The desired state of the stock or fishery (for example, MEY or B_{TARG}) ¹
Limit	The level of an indicator (such as biomass or fishing mortality) beyond which the risk to the stock is regarded as unacceptably high ¹
MEY	The sustainable catch or effort level for a commercial fishery that allows net economic returns to be maximised. In this context, maximised equates to the largest positive difference between total revenue and total cost of fishing ¹
MSY	The maximum average annual catch that can be removed from a stock over an indefinite period under prevailing environmental conditions ¹

Notation:

Notation	Description
B	Spawning biomass - the total weight of all adult (reproductively mature) fish in a population ¹
B_0	The unfished spawning biomass (determined from an appropriate reference point)
F	Fishing mortality rate
B_{LIM}	Biomass limit reference point - the point beyond which the risk to the stock is regarded as unacceptably high ¹
B_{TARG}	Biomass target reference point - the desired biomass of the stock ¹

Other acronyms:

Acronym	Description
CPUE	Catch per unit effort
eHCR	Empirical Harvest Control Rule
HCR	Harvest Control Rule - pre-determined rules that control fishing activity according to the biological and economic conditions of the fishery (as defined by monitoring or assessment). Also called 'decision rules'. HCR are a key element of a harvest strategy ¹
HSP	<i>Commonwealth Fisheries Harvest Strategy Policy: Framework for applying an evidence-based approach to setting harvest levels in Commonwealth fisheries</i> (June 2018)
HS	Torres Strait Tropical Rock Lobster Fishery Harvest Strategy
PZJA	Protected Zone Joint Authority

¹ Definition sourced from the *Commonwealth Fisheries Harvest Strategy Policy: Framework for applying an evidence-based approach to setting harvest levels in Commonwealth fisheries* (June 2018)

MSE	Management Strategy Evaluation - a procedure whereby alternative management strategies are tested and compared using simulations of stock and fishery dynamics ¹
RBC	Recommended Biological Catch
TRLRAG	Protected Zone Joint Authority Tropical Rock Lobster Resource Assessment Group
TRLWG	Protected Zone Joint Authority Tropical Rock Lobster Working Group
TAC	Total Allowable Catch- the annual catch limit set for a stock, species or species group. Used to control fishing mortality within a fishery ¹
Tiered approach	A framework that uses different control rules to cater for different levels of uncertainty about a stock
TIB	Traditional inhabitant boat
TVH	Transferrable vessel holder
TRL	Tropical Rock Lobster
TSPZ	Torres Strait Protected Zone

OVERVIEW

The Torres Strait Tropical Rock Lobster Fishery (the Fishery) Harvest Strategy (HS) sets out the management actions needed to achieve the agreed Fishery objectives. The HS describes the performance indicators used for monitoring the condition of the stock, the fishery-independent survey and stock assessment procedures and the rules applied to determine the recommended biological catch (RBC) and the total allowable catch (TAC) each fishing season.

The HS uses a single tier approach with an empirical harvest control rule (eHCR) that is used to determine a RBC. The eHCR uses the pre-season survey index of abundance of juvenile (1+) and newly recruited (0+) Tropical Rock Lobster (TRL) and the catch per unit effort (CPUE) indices for the traditional inhabitant boat (TIB) and transferrable vessel holder (TVH) fishing sectors. The eHCR has been extensively tested using Management Strategy Evaluation (MSE) (Plagányi *et al.* 2018). The RBC is the best available scientific advice on what the total fishing mortality (landings from all sectors and discards) should be for the stock. The RBC is used to negotiate Australia-Papua New Guinea catch sharing and recommend TACs (an enforced limit on total catches).

The HS meets the requirements of the *Commonwealth Fisheries Harvest Strategy Policy: Framework for applying an evidence-based approach to setting harvest levels in Commonwealth fisheries* (June 2018) (HSP) by applying a precautionary approach to the reference points and measures to be implemented in accordance with the reference points. This is reflected in the use of proxy reference points that are more precautionary than those specified in the HSP. The eHCR is designed to decrease exploitation rate as the stock size decreases below the target reference point. The HS uses a biomass target reference point equal to recent levels (2005-2015) that take account of the fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable. The HS proxies are B_{LIM} is 32% of B_0 , B_{TARG} is 65% of B_0 .

Further work for the HS will include the development of a tiered approach. The tiered approach applies different types of control rules to cater for different amounts of data available and to account for changes to uncertainty on stock status. A tiered approach adopts increased levels of precaution that correspond to increasing levels of uncertainty about the stock status, in order to maintain the same level of risk across the different tiers.

The status of the stock and how it is tracking against the HS, is reported to the Tropical Rock Lobster Resource Assessment Group (RAG), Tropical Rock Lobster Working Group (TRLWG) and the Protected Zone Joint Authority (PZJA). The stock assessment is conducted periodically to evaluate stock status relative to reference levels and, in doing so, performance of the eHCR. The stock assessment includes considerations of the catch rates in current and previous fishing seasons, how the catches compare to the RBCs, stock status indicators in relation to the reference points and an RBC for the upcoming fishing season.

1 BACKGROUND

This Torres Strait Tropical Rock Lobster Fishery (the Fishery) Harvest Strategy (HS) has been developed in accordance with the *Commonwealth Fisheries Harvest Strategy Policy: Framework for applying an evidence-based approach to setting harvest levels in Commonwealth fisheries* (June 2018) (HSP) and consistent with objectives of the *Torres Strait Fisheries Act 1984* (the Act).

The Fishery HS takes into account key fishery specific attributes including:

- a) there is potential for large, unpredictable inter-annual variations in availability and abundance of Tropical Rock Lobster (TRL);
- b) TRL is a shared resource important for the traditional way of life and livelihood of traditional inhabitants, commercial and recreational sectors (Tropical Rock Lobster Resource Assessment Group (TRLRAG) 20, 4-5 April 2017); and
- c) advice from the TRLRAG industry members to maintain stock abundance at recent levels (2005-2015) (TRLRAG 17, 31 March 2016).

1.1 COMMONWEALTH FISHERIES HARVEST STRATEGY POLICY

The objective of the HSP is the ecologically sustainable and profitable use of Australia's Commonwealth commercial fisheries resources (where ecological sustainability takes priority) - through implementation of harvest strategies.

To pursue this objective the Australian Government will implement harvest strategies that:

- a) ensure exploitation of fisheries resources and related activities are conducted in a manner consistent with the principles of ecologically sustainable development, including the exercise of the precautionary principle
- b) maximise net economic returns to the Australian community from management of Australian fisheries - always in the context of maintaining commercial fish stocks at sustainable levels
- c) maintain key commercial fish stocks, on average, at the required target biomass to produce maximum economic yield from the fishery
- d) maintain all commercial fish stocks, including byproduct, above a biomass limit where the risk to the stock is regarded as unacceptable (B_{LIM}), at least 90 per cent of the time
- e) ensure fishing is conducted in a manner that does not lead to overfishing - where overfishing of a stock is identified, action will be taken immediately to cease overfishing
- f) minimise discarding of commercial species as much as possible
- g) are consistent with the *Environment Protection and Biodiversity Conservation Act 1999* and the *Guidelines for the Ecologically Sustainable Management of Fisheries*.

For fisheries that are managed jointly by an international organisation or arrangement, the HSP does not prescribe management arrangements. This includes management arrangements for commercial and traditional fishing in the Torres Strait Protected Zone (TSPZ), which are governed by provisions of the Torres Strait Treaty and the *Torres Strait Fisheries Act 1984*. However, it does articulate the government's preferred approach.

The HSP provides for the use of proxy settings for reference points to cater for different levels of information available and unique fishery circumstances. This balance between prescription and flexibility encourages the development of innovative and cost effective strategies to meet key policy objectives. Proxies, including those that exceed the minimum standards, must be demonstrated to be compliant with the HSP objective.

