

# Torres Strait Tropical Rock Lobster Resource Assessment Group Meeting 22

Meeting Record

27-28 March 2018

Thursday Island

Note all meeting papers and record available on  
the PZJA webpage: [www.pzja.gov.au](http://www.pzja.gov.au)



Australian Government

Australian Fisheries Management Authority

# Contents

Meeting participants .....	3
Members.....	3
Observers .....	4
1 Preliminaries .....	7
1.1 Apologies.....	7
1.2 Adoption of agenda .....	7
1.3 Declaration of interests .....	7
1.4 Action items from previous meetings.....	8
2 Updates from members .....	8
2.1 Industry and scientific .....	8
2.2 Government .....	9
2.2.1 Fish receiver update.....	10
2.2.2 TRL Fishery export approval.....	10
2.2.3 Legislative amendments update .....	10
2.3 PNG NFA .....	10
2.4 Native Title .....	10
3 2017/18 TRL catch and effort information.....	11
4 Finalising the stock assessment update and recommended biological catch .....	11
5 Data rules for using catch data reported in the Torres Strait Buyers and Processors Docket Book	15
6 TRL harvest strategy.....	16
7 Justification for a January season start date for the QLD East Coast TRL Fishery .....	16
8 Setting of hookah closures .....	17
9 Other Business .....	18
10 Date and venue for next meeting .....	18

## Meeting participants

### Members

Name	Position	Declaration of interest
Dr 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. No research projects in the Torres Strait. Full declaration of interests provided at <b>Attachment A</b> .
Dean Pease	AFMA Executive Officer	Nil
Selina Stoute	AFMA member	Nil
Charlie Kaddy	TSRA member (Fisheries Programme Manager)	Nil. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them
Tom Roberts	Queensland Department of Agriculture and Fisheries (QDAF) member	Nil
Dr Andrew Penney	Scientific member	Research consultant (Pisces Australis), member of other RAGs. No research projects in the Torres Strait
Dr Eva Plaganyi	Scientific member	Project staff for PZJA funded TRL research projects
Mark David	Industry member	Traditional Inhabitant Kulkalgal, TRLWG Industry member, Traditional Owner and TIB licence holder
Terrence Whap	Industry member	Nil. Traditional Inhabitant Maluialgal and Traditional Owner and TRLWG Industry member. Does not hold a TIB licence

Name	Position	Declaration of interest
Les Pitt	Industry member	Nil. Traditional Inhabitant Kemer Kemer Meriam and TRLWG Industry member
Phillip Ketchell	Industry member	Nil. Traditional Inhabitant Kaiwalagal, TRLWG Industry member, and Traditional Owner
Daniel Takai	Industry member	Pearl Island Seafoods, Tanala Seafoods and TIB licence holder
Dr Ray Moore	Industry member	Industry representative and Master Fisherman licence holder
Brett Arlidge	Industry member	General Manager MG Kailis Pty Ltd. MG Kailis Pty Ltd is a holder of TVH licences

## Observers

Name	Position	Declaration of interest
Alexander Morison	TRLWG Chair	No pecuniary or other interest in the Tropical Rock Lobster Fishery or any other Torres Strait fisheries Fisheries Consultant. Chair of SERAG and SharkRAG. Scientific member on SEMAC. Contracted by government departments, non-government agencies and companies for a range of fishery related matters including research and MSC assessments of AFMA managed and other fisheries (by SCS Global Services)
Sevaly Sen	TRLWG Fisheries Economist member	Nil interest in Torres Strait fisheries. Conducts various FRDC research projects relevant to AFMA fisheries
Allison Runck	TSRA observer	Nil. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them

Name	Position	Declaration of interest
Jerry Stephen	TSRA Deputy Chair, TSRA Member for Ugar and TSRA Portfolio Member for Fisheries	TIB licence holder and Traditional Owner
Patrick Mills	Chair of the Torres Strait Fisher's Association	TIB licence holder and Traditional Owner
Seriako Stephen	Representative for Malu Lamar (Torres Strait Islanders) Corporation Registered Native Title Body Corporate (RNTBC)	Nil
Sandie Edwards	Industry observer	Torres Straits Seafood Pty Ltd and buyer
Koro Samai	Industry observer	Fisher
Pala Rubu	Industry observer	Fisher
Yacoba Wena	Industry observer	Fisher
Ngukis Asse	Industry observer	Fisher
Dr Mark Tonks	CSIRO scientific observer	Project staff for PZJA funded TRL research projects
James Mills	Industry observer	TIB licence holder
Ted Whap	Industry observer	Fisher
Susamie Ketchell	Industry observer	Fisher
Kumi Bon	Industry observer	Fisher
Kumi Abua	Industry observer	Fisher
Karo Whap	Industry observer	Fisher
Muttie Assan	Industry observer	Fisher
Kevin Sabatino Snr	Industry observer	TIB licence holder and Traditional Owner
Thomas Nomoa	Industry observer	TIB licence holder and Traditional Owner
Thomas Mene	Industry observer	Fisher
Paul Ahmat	Industry observer	Fisher
Richard Takai	Industry observer	Fisher
Hideo Shibasaki	Industry observer	Fisher
Kevin Takai	Industry observer	Fisher
Kevin Sabatino Jnr	Industry observer	Fisher
Morgan Daniel	Industry observer	Fisher

Name	Position	Declaration of interest
Jack Bani	Industry observer	TIB licence holder and Traditional Owner
Natalie Couchman	AFMA observer	Nil
Steve Bolton	AFMA observer	Nil

**Notes:**

This list of observers may be incomplete as some observers attended at different times and some declined to complete the attendance form.

Napau Pedro Stephen (TSRA Chair) attended at the reopening of the meeting on the morning of 28 March 2018. Further details are provided under agenda item 1.2.

# 1 Preliminaries

---

## 1.1 Apologies

1. Mr Terrence Whap opened the meeting in prayer at 1:00 pm on 27 March 2018.
2. The Chair welcomed attendees to the 22<sup>nd</sup> meeting of the Torres Strait Tropical Rock Lobster Resource Assessment Group (TRLRAG22). The Chair acknowledged the Traditional Owners of the land on which the meeting was held and paid respect to Elders past and present.
3. Attendees at the RAG are detailed in the meeting participant tables at the start of this meeting record.
4. Apologies were received from Maluwap Nona (Chairperson, Malu Lamar (Torres Strait Islanders) Corporation RNTBC) and Aaron Tom (Industry member).

## 1.2 Adoption of agenda

5. The draft agenda was adopted without change (**Attachment B**). Agenda Items 1-4 were discussed on 27 March 2018. Agenda Items 4-10 were discussed on 28 March 2018.
6. On the morning of 28 March 2018, the Chair moved to open the meeting. A request was received for Mr Napau Pedro Stephen (Chairperson, TSRA) to provide a statement to the meeting prior to the commencement of meeting proceedings. The Chair granted this request. A summary of the statement made by Mr Stephen is noted for the record at **Attachment C**. Mr Stephen did not attend the remainder of the meeting and was not asked to declare conflicts of interest.

