

TORRES STRAIT TROPICAL ROCK LOBSTER**WORKING GROUP (TRLWG) MEETING No.7****WEDNESDAY 28 MARCH 2018, 1:00PM-5:30PM****THURSDAY 29 MARCH 2018, 8:30AM-12:00PM****Thursday Island TSRA conference room****AGENDA**

1. Preliminaries (Chair)
 - 1.1. Meeting preliminaries
 - 1.2. Adoption of agenda
 - 1.3. Declaration of interests
 - 1.4. Action items from previous meetings (AFMA)
2. Updates from Members
 - 2.1. Industry
 - 2.2. Government
 - 2.2.1. Fish receiver update
 - 2.2.2. TRL Fishery export approval
 - 2.2.3. Legislative amendments update
 - 2.3. PNG NFA update
 - 2.4. Native Title
3. Finalising the total allowable catch (TAC) for the 2017/18 fishing season (AFMA)
4. Management arrangements for the 2017/18 fishing season (AFMA)
5. Progress on developing a Tropical Rock Lobster Fishery Management Plan
6. Finalising the Harvest Strategy for the Tropical Rock Lobster Fishery
7. TRL Fishery budget report for 2018/19

8. Other Business (Chair)

9. Date and venue for next meeting.

TROPICAL ROCK LOBSTER WORKING GROUP	MEETING No. 7 28-29 March 2018
PRELIMINARIES Opening prayer, acknowledgement of Traditional Owners, welcome and apologies	Agenda Item 1.1 For Noting

RECOMMENDATIONS

1. The Working Group **NOTE**:
 - a. an opening prayer;
 - b. an acknowledgement of Traditional Owners;
 - c. the Chairperson's welcome address; and
 - d. apologies received from members unable to attend.
2. The Working Group **NOTE** that TRL Working Group TVH industry member Luke Dillon resigned from his position on the Working Group on 1 February 2018 because he is no longer a licence holder in the Fishery.
3. The Working Group **NOTE** that AFMA sent a letter on 6 February 2018 to all TVH licence holders seeking nominations by 5 March 2018 to temporarily appoint one non-traditional inhabitant industry member to the Working Group due to a vacancy that was the result of the resignation of the existing industry member.
4. The Working Group **NOTE** that no nominations were received and AFMA will re-advertise the position with TVH industry members in April 2018.

BACKGROUND

5. Apologies have been received from:
 - a. NIL.

TROPICAL ROCK LOBSTER WORKING GROUP	MEETING No. 7 28-19 March 2018
PRELIMINARIES Adoption of agenda	Agenda Item 1.2 For DECISION

RECOMMENDATIONS

1. That the Working Group consider and **ADOPT** the agenda.

BACKGROUND

2. A draft agenda was circulated to members and other participants on 1 March 2018.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2018
Declaration of interests	Agenda Item 1.3 Discussion & Advice

RECOMMENDATION

That the Working Group:

1. **DECLARE** all real or potential conflicts of interest in the Torres Strait Rock Lobster Fishery at the commencement of the meeting;
2. **DETERMINE** whether the member or observer may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict;
3. **ABIDE** by decisions of the Working Group regarding the management of conflicts of interest; and
4. **NOTE** that the record of the meeting must record the fact of any disclosure, and the determination of the Working Group as to whether the member or observer may or may not be present during discussion of, or decisions made, on the matter which is the subject of the conflict.

BACKGROUND

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

discussions on that issue. Declarations of interest, and subsequent decisions by the forum, must be recorded accurately in the meeting minutes.

10. Previous RAG and Working Group declarations of interest are enclosed.

Name	Position	Declaration of interest
Members		
Sandy Morison	Chair	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). No pecuniary or other interest in the Tropical Rock Lobster fishery or any other Torres Strait fisheries.
Dean Pease	TRLRAG Executive Officer	Nil
Selina Stoute	AFMA Member	Nil
John Ramsay	TSRA Member	TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them.
Tom Roberts	QDAF member	Nil
Aaron Tom	Industry Member	Nil
Mark David	Industry Member	TIB licence holder
Terrence Whap	Industry Member	Nil
Les Pitt	Industry Member	TIB licence holder
Phillip Ketchell	Industry Member	TIB licence holder
Sevaly Sen	Fishery Economist	Nil
Darren	Independent Scientific Member	Member of other RAG's and research consultant
Mark Dean	Industry Member	TVH licence operator

Observers		
Jerry Stephen	TSRA Deputy Chair and Fisheries Portfolio Member	TIB licence holder
Maluwap Nona	Chairperson Malu Lamar	TIB licence holder
Allison Runck	TSRA Observer	TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them.
Mark Tonks	CSIRO Scientific Observer	Project staff for PZJA funded TRL research projects
Ian Knuckey	TRLRAG Chair / Observer	Nil. Member of other RAG's and conducts various AFMA research projects
Daniel Takai	Industry Observer	Pearl Island Seafood, Tanala Seafood and TIB licence holder
Eva Plaganyi	CSIRO Scientific Observer	Project staff for PZJA funded TRL research projects.
Brett Arlidge	Industry Observer	General Manager MG Kailis Pty Ltd, holder of TVH licences

PZJA Torres Strait Tropical Rock Lobster Fishery Resource Assessment Group	27-28 March 2018
Fish receiver system update	Agenda Item 2.2.1 FOR NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the update provided regarding the implementation of a Torres Strait fish receiver system (FRS), in particular:
 - a. the FRS became mandatory for all Torres Strait Fisheries, excluding the Torres Strait Prawn Fishery, on 1 December 2017;
 - b. AFMA have received good catch and effort information through the FRS to date. This data is more comprehensive and timely than that received under the previous voluntary arrangements and will be used to support better decision making about how fisheries are managed, including setting and monitoring total allowable catches;
 - c. over the coming 12 months, further community visits will be conducted with Torres Strait Island and Northern Peninsula Area (NPA) communities, to provide ongoing support and education and receive feedback on how the FRS is functioning.

KEY ISSUES

2. The following table provides a summary of licences and activities undertaken to date (8 March 2018).

Number of fish receiver licences granted	66
Number of fish receivers that have received fish and submitted CDRs	18
Kilograms of Finfish reported through FRS	7,150 kg (all species combined)
Kilograms of Tropical Rock Lobster reported through FRS	70,429.6 kg
Kilograms of Beche-de-mer reported through FRS	7,508 kg (all species combined)

3. In general the response to the FRS has been very positive with fish receivers providing accurate data in a timely manner. A significant proportion of this data is coming from the TIB licence sector, a sector which has historically had poor data returns.
4. The FRS is still in the early stages of implementation. AFMA is providing ongoing education and support to fishers and fish receivers as well as targeting compliance activities to ensure all parties understand and are meeting their responsibilities under the FRS:
 - a. fish receivers are completing and submitting catch disposal records correctly;
 - b. fish receivers are only receiving from licensed fishers;
 - c. fishers have a valid licence;
 - d. fishers are having their catch weighed by a fish receiver at the first point of landing.
5. AFMA will also be conducting further community visits over the coming 12 months, to continue this education and support and receive feedback on how the FRS is functioning.