With a harvest strategy in place, fishery managers and stakeholders are able to operate with pre-defined rules, management decisions are more transparent, and there are likely fewer unanticipated outcomes necessitating hasty management responses. However, due to the inherently natural variability of TRL abundance there may be a need for significant changes in recommended catch on an annual basis.

1.2 DEVELOPMENT OF THE TRL HARVEST STRATEGY

The HS has been developed in consultation with the TRLRAG (meeting no. 17 on 31 March 2016; meeting no. 18 on 2-3 August 2016; meeting no. 19 on 13 December 2016; meeting no. 20 on 4-5 April 2017; meeting no. 22 on 27-28 March 2018; meeting no. 24 on 18-19 October 2018; and meeting no. 25 on 11-12 December 2018; out of session 16 September-9 October 2019) and TRLWG (meeting no. 6 on 25-26 July 2017; meeting no. 9 on 19-20 February 2019; out of session 16 September-9 October 2019). This HS replaces the interim HS developed for the Fishery in 2008.

2 TRL FISHERY HARVEST STRATEGY

2.1 SCOPE

This HS applies to the whole Fishery and it takes into account catch sharing arrangements between Australia and Papua New Guinea (PNG).

The HS outlines the control rules used to develop advice on the recommended biological catch (RBC) and to recommend total allowable catches (TACs) (an enforced limit on total catches). The HS sets the criteria that pre-agreed management decisions will be based on in order to achieve the HS objectives.

Over time the HS may be amended to use a tiered approach to cater for different amounts of data available and different types of assessments (for example mid-season surveys and annual assessments). Underpinning a tiered HS is increased levels of precaution with increasing levels of uncertainty about the stock status. Each tier has its own harvest control rule (HCR) and associated rules that are used to determine a RBC.

2.2 OBJECTIVES

The operational objectives of the HS are to:

- a) Maintain the stock at (on average), or return to, a target biomass point B_{TARG} equal to recent levels (2005-2015) that take account of the fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable.
 - o The agreed B_{TARG} is more precautionary than the default proxy B_{MEY} (biomass at maximum economic yield) level as outlined in the HSP.
- b) Maintain the stock above the limit biomass level (B_{LIM}), or an appropriate proxy, at least 90 per cent of the time.
 - o The agreed B_{LIM} is more precautionary than the default proxy HSP B_{LIM} .
- c) Implement rebuilding strategies, if the spawning stock biomass is assessed to fall below B_{LIM} in two successive years.

2.3 RECOMMENDING TACs FROM RBCs

The RBC is the recommended total catch of TRL (both retained and discarded) that can be taken by all sectors within the TSPZ and waters declared as areas outside but near to the TSPZ, including Australian and PNG fishers. The HSP states that when setting the TAC for the next fishing season the HS should take into account all sources of fishing mortality.

The HS does not include catches taken by non-commercial fishing sectors, for example traditional, recreational or research catches. The TRLRAG recommended at meeting no. 18 on 2-3 August 2016 that non-commercial catches not be estimated in the stock assessment model or when setting the TAC at this time, noting the likely low level of overall catch and

the lack of accurate data. However, if unaccounted fishing mortality were to increase significantly this may impact on the performance of the stock assessment. The HS may be updated in the future to account for changing circumstances in the Fishery, the review provisions are described in **Section 2.13**.

2.4 MONITORING

Biological data for the Fishery are monitored by a range of methods listed below. Currently there is no ongoing monitoring strategy in place to collect economic information.

Fishery independent surveys

A key component of the monitoring program is the fishery-independent survey which provides a time-series of relative abundance indices for TRL. Fishery-independent surveys have been conducted in the Fishery since 1989. Historically (1989-2014 and 2018), mid-season (July) surveys focused on providing an index of abundance of the spawning (age 2+) and juvenile (age 1+) lobsters. Mid-season surveys have been replaced with pre-season (November) surveys (2005-2008; 2014 to current) which focus on providing an index of recruiting (age 1+) lobsters as close as possible to the start of the fishing season to support the transition to quota management and setting of a TAC. Pre-season surveys also provide indices of recently-settled (age 0+) lobsters, which may become useful under quota management as they allow forecasting of stock one year in advance and are used in the eHCR.

Catch and effort information

Fishers in the transferrable vessel holder (TVH) sector are required to record catch and effort information in the Torres Strait Tropical Rock Lobster Daily Fishing Log (TRL04). The following data are recorded for each TVH fishing operation: the port and date of departure and return, fishing area, fishing method, hours fished and the weight (whole or tails) of TRL retained. Fishers in both the TVH and traditional inhabitant boat (TIB) sectors are required to record catch information in the Torres Strait Fisheries Catch Disposal Record (TDB02). The provision of effort information under the TDB02 is voluntary. Some processors previously (2014-2016) reported aggregate TIB catch information directly to AFMA predominantly through the Torres Strait Seafood Buyers and Processors Docket Book (TDB01).

2.5 INTEGRATED STOCK ASSESSMENT MODEL

The stock assessment model (termed the 'Integrated Model') (Plagányi *et al.* 2009) was developed in 2009 and is an Age-Structured Production Model, or Statistical Catch-at-Age Analysis (SCAA) (e.g. Fournier and Archibald 1982). It is a widely used approach for providing RBC advice and the associated uncertainties.

The model integrates all available information into a single framework to assess resource status and provide a RBC. The model addresses all of the concerns highlighted in a review of the previous stock assessment approach (Bentley 2006, Ye *et al.* 2006, 2007). The model

is fitted to the mid-season and pre-season survey data and TIB and TVH catch per unit effort (CPUE) data. The growth relationships used in the model were revised from the previous stock assessment model (Ye *et al.* 2006) to ensure that the modelled individual mass at age more closely resembled field measurements. The model has been used as an Operating Model in a Management Strategy Evaluation (MSE) framework to support the management of the Fishery (Plagányi *et al.* 2012, 2013, 2018).

The stock assessment model is non-spatial and assumes (conservatively) that the Torres Strait Tropical Rock Lobster Fishery stock is independent of the Queensland East Coast Tropical Rock Lobster Fishery stock. A spatial version of the model has been developed as part of an earlier MSE project, and can be used to investigate plausible linkages between these stocks (Plagányi *et al.* 2012, 2013).

The model includes three age-classes only (0+, 1+ and 2+ age lobsters) as it is assumed that lobsters migrate out of the Torres Strait in October each year. Torres Strait TRL emigrate in spring (September-November) and breed during the subsequent summer (November-February) (MacFarlane and Moore 1986; Moore and Macfarlane 1984). A Beverton-Holt stock-recruitment relationship is used (Beverton and Holt 1957), allowing for annual fluctuation about the average value predicted by the recruitment curve. The model is fitted to the available abundance indices by maximising the likelihood function. Quasi-Newton minimisation is used to minimise the total negative log-likelihood function (using the package AD Model Builder™) (Fournier *et al.* 2012).

2.6 EMPIRICAL HARVEST CONTROL RULE

The empirical harvest control rule (eHCR) recommended by the TRLRAG uses the pre-season survey 1+ and 0+ indices, both standardised CPUE indices (TVH and TIB), applies the natural logarithms of the slopes of the five most recent years' data and the average catch over the past five years, with an upper catch limit of 1,000 t. The relative weightings of the eHCR indices are 70 per cent pre-season survey 1+ index, 10 per cent pre-season survey 0+ index, 10 per cent TIB sector standardised CPUE and 10 per cent TVH sector standardised CPUE.

The basic formula is:

$$RBC_{y+1} = wt_s1 \cdot \left(1 + s_y^{presurv,1}\right) \cdot \bar{C}_{y-4,y} + wt_s2 \cdot \left(1 + s_y^{presurv,0}\right) \cdot \bar{C}_{y-4,y} \\ + wt_c1 \cdot \left(1 + s_y^{CPUE,TVH}\right) \cdot \bar{C}_{y-4,y} + wt_c2 \cdot \left(1 + s_y^{CPUE,TIB}\right) \cdot \bar{C}_{y-4,y}$$

Or if $RBC_{y+1} > 1000t$, $TAC_{y+1} = 1000$.