## 1.3 Declaration of interests

7. The Chair stated that as outlined in PZJA Fisheries Management Paper No. 1 (FMP1), all members of the RAG must declare all real or potential conflicts of interest in Torres Strait TRL Fishery at the commencement of the meeting. Given the number of meeting observers, it was decided it would be too time consuming to ask each participant to leave the room while a decision is made as to whether, for the relevant agenda items, they can participate in the discussion and in the making of recommendations, or remain absent from the meeting. The declarations of interests would be noted under each agenda item.
8. Declarations of interests were provided by each meeting participant. These are detailed in the meeting participant tables at the start of this meeting record.
9. Unrelated to this agenda item but noted for the record, an Industry observer, Mr Anthony Assan, made a statement regarding recent comments made by the TSRA Chairperson in the Torres News concerning 100% Traditional Inhabitant ownership of the TRL Fishery and the decision of the TSRA Board to lease out TVH licences in the Fishery in the 2017/18 fishing season. Mr Assan does not expect the ownership target to be reached. Further, Mr Assan expressed the opinion that some in the TIB sector do not support the leasing of the TVH licences as they feel it is putting more pressure on the TIB sector to compete.
10. The TSRA Portfolio Member for Fisheries advised the meeting that he would look to organise a meeting with Mr Assan and the TSRA Chair to discuss this matter following the RAG meeting. The Chair noted it was not a matter for the RAG to be considering. The TSRA Portfolio Member for Fisheries noted that TSRA is currently conducting consultation on the Community Management Framework.

## 1.4 Action items from previous meetings

11. The RAG noted the report provided by the Executive Officer advising of the status of actions arising from previous TRLRAG meetings (**Attachment D**).
12. With regards to Action Item 3, an Industry member raised concerns about Australian access to and quality of PNG catch data and whether any catch is being taken using trawl. The CSIRO Scientific member noted that at recent meetings with the PNG NFA there was some discussion and interest from the PNG NFA in undertaking a research project to survey catch landed in local PNG markets, noting there is uncertainty around PNG catches.

## 2 Updates from members

---

### 2.1 Industry and scientific

13. The RAG noted updates provided by Industry and Scientific members and observers on the recent performance and key issues affecting the TRL Fishery:
  - a. An Industry member reported that there had been no large change in the Fishery.
  - b. Another Industry member reported that compared to previous seasons, the 2017/18 season was fairly normal, if slightly below average, but not markedly so. Catches from December to February have been slightly higher than last season, but noting that last season was the poorest on record for them. The catches are coming from the West, more so than in previous season, but this may be driven by where fishers have chosen to operate and may not be a reflection of stock distribution. Sizes are what would be expected this season (average is less than 1.5 kg). The catch rates and sizes do not align with what is expected from the stock assessment.
  - c. The CSIRO Scientific member noted that the results of the integrated stock assessment have been finalised and will be presented at this meeting. The indices are showing lower recruitment than previous seasons. Some anecdotal reports are also supporting this conclusion.
  - d. Another Industry member reported that lobsters appear to be concentrated around Mabuiag island, with poor catches being experienced to the South East and around Thursday Island. The fishing around Mabuiag is concentrated about 8 nm off the island but is patchy. These fishing grounds have not fished well for a number of years, but have come good again this season. This may be attributed to sand incursions of past seasons clearing this season. Fishers are not seeing good numbers of 0+ nor 1+ lobsters on the Mabuiag fishing grounds.
  - e. Another Industry member reported that catches around Darnley island are slow (average of 10-20 kg of tails per fishing trip). In previous seasons there were more larger lobsters around.
  - f. An Industry observer reported that TVH fishers appear to be concentrated around Buru (Turnagain). There seems to be good number of larger lobsters (over 1.5 kg) around Mabuiag island.
  - g. Another Industry observer reported that catches around Tudu island have not been as good as they have in previous seasons, they have started slow and remained slow. Dungeness Reef is the same. The fleet is favouring the Western fishing grounds. Sizes are ok, about half are > 1 kg and half are < 1 kg.



- h. Another Industry observer reported that there is food on the grounds around Thursday Island, but the lobsters are in low numbers.
- i. An Industry member noted that it is unlikely that freshwater inflow would be affecting lobster numbers on the grounds. Around the outflow of the Fly River in PNG, lobsters have shown an ability to adapt their tolerance to freshwater. In past seasons, Deliverance Island had some very large lobsters and these may have migrated to the grounds around Mabuig island. Something similar may be occurring this season.
- j. An industry member noted that the catches from PNG are low but slightly higher than last season which was very poor. This is in the main due to a hookah closure being in place until 31 March 2018.

## 2.2 Government

14. The RAG noted an update provided by the AFMA member regarding management initiatives relevant to the TRL Fishery:

- a. Industry meeting - on 27 February 2018 AFMA held an industry meeting on Thursday Island. AFMA provided industry members information about the preliminary RBC and catch rates, explained the stock assessment process, explained the purpose of this RAG and the following Working Group meeting, to notify industry members that additional measures may be needed to regulate catch in the 2017/18 fishing season and to gather industry views.
- b. Draft TRL Management Plan - the TSRA has conducted further consultation with Traditional Inhabitant fishers about how quota allocations under a quota management system could be managed. Outcomes from this consultation as well as that on the draft TRL Management Plan and TRL Working Group advice will be tabled with the PZJA.
- c. Australia and PNG bilateral meeting - the Fisheries Committee met on 5 February 2018 and provided advice to the Joint Advisory Council (JAC). The JAC noted advice regarding the preliminary TRL RBC for the 2017/18 fishing season. The JAC also noted ongoing interest by the PNG prawn trawl industry to retain TRL and agreed that any departures from the current ban must be assessed in line with the Treaty. The JAC recognised the importance of the resource to Traditional Inhabitants noting that it is a shared stock and the potential for trawling to impact spawning migration pathways and biomass in the Torres Strait. PNG also agreed to provide data on catches. The AFMA CEO will be following up again with the NFA Managing Director on these matters.
- d. Australian National Audit Office (ANAO) - the ANAO has commenced a performance audit of Australian Government coordination arrangements in the Torres Strait. ANAO officers will be visiting the Torres Strait in April.

15. The RAG noted an update provided by the QDAF member regarding QDAF activities relevant to the management of the TRL Fishery:

- a. East Coast TRL Working Group – this group met for the first time since 2011 and will focus on developing a harvest strategy, to be implemented by 2020. The group will also review existing management arrangements.
- b. Catch to date – approximately 55 tonnes of the 195 tonnes TAC has been caught. Last season the TAC was reached by 1 July. Catch for the last month has slowed (3 tonnes in March) as the industry has decided to fish to higher market prices and catch per unit effort (CPUE) expected later in the season. The QDAF member advised that there is 5 tonnes allocated to the indigenous sector under indigenous fishing permits. The purpose of these permits is to provide the

opportunity for indigenous fishers to trial commercial fishing. In order to access more quota, fishers would need to purchase it. QDAF are currently reviewing the policy detailing access arrangements to the 5 tonnes indigenous sector allocation.

16. An industry member noted that the East Coast TRL Fishery is able to fish to higher market prices due to the certainty provided by quota.
17. The RAG noted an update provided by the TSRA member regarding TSRA activities relevant to the management of the TRL Fishery:
  - a. Fisheries Summit – planned for May 2018 to span 3 days. Further details to be provided closer to time but key fisheries projects and issues will be up for discussion as well as seeking nominations for Traditional Inhabitant positions on PZJA forums. These positions will be for a three-year term. AFMA will write to all licence holders with further details.
  - b. Audit of infrastructure and services – a draft report has been considered by the TSRA Board and the report will be finalised shortly. The report will be made public on the TSRA website, and made available at the Fisheries Summit.
  - c. Export and branding for Torres Strait seafood - a consultant has been engaged to assess the economic feasibility, regulatory requirements and infrastructure needs to export seafood directly from the Torres Strait and the potential value derived from creating a brand for Torres Strait seafood.
  - d. Separate licence entity – broad consultation has been conducted on a project looking at the establishment of a corporate entity separate from the TSRA to hold in trust and manage commercial fishing licences on behalf of Torres Strait communities. There is general support for the entity and TSRA now need to complete further work on legal and governance structures.