6. AFMA is also working to develop reports on the catch taken in each Torres Strait fishery that can be made publically available on a regular basis (e.g. monthly). The reports will provide industry and other stakeholders with an indication as to how a season is performing and where catch may be approaching TACs. AFMA will ensure that any disclosure of catch or effort data is only done so in accordance with AFMA's Information Disclosure policy. This includes not releasing catch or effort data prior to the end of a fishing season where the data represents less than five vessels. The policy can be accessed on AFMA's website at <http://www.afma.gov.au/about/fisheries-management-policies/>

Fisher and fish receiver responsibilities

7. Fishers and fish receivers have a number of responsibilities under the FRS – the table below provides a summary of these.

Fish Receivers	Fishers
Fish receivers are only permitted to receive fish from licenced fishers	Fishers must have their commercial catch weighed by a licenced fish receiver when it is first landed. Catch is landed when it is brought ashore or unloaded to a Carrier Class B or C boat. This does not include the catch you keep in cages or traps at sea (e.g. live Kaiaar in sea cages)
Fish receivers must weigh (and if required, count) the fish and complete a Catch Disposal Record as soon as they receive the fish. The Catch Disposal Record must be completed as per the instructions	Fishers must provide their name, fishing licence number and boat symbol to the fish receiver and sign the section of the Catch Disposal Record which shows this information
Fisher receivers may request information about the fishers fishing area and method. This is voluntary, but is very important information for managing Torres Strait Fisheries sustainably	Fishers may provide information about their fishing area and method. This is voluntary, but is very important information for managing Torres Strait Fisheries sustainably
Fish receivers can only receive fish at the premises (or boats if you are receiving on a Carrier Class B or C licenced boat) nominated on their licence	
Fish receivers must give the pink copy of the Catch Disposal Record to the fisher	
Fish receivers must place the white copy of the Catch Disposal Record in the mail to AFMA (using the prepaid envelopes provided) within 3 business days of receiving the fish	
Fish receivers must retain the green copy of the Catch Disposal Record for five years	
Fish receivers must nominate an agent using the RA form if they wish to have a person other than themselves complete the Catch Disposal Record on their behalf	

Fish receivers must display a copy of their licence in public view at each of the premises identified on the licence	
Fish receivers should contact AFMA for a replacement Catch Disposal Record book prior to the completion of the existing book	

BACKGROUND

8. In March 2017, the PZJA agreed to replace the current voluntary Torres Strait Seafood Buyers and Processors Docket Book system with a mandatory FRS for all Torres Strait Fisheries, excluding Torres Strait Prawn Fishery, by 1 December 2017.
9. Accurate reporting and catch monitoring against TACs and individual catch allocations is not only important to ensure the sustainability of fisheries but also to maintain general compliance and integrity of management arrangements. The latter is very important for maintaining the value and security of fishing entitlements.
10. In relation to Torres Strait fisheries, effective catch monitoring through the FRS will support:
 - a. the effectiveness of a quota management system in the Tropical Rock Lobster Fishery;
 - b. guiding expansion in the Bêche-de-mer and Finfish Fisheries;
 - c. rebuilding Black Teatfish stocks. Competition for the resource is increasing however the TAC is likely to remain small (15 tonnes) in the short to medium term or until such time new information is gathered to justify an increase in harvest levels; and
 - d. ensuring the integrity of the finfish leasing arrangements which are based on individual catch allocations.
11. Consultation on the introduction of the FRS was conducted through the PZJA RAGS, MACs and Working Groups, native title representative bodies, letters to all stakeholders and visits to all Torres Strait Island and Northern Peninsula Area (NPA) communities.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2018
Industry members update	Agenda Item 2.1 FOR DISCUSSION AND ADVICE

RECOMMENDATIONS

That the Working Group:

1. **NOTE** any fishery updates provided by Industry members;
2. **DISCUSS** and provide **ADVICE** on key issues affecting the fishery.

KEY ISSUES

1. It is important that the Working Group develops a common understanding of any relevant matters within adjacent jurisdictions and what issues if any, are having the greatest impact on industry and the management of the fishery. Developing this understanding will ensure proceedings of the Working Group are focused and may more effectively address each issue.
2. Industry members are asked to provide any updates on economic and market trends and opportunities in markets, processing and value adding.
3. Industry is also asked to contribute advice on fishing conditions for the current season.

TROPICAL ROCK LOBSTER	MEETING No. 21
RESOURCE ASSESSMENT GROUP (TRLRAG)	12-13 December 2017
FISHERY UPDATES	Agenda Item 2.2
Government agencies update	For NOTING

RECOMMENDATIONS

1. That the Working Group:
 - a. **NOTE** the update provided by AFMA below;
 - b. **NOTE** the update provided by AFMA for Agenda Items: 2.2.1 Torres Strait Fish Receiver System; 2.2.2 TRL Fishery Strategic Assessment and 2.2.3 Torres Strait legislative amendments; and
 - c. **NOTE** a verbal update will be provided by the QDAF and TSRA.

AFMA UPDATES

Australia and PNG bilateral meeting

2. The Joint Advisory Council (JAC) met on 8 February 2018 in Port Moresby, Papua New Guinea, in accordance with Article 19 of the Torres Strait Treaty.
3. A Fisheries Committee Meeting met prior to this meeting on 5 February 2018 (**Attachment A**) and provided advice to the JAC (summarised below).
4. In addition to the formal Bilateral Treaty meetings, AFMA and CSIRO staff attended the PNG National Fisheries Authority office to provide an update on Tropical Rock Lobster science related to our shared stock and to emphasise the importance of timely and accurate data sharing between our countries fisheries management agencies.

Fisheries Committee report to the JAC

5. The JAC noted ongoing interest by the PNG prawn trawl fishing industry to retain tropical rock lobster 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. The JAC welcomed AFMA and PNG-NFAs commitment to work together in evaluating the impacts of trawl fishing.
6. The JAC noted advice of the likely reduction in the tropical rock lobster catch in the 2018 season and the need for both AFMA and PNG-NFA to work with their industries to ensure that catches are kept at or below the catch limit.