Where:

$\bar{C}_{y-4,y}$ is the average achieved catch during the past 5 years, including the current year i.e. from year $y-4$ to year y ,

- $s_y^{presurv,1}$ is the slope of the logarithms of the preseason survey 1+ abundance index, based on the 5 most recent values;
- $s_y^{presurv,0}$ is the slope of the logarithms of the preseason survey 0+ abundance index, based on the 5 most recent values;
- $s_y^{CPUE,TVH}, s_y^{CPUE,TIB}$ is the slope of the logarithms of the TVH and TIB CPUE abundance index, based on the 5 most recent values;
- $wt_s1, wt_s2, wt_c1, wt_c2$ are tuning parameters that assign relative weight to the preseason 1+ (wt_s1) and 0+ (wt_s2) survey trends compared with the CPUE TVH (wt_c1) and TIB (wt_c2) trends.

2.7 REFERENCE POINTS

The HS reference points are:

- a) The unfished biomass B_0 is the model-estimate of spawning stock biomass in 1973 (start of the Fishery). $B_0 = B_{1973}$.
- b) The target biomass B_{TARG} is the spawning biomass level equal to recent levels (2005-2015) that take account of the fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable. B_{TARG} is the proxy for B_{MEY} , $B_{TARG} = 0.65 B_0$.
 - o The agreed B_{TARG} is more precautionary than the default proxy B_{MEY} (biomass at maximum economic yield) level as outlined in the HSP. The TRLRAG noted a B_{TARG} higher than the HSP default was considered important for the Fishery because: 1) the stock is a shared resource that is particularly important for traditional fishing; 2) the stock has high variability; and, 3) all industry members recommended the HS maintain the stock around the relatively high current levels (TRLRAG meeting no. 17, 31 March 2016 and meeting no. 18, 2-3 August 2016).
- c) The limit biomass B_{LIM} is the spawning biomass level below which the risk to the stock is unacceptably high and the stock is defined as 'overfished'. B_{LIM} is agreed to be half of B_{TARG} , $B_{LIM} = 0.32 B_0$.
 - o The agreed B_{LIM} is more precautionary than the default proxy HSP B_{LIM} .
- d) If the limit reference point (B_{LIM}) is triggered in two successive years then the Fishery is closed.
- e) The target fishing mortality rate F_{TARG} is the estimated level of fishing mortality rate that maintains the spawning biomass around B_{TARG} . $F_{TARG} = 0.15$.

- $F_{\text{TARG}} = 0.15$ is the target fishing mortality rate that corresponds to an optimal level in terms of economic, biological and social considerations (TRLRAG meeting no. 18, 2-3 August 2016).

Rational for reference points

The HSP recognises that each stock/species/fishery will require an approach tailored to the fishery circumstances, including species characteristics. The HSP identifies that the selection of reference points within harvest strategies need to be realistic with respect to the scale or nature of the fishery and the resources available to manage it. Reference points should be set at levels appropriate to the biology of the species and the proper functioning of the broader marine ecosystem. Further, stocks that fall below B_{LIM} will be subject to the recovery measures stipulated in the HSP. A number of adaptive management approaches may be used to deal with this, such as pre-season surveys to provide estimates of abundance to which the eHCR is applied.

The Fishery is characterised by a highly variable stock where majority of the catch (since 2001 due to the introduction of a minimum size limit) is from a single cohort. The stock assessment model and MSE testing have identified the target biomass should be set between 65 and 80 per cent of the unfished biomass to account for the importance of the stock for the traditional way of life and livelihood of traditional inhabitants and to achieve biological and economic objectives. The HS's higher average target biomass level, compared to the default HSP target of 0.48 per cent of unfished biomass, reduces the risk of recruitment being compromised.

The unfished biomass (B_0) is calculated within the stock assessment model, the value of unfished biomass and target biomass have therefore varied over time in response to annual data updates and model parameter settings and estimates. Estimates of unfished biomass and target biomass are particularly sensitive to changes to parameter h , which determines the steepness of the stock-recruit relationship, and the input parameter that controls the level of stock-recruit variability.

Independent of variability to the unfished biomass value, the target fishing mortality rate $F_{\text{TARG}} = 0.15$ is applied to maintain the spawning biomass around the biomass target reference point (B_{TARG}), which is the average level over the past two decades. This is assumed to be a proxy for B_{MEY} because stakeholders agreed that this target level corresponded to an optimal level in terms of economic, biological and social considerations (TRLRAG meeting no. 18, 2-3 August 2016).

The biomass limit reference point (B_{LIM}) is 32 per cent of unfished biomass. The higher limit reference point, compared to the HSP proxy of 20 per cent of unfished biomass, is supported by recommendations of similar limit reference points for other highly variable species such as forage fish (Pikitch *et al.* 2012). Due to the changing values of unfished biomass and target biomass the value of the limit reference point, taken as half the target reference point, has previously varied between 32 and 40 per cent of unfished biomass.

Recent MSE testing identified that a limit reference point of 40 per cent unfished biomass is too conservative, it would result in the limit reference point being breached more frequently and add unnecessary precaution to the HS. The TRLRAG agreed to set the limit reference

point at 32 per cent of unfished biomass with the condition that if the stock falls below the limit reference point in two successive years it triggers a Fishery closure. The eHCR is more precautionary than the HSP criterion to 'maintain all commercial fish stocks, including byproduct, above a biomass limit where the risk to the stock is regarded as unacceptable (B_{lim}), at least 90 per cent of the time'. The HSP provides for the designation of a limit reference point above the proxy (B_{20}) where this has been estimated or is deemed appropriate.

2.8 eHCR AND STOCK ASSESSMENT CYCLE

The eHCR and stock assessment cycle is as follows:

- The eHCR is run in November each year to provide a RBC by 1 December for the following fishing season.
- A stock assessment is run on a three year cycle by March, unless the stock assessment is triggered by a decision rule (**Section 2.10**). The stock assessment determines the Fishery stock status and evaluates the performance of the eHCR and identifies if any revisions to the eHCR are required.
- If the eHCR needs to be revised, the stock assessment is conducted annually to estimate the RBC until the revised eHCR is agreed.

2.9 DATA SUMMARY

The annual data summary reviews the nominal and standardised CPUE from the TIB and TVH sectors, as well as total catch from all sectors, the size-frequency information provided from a sub-sample of commercially caught TRL and the fishery-independent survey indices of 0+ and 1+ age lobsters. The data summary is used as an indicator to identify if catches correspond to the RBC, and to monitor CPUE.

2.10 DECISION RULES

The decision rules for the HS are:

Maximum catch limit

- The eHCR includes a maximum catch limit of 1000 t. Once the HS is implemented the cap will be reviewed after three years using MSE testing with the updated stock assessment model.

Pre-season survey trigger

- If in any year the pre-season survey 1+ index is 1.25 or lower (average standardised number of 1+ age lobsters per survey transect) it triggers a stock assessment.

Biomass limit reference point triggered

- If the pre-season survey trigger is triggered in the first year, a stock assessment update must be conducted in March.
 - If after the first year the stock is assessed below the biomass limit reference point, it is optional to conduct a mid-season survey, the pre-season survey must continue annually.
- If the pre-season survey trigger is triggered two years in a row, a stock assessment must be conducted in December (of the second year).

Fishery closure rules

- If the stock assessment determines the stock to be below the biomass limit reference point in two successive years, the Fishery will be closed to commercial fishing.
 - MSE testing of the eHCR has shown that it is extremely unlikely (<1%) for the Fishery to be closed based on its current performance (Plagányi *et al.* 2018).