### **2.2.1 Fish receiver update**

18. In the interests of time, the RAG noted the update provided in the associated agenda paper as read.

### **2.2.2 TRL Fishery export approval**

19. In the interests of time, the RAG noted the update provided in the associated agenda paper as read.

### **2.2.3 Legislative amendments update**

20. In the interests of time, the RAG noted the update provided in the associated agenda paper as read.

## **2.3 PNG NFA**

21. This item was not discussed as the PNG NFA invited participant was not in attendance.

## **2.4 Native Title**

22. The RAG noted concerns raised by the representative for the Malu Lamar (Torres Strait Islanders) Corporation RNTBC. The Chairperson for Malu Lamar was an apology for the meeting. The Malu Lamar representative expressed concerns over the low RBC for the 2017/18 fishing season. The representative advised that the rights of Traditional Inhabitants to fish are protected under Article 10 of the Torres Strait Treaty and

prescribed in the objectives of the *Torres Strait Fisheries Act 1984*. The representative stated that what remains of the RBC needs to be allocated to Traditional Inhabitants.

### 3 2017/18 TRL catch and effort information

23. The RAG noted an update provided by the AFMA Executive Officer on catch and effort in the TRL Fishery for the 2017/18 fishing season to date:

- a. As reported through the new mandatory fish receiver system implemented on 1 December 2017, the total landed catch reported for the TRL Fishery from 1 December 2017 to 21 March 2018 is 81,688 kg (**Table 1**).
- b. There are outstanding catch disposal records (TDB02) for the period 1 to 21 March 2018. Therefore, the landed catch reported for the March period may be under-reported.
- c. AFMA is awaiting an update from the PNG National Fisheries Authority on catches to date for the PNG TRL Fishery.

Table 1: Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Torres Strait TRL Fishery for the period 1 December 2017 to 21 March 2018. Source: catch records from the Torres Strait Catch Disposal Record (TDB02).

Dates	TIB (kg)	TVH (kg)	Combined catch (kg)	Number of records
01/12/2017 to 31/12/2017	8,516.8	31.3	8,548.1	414
01/01/2018 to 31/01/2018	9,802.4	0.0	9,802.4	493
01/02/2018 to 28/02/2018	21,574.2	27,307.8	48,882.0	755
1/03/2018 to 21/03/2018	5,749.8	8,706.0	14,455.9	255
<b>Total</b>	<b>45,643.2</b>	<b>36,045.2</b>	<b>81,688.4</b>	<b>1,917</b>

### 4 Finalising the stock assessment update and recommended biological catch

24. The RAG noted a presentation provided by Dr Mark Tonks, CSIRO Scientific observer, detailing the results of the November 2017 pre-season survey. With regards to survey design, the RAG noted:

- a. Dive surveys were conducted at 77 sites using 500 x 4 m belt transects. These sites have been repeated over the last two years. At each site the number of lobsters is counted and seabed habitat assessed. Some of the sites occur in currently fished areas.
- b. Survey conditions were fair with good visibility and were similar to previous surveys. Noting this, weather is not considered to have impacted on the survey results.

25. The results of the survey show:

- a. 1+ lobster abundance index – 1.78 lobsters observed per transect. This is the lowest recorded for a pre-season survey, just 25% of the highest index in 2015. The index is the same as the 1998 mid-season survey and higher than the 2001 and 2005 mid-year surveys. Compared to previous surveys, it is looking similar to previous poor seasons.

- b. 1+ lobster abundance and distribution – low abundance around the Western survey sites (Thursday Island, Mabuiag, Buru (Turnagain)). The South East survey sites were up 250% from the 2016 survey. Distribution is similar to previous surveys but with an absence of 1+ lobsters around Buru.
  - c. 0+ lobster abundance index – lowest ever recorded, just 20% of the 2016 survey index.
  - d. 0+ lobster abundance and distribution – very low abundance around Mabuiag and Thursday Island and low across most other sites except the South East. The distribution is unusual compared to the 2016 survey.
  - e. Certainty - CSIRO are confident about the 1+ lobster results, with a little less certainty about the 0+ lobster results because 0+ lobsters are harder to see.
  - f. Size frequency – commercial size length frequency data provided by MG Kailis has been fairly consistent through time. However, the survey data is showing tail width size has decreased over the last 4 years.
  - g. Seabed habitat – the seabed habitat has remained relatively consistent through time (1994-2014), with a slight downwards trend in rubble and coral, and a slight increase in algae and seagrass. There was a coral bleaching event recorded in 2010. Sand cover has been relatively consistent with the Southern sites experiencing some sand incursions in 2015.
26. The RAG noted the number of survey sites has decreased through time (from 144 to 77 sites). The biggest decrease has been in the last 3 years. A drop in precision was seen with the removal of some Eastern sites, however the existing sites are considered representative of the TRL Fishery.
27. RAG members discussed the value in increasing the number of sites in subsequent years. It was noted that increasing the number of sites will reduce the standard error, however the trend of abundance will remain the same. The CSIRO Scientific observer advised that new sites would need to be randomly stratified and scaled on the basis of TRL stock distribution and previous surveys. Industry members suggested additional sites are needed at Warrior Reef. The RAG noted that there were more survey sites around Warrior Reef previously, and that surveys in this area may be able to indicate of any change to migration patterns.
28. The CSIRO Scientific member noted that tagging and larval convection studies look at developing a better understanding of the TRL life cycle and may assist in understanding if there have been any changes to migration patterns through time.
29. RAG members discussed the utility of a mid-season survey to provide better precision in survey results. The CSIRO Scientific member advised that:
- a. Pre-season surveys provide the best information about 1+ lobster abundance, but also provide abundance information on 0+ and 2+ lobsters.
  - b. Mid-season surveys provide good information on 2+ lobsters. In the absence of a mid-season survey, CPUE data is used as an indicator of 2+ lobster abundance. When conducted in the past, the mid-season surveys showed a strong correlation with the CPUE data.
  - c. Pre-season surveys are more important for setting a TAC for the following fishing season. A mid-season survey would give independent information about the spawning stock. The Independent Scientific member noted however, as there is not a stable relationship between the spawning stock and recruitment, it is not possible to predict recruitment from this information. It is better to survey those lobsters that have already recruited into the fishery, that being the 0+ and 1+ lobsters.

- d. Much remains uncertain as to where the sources of recruitment are for the TRL Fishery, the thinking is that there are many sources. Given this uncertainty, the TRL stock needs to be protected across its distribution.
30. In summary, the RAG noted that the November 2017 pre-season survey showed the lowest level of 1+ (high certainty) and 0+ (less certainty) lobsters in the TRL Fishery's history of pre-season surveys. This is the main factor causing the reduction of the RBC for the 2017/18 fishing season.
31. The RAG noted a presentation, titled *Draft Updated 2017 Integrated Stock Assessment to provide management advice on the Torres Strait rock lobster fishery*, provided by Dr Eva Plaganyi, CSIRO Scientific member, detailing the results of the updated integrated stock assessment and RBC calculations. The RAG noted the integrated stock assessment takes into account:
- a. Data from pre-season surveys – last 8 years, including that conducted in November 2017;
  - b. Data from mid-year surveys – 1989-2014;
  - c. Catch and effort information – TIB and TVH;
  - d. Length frequency information – Australia and PNG;
  - e. Historical information;
  - f. Environmental information.
32. The RAG noted catch data for the period 1973-2017 and in particular 2017 catch against the RBC: Traditional Inhabitant Boat sector 106.4 tonnes; Transferable Vessel Holder sector 149 tonnes; PNG 113 tonnes. This accounted for 74% of the 495 tonnes RBC.
33. Industry observers requested further details on the TRL life cycle. The RAG discussed the TRL life cycle as presented by the CSIRO Scientific member (**Attachment E**). The life cycle that was presented is general in nature and it was noted that there will be exceptions. In the Western Torres Strait, females walk East to PNG in August-September and don't return. In the Eastern Torres Strait female lobsters walk out to deeper water and then return. The same is thought to occur in the East Coast TRL Fishery. Lobsters spawn and recruit within the Coral Sea gyre. The TRL larval phase lasts approximately 6 months.
34. The RAG discussed possible explanations for the low abundance of TRL around Thursday Island. The CSIRO Scientific member advised that the research shows TRL do not migrate far once settled in the Torres Strait, until they migrate to spawn. An Industry member noted that there have been some historical observations of 1+ lobsters moving from the Northern area of the East Coast TRL Fishery into the Torres Strait, but strong evidence for this is not available. Recruitment in the Torres Strait is primarily through the settlement of juvenile lobsters. As such it is unlikely that TRL settled in the East Coast TRL Fishery migrate to the Torres Strait.
35. The RAG noted a summary the survey cycle (**Attachment F**).
36. The RAG noted the model used is an age-structured production model (ASPM) which integrates all available data and fits that data to calculate an RBC. The outputs of the model show:
- a. Abundance of TRL in each age class (0+, 1+ and 2+) – all age classes are lower than previous years. Model does not fit 0+ lobsters as the variability of the data is high.
  - b. CPUE – the trend is down for 2017. This trend was also seen in other poor years (2004, 2008, 2011). If there are not a lot of 1+ lobsters growing into fishable size, then should see a drop in CPUE around March-April 2018. TRL generally reach legal size at 22 months, they are generally 18 months old at the time of the pre-season survey each November.