Australian National Audit Office (ANAO) performance audit

7. The ANAO has commenced a Performance Audit of Australian Government Coordination Arrangements in the Torres Strait.
8. Currently prescribed audited entities are the:
 - a. Australian Fisheries Management Authority
 - b. Department of Agriculture and Water Resources

- c. Department of Foreign Affairs and Trade
 - d. Department of Home Affairs
 - e. Torres Strait Regional Authority
9. Officer from the ANAO will be visiting the Torres Strait in April as part of the performance audit.
10. The objective of the Audit is to assess the effectiveness of the coordination arrangements of Australian Government entities operating in the Torres Strait.
11. The Audit will apply two criteria:
- Criteria 1: Do Australian Government entities operating in the Torres Strait have appropriate governance arrangements to support the coordination of their activities?
 - Criteria 2: Are the coordination arrangements effective in supporting Australian Government activities in the Torres Strait?
12. Further information on the Performance Audit is at **Attachment B** and can be found at the ANAO website: <https://www.anao.gov.au/work/performance-audit/coordination-arrangements-australian-government-entities-operating-torres-strait#0-0-auditcriteria>

Report of the Fisheries Committee Bilateral Meeting

5 February 2018

Sir Manasupe Haus

Port Moresby, Papua New Guinea

1. Welcome

- 1.1. The Fisheries Committee Bilateral Meeting was held on 5 February 2018, at Sir Manasupe Haus, Port Moresby, Papua New Guinea to discuss items under Articles 20-28 of the Torres Strait Treaty (the Treaty).
- 1.2. The meeting was opened at 1400 hrs and co-chaired by Mr Ian Liviko, Prawn and Lobster Fisheries Manager, Papua New Guinea National Fisheries Authority (PNG-NFA) and Dr Nicholas Rayns, Executive Manager, Fisheries Management Branch, Australian Fisheries Management Authority (AFMA). A delegation list is provided at **Attachment A**.
- 1.3. The meeting **NOTED** the importance of Fisheries Bilateral meetings as valuable fora to discuss fisheries matters in relation to shared common resources of great importance to both countries for cultural, community and commercial purposes.
- 1.4. The meeting **NOTED** that several key issues discussed at the Traditional Inhabitant's Meeting (TIM meeting) were directly relevant to the Fisheries Committee Meeting. The Co-Chair thanked the TIM Co-Chairs for the opportunity to observe the TIM meeting held prior to the Fisheries Committee Meeting.
- 1.5. The meeting **NOTED** AFMA advice on improvements made to management arrangements across Australian managed Torres Strait fisheries in 2017 to improve monitoring and data gathering. These reforms included the implementation of mandatory vessel monitoring systems (satellite tracking) on all primary and processor-carrier boats in the Torres Strait. Also implemented was the fish receiver system which makes it mandatory for all commercial catches to be weighed at point of landing and catch disposal records filled out and returned to AFMA.

2. Review of actions items: Fisheries Bilateral Meeting 2016

- 2.1. The meeting **NOTED** the progress on actions arising items from the 2016 Fisheries Bilateral Meeting.

3. Compliance and Licensing

- 3.1. The meeting **NOTED** the co-operation between Australian and Papuan New Guinean compliance teams to deliver compliance services under the Treaty. The meeting further **NOTED** that the joint approach in conducting patrols, intelligence sharing and investigations has led to successful prosecutions in both jurisdictions. The meeting strongly **SUPPORTED** the continuation of this approach to address compliance risks in the region.
- 3.2. The meeting **NOTED** that cross-decking of compliance officers would remain a priority.
- 3.3. The meeting **NOTED** advice that PNG-NFA's capacity to respond in a timely manner to compliance reports relies on assets being available. The meeting further **NOTED** PNG-NFA advice that compliance patrols were problematic within the 'dogleg' area as it is an uncharted area of waters making navigation hazardous.

Amendment of the Torres Strait Fisheries Act 1984

- 3.4. The meeting **NOTED** advice from AFMA that it is working to progress a limited number of amendments to the *Torres Strait Fisheries Act 1984* (the Act). The amendments have a narrow focus, intended to deliver immediate improvement to the administration of the Act. The amendments include the introduction of infringements notices, streamlining delegations and removing impediments to implementing mandatory reporting across all licences.
- 3.5. The meeting **RECOGNISED** the importance of involving Traditional Inhabitant members in any legislative amendments noting the Act was created to implement the Australian government's responsibilities under the Treaty. The meeting **WELCOMED** the Australian Government's Commitment to consult with communities, native title holders and the Protected Zone Joint Authority (PZJA) advisory committees.

4. Prawn Fishery

- 4.1. The meeting **NOTED** prawn fishing activity in the Australian zone remains low with effort dropping to 1004 nights fished in 2007. This is down from 2472 nights fished in 2016. Total catch reported in 2017 was 111 tonnes and 25 tonnes for tiger prawn and endeavour prawns respectively. The meeting **NOTED** that effort was largely driven by economic factors rather than stock availability.
- 4.2. The meeting **NOTED** that amendments had been made to the Australian prawn fishery and AFMA plans to update the stock assessment and undertake an Ecological Risk Assessment of the fishery over the next two years.
- 4.3. PNG-NFA **ADVISED** that there is little interest in prawn fishing in PNG waters of the TSPZ and declined the offer of catch sharing arrangements in the Australian Torres Strait Prawn Fishery. Australia did not seek to take up its entitlement in PNG waters for 2017.

PNG Treaty Traditional Inhabitants benefiting from the Treaty

- 4.4. The meeting **NOTED** advice from PNG Traditional Inhabitants that they have not been able to realise any of the benefits envisaged under the Treaty as it relates to commercial fishing. The PNG Traditional Inhabitants advised that have not been able to utilise the catch sharing arrangements provided under the Treaty and do not have expansive territorial seas in which to commercially fish.
- 4.5. The meeting **NOTED** support from the Australian Traditional Inhabitants for opportunities to ensure PNG Traditional Inhabitants are able to derive benefits from fisheries resources in the TSPZ in line with the Treaty.
- 4.6. The meeting **NOTED** advice from PNG-NFA that the authority confirms its commitment to support Treaty villages and has secured a budget to fund consultation and awareness raising visits to Treaty villages and fisheries intervention activities & projects. PNG-NFA further advised that they have the ability to deliver practical assistance, several administrative matters need to be resolved and stakeholders need to agree on their needs.
- 4.7. PNG-NFA **REQUESTED** to work collaboratively with AFMA to develop options on how PNG can effectively take up catch sharing options. AFMA welcomed the opportunity to assist PNG-NFA.

- 4.8. The meeting **NOTED** AFMA and PNG-NFA's strong commitment to ensure catch sharing arrangements are administered in line with the Treaty and in a manner that that does not unnecessarily impede traditional inhabitants from utilising those entitlements.

5. Tropical Rock Lobster Fishery

- 5.1. The meeting **NOTED** outcomes of the pre-season survey conducted in Australian waters in November 2017 and preliminary outcomes of the updated stock assessment. Based on the updated stock assessment the total recommended catch for 2018 is 299 tonnes.
- 5.2. The meeting **NOTED** AFMA advice that the pre-season survey index abundance for Tropical Rock Lobsters (TRL) was very low. While TRL is characterised as having highly variable recruitment, consideration of other contributing factors to the low pre-season abundance is ongoing. Factors likely include, environmental anomalies experienced over the last three years including, strong El Nino events, record high sea temperatures, habitat changes (industry reported significant sand incursions over certain fishing grounds) and coral bleaching events.
- 5.3. The meeting **AGREED** that 2018 catch sharing arrangements are to be finalised out of session in April once the final consideration of the stock assessment has been finalised and considered by the PZJA advisory committee. AFMA reiterated the standing invitation for PNG-NFA to attend the PZJA advisory committee meetings.
- 5.4. AFMA and PNG-NFA **REAFFIRMED** their commitment to providing timely and accurate catch reporting to ensure the integrity of future stock assessments. This includes the reporting of catch from all sectors.