Re-opening the Fishery

- Following closure of the Fishery, fishery-independent mid-season and pre-season surveys are mandatory. The Fishery can only be re-opened when a stock assessment determines the Fishery to be above the biomass limit reference point (**Attachment A, Figure 5**).

Based on the decision rules, there are four alternative possible scenarios (**Section 2.11**) that may occur under the application of the eHCR. Graphic representations of the four scenarios are provided in **Attachment A**.

2.11 DECISION RULE SCENARIOS

Scenario 1 – Pre-season survey trigger not triggered and the eHCR does not require revision

- The pre-season survey trigger is not triggered.
- The eHCR RBCs appear to remain within ranges tested by MSE.
- The updated stock assessment does not indicate any need for revision of the eHCR.
- Application of the eHCR continues unchanged.
- A graphic representation of Scenario 1 is provided in **Attachment A, Figure 1**.

Scenario 2 – Pre-season survey trigger not triggered, eHCR and stock assessment require revision

- The pre-season survey trigger is not triggered.

- The eHCR RBCs appear to remain within ranges tested by MSE.
- The updated stock assessment indicates the eHCR recommended RBCs are outside the revised ranges tested by MSE, indicating that the eHCR should be revised.
- Annual RBCs need to be set using annual stock assessments until a revised eHCR has been agreed, after which the revised eHCR is applied.

A graphic representation of Scenario 2 is provided in **Attachment A, Figure 2**.

Scenario 3– Pre-season survey trigger is triggered, eHCR is reviewed by stock assessment and the biomass limit reference point is not breached

- The pre-season survey trigger is triggered in one year.
- A stock assessment update (March) is required to confirm if the biomass limit reference point has been breached. This assessment update determines that the biomass limit reference point has not been breached.
- If the biomass limit reference point is breached once, discussions will be held on preventative measures to reduce the risk of closure.
- The eHCR RBC is applied and consideration is given to revising the eHCR to prevent future incorrect indications that the biomass limit reference point may have been breached.
- The stock assessment continues on a three year cycle, unless triggered to occur by a decision rule.
- A graphic representation of Scenario 3 is provided in **Attachment A, Figure 3**.

Scenario 4 – Pre-season survey trigger is triggered, stock assessment confirms the biomass limit reference point is breached

- The pre-season survey trigger is triggered in one year.
- A stock assessment update (March) is required to confirm if the biomass limit reference point has been breached. This assessment update determines that the biomass limit reference point has been breached.
- The pre-season survey trigger is triggered for a second successive year.
- A second stock assessment update (December) is required to confirm whether the biomass limit reference point has been breached a second time. This assessment update determines that the biomass limit reference point has been breached a second time.
- The commercial fishery is closed until an assessment update confirms that the stock has recovered to above the biomass limit reference point.
 - If the Fishery is closed to commercial fishing, discussions are held on future management arrangements.

- Fishery-independent mid-season and pre-season surveys are mandatory and conducted on an annual basis. The Fishery will only re-open when the Fishery is assessed to be above the biomass limit reference point by the stock assessment.
 - The eHCR must be revised before being re-implemented to reduce the risk of the Fishery breaching the biomass limit reference point and for the eHCR to incorporate rebuilding requirements.
- A graphic representation of Scenario 4 is provided in **Attachment A, Figure 4**.

2.12 GOVERNANCE

The status of the Fishery and how it is tracking against the HS is reported to the TRLRAG, TRLWG and the PZJA as part of the yearly RBC and TAC setting process.

2.13 REVIEW

Harvest strategies are to be reviewed every five years. However, it may be necessary to amend harvest strategies earlier if:

- a marked change in stocks targeted occurs, leading to a change in which stocks are categorised as key commercial
- new information substantially changes understanding of the fishery, leading to revised estimates of indicators relative to reference points
- external drivers have unexpectedly increased the risk to a fishery and fish stocks, including environmental or climate drivers that have substantially altered the productivity characteristics (growth or recruitment) of the stock
- performance indicators show that harvest strategies are not working effectively, and that the intent of the HSP is not being met.

Early review may be triggered when either:

- harvest strategies are implemented without formal testing or evaluation using methods such as MSE
- MSE testing did not take adequate account of the changes in risk factors subsequently observed, or
- subsequent estimates of the performance indicators used in the HCR are biased or uncertain to the extent that application of the control rule using these indicators fails to appropriately adjust fishing pressure.

3 REFERENCES

- Bentley, N. 2006. Review of chapter 5 of Ye *et al* (2006) "Sustainability Assessment of the Torres Strait Rock Lobster Fishery". Report submitted to AFMA.
- Beverton, R.; Holt, S. 1957. On the dynamics of exploited fish populations. UK Ministry of Agriculture and Fisheries Investigations (Ser 2). 19.
- Department of Agriculture and Water Resources. 2018. Commonwealth Fisheries Harvest Strategy Policy, Canberra, June. CC BY 4.0.
- Fournier, D.A.; Skaug, H.J.; Ancheta, J.; Ianelli, J.; Magnusson, A.; Maunder, M.N.; Nielsen, A.; Sibert, J. 2012. AD Model Builder: using automatic differentiation for statistical inference of highly parameterized complex nonlinear models. *Optimization Methods and Software*. 27:233-249.
- MacFarlane, J.; Moore, R. 1986. Reproduction of the ornate rock lobster, *Panulirus ornatus* (Fabricius), in Papua New Guinea. *Mar Freshwater Res.* 37:55-65.
- Moore, R.; Macfarlane, J.W. 1984. Migration of the Ornate Rock Lobster, *Panulirus ornatus* (Fabricius), in Papua-New-Guinea. *Aust J Mar Fresh Res.* 35:197-212.
- Pikitch, E.; Boersma, P.D.; Boyd, I.L.; Conover, D.O.; Cury, P.; Essington, T.; Heppell, S.S.; Houde, E.D.; Mangel, M.; Pauly, D.; Plagányi, É.E.; Sainsbury, K.; R.S. Steneck. 2012. Little Fish, Big Impact: Managing a crucial link in ocean food webs. Lenfest Ocean Program. Washington, DC. 108 pp.
- Plagányi, É.E.; Dennis, D.; Kienzie, M.; Ye, Y.; Haywood, M.; Mcleod, I.; Wassenberg, T.; Pillans, R.; Dell, Q.; Coman, G.; Tonks, M.; Murphy, N. 2009. TAC estimation & relative lobster abundance surveys 2008/09. AFMA Project Number: 2008/837. CSIRO Final Report, October 2009. 80 pp.
- Plagányi, É.E.; Kienzie, M.; Dennis, D.; Venables, W.; Tonks, M.; Murphy, N.; Wassenberg, T. 2010. Refined stock assessment and TAC estimation for the Torres Strait rock lobster (TRL) fishery. Australian Fisheries Management Authority Torres Strait Research program Final Report. AFMA Project number: 2009/845. 84 pp.
- Plagányi, É.; Deng, R.; Dennis, D.; Hutton, T.; Pascoe, S.; van Putten, I.; Skewes, T. 2012. An integrated Management Strategy Evaluation (MSE) for the Torres Strait Tropical Rock Lobster *Panulirus ornatus* fishery. CSIRO/AFMA Final Project Report.
- Plagányi, É.; Dennis, D.; Deng, R.; Campbell, R.; Hutton, T.; Tonks, M. 2016. Torres Strait Tropical Rock Lobster (TRL) *Panulirus ornatus* Harvest Control Rule (HCR) development and evaluation. CSIRO/AFMA Draft Final Project Report, AFMA Project No. 2016/0822; 110pp.
- Plagányi, E.E.; van Putten, I.; Hutton, T.; Deng, R.A.; Dennis, D.; Pascoe, S.; Skewes, T.; Campbell, R.A. 2013. Integrating indigenous livelihood and lifestyle objectives in managing a natural resource. *P Natl Acad Sci USA*. 110:3639-3644.
- Plagányi, É.; Deng, R.A.; Campbell, R.A.; Dennis, D.; Hutton, T.; Haywood, M.; Tonks, M. 2018. Evaluating an empirical harvest control rule for the Torres Strait *Panulirus ornatus* tropical rock lobster fishery. *Bulletin of Marine Science*, 94(3), pp.1095-1120.
- Ye, Y.; Dennis, D.; Skewes, T. 2008. Estimating the sustainable lobster (*Panulirus ornatus*) catch in Torres Strait, Australia, using an age-structured stock assessment model. *Continental Shelf Research*. 28:2160-67.