- c. Stock-recruitment residuals – recruitment in 2016 and 2017 is worse than average. There have been poor recruitment years in the past, but not for two consecutive years.
37. The RAG discussed the implications of the low abundance of 0+ and 1+ lobsters for the 2017/18 fishing season. 1+ lobsters surveyed during the November 2017 pre-season survey will grow out to fishable size around March/April 2018. 0+ lobsters will grow out to fishable size a year later in March/April 2019. If the abundance of 1+ lobsters is as low as the survey indicates, then fishing mortality for the 2017/18 fishing season needs to be decreased to allow for a sufficient spawning stock for subsequent seasons. A similar issue may arise for the 2018/19 fishing season, given the low abundance of 0+ lobsters during the pre-season survey, though there is less certainty around the estimates of abundance for this age class.
38. The CSIRO Scientific member advised that where there are low abundances of 1+ and 2+ lobsters, concentrations or 'hot spots' would be expected. There would not be high abundances spread across the fishery as has occurred in past years.
39. The RAG noted that the 2+ lobsters being caught now are likely larger males left over from the previous year. This is borne out by the length frequency data. It is expected that when the 2+ lobsters are mostly caught, which they generally are during a season, there will be a drop in CPUE as they are replaced by a low abundance of 1+ lobsters.
40. The Independent Scientific member advised that they have reviewed the results of the November 2017 pre-season survey and the outputs of the model and has confidence in the findings.
41. The RAG discussed the CPUE data in further detail (**Attachment G**):
- December 2017 and January 2018 CPUEs are higher than in recent years. February 2018 is looking to be on a par with the long-term average, maybe slightly lower. The effort for the TVH sector in 2018 is not particularly high compared to past years.
  - The Chair noted that the effort information collected in catch disposal records may not always be accurate, for example in many cases dive hours are not recorded and fishing days where there has been zero catch or low catch may not be recorded. Given this, any trends extrapolated from this data may be impacted. There is also a need to update the CPUE standardisation with regards to fishing patterns and efficiency.
  - An Industry member noted that if the survey is correct, and noting that in the past there has been a strong correlation between the survey results and CPUE data, then it should be expected that the CPUE will drop markedly and as such are less likely to reach the Australian catch share of the RBC.
  - Another Industry member noted that in order to get the best outcome for the Fishery and the industry this season, the fishers themselves have a responsibility to come together to participate in and support the making of decisions.
42. In summary, the RAG noted that the CPUE data for the 2017/18 season to date has not contradicted the results of the November 2017 pre-season survey nor the outputs of the integrated stock assessment.
43. Taking into consideration all of the above, the RAG recommended a final RBC for the 2017/18 of 299 tonnes for Australia and PNG inclusive.

### **Recommendation 1**

**The RAG recommended a final RBC for the 2017/18 of 299 tonnes for Australia and PNG inclusive.**

44. With reference to FMP1, the RAG discussed the attendance of the large number of observers at the meeting, noting some were wearing protest shirts and the majority were in attendance without seeking the prior agreement of the Chair. The RAG noted that while observers are generally welcome to attend RAG meetings to observe the proceedings, their presence in large numbers, particularly at this meeting, may have had the potential to inhibit or disrupt members from freely contributing to discussions and recommendations. The Chair also noted that Agenda Item 5 involved fine-scale examination of individual fisher's catch and effort data. It was not considered appropriate that observers had access to this information. On this basis, the Chair thanked observers for the time taken to attend the meeting and advised that the next session of the meeting would be closed to observers.
45. Following observers leaving the meeting the members discussed the implications of having such a large group of observers at a meeting and whether it impacted on members' comfort in providing advice to the RAG. Members considered it was generally (two-way) a positive role that observers played in the RAG and that although there were large numbers at this meeting, they did not disrupt the meeting or behave in a manner inconsistent with the standard of behaviour expected under FMP1. It was noted that many of the observers, however, had not sought permission from the Chair to attend and that this should be addressed in the future. Members agreed that, in general, they would be comfortable with observers continuing to attend the meetings.

## **5 Data rules for using catch data reported in the Torres Strait Buyers and Processors Docket Book**

---

46. RAG members discussed data rules for the use of TRL catch data reported in the Torres Strait Buyers and Processors Docket Book (TDB01). The RAG noted:
- a. The TDB01 was used in the TRL Fishery principally to record the catch and effort for fishers operating in the TIB sector of the fishery. The TDB01 was replaced on 1 December 2017 by the mandatory Torres Strait Catch Disposal Record (TDB02);
  - b. Catch from the TRL Fishery is also reported through the Torres Strait Tropical Rock Lobster Fishery Daily Fishing Log (TRL04). Catch sold between processors can also be recorded in the TDB01. This can create duplicate catch records making it difficult to accurately determining the true catch taken by the TIB sector of the fishery.
  - c. A number of mechanisms have been introduced in an attempt to reduce duplicate catch records, however a number of uncertainties still remain, including:
    - i. The TDB01 "related-logs" field identifies if the catch has been reported elsewhere (e.g. TRL04). If the fisher or processor does not complete this field, duplicate records may not be identified.
    - ii. The TDB01 "seller-type" field identifies the fisher by name/entity. This can be used to identify between TIB and TVH fishers. Seller names are often not included, misspelt or a nickname is used reducing the utility of this field.
    - iii. The TDB01 "vessel-type" field is used to indicate whether the vessel-symbol detailed in the TDB01 corresponds to a vessel listed in the TVH database.
  - d. The recommended data rules are proposed to assign TDB01 records with unknown or missing information to either the TIB sector, TVH sector or as processor-to-processor trading.

47. The RAG agreed to adopt the data rules provided at **Attachment H**.

**Recommendation 2**

**The RAG agreed to adopt the data rules provided at Attachment H.**

## **6 TRL harvest strategy**

48. The RAG noted an update provided by the AFMA member regarding the Harvest Strategy for the TRL Fishery:

- a. The TRLWG considered the draft TRL Harvest Strategy at its meeting on 25-26 July 2017.
- b. The WG recommended that further work be undertaken by the WG and RAG to examine possible options for including social and/or economic objective in the draft harvest strategy and applying a management trigger under the harvest strategy as the stock approaches the limit reference point to minimise the impacts on traditional inhabitant commercial fishers.

49. The RAG was asked to advise on the likely:

- a. Data and assessment requirements to support the proposed management trigger;
- b. Impediments, if relevant, to meeting the data and assessment requirements; and,
- c. Costs of any new data and assessment requirements.

50. The RAG agreed that a management trigger can be included that results in alternative management and catch sharing arrangements. However, the trigger level itself and proposed management response needs to be identified by the WG before the RAG can provide advice about how the Harvest Strategy should be modified to accommodate it. The RAG discussed that:

- a. Social and economic limits are often based on tonnage and not % biomass. Biomass based triggers are difficult to monitor and it is not practical for the TRL Fishery given the limitations of available data.
- b. Triggers that result in management changes part way through a season are complex to administer and require real time data and analysis which is expensive for the fishery. In the TRL Fishery in-season adjustments would be difficult under the current inputs.
- c. If a new trigger is incorporated, the Harvest Strategy would need to undergo management strategy evaluation (MSE) testing. This is a costly exercise.

51. The RAG endorsed the draft TRL Harvest Strategy and recommended the WG further discuss and provide the RAG with details on the trigger level and proposed management response.

**Recommendation 3**

**The RAG endorsed the draft TRL Harvest Strategy and recommended the WG further discuss and provide the RAG with details on the trigger level and proposed management response.**

## **7 Justification for a January season start date for the QLD East Coast TRL Fishery**

52. The RAG noted a summary provided by the QDAF Member regarding the 1 January season start date for the East Coast TRL Fishery:



- a. In 2014, QDAF changed the end date of the East Coast TRL Fishery's spawning closure from 31 January to 31 December. The start date of the spawning closure 1 October remained unchanged.
  - b. The amendment to the closure date did not remove the closure over the peak spawning months of October-December, but reduced the length of the closure to allow industry to take advantage of a period of high demand in January.
  - c. The limited data available indicates the peak spawning period for the East Coast TRL Fishery occurs in November and in deep water. The closure starts and finishes one month either side of the peak spawning period. Fishers are also restricted to shallower waters reducing their interactions with spawning lobsters in deep water. If spawning lobsters are encountered at any time whilst the fishery is open there is total protection on the take of berried and tar spot lobsters. A total allowable catch (TAC) also restricts the level of catch.
  - d. Advice from CSIRO TRL scientists at the time of the change was supportive in bringing forward the start date of the new season to 31 December considering the East Coast TRL Fishery is managed under a TAC and the peak spawning period is in November.
  - e. The Torres Strait TRL Fishery spawning closure is slightly different to the East Coast TRL Fishery with a closure from 1 October to 30 November and then a prohibition on the use of hookah gear from December-January.
53. The CSIRO Scientific member reinforced that there are no concerns about a season opening in January, as peak spawning occurs November in deeper water. This change is not considered to affect the Torres Strait TRL Fishery.
54. The RAG noted advice from some Industry members that there is little evidence that larger lobsters migrate from the East Coast to the Torres Strait. Therefore, it is considered to be minimal impact from this spawning closure on the Torres Strait. There is anecdotal evidence that 1+ lobsters migrate from the Northern area of the East Coast into the Torres Strait. But these lobsters would be undersize and only grow to a fishable size later in the fishing season.
55. The RAG noted that historically TIB fishers had access to areas of the East Coast TRL Fishery. It was advised that concerned fishers raise this matter with QDAF directly.
56. The QDAF member advised that they are seeking an indigenous member for their East Coast TRL Fishery and have sought nominations including from relevant native title bodies. No nominations have been received to date.

## 8 Setting of hookah closures

57. The RAG noted a proposal from the TSRA Portfolio Member for Fisheries regarding the setting of moon-tide hookah closures for the TRL Fishery. It was proposed that:
- a. A second hookah closure period be implemented each month in the TRL Fishery for the remainder of the 2017/18 fishing season, effective from 13 April 2018.
  - b. Consideration be given prior to each fishing season as an additional effort control in years with a recommended biological catch set below historical catch averages.
58. The RAG noted that moon-tide hookah closures were originally introduced in 2005 as a temporary measure as a way to reduce fishing effort to levels recorded in 2002. This was at a time when the TRL Fishery was considered to be subject to overfishing. In 2013 the closures were removed following a buy-out of TVH licences. They were again reintroduced for the 2014/15 fishing season following agreement from both the TIB and TVH sectors.

59. It was highlighted that any changes in fishery management during 2018 to respond to the low TAC, could impact on or bias CPUE as an index of abundance for input into the next assessment or a harvest strategy.
60. The CSIRO Scientific member noted that a second hookah closure period would slow the rate of fishing which would prolong fishing and support the continuity of CPUE data for a longer period. This would be important particularly in a year where the fishery may close early as having continuous CPUE throughout a fishing season is important for informing calculations on spawning biomass.
61. The RAG recommended the proposal be put forward to the WG for further consideration.

#### **Recommendation 4**

**The RAG recommended the proposal from the TSRA Portfolio Member for Fisheries regarding the setting of moon-tide hookah closures for the TRL Fishery be put forward to the WG for further consideration.**

## **9 Other Business**

---

62. There was no other business raised by members.

## **10 Date and venue for next meeting**

---

63. The RAG noted that the next meeting is tentatively scheduled for December 2018, with a date to be decided out of session.
64. The meeting was closed in prayer at 12:00pm on 28 March 2018.

**Declaration of interests**  
**Dr Ian Knuckey – April 2018**

**Positions:**

- Director – Fishwell Consulting Pty Ltd
- Director – Olrac Australia (Electronic logbooks)
- Chair / Director – Australian Seafood Co-products (seafood waste utilisation)
- Chair / Director – ASCo Fertilisers (seafood waste utilization)
- Chair – Northern Prawn Fishery Resource Assessment Group
- Chair – Tropical Rock Lobster Resource Assessment Group
- Chair – Victorian Rock Lobster and Giant Crab Assessment Group
- Scientific Member – Northern Prawn Management Advisory Committee
- Scientific Member – SESSF Shark Resource Assessment Group
- Scientific Member – Great Australian Bight Resource Assessment Group
- Invited scientific participant – SEMAC, SERAG

**Current / Recent Projects and funding:**

- Principal Investigator – FRDC Project 2017-069 Indigenous Capacity Building
- Principal Investigator – VFA Project 17-646976 – Ocean Scallop Biomass Survey – 2018
- Principal Investigator – FRDC Project 2017/122 - Review of fishery resource access and allocation arrangements across Australian jurisdictions
- Principal Investigator – FRDC Project 2016/116 - 5-year RD&E Plan for Northern Territory fisheries and aquaculture
- Principal Investigator – AFMA Project 2017/0803 - Analysis of Shark Fishery Electronic Monitoring data
- Principal Investigator – AFMA Project 2017/0807 - Resource Survey of the Great Australian Bight Trawl Sector – 2018
- Principal Investigator – AFMA Project 2016/0809 – Improved targeting of arrow squid
- Principal Investigator – AFMA Project 2018/08xx – Bass Strait and Central Zone Scallop Fishery – 2018 and 2019 Survey
- Principal Investigator – DPIPWE Project – Review of abalone dive rates
- Principal Investigator – FRDC Project 2015/204 – Realising economic returns of reducing waste through utilization of bycatch in the GAB Trawl Sector of the SESSF
- Principal Investigator – FRDC Project 2014/203 – Review of Monitoring and Assessment in the SESSF
- Principal Investigator – AFMA Project 2014/0809 – Fishery Independent Survey of shelf resources in the Great Australian Bight Trawl Fishery 2017
- Principal Investigator – Survey for Black teatfish in the Queensland Sea Cucumber Fishery.
- Principal Investigator – CRC Project 2013/748.40 – Improved understanding of economics in fisheries harvest strategies.
- Principal Investigator – FRDC Project 2014/207 – The social drivers and implications of conducting an ecological risk assessment of both recreational and commercial fishing - a case study from Port Phillip Bay
- Co-Investigator – Optimising processes and policy to minimise business and operational impacts of seismic surveys on the fishing industry and oil and gas industry.
- Co-Investigator – FRDC Project 2017/014 – SA Marine Scalefish Review
- Co-investigator – AFMA Project - SESSF 2018 Fishery Independent Survey

- Co-investigator – Bird mitigation in the SESSF trawl sector
- Researcher – Various fishing industry liaison projects for oil and gas industry
- Scientific Advisor – Atlantis, GABIA, Gulf St Vincent Prawn Fishery, Seafish JV, SETFIA, SSIA
- MSC Auditor – Falklands Is 2016 Surveillance Audit (Acoura), Macquarie Is Toothfish (SCS)
- Facilitator – WWF shark traceability workshop
- Facilitator – SPC Tuna Data Collection Committee
- Facilitator – Indonesian fishery training and development

**Current / Recent Clients (>\$5000):**

- ABARES
- Acoura
- Atlantis Fisheries Consulting Group
- Australian Fisheries Management Authority (AFMA)
- CRC – Seafoods
- Department of Agriculture and Water Resources
- Department of Primary Industry - Victoria
- Dept. Primary Industry, Parks Water and Environment (DPIPWE) Tasmania
- Fisheries Research and Development Corporation (FRDC)
- Great Australian Bight Fishing Industry Association (GABIA)
- Gulf of St Vincent Prawn Boat Owners Association
- Monash University
- NT Fisheries
- Richey Fishing
- South Australian Rock Lobster Advisory Council (SARLAC)
- SARDI Aquatic Sciences
- SCS Global Services
- Seafood Industry Victoria
- Seafish JV
- SeaFresh
- Secretariat of the Pacific Community
- South East Trawl Fishing Industry Association (SETFIA)
- Southern Shark Industry Alliance (SSIA)
- Tasmanian Seafoods
- Victorian Fisheries Authority
- Western and Central Pacific Fisheries Commission
- World Wildlife Fund – Australia (WWF)

**TORRES STRAIT TROPICAL ROCK LOBSTER  
RESOURCE ASSESSMENT GROUP (TRLRAG) MEETING #22  
TUESDAY 27 March 2018 1:00PM-5:30PM  
WEDNESDAY 28 March 2018 8:30AM-12:00PM  
THURSDAY ISLAND, TSRA CONFERENCE ROOM**

**AGENDA**

1. Preliminaries
  - 1.1. Apologies
  - 1.2. Adoption of agenda
  - 1.3. Declaration of interests
  - 1.4. Action items from previous meetings
2. Updates from Members
  - 2.1. Industry and scientific
  - 2.2. Government
    - 2.2.1. Torres Strait Fisher Receiver System
    - 2.2.2. TRL Fishery Strategic Assessment
    - 2.2.3. Torres Strait legislative amendments
  - 2.3. PNG-NFA
  - 2.4. Native Title
3. 2017/18 TRL catch and effort information
4. Finalising the stock assessment update and recommended biological catch
5. Data rules for using catch data reported in the Torres Strait Buyers and Processors Docket Book
6. TRL harvest strategy
7. Justification for a January season start date for the QLD East Coast TRL Fishery
8. Setting of hookah closures
9. Other Business
10. Date and venue for next meeting

## Summary of the statement made by Napau Pedro Stephen to the TRLRAG on 28 March 2018

Key points made by Napau Pedro Stephen:

- Noted the low recommended biological catch (RBC) of 299 tonnes for the Torres Strait TRL Fishery for the current season (2017/18 fishing season).
- Mr Stephen acknowledged that the TRL Resource Assessment Group (RAG) and Working Group are the appropriate bodies through which advice needs to be provided about the management of the TRL Fishery this season.
- The TSRA Board are of the view that in making decisions about the management of the TRL Fishery this season, noting aspirations for 100% ownership of Torres Strait fisheries, the benefits of any such decisions need to go to the Traditional Inhabitants of the Torres Strait.
- Mr Stephen has requested an urgent meeting with the Commonwealth and Queensland Ministers to discuss the outcomes of the meeting. Mr Stephen will represent the interests of Traditional Inhabitant fishers at this meeting.
- Mr Stephen's message to the meeting with Ministers will be that, in light of a low RBC, it should not be on Traditional Inhabitants to sacrifice this season. Traditional Inhabitant fishers from day dot have sacrificed to ensure the stock is sustainable. The TRL Fishery is critical in providing livelihoods for Traditional Inhabitants across the Torres Strait, and it is under threat this season. The only choice many Traditional Inhabitant fishers will have if the TRL Fishery is closed will be the Community Development Programme (CDP). This is no choice. Future decisions about the management of the TRL Fishery need to be made to the benefit of Traditional Inhabitants.
- Mr Stephen made himself available to any fishers that would like to meet with him.
- Mr Stephen noted that both the Management Plan and Harvest Strategy for the TRL Fishery had yet to be finalised. Regardless, action is needed now and this action needs to benefit Traditional Inhabitants.
- Traditional management of the TRL stock has been historically practised. These practices are in line with the science in ensuring that effort on the stock is controlled so the sustainability of the stock is not negatively impacted. The science does not tell us anything new regarding the management of the TRL stock.
- Mr Stephen noted that the TSRA Portfolio Member for Fisheries (and TSRA Deputy Chair), in attendance at the meeting, speaks for the TSRA Board. Mr Stephen requested AFMA consider the appointment of TSRA Portfolio Member for Fisheries as a member of the TRLRAG.
- There are already tensions between Traditional Inhabitant fishers and TVH fishers out on the fishing grounds and no one wants to see these tensions inflamed and ending up in front of the Court.

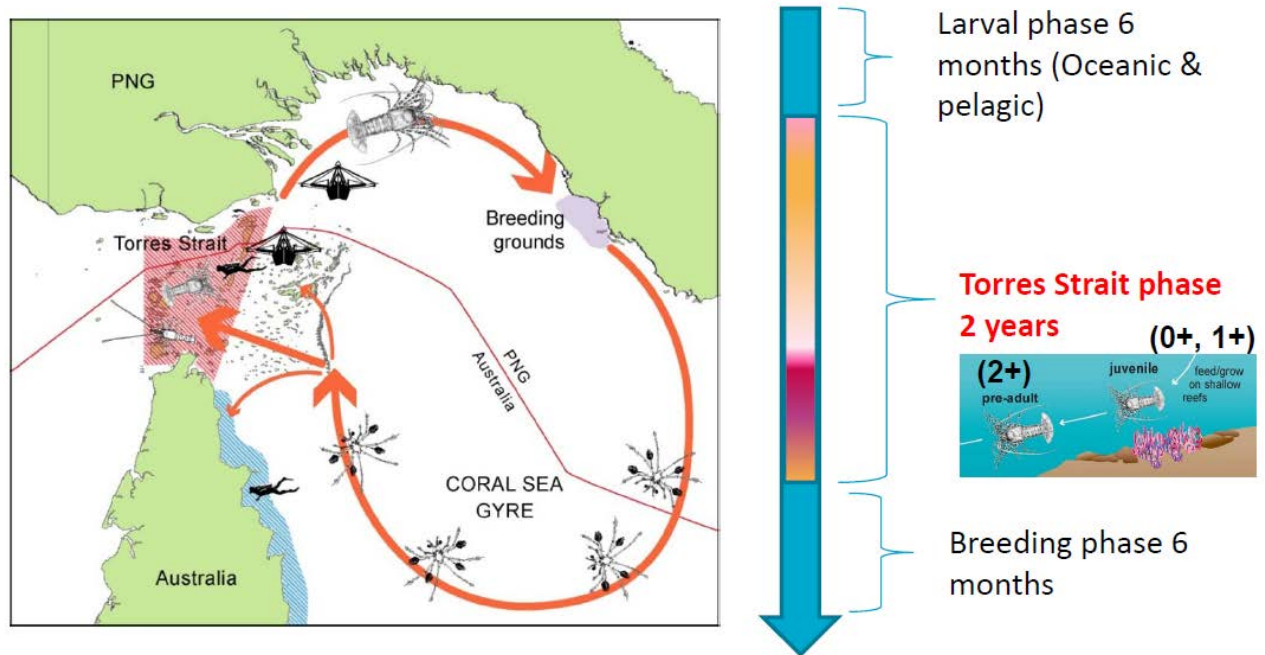
## Action items from previous meetings

#	Action Item	Agenda	Agency	Due Date	Status
1.	<p>AFMA to review the effectiveness of certain TIB licensing arrangements (in its 2016 licencing review) including:</p> <ul style="list-style-type: none"> <li>TIB licenses should share a common expiry date</li> <li>licences to last for longer than the current 12 month period.</li> </ul>	TRLRAG14	AFMA	2017	<p><b>Ongoing</b></p> <p>AFMA has begun undertaking a review of licensing of Torres Strait Fisheries, this issue will be considered as part of this review. At present however, AFMA resources are focused on progressing the proposed legislative amendments as a matter of priority.</p>
2.	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	AFMA CSIRO	TRLRAG17	<p><b>Ongoing</b></p> <p>AFMA to complete further work. This has been difficult to action ahead of other priorities for the TRL Fishery.</p>
3.	AFMA to prepare a summary of evidence that PNG trawl-caught TRL are a shared stock between Australia and PNG, including details such as the TRL biological characteristics, larvae dispersal, tag recapture data and catch and effort information. AFMA will circulate the paper to the RAG	TRLRAG19	AFMA		<p><b>Ongoing</b></p> <p>AFMA sent a letter to PNG NFA outlining concerns of trawlers retaining TRL on 8 March 2017.</p> <p>AFMA presented the key findings of the CSIRO larval advection model at the Fisheries Bilateral meeting held in Port Moresby on 5 February 2018. The bilateral meeting noted that the findings show the Australian and PNG TRL fisheries are based on a single stock.</p> <p>AFMA and CSIRO (Dr Plaganyi) met with PNG NFA officials, including the NFA Managing Director, John Kasu on 7 February 2018 at the NFA offices in Port</p>

	out-of-session for comment before sending to PNG NFA.				Moresby. Dr Plaganyi presented the updated stock assessment results and larval advection modelling. There was agreement that the updated larval modelling together with past research provides strong evidence that TRL is a shared stock between Australia and PNG. These meetings have been followed up with a phone call between the PNG NFA Managing Director and AFMA CEO which included discussions on the importance of controlling catches so they do not exceed each jurisdiction's catch share of the recommended biological catch (RBC).
4.	Malu Lamar RNTBC to provide AFMA with the map of traditional boundaries and regional area and reef names for each of the Torres Strait Island nations and for CSIRO to examine possible revised naming conventions for survey sites	TRLRAG20	Malu Lamar		<b>Ongoing</b> AFMA is awaiting advice from Malu Lamar and will assist where possible. Email reminders sent 20/12/2017 and 08/03/2018. CSIRO advised that they have received some maps with information on traditional names but that this is not complete. They will work with Malu Lamar if further information is needed.
5.	AFMA to investigate the potential cause of the TVH sector misreporting of fishing hours.	TRLRAG21	AFMA	TRLRAG22	<b>Complete</b> The missing data was tracked to logbooks returns from two vessel operators. The licence holder was notified.
6.	Lamp fishing data should be used for future TIB CPUE analyses	TRLRAG21			<b>Complete</b> TIB sector CPUE analysis will be updated to include lamp fishing.
7.	Torres Strait Docket Book (TDB01) data rules to be presented at the next RAG meeting scheduled for March 2018	TRLRAG21	CSIRO AFMA	Deferred to TRLRAG22	<b>Complete</b> Data rules to be considered at TRLRAG 22.



	The scientific observer recommended that RAG members and observers read the meeting paper prior to discussing this agenda item at the next meeting.				
--	---	--	--	--	--

***Panulirus ornatus* Life Cycle**

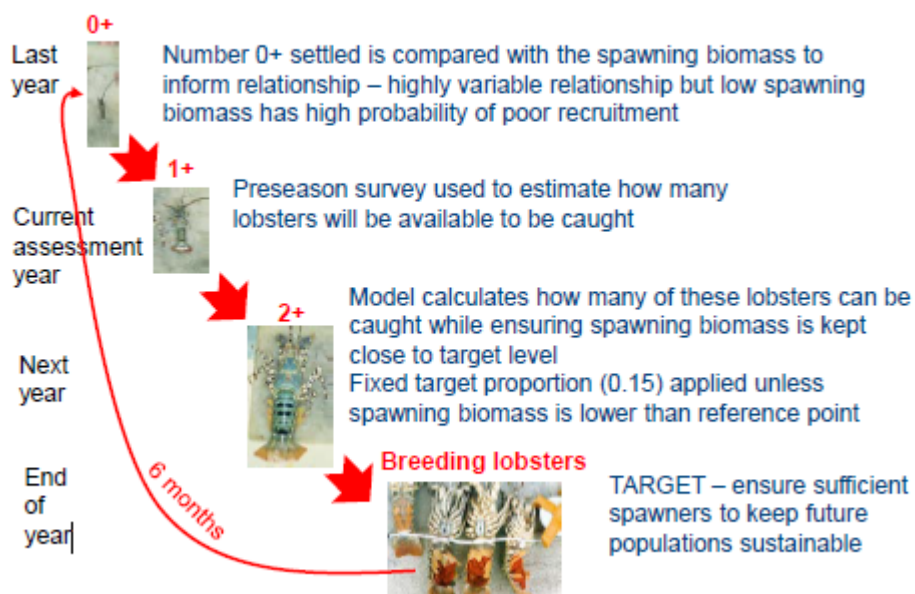
Source: : Éva Plagányi, Mark Tonks, Rob Campbell, Mick Haywood, Roy Deng (2018) Final 2017 Integrated Stock Assessment and RBC (2018) for the Torres Strait rock lobster fishery. Powerpoint presentation presented to the 22<sup>nd</sup> meeting of the Torres Strait Tropical Rock Lobster Resource Assessment Group held on 27-28 March 2018.

## Summary of the Assessment Cycle for the Torres Strait Tropical Rock Lobster Fishery

### Summary of Life Cycle and Assessment



### Assessment Basics



Source: Éva Plagányi, Rob Campbell, Mark Tonks, Mick Haywood, Roy Deng, Nicole Murphy, Kinam Salee (2018) Torres Strait rock lobster (TRL) 2017 fishery surveys, CPUE and stock assessment: AFMA Project 2016/0822. March 2018 Draft Final Report.

Nominal CPUE for the Torres Strait Tropical Rock Lobster Fishery

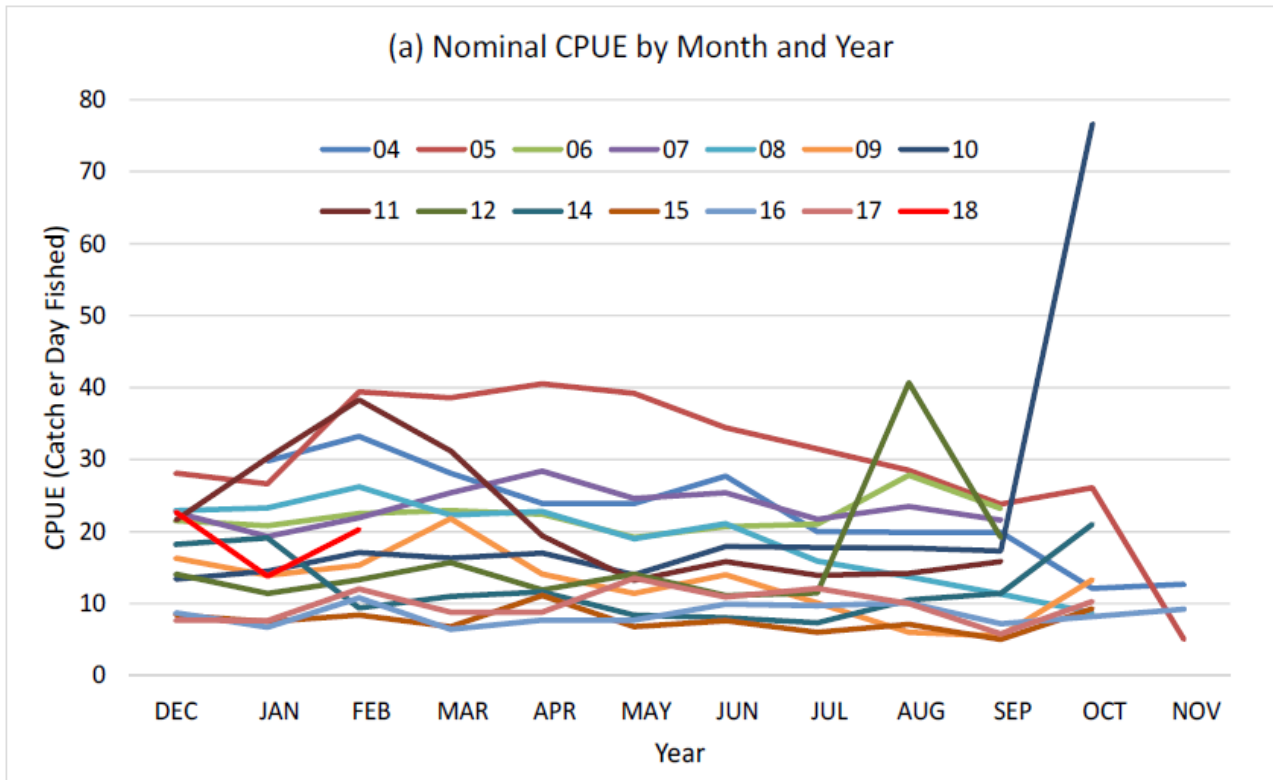


Figure 1: Nominal CPUE for the Traditional Inhabitant Boat (TIB) sector per month and year.

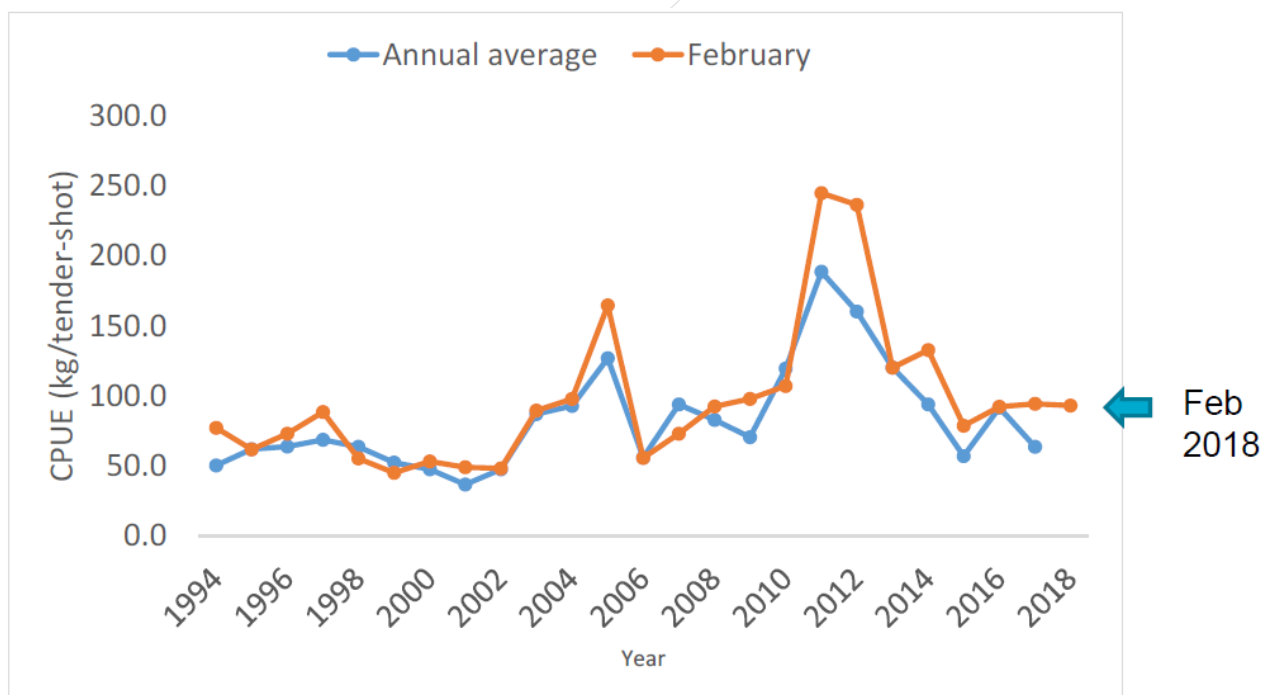


Figure 2: Nominal CPUE for the Transferable Vessel Holder (TVH) sector per year (annual average and February each year).

Source: : Éva Plagányi, Mark Tonks, Rob Campbell, Mick Haywood, Roy Deng (2018) Final 2017 Integrated Stock Assessment and RBC (2018) for the Torres Strait rock lobster fishery. Powerpoint presentation presented to the 22<sup>nd</sup> meeting of the Torres Strait Tropical Rock Lobster Resource Assessment Group held on 27-28 March 2018.

## Data rules for using Tropical Rock Lobster catch data reported in the Torres Strait Buyers and Processors Docket Book (TDB01)

1. Where Seller-Type is identified as a processor then the corresponding catch record should be interpreted as a duplicate associated with a Processor-to-Processor trade and as such should not be included in the catch for the TIB sector. The DATA\_TYPE associated with these records is therefore set to 'PROCESSOR'.
  - a. An exception is made for the records associated with Joseph Dai where DATA\_TYPE='TIB'.
2. Where Seller-Type is identified as processor but the Seller-Name is a business name then the corresponding catch record should be identified with the fishery sector (TIB or TVH). The DATA-TYPE is listed as 'TVH-TradeName' or 'TIBTradeName' respectively.
3. Where Vessel-Type is identified as a TVH-vessel then the corresponding catch record should be interpreted as a duplicate associated with the TVH sector and as such should not be included in the catch for the TIB sector. The DATA-TYPE is listed as TVH.
  - a. Note, whether or not the corresponding catch is contained in the TVH database needs to be checked.
4. Where Vessel-Type identifies the distinguishing symbol as an 'F-symbol' then the corresponding catch record should be included in the catch for the TIB sector and the DATA-TYPE is listed as 'TIB'.
  - a. An exception is made for the two vessels with the symbol FXYC or FWED which are TVH vessels and for these records the DATA-TYPE is listed as 'TVH'.
5. Where Related-Log is blank then the corresponding catch record should be identified as a catch for the TIB sector and the DATA-TYPE is listed as 'TIB'.
6. All other records should be attributed to the TIB sector and the DATA-TYPE listed as 'TIB'.
  - a. After fitting the five rules above, only 1055 records (of the 77,358 in total) remained un-assigned. Note: all but 3 of the 1055 (22 of the 25 vessels-symbols) occur in the Docket-Book database where the DATA-TYPE has already been assigned to the TIB sector.