PNG trawlers retaining Tropical Rock Lobster

- 5.5. The meeting **NOTED** PNG-NFA advice that the PNG prawn trawl industry are interested in retaining Tropical Rock Lobster that are incidentally caught and dead when brought on-board.
- 5.6. The meeting **NOTED** PNG-NFAs **REQUEST** to work with AFMA to further evaluate the impacts of various levels of trawl catch on the TRL stock and identify possible management options (seasonal or spatial closures) that could be developed to benefit all sectors. AFMA welcomed the opportunity to assist PNG-NFA and reiterated the importance of a taking a precautionary approach when considering any amendments to the current trawl ban.
- 5.7. The meeting **NOTED** advice from traditional inhabitants that the longstanding trawl bans in both jurisdictions were implemented after much negotiation to protect the sustainability of TRL and there would need to be strong case put forward to depart from this arrangement.
- 5.8. The meeting **REITERATED** the need to manage the take of tropical rock lobsters to the agreed global Total Allowable Catch irrespective of fishing method.

Stock structure

- 5.9. The meeting **NOTED** draft modelling outcomes of likely larval movements of tropical rock lobsters within the region. The meeting **NOTED** the research was undertaken by CSIRO and was an update of previous work using an updated model and data from additional years.
- 5.10. The meeting **NOTED** the following key findings:

- Australian and Papua New Guinea tropical rock lobster fisheries are based on single stock;
- recruitment success to Torres Strait is highly variable with recruits coming from Yule Island and northern Queensland placing further importance on having a healthy spawning biomass across its range; and
- the model did not find a clear relationship between larval dispersal and pre-season survey results (abundance and distribution of tropical rock lobster). This means the current model cannot assist in predicting how the stock may be influenced by catches or changing environmental conditions. Further work may be considered to improve the model, such as including fine scale tidal information for the Torres Strait.

6. Traditional Fisheries

- 6.1. The meeting **NOTED** the update on turtle and dugong management in Australian waters.
- 6.2. The meeting **NOTED** advice from PNG traditional inhabitants that the *Moro Momoro Gamo* management plan has been completed but has not yet been implemented. Noting that the plan covers a large number of communities (14 maritime boundaries), work is in progress to develop individual management plans to suit each community.
- 6.3. The meeting **NOTED** previous committee advice that the issue of illegal netting of dugong and turtle needs to be considered within the broader issues of livelihoods in PNG Treaty Villages.
- 6.4. PNG traditional inhabitants **ADVISE** that while illegal fishing was not supported, the incentive for Treaty villagers to fish illegally is likely linked to their immediate needs to provide food for themselves and their families. It was further **RECOGNISED** that this incentive is only likely to increase with population growth together with a lack of alternative livelihoods and persistent poverty in the PNG Treaty Villages. Advice from PNG traditional inhabitants was **NOTED** that the Treaty, in their view, has removed access to historical fishing grounds and provided little benefit to the PNG Treaty villagers.
- 6.5. Australian Traditional Inhabitant representatives **SUGGESTED** that gear restrictions in Torres Strait, limiting take of turtle and dugong to traditional methods only, could also be reflected in PNG community management plans under development. PNG Traditional Inhabitant representatives advised that they will encourage their members to discuss this suggestion with communities.

7. Spanish Mackerel

- 7.1. The meeting **NOTED** the update on Spanish mackerel as detailed in the agenda paper.
- 7.2. The meeting **NOTED** that a harvest strategy was under development for Torres Strait Finfish Fishery (which will apply to Spanish mackerel and coral trout) which would guide future management decisions for fishery.
- 7.3. The meeting **NOTED** advice from PNG-NFA that the PNG industry remains very small scale and did not yet have the capacity to utilise catch sharing arrangements under the Treaty.
- 7.4. Australia and Papua New Guinea both graciously **DECLINED** to enter into catch sharing arrangements for the 2017-18 fishing season.

8. Pearl Shell

- 8.1. The meeting **NOTED** the update on pearl shell as detailed in the agenda paper.

- 8.2. The meeting **NOTED** advice from AFMA and PNG-NFA that fishing activity for pearl shell remains negligible in both jurisdictions.
- 8.3. The meeting **NOTED** further advice from PNG-NFA that there are many skilled pearl shell divers within Treaty communities and **REQUESTED** to work with AFMA to explore opportunities under the Treaty to develop the pearl shell fishery. AFMA welcomed the opportunity to assist with PNG-NFA.
- 8.4. Australia and Papua New Guinea both graciously **DECLINED** to enter into catch sharing arrangements for 2018.

9. Other Fisheries

Beche-de-mer

- 9.1. The meeting **NOTED** the update on the Australian Beche-de-mer Fishery as detailed in the agenda paper.
- 9.2. The meeting **NOTED** AFMA advice that interest was increasing in the Australian beche-de-mer fishery with fishers focussing on providing the market with alternative species such as curryfish.
- 9.3. The meeting **NOTED** AFMA advice that it was working with scientists and traditional inhabitants in developing a harvest strategy for beche-de-mer which would guide future management decisions and support the sustainable development of the fishery.
- 9.4. The meeting **NOTED** PNG-NFA advice that the PNG moratorium on the take and possession of beche-de-mer was lifted in April 2017. The total allowable catches were taken quickly resulting in all provinces closed again to beche-de-mer fishing by July 2017. The Fishery remains closed.
- 9.5. The meeting **NOTED** the PNG-NFA is currently reviewing management arrangements for the Fishery in consultation with stakeholders and monitoring stocks with monitors regularly visiting fishing communities. A further opening of the fishery will be informed by the review. PNG-NFA **AGREED** to provide the Fisheries Committee with an update on any changes to management arrangements for the Fishery.
- 9.6. The meeting **NOTED** PNG-NFA advice that illegal fishing for beche-de-mer is prevalent and that Indonesian buyers were very active in PNG during the beche-de-mer season creating strong demand for product.

Barramundi

- 9.7. The meeting **NOTED** advice from PNG-NFA that fishers had raised concerns that catches of Barramundi appear to be declining.
- 9.8. The meeting **NOTED** that a stock assessment scheduled for barramundi had not occurred due to funding limitations. PNG-NFA now plans to undertake a desk-top study this year using information from previous studies on harvest rates (for example research by Dr Sara Bussliachi).
- 9.9. The meeting **WELCOMED** further advice and acknowledgement from PNG-NFA that the South Fly Government has supported the reopening of the barramundi hatchery on Daru and continues to support efforts to re-establish the restocking exercise in to the wild.