Torres Strait Tropical Rock Lobster Fishery – alternative annual Harvest Control Rule application scenarios

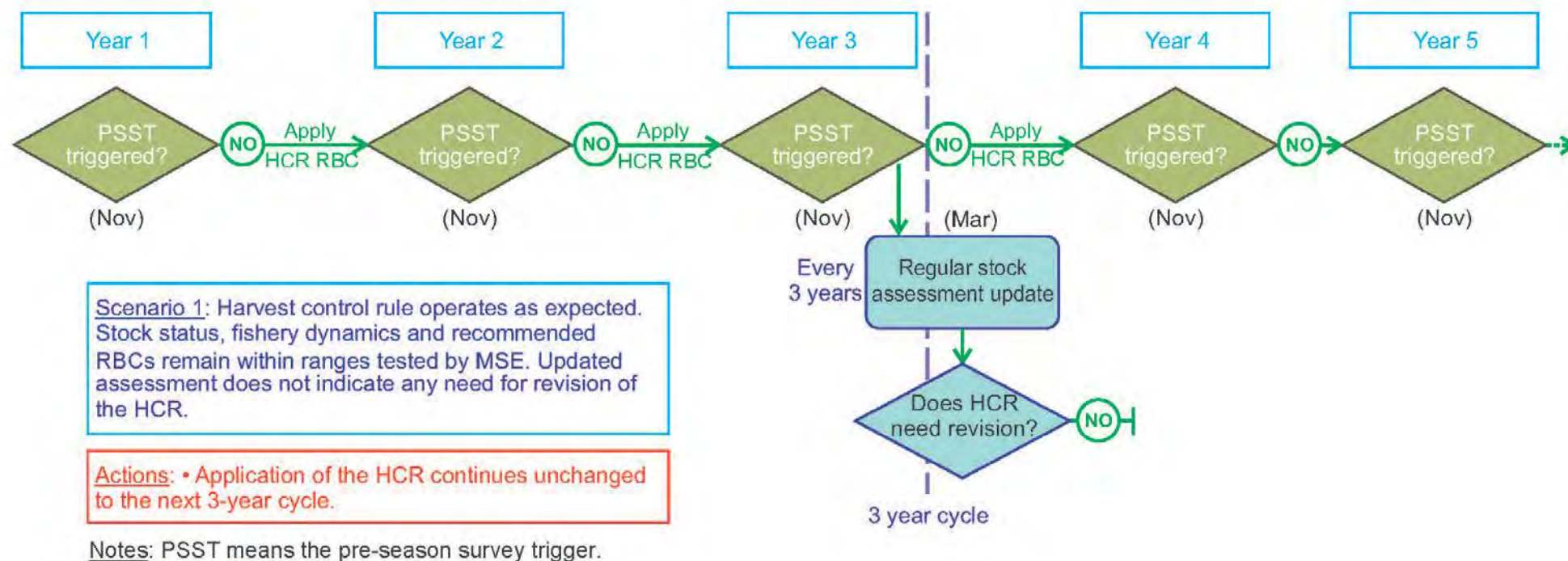


Figure 1. Torres Strait Tropical Rock Lobster Fishery decision rule scenario 1.

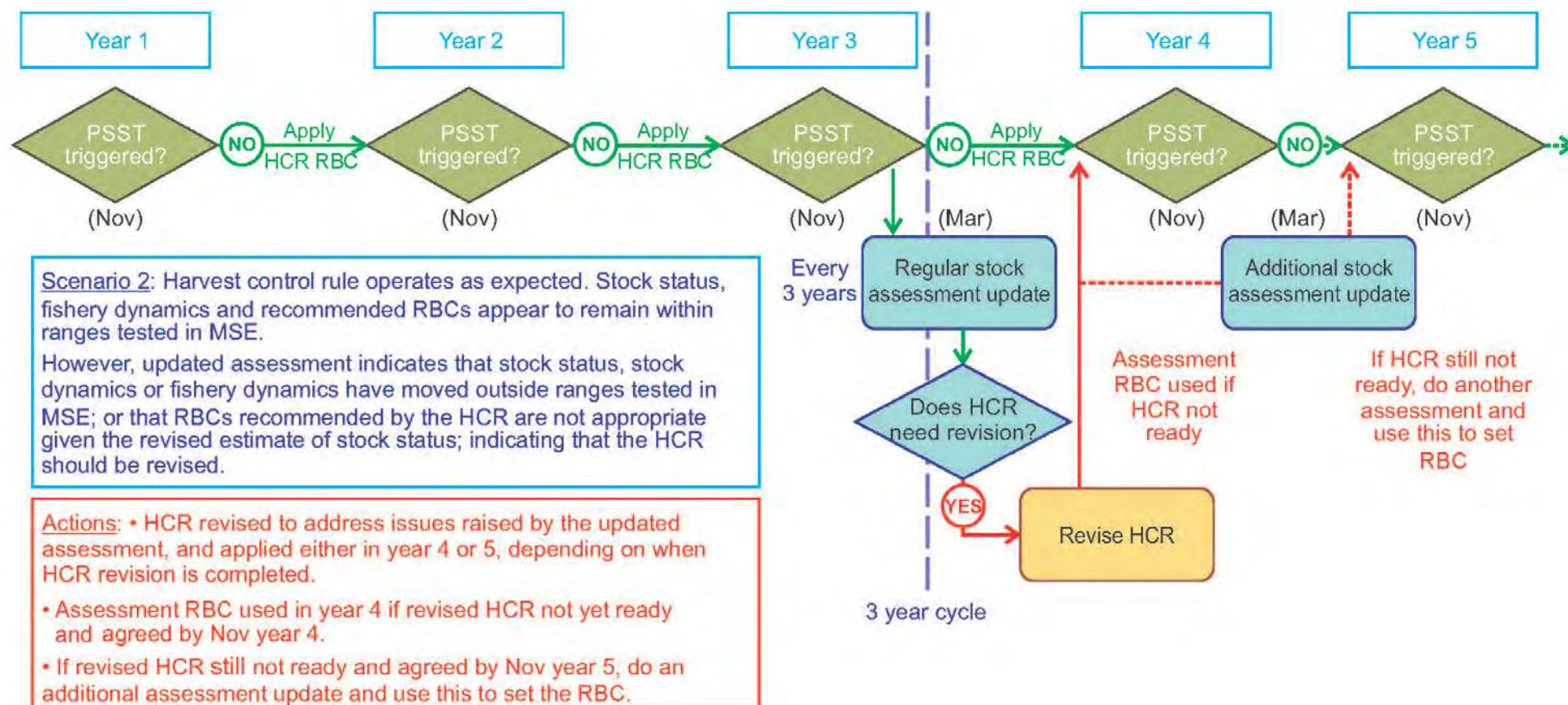
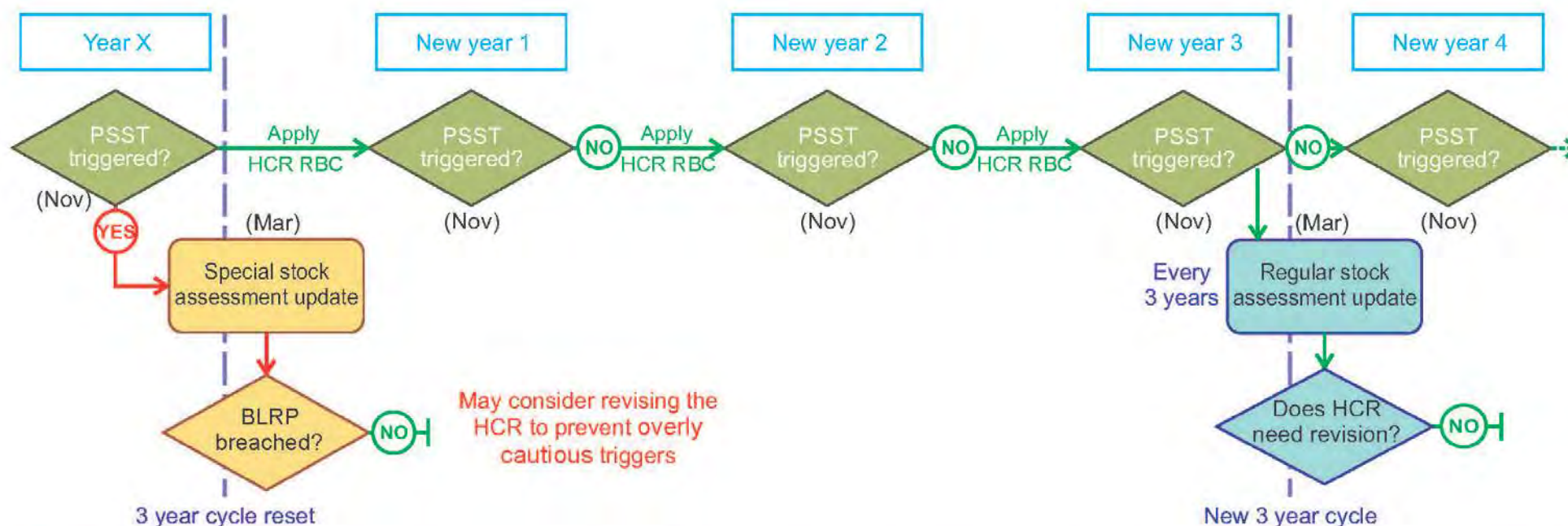


Figure 2. Torres Strait Tropical Rock Lobster Fishery decision rule scenario 2.



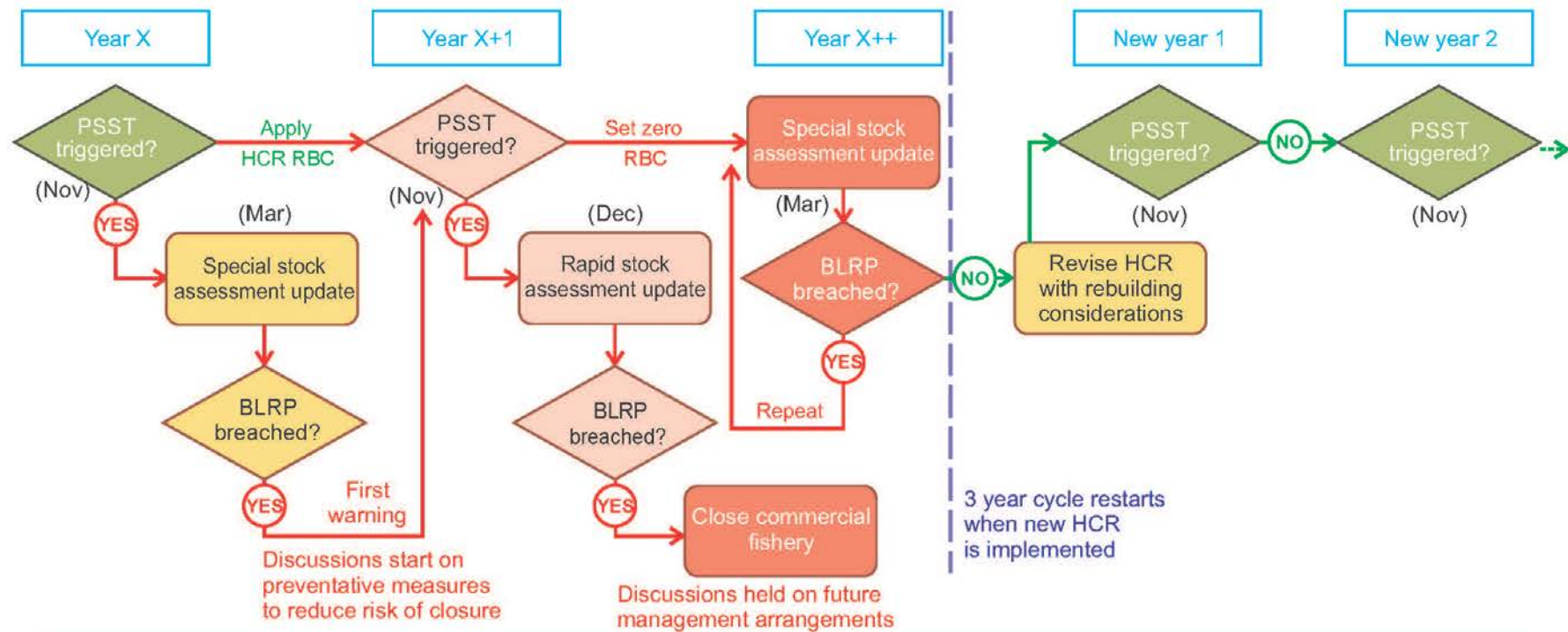
Scenario 3: Application of the HCR in a particular year results in the PSST being triggered, requiring a special assessment update to confirm whether the BLRP has been breached. However, this assessment update determines that the BLRP has not been breached.

Actions: *Application of the HCR continues unchanged, although consideration may be given to revising the HCR to prevent overly cautious triggering of the PSST (refer to Scenario 2).

• The three-year cycle is reset, postponing the next regular assessment update to retain the 3 year spacing between assessments, provided the PSST is not triggered again in that period.

Notes: PSST means the pre-season survey trigger. BLRP means biomass limit reference point.

Figure 3. Torres Strait Tropical Rock Lobster Fishery decision rule scenario 3.



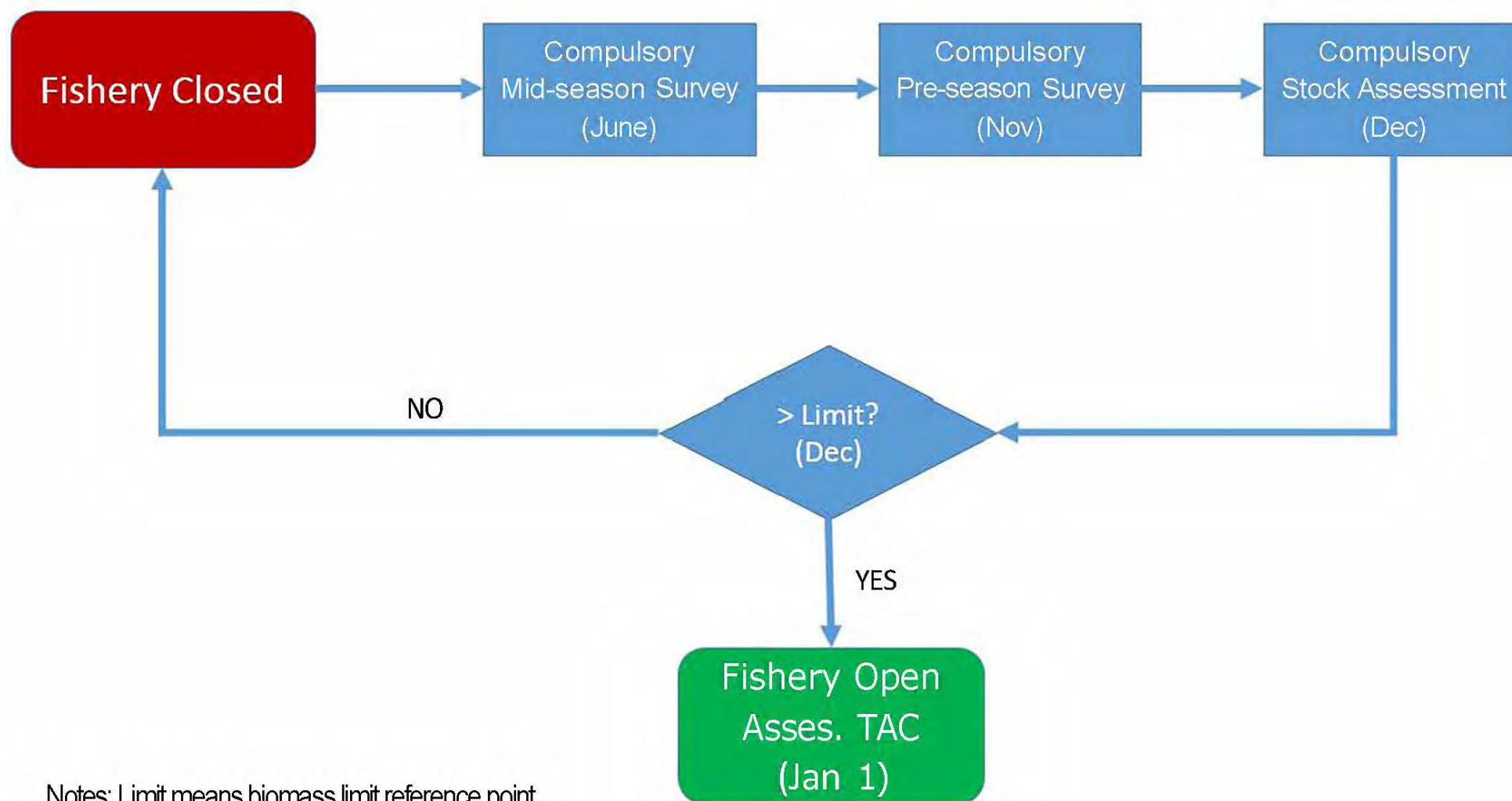
Scenario 4: Application of the HCR in a particular year results in the PSST being triggered, requiring a special assessment update to confirm whether the BLRP has been breached. Special assessment update confirms that the BLRP has indeed been breached. Application of the HCR the following year results in the PSST being triggered for the second successive year, requiring a second rapid assessment update to confirm whether the BLRP has been breached a second time. Assessment update confirms that the BLRP has been breached again. The commercial fishery is closed until an assessment update confirms that the stock has recovered to above the BLRP.

Actions:

- When it has been confirmed that the BLRP has been breached the first time, discussions will be held on preventative measures to reduce the risk of closure.
- If it is confirmed that the BLRP has been breached for a second year and that the commercial fishery must be closed, discussions will be held on future management arrangements to reduce the risk of future closures.
- If the fishery is closed, annual assessments will be done until an assessment update confirms that the stock has recovered to above the BLRP.
- Before being re-implemented, the HCR will be revised to reduce the risk of breaching the BLRP in future and to incorporate rebuilding requirements.

Notes: PSST means the pre-season survey trigger. BLRP means biomass limit reference point.

Figure 4. Torres Strait Tropical Rock Lobster Fishery decision rule scenario 4.



Notes: Limit means biomass limit reference point.

Figure 5. Torres Strait Tropical Rock Lobster Fishery closure and re-opening rule.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
RECOMMENDED BIOLOGICAL CATCH	Agenda Item 5 For discussion and advice

RECOMMENDATIONS

1. That the RAG:

- a. **NOTE**, on 27 August 2020, Senator the Hon. Jonathon Duniam determined a total allowable catch (TAC) of 200,000 kilograms of TRL in the Australian waters of the TRL Fishery for the 2020-21 fishing season.
 - i. It is expected that the TAC will be increased once the outcomes of the scientific assessment process and the TAC sharing arrangements under the Treaty between Australia and Papua New Guinea (PNG) have been taken into account.
- b. **CONSIDER** the recommended biological catch (RBC) estimates derived through the application of the empirical harvest control rule (eHCR) - to be presented by CSIRO (**Attachment 5a – pending**).
 - i. noting that the RBC covers the Torres Strait Protected Zone (TSPZ) (Australia and PNG).
- c. In accordance with the TRL Harvest Strategy (**Attachment 4b**), **DISCUSS** and **PROVIDE ADVICE** on a RBC for the 2020-21 fishing season.

KEY ISSUES

Start of season TAC

2. At its meeting on 27 August 2020, consistent with previous advice from the TRLRAG and TRLWG, the PZJA agreed for the TRL Fishery to have an interim TAC of 200,000 kgs (unprocessed weight) for the 2020-21 fishing season. Noting this, the Minister subsequently determined the TAC under section 13 of the *Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan 2018* (the Management Plan).
3. It is expected that the TAC will be increased once the outcomes of the scientific assessment process and the TAC sharing arrangements under the Treaty between Australia and PNG have been taken into account. Any increase in the TAC is expected to be determined by the end of February 2021. Further details on the expected timeline is provided at **Attachment 5b**.

Empirical Harvest Control Rule (eHCR)

4. The eHCR uses the pre-season survey 1+ and 0+ indices, both standardised catch per unit effort (CPUE) indices (TVH and TIB), applies the natural logarithms of the slopes of the five most recent years' data and includes an upper catch limit of 1,000 tonnes. The relative weightings of the eHCR indices are 70% pre-season survey 1+ index, 10% pre-season survey 0+ index, 10% TIB sector standardised CPUE and 10% TVH sector standardised CPUE. The eHCR includes a maximum catch limit of 1000 tonnes.
5. CSIRO have developed an eHCR RBC calculator to assist stakeholders in understanding how the eHCR works (**Attachment 5c**).

Recommended Biological Catch

6. The eHCR will be applied to provide RBC estimates for the 2020-21 fishing season.
7. The RAG is being asked to review CSIRO's application of the eHCR and in accordance with the TRL Harvest Strategy, provide advice on a RBC for the 2020-21 fishing season, with regard to:
 - a. section 2.10 Decision Rules of the TRL Harvest Strategy which provides that if in any year the pre-season survey 1+ index is 1.25 or lower (average standardised number of 1+ age lobsters per survey transect) it triggers a stock assessment.
 - i. Having regard to the pre-season survey results presented under Agenda Item 4, the pre-season survey trigger has not been triggered.
 - b. section 2.11 Decision Rule Scenarios of the TRL Harvest Strategy which provides that under Scenario 1 or 2, if the pre-season trigger has not been triggered, the RAG should consider whether the eHCR RBCs remain within the ranges tested by management strategy evaluation (MSE).
8. The RAG should also note that under the TRL Harvest Strategy, the stock assessment model is to be updated every three years and the most recent stock assessment was undertaken in 2019. Having considered the final 2019 stock assessment results at their meeting on 7 May 2020, TRLRAG 28 agreed that no revisions were to the eHCR were required.

BACKGROUND

TAC setting process

9. Under subsection 13 of the Plan, the Minister must determine a TAC for the TRL Fishery prior to the start of a fishing season. In making a TAC determination, the Minister must:
 - a. consult with any advisory committee that the PZJA has established under subsection 40(7) of the *Torres Strait Fisheries Act 1984*, to provide advice relating to the TRL Fishery; and
 - b. have regard to Australia's obligations under the Torres Strait Treaty.
10. Under section 13 the Minister may also consider the views of any person with an interest in the TRL Fishery or the ecologically sustainable use of the TRL Fishery and take into account the amount of TRL taken in the TRL Fishery as a result of other fishing, such as traditional fishing or recreational fishing.
11. Subsection 14 provides for the Minister to determine an increase to the TAC for a fishing season. Subsections 8-11 prescribe how a TAC is to be administered, including the issuing of a notice when the TAC for the Traditional Inhabitant sector has been reached.
12. Further background on the TAC setting process, how catch is shared between Australia and PNG, and how each sector's catches will be managed for the 2020-21 fishing season is provided in the Tropical Rock Lobster Fishery Management Arrangements Booklet 2020-21 available from the [PZJA website](#).

Start of season TAC

13. At its meeting on 18-19 October 2018, the TRLRAG advised that the start of season catch limit should cover 1 December through to the end of February, and be based on the maximum annual catch amount for the period 2005-2018, being 200 tonnes. This is to minimise the risk that the limit could artificially constrain fishing effort, particularly in a year of high TRL abundance.
14. The TRLRAG further advised that if needed, an additional 100 tonnes be added to the start of season catch limit amount, to account for catches from PNG.

15. It was further agreed that the start of season catch limit be overridden in seasons where the TRL stock abundance is exceptionally low and the final RBC is likely to fall below the start of season catch limit or where overridden by the Harvest Strategy decision rules. In such cases, the use of the start of season catch limit should not be used in subsequent seasons until reviewed by the TRLRAG.
16. The above approach was applied for setting the start of season TAC for the 2020-21 fishing season with no objections from the TRLRAG.

Expected timeline for finalising a total allowable catch (TAC) for the Australian Torres Strait Tropical Rock Lobster Fishery (TRL Fishery)

Key:

Scientific assessment and advice

PNG-Australia agreement

Administrative step for Australia

Steps	Description	Indicative timeline
Agree timeline and process	AFMA CEO and PNG NFA Director General to meet to agree on process for agreement on catch sharing arrangements for the Torres Strait Tropical Rock Lobster Fishery (TRL Fishery) for the coming fishing season.	22 July 2020
PNG and Australian catch and effort data compiled	Australian and PNG catch and effort data are compiled ¹ .	By 31 October 2020
Pre-season scientific survey	Survey data are collected and used to update TRL survey abundance indices used to calculate a recommended biological catch (RBC) ² . Survey must be conducted in November to provide comparable results overtime and the most accurate estimate of annual lobster recruitment into the fishery.	1-14 November 2020
Australian start of season TAC determined	Minister to determine a 200 tonnes start of season ³ TAC for the Australian TRL Fishery for the 2020-21 fishing season, as per section 13 of the <i>Torres Strait Fisheries (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan 2018</i> (the Plan) ⁴ . Start of season TAC based on advice received from TRLRAG and TRLWG in October-November 2018. TAC to apply to Australian TRL Fishery only.	Mid-November 2020

¹ These data are provided to CSIRO to update catch per unit effort indices used to calculate a recommended biological catch for the coming fishing season.

² A RBC is the total amount of TRL that can be sustainably taken out of the water by all fishers (commercial, traditional, recreational) each season, while leaving enough in the water to breed.

³ The Australian TRL Fishery fishing season runs from 1 December each year to 30 September the following year.

⁴ The Plan is accessible online at <https://www.legislation.gov.au/Details/F2018L01645>

RBC calculation	CSIRO to use empirical Harvest Control Rule (eHCR) to calculate a RBC. Every three years (starting in 2019), CSIRO to update and run the stock assessment model to evaluate the performance of the eHCR. Preliminary stock assessment results are usually available within 4-5 weeks of the pre-season scientific survey.	Late November through to early December 2020
TRL Resource Assessment Group (TRLRAG) and TRL Working Group (TRLWG) advice ⁵	TRLRAG to review the survey results, CPUE analyses and application of the eHCR. Advice provided on a final RBC. TRLWG to review TRLRAG advice. Advice provided on a final global TAC ⁶ . Every three years (starting in 2019), TRLRAG and TRLWG to consider preliminary results of stock assessment. Advice provided on finalising the assessment.	16-17 December 2020
PZJA agreement to final global TAC	PZJA to review TRLRAG and TRLWG advice and agree to final global TAC.	January 2021 (date of PZJA meeting to be confirmed)
Agree final global TAC, shares of the TAC, cross-endorsement apportionments and any preferential entitlements	AFMA CEO and PNG NFA Director General to meet to agree, as per the terms of the Torres Strait Treaty, on: <ul style="list-style-type: none">- a final global TAC as per article 23(2);- shares of the final global TAC as per article 22(1) (e.g. 15%:85% split);- cross-endorsement apportionments as per articles 23(4) and 25;- preferential entitlement to any unfished cross-endorsement apportionments as per article 25. An exchange of letters is required to formalise the agreement.	By 31 January 2021
Australian final TAC determined	Minister to determine a final TAC for the Australian TRL Fishery for the 2020-21 fishing season, as per section 14 of the Plan. TAC to apply to Australian TRL Fishery only.	By 28 February 2021

⁵ Officers from PNG NFA are invited to attend all PZJA advisory forums.

⁶ A global TAC is the total amount of TRL that can be sustainably taken out of the water by both Australian and PNG commercial fishers each season.

TRLRAG advice	Every three years (starting in 2019), TRLRAG to review the final stock assessment results. Advice provided on the need to review the eHCR and conduct a stock assessment in subsequent years, as per Harvest Strategy rules.	February/March
If relevant, submit any formal requests for cross-endorsement	<p>PNG and/or Australia to provide formal request to the other Party seeking cross-endorsement pursuant to article 26 of the Torres Strait Treaty. Request to include:</p> <ul style="list-style-type: none"> - a copy of the licence/s for which a Treaty endorsement is sought⁷; - a copy of any licence conditions in force for the licence/s; - boat particulars; - details for payment of applicable fees. <p>It will take approximately 6 weeks for Australia to complete the domestic processes to issue a Treaty endorsement/s⁸.</p>	By 31 March

⁷ For PNG licence/s, each licence needs to be current at the time of the formal request, valid for the period for which a Treaty endorsement is sought and have the same details as that written in the formal request, and valid in PNG for the same fishery as it is proposed to operate in Australian waters.

⁸ Australia's domestic process include requirements to undertake native title notification pursuant to sub-sections 24HA(2) and (7) of the Commonwealth *Native Title Act 1993*, which takes a minimum of 1 month, and to seek approvals to issue a Treaty endorsement/s.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
OTHER BUSINESS	Agenda Item 6 For discussion

RECOMMENDATIONS

1. That the RAG **NOMINATE** any further business for discussion.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG) Video conference	MEETING 30 16 December 2020
DATE AND VENUE FOR NEXT MEETING	Agenda Item 7 For discussion

RECOMMENDATIONS

1. That the RAG **NOMINATE** a date and a venue for the next meeting noting proposed meeting dates in the table below alongside key agenda items.

Date	Key agenda items
30-31 March 2020 (during a moontide closure)	TRLRAG Data Sub-Group (meeting 2) <ul style="list-style-type: none"> - Assess and identify improvements to fisher dependent data inputs to the Torres Strait TRL Fishery assessment framework - Consider draft data plan
May 2021	TRLRAG Data Sub-Group (meeting 3) <ul style="list-style-type: none"> - If required
May 2021	TRLRAG (meeting 31) <ul style="list-style-type: none"> - Consider any related intersessional work undertaken by CSIRO - Discuss research and data needs planning, including: <ul style="list-style-type: none"> • Consider Data Sub-Group meeting outcomes • As required, following the introduction of quota management system, develop a work plan to guide future CPUE standardisation work including identification of any additional information needs • Discuss research priorities and any updates to the five-year research plan.
15-16 December 2021	TRLRAG (meeting 32) <ul style="list-style-type: none"> - Consider results of the November 2021 pre-season survey - Consider CPUE analyses for the 2020-21 fishing season - Consider the recommended biological catch (RBC) estimates derived through the application of the empirical harvest control rule (eHCR) under the TRL Harvest Strategy and provide advice on a RBC for the 2021-22 fishing season - Consider intersessional work undertaken by CSIRO to develop a tiered harvest strategy