

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 Kulkagal, 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:

- a) 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 Kulkalgal 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.
- b) 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.
- c) 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.
- d) 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 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.

**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.

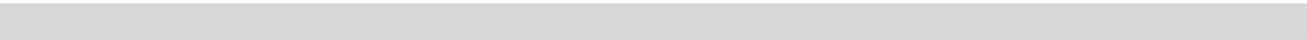
4 TRL DATA AND PRE-SEASON SURVEY CONSIDERATIONS

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.