Finfish fishery – reef-line sector - update on activity in the Australian jurisdiction

- 9.10. The meeting **NOTED** the update on finfish activity in Australian waters was detailed in the agenda paper.
- 9.11. The meeting **NOTED** that a harvest strategy was under development for the Torres Strait Finfish Fishery (Spanish mackerel and coral trout) which would guide future management decisions for the Fishery.
- 9.12. The meeting **NOTED** that an initial stock assessment for coral trout would be conducted as part of the harvest strategy development.

10. Other Business

Research in the Torres Strait

- 10.1. The meeting **NOTED** the update on research projects in progress, or proposals under consideration relevant to the Torres Strait as detailed in the agenda paper.
- 10.2. The meeting co-chair **ADVISED** the meeting of broader research projects of relevance to the Torres Strait including CSIRO work to support Australia wide decadal monitoring for the effects of climate change which is due for completion in mid-2018. Also **NOTED** was another CSIRO project looking to examine optimising the yield that could be gained from Australian commercial seafood species which includes Torres Strait.
- 10.3. The meeting **REQUESTED** to revisit the outcomes of prior CSIRO research presented by James Butler 'Developing legal value chains and alternative markets for South Fly District fisheries'.

Presentation "Value-chains in Western Province Fisheries" by Dr Sara Busillachi.

- 10.4. The meeting **NOTED** the presentation from Dr Sara Busillachi, CSIRO which outlined recent findings from the collection of economic data from sales of PNG marine-derived commodities through the market chain into the Asian market. These commodities include beche-de-mer, shark fin and fish maw (swim bladder) from jewfish and barramundi.
- 10.5. The meeting **NOTED** that the research indicates that fishers in the Western Province are paid only a small proportion of the final market price of these commodities and face many risks in harvesting the products.
- 10.6. The meeting **NOTED** that the collection of supply chain data was the initial phase of the project with data still being analysed until July 2018. Funding for a second stage will likely be sought.

Next meeting

- 10.7. The meeting **NOTED** that the 2018 bilateral meeting is to be held in Australia and delegates will be advised by the Australian government on the arrangements for the meeting.

11. Closing Prayer

- 11.1. The meeting closed at 1700hrs with a closing prayer from TSRA Chairperson Pedro Stephen.

Table of actions arising from the 2017 Fisheries Bilateral Meeting (5 Feb 2018)

Item Number	Agenda #	Action	Responsible Agency
2017-1	4	AFMA and PNG-NFA to work collaboratively to investigate how treaty villages may effectively engage in commercial fisheries under the Treaty.	AFMA and PNG-NFA
2017-1	5.1	AFMA and PNG-NFA to work to collaboratively to further evaluate the impact of PNG prawn trawl catches impacting the Tropical Rock Lobster stock.	AFMA and PNG-NFA
2017-2	10.1	The outcomes of the CSIRO research project “Developing legal value chains and alternative markets for South Fly District fisheries” are to be made available to the meeting attendees.	AFMA

Attachment A
Fisheries Committee Bilateral Meeting 2016
Delegation List

Australian Delegation

Australian Traditional Inhabitant Representatives

Cr Getano Lui (Jr), Iama (Yam) Island (Traditional Inhabitant Meeting Co-chair)
 Cr Fraser Nai, Masig (Yorke) Island
 Cr Patrick Thaiaday, Erub (Darnley) Island
 Mr Erik Peter, Torres Strait Regional Authority, Member for Boigu

Australian Government Representatives

Dr Nick Rayns, Australian Fisheries Management Authority – Australian Co-Chair
 Ms Leilani Bin-Juda, Treaty Liaison Officer, Department of Foreign Affairs and Trade
 Mr Pedro Stephen, Chairperson, Torres Strait Regional Authority
 Mr Charlie Caddy, A/g Chief Executive Officer, Torres Strait Regional Authority
 Mr Stan Lui, A/g Environment Program Manager, Torres Strait Regional Authority
 Ms Fiona Pemberton, Department of Immigration and Border Protection
 Mr Lyndon Peddell, A/g Manager Foreign Compliance, Australian Fisheries Management Authority
 Ms Selina Stoute, Manager Torres Strait Fisheries, Australian Fisheries Management Authority
 Mr Andrew Trappett, Senior Fisheries Management Officer, Australian Fisheries Management Authority, Fisheries Committee Meeting Secretariat

Papua New Guinea Delegation

Papua New Guinea Traditional Inhabitant Representatives

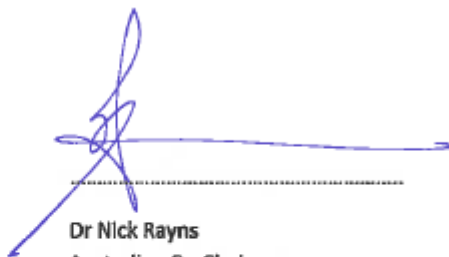
Cr Kebei Salee, Councillor for Sigabaduru, Traditional Inhabitant Meeting co-chair
 Cr Frank Warapa, Councillor for Buji/Ber
 Cr Tibau Kaware, Councillor for Katatai
 Cr Murray Dimia, Councillor for Sui
 Cr Peter Papua, Councillor for Mabudauan

Papua New Guinea Government Representatives

Mr Ian Liviko, Manager, Prawn and Lobster Fisheries, Papua New Guinea National Fisheries Authority
 Mr Joseph Posu, Management Officer, Prawn and Lobster Fisheries, Papua New Guinea National Fisheries Authority
 Mr Rei Vagi, Conservation and Environment Officer, CEPA



Mr Ian Liviko
Papua New Guinean Co-Chairperson
Manager, Prawn and Lobster Fisheries, Papua
New Guinea National Fisheries Authority



Dr Nick Rayns
Australian Co-Chairperson
Executive Manager, Fisheries Management
Branch, Australian Fisheries Management
Authority

Objective	To assess the effectiveness of the coordination arrangements of Australian Government entities operating in the Torres Strait.																																
Criteria	1. Do Australian Government entities operating in the Torres Strait have appropriate governance arrangements to support the coordination of their activities?		2. Are the coordination arrangements effective in supporting Australian Government activities in the Torres Strait?																														
Sub-criteria	<div>1.1 Entities assess the risks and benefits associated with the conduct of coordinated activities, and prioritise coordinated activities accordingly.</div> <div>1.2 As part of their risk assessment, entities consider the impact of their operations on Torres Strait communities and community engagement is prioritised accordingly.</div> <div>1.3 Entities have agreements in place to support the coordination of their activities with other government and non-government entities.</div> <div>1.4 Roles and responsibilities are clearly defined and agreed between entities.</div> <div>1.5 Governance structures (such as committees and communication mechanisms) are effective in supporting the coordination of activities.</div> <div>1.6 Entities have developed mechanisms to support coordinated activities (including data sharing and IT systems integration).</div>		<div>2.1 The coordination arrangements are effective in supporting the Torres Strait Treaty and Border Control operations, including through:</div> <div><div><div></div><div>the management of the biosecurity risk (people, animal and plant health);</div></div><div><div></div><div>the control of people movements (including under the Treaty’s traditional visits provisions); and</div></div><div><div></div><div>the monitoring of fishing activities (to control illegal and over fishing).</div></div></div> <div>2.2 The coordination arrangements are effective in facilitating better integration of services in the Torres Strait, including through:</div> <div><div><div></div><div>the mapping of services and the identification of gaps and duplications;</div></div><div><div></div><div>the alignment of services to agreed regional and Australian Government objectives; and</div></div><div><div></div><div>the alignment of performance measures to support effective service performance monitoring and assessment.</div></div></div> <div>2.3 The coordination arrangements are effective in optimising the use of facilities and resources, including sharing and pooling of transport, accommodation, corporate services and skills of government officials.</div>																														
Audit details	<div>Audit team</div> <table><tr><td>Dr Isabelle Favre</td><td>Senior Director (Audit Manager)</td><td>02 6203 7513</td><td>isabelle.favre@anao.gov.au</td></tr><tr><td>Elizabeth Wedgwood</td><td>Director</td><td>02 6203 7867</td><td>elizabeth.wedgwood@anao.gov.au</td></tr><tr><td>Hugh Balgarnie</td><td>Performance Analyst</td><td>02 6203 7522</td><td>hugh.balgarnie@anao.gov.au</td></tr><tr><td>Yvonne Buresch</td><td>Performance Analyst</td><td>02 6203 7617</td><td>yvonne.buresch@anao.gov.au</td></tr><tr><td>Deborah Jackson</td><td>Executive Director</td><td>02 6203 7584</td><td>deborah.jackson@anao.gov.au</td></tr></table>		Dr Isabelle Favre	Senior Director (Audit Manager)	02 6203 7513	isabelle.favre@anao.gov.au	Elizabeth Wedgwood	Director	02 6203 7867	elizabeth.wedgwood@anao.gov.au	Hugh Balgarnie	Performance Analyst	02 6203 7522	hugh.balgarnie@anao.gov.au	Yvonne Buresch	Performance Analyst	02 6203 7617	yvonne.buresch@anao.gov.au	Deborah Jackson	Executive Director	02 6203 7584	deborah.jackson@anao.gov.au	<div>Contribute to the audit</div> <div>via email on the ANAO website: www.anao.gov.au</div>		<div>Audit timeframe</div> <table><tr><td>Fieldwork</td><td>Mar-Sept 2018</td></tr><tr><td>Report Preparation Papers to auditee</td><td>Sept 2018</td></tr><tr><td>Proposed (s.19) report to auditee</td><td>Nov 2018</td></tr><tr><td>Report tabled</td><td>Jan 2019</td></tr></table>	Fieldwork	Mar-Sept 2018	Report Preparation Papers to auditee	Sept 2018	Proposed (s.19) report to auditee	Nov 2018	Report tabled	Jan 2019
Dr Isabelle Favre	Senior Director (Audit Manager)	02 6203 7513	isabelle.favre@anao.gov.au																														
Elizabeth Wedgwood	Director	02 6203 7867	elizabeth.wedgwood@anao.gov.au																														
Hugh Balgarnie	Performance Analyst	02 6203 7522	hugh.balgarnie@anao.gov.au																														
Yvonne Buresch	Performance Analyst	02 6203 7617	yvonne.buresch@anao.gov.au																														
Deborah Jackson	Executive Director	02 6203 7584	deborah.jackson@anao.gov.au																														
Fieldwork	Mar-Sept 2018																																
Report Preparation Papers to auditee	Sept 2018																																
Proposed (s.19) report to auditee	Nov 2018																																
Report tabled	Jan 2019																																

PZJA Torres Strait Tropical Rock Lobster Fishery Resource Assessment Group	27-28 March 2018
Fish receiver system update	Agenda Item 2.2.1 FOR NOTING

RECOMMENDATIONS

1. That the RAG **NOTE** the update provided regarding the implementation of a Torres Strait fish receiver system (FRS), in particular:
 - a. the FRS became mandatory for all Torres Strait Fisheries, excluding the Torres Strait Prawn Fishery, on 1 December 2017;
 - b. AFMA have received good catch and effort information through the FRS to date. This data is more comprehensive and timely than that received under the previous voluntary arrangements and will be used to support better decision making about how fisheries are managed, including setting and monitoring total allowable catches;
 - c. over the coming 12 months, further community visits will be conducted with Torres Strait Island and Northern Peninsula Area (NPA) communities, to provide ongoing support and education and receive feedback on how the FRS is functioning.

KEY ISSUES

2. The following table provides a summary of licences and activities undertaken to date (8 March 2018).

Number of fish receiver licences granted	66
Number of fish receivers that have received fish and submitted CDRs	18
Kilograms of Finfish reported through FRS	7,150 kg (all species combined)
Kilograms of Tropical Rock Lobster reported through FRS	70,429.6 kg
Kilograms of Beche-de-mer reported through FRS	7,508 kg (all species combined)

3. In general the response to the FRS has been very positive with fish receivers providing accurate data in a timely manner. A significant proportion of this data is coming from the TIB licence sector, a sector which has historically had poor data returns.
4. The FRS is still in the early stages of implementation. AFMA is providing ongoing education and support to fishers and fish receivers as well as targeting compliance activities to ensure all parties understand and are meeting their responsibilities under the FRS:
 - a. fish receivers are completing and submitting catch disposal records correctly;
 - b. fish receivers are only receiving from licensed fishers;
 - c. fishers have a valid licence;
 - d. fishers are having their catch weighed by a fish receiver at the first point of landing.
5. AFMA will also be conducting further community visits over the coming 12 months, to continue this education and support and receive feedback on how the FRS is functioning.

6. AFMA is also working to develop reports on the catch taken in each Torres Strait fishery that can be made publically available on a regular basis (e.g. monthly). The reports will provide industry and other stakeholders with an indication as to how a season is performing and where catch may be approaching TACs. AFMA will ensure that any disclosure of catch or effort data is only done so in accordance with AFMA's Information Disclosure policy. This includes not releasing catch or effort data prior to the end of a fishing season where the data represents less than five vessels. The policy can be accessed on AFMA's website at <http://www.afma.gov.au/about/fisheries-management-policies/>

Fisher and fish receiver responsibilities

7. Fishers and fish receivers have a number of responsibilities under the FRS – the table below provides a summary of these.

Fish Receivers	Fishers
Fish receivers are only permitted to receive fish from licenced fishers	Fishers must have their commercial catch weighed by a licenced fish receiver when it is first landed. Catch is landed when it is brought ashore or unloaded to a Carrier Class B or C boat. This does not include the catch you keep in cages or traps at sea (e.g. live Kaiar in sea cages)
Fish receivers must weigh (and if required, count) the fish and complete a Catch Disposal Record as soon as they receive the fish. The Catch Disposal Record must be completed as per the instructions	Fishers must provide their name, fishing licence number and boat symbol to the fish receiver and sign the section of the Catch Disposal Record which shows this information
Fisher receivers may request information about the fishers fishing area and method. This is voluntary, but is very important information for managing Torres Strait Fisheries sustainably	Fishers may provide information about their fishing area and method. This is voluntary, but is very important information for managing Torres Strait Fisheries sustainably
Fish receivers can only receive fish at the premises (or boats if you are receiving on a Carrier Class B or C licenced boat) nominated on their licence	
Fish receivers must give the pink copy of the Catch Disposal Record to the fisher	
Fish receivers must place the white copy of the Catch Disposal Record in the mail to AFMA (using the prepaid envelopes provided) within 3 business days of receiving the fish	
Fish receivers must retain the green copy of the Catch Disposal Record for five years	
Fish receivers must nominate an agent using the RA form if they wish to have a person other than themselves complete the Catch Disposal Record on their behalf	

Fish receivers must display a copy of their licence in public view at each of the premises identified on the licence	
Fish receivers should contact AFMA for a replacement Catch Disposal Record book prior to the completion of the existing book	

BACKGROUND

8. In March 2017, the PZJA agreed to replace the current voluntary Torres Strait Seafood Buyers and Processors Docket Book system with a mandatory FRS for all Torres Strait Fisheries, excluding Torres Strait Prawn Fishery, by 1 December 2017.
9. Accurate reporting and catch monitoring against TACs and individual catch allocations is not only important to ensure the sustainability of fisheries but also to maintain general compliance and integrity of management arrangements. The latter is very important for maintaining the value and security of fishing entitlements.
10. In relation to Torres Strait fisheries, effective catch monitoring through the FRS will support:
 - a. the effectiveness of a quota management system in the Tropical Rock Lobster Fishery;
 - b. guiding expansion in the Bêche-de-mer and Finfish Fisheries;
 - c. rebuilding Black Teatfish stocks. Competition for the resource is increasing however the TAC is likely to remain small (15 tonnes) in the short to medium term or until such time new information is gathered to justify an increase in harvest levels; and
 - d. ensuring the integrity of the finfish leasing arrangements which are based on individual catch allocations.
11. Consultation on the introduction of the FRS was conducted through the PZJA RAGS, MACs and Working Groups, native title representative bodies, letters to all stakeholders and visits to all Torres Strait Island and Northern Peninsula Area (NPA) communities.

Torres Strait Tropical Rock Lobster Working Group	Meeting 2018 27-28 March 2018
MANAGEMENT TRL Fishery export approval under the EPBC Act.	Agenda Item 2.2.2 FOR NOTING

RECOMMENDATION

1. That the Working Group **NOTE** that the Torres Strait Tropical Rock Lobster Fishery has, subject to conditions, received export approval under the *Environment Protection and Biodiversity Conservation Act 1999* until 2020.

KEY ISSUES

2. The Torres Strait Tropical Rock Lobster Fishery has been declared an approved Wildlife Trade Operation (WTO) under *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) for a further three years, valid under 18 December 2020 (**Attachment A**).
3. This approval is:
 - a. necessary in order to legally export commercially wild caught seafood from Australia; and
 - b. subject to conditions which require ongoing work by the PZJA (**Table 1**).
4. The Working Group will need to have regard for the conditions currently in place when developing management advice for the Fishery.
5. One new condition has been added to the WTO that states:
 - a. The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion in the fishery
 - b. This may include data collection and analysis protocols to manage risks, triggers and/or limits for managing harvest, and should also account for all sources of stock mortality, including commercial, recreational, Traditional and illegal harvest.
6. Conditions carried over from the previous certification are:
 - a. The need for the fishery to operate in accordance with the management arrangements in for under the Torres Strait Fisheries Act 1984.
 - b. PZJA to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Tropical Rock Lobster Fishery management arrangements against which EPBC Act decisions are made.
 - c. PZJA to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition
 - d.

Table 1 WTO conditions for the Torres Strait Tropical Rock Lobster Fishery, a comparison with previous consideration and status of any relevant management actions.

Number	Condition	Comparison to previous WTO	Status of any relevant management actions
1.	Operation of the Torres Strait Tropical Rock Lobster Fishery will be carried out in accordance with management arrangements in force under the Torres Strait Fisheries Act 1984.	Carry over	Condition adhered to.
2.	The Torres Strait Protected Zone Joint Authority to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Tropical Rock Lobster Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.	Carry over – standard condition on all WTOs.	Amendments to management arrangements (if any performed) are reported to DoEE through scheduled Strategic Assessment Reports.
3.	The Torres Strait Protected Zone Joint Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition.	Carry over -standard condition on all WTOs.	Reports are submitted to DoEE in support of renewing WTO export accreditation.
4.	The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion in the fishery. This may include data collection and analysis protocols to manage risks, triggers and/or limits for managing harvest, and should also account for all sources of stock mortality, including commercial, recreational, Traditional and illegal harvest.	New condition	The PZJA is working to implement a quota management system (QMS) including an enforceable TAC for the fishery. The PZJA is working to implement a final harvest strategy for the Fishery that includes decision rules that promote sustainable management of the stock. AFMA continues to promote catch reporting with industry across all sectors and collects data from daily fishing log books (mandatory TVH sector) and as of 1 December 2017, catch disposal records from TIB and TVH sectors.

BACKGROUND

7. The *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) requires the Australian Government to assess the environmental performance of fisheries and promote ecologically sustainable fisheries management.
8. The Minister for the Department of the Environment and Energy is responsible for the assessment of fisheries managed under Commonwealth legislation and state export fisheries in accordance with the EPBC Act.
9. Several separate assessments are undertaken under the EPBC Act:
 - the strategic assessment of fisheries under Part 10 of the EPBC Act;
 - assessments relating to impacts on protected marine species under Part 13; and,
 - assessments for the purpose of export approval under Part 13A.
10. In assessing a management plan under Part 10 of the EPBC Act the Minister for the Environment is assessing the framework for managing the fishery and declaring that actions approved in accordance with the accredited plan do not require approval under Part 9 for impact on the environment (approval of actions relating to matters of national environmental significance).
11. In assessing a management plan under Part 13 of the EPBC Act the Minister for the Environment is determining that all reasonable steps are being taken to avoid killing or injuring protected species and that the fishery to which the plan relates does not, or is not likely to, adversely affect the survival or recovery in nature of any listed threatened species or the conservation status of a listed migratory species, cetacean, or listed marine species or a population of that species.
12. In assessing a management plan under Part 13A of the EPBC Act the Minister for the Environment is determining whether species taken in the fishery should be included on the list of exempt native specimens (LENS) and therefore allowed to be exported. For each specimen on the list there is to be a notation that states whether the inclusion of the specimen in the list is subject to restrictions or conditions and, if so, the nature of those restrictions or conditions.
13. The Torres Strait Tropical Rock Lobster Fishery was first assessed 2004 under Parts 10, 13 and 13 A of the EPBC Act. Export approval was granted through amending the LENS and declaring the TRL Fishery a Wildlife Trade Operation (WTO) for a period of three years, valid until 24 November 2007. A further three WTO approvals were granted with the last valid until 4 May 2016.
14. On 12 April 2017, AFMA submitted an application on behalf of the PZJA, for reassessment of the Torres Strait Tropical Rock Lobster Fishery under the EPBC Act as a wildlife trade operation (**Attachment B**).
15. The Department of the Environment and Energy assessed this application against the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition'. Public consultation was undertaken on the application between 26 April and 31 May 2017. No comments were received.
16. The Department of the Environment and Energy assessment is at **Attachment C**.

17. The Delegate of the Minister for the Environment and Energy wrote to AFMA and Senator the Hon Anne Ruston, Assistant Minister for Agriculture and Water Resources on 20 December 2017 advising of her decision in relation to the reassessment of seven Commonwealth-managed fisheries including the Torres Strait Tropical Rock Lobster Fishery (**Attachment D**).

LIST OF ATTACHMENTS

Attachment A – Declaration of an approved Wildlife Trade Operation – Torres Strait Tropical Rock Lobster Fishery, December 2017.

Attachment B – Report submitted by AFMA to DoEE on behalf of PZJA for the Torres Strait Tropical Rock Lobster Fishery.

Attachment C – DoEE Assessment of the Torres Strait Tropical Rock Lobster Fishery. December 2017.

Attachment D – Letter from delegate on decision to declare WTO, 20 December 2017



COMMONWEALTH OF AUSTRALIA

Environment Protection and Biodiversity Conservation Act 1999

DECLARATION OF AN APPROVED WILDLIFE TRADE OPERATION – TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY, DECEMBER 2017

I, ILSE KIESSLING, Acting Assistant Secretary, Wildlife Trade and Biosecurity Branch, as Delegate of the Minister for the Environment and Energy, have considered in accordance with section 303FN of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) the application from the Australian Fisheries Management Authority and advice on the ecological sustainability of the operation. I am satisfied on those matters specified in section 303FN of the EPBC Act. I hereby declare the operations for the harvesting of specimens that are or are derived from fish or invertebrates, other than specimens that belong to species listed under Part 13 of the EPBC Act (other than a species listed in the conservation dependent category), and specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list), taken in the Torres Strait Tropical Rock Lobster Fishery as defined in the management regime in force under the *Torres Strait Fisheries Act 1984* (Cth) and the *Torres Strait Fisheries Regulations 1985* (Cth), to be an approved wildlife trade operation, in accordance with subsection 303FN(2) and paragraph 303FN(10)(d), for the purposes of the EPBC Act.

Unless amended or revoked, this declaration:

- a) is valid until 18 December 2020 and;
- b) is subject to the conditions applied under section 303FT specified in the Schedule.

Dated this 20 day of December 2017

.....
Delegate of the Minister for the Environment and Energy

A person whose interests are affected by this declaration may, within 28 days, make an application in writing to the Department of the Environment and Energy for the reasons for the decision.

An application for independent review of the decision (under section 303GJ(1) of the *Environment Protection and Biodiversity Conservation Act 1999*) may be made to the Administrative Appeals Tribunal (AAT), on payment of the relevant fee by the applicant, either within 28 days of receipt of the reasons for the decision, or within 28 days of this declaration if reasons for the decision are not sought. Applications should be made to the Deputy Registrar, AAT in your Capital City. Please visit the AAT's website at <http://www.aat.gov.au/> for further information.

You may make an application under the *Freedom of Information Act 1982* (Cth) to access documents relevant to this decision. For further information, please visit <http://www.environment.gov.au/foi/index.html>.

Further enquiries should be directed to the Director, Wildlife Trade Assessments Section, Department of the Environment and Energy, Telephone: (02) 6274 1917 Email: sustainablefisheries@environment.gov.au.

SCHEDULE

Declaration of the Harvest Operations of the Torres Strait Tropical Rock Lobster Fishery as an approved wildlife trade operation, December 2017

ADDITIONAL PROVISIONS (section 303FT)

Relating to the harvesting of specimens that are or are derived from fish or invertebrates, other than specimens that belong to species listed under Part 13 of the EPBC Act (other than a species listed in the conservation dependent category), and specimens that belong to taxa listed under section 303CA of the EPBC Act (Australia's CITES list), taken in the Torres Strait Tropical Rock Lobster Fishery:

1. Operation of the Torres Strait Tropical Rock Lobster Fishery will be carried out in accordance with management arrangements in force under the *Torres Strait Fisheries Act 1984*.
2. The Torres Strait Protected Zone Joint Authority to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Tropical Rock Lobster Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* decisions are made.
3. The Torres Strait Protected Zone Joint Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.
4. The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion in the fishery.

This may include data collection and analysis protocols to manage risks, triggers and/or limits for managing harvest, and should also account for all sources of stock mortality, including commercial, recreational, Traditional and illegal harvest.



Australian Government

Australian Fisheries Management Authority

Contents

Contact details	3
Executive summary	4
Torres Strait Tropical Rock Lobster Fishery Strategic Assessment Report – February 2017.....	5
Introduction	5
Consultation	5
1. Description of the fishery	6
1.1 Target/permitted/prohibited species	7
1.2 Fishing method employed	7
1.3 Fishery area	7
1.4 Allocation between sectors	7
1.5 Status of export approval /accreditation under Environment Protection and Biodiversity Conservation Act 1999	8
2. Management arrangements	8
2.1 Governing legislation.....	8
2.2 Protected Zone Joint Authority (PZJA)	8
2.3 Agencies roles and responsibilities	9
2.4 Proposed management arrangements for the fishery	10
2.5 Statement of the performance of the fishery against objectives, performance indicators and performance measures	14
2.6 Compliance risks present in the fishery and actions taken to reduce these risks	14
2.7 Description of cross-jurisdictional management arrangements	16
2.8 Demonstration of compliance with Threat Abatement Plan's, recovery plans etc.....	16
3. Research and monitoring	16
3.1 Research priorities and funding	16
3.2 Fishery independent surveys	17
3.3 Catch and effort reporting	18
3.4 Total catch of target species	18
3.5 Total catch of target species taken by other fisheries	18
3.6 Bycatch and byproduct species	19
3.7 Harvest by each sector	19
3.8 Effort data including information on trends	20

3.9	Spatial and temporal issues/trends	22
3.10	Benthic communities	23

Tables

Table 1. Torres Strait Tropical Rock Lobster Fishery management measures.....	12
Table 2. Total catch and total allowable catch (TAC) of TRL (tonnes in live weight) from 2012-2015....	18
Table 3. Number of TRL caught and discarded on TSPF observer voyage OB15/043.	19
Table 4. Australia (TIB and TVH) and PNG annual catch (tonnes live weight) of Tropical Rock Lobster and Total Allowable Catch for the years 2004 to 2015.	19
Table 5. Annual effort statistics for the TVH sector.	Error! Bookmark not defined.
Table 6. Annual effort statistics for the TIB sector.	Error! Bookmark not defined.
Table 7. Nominal catch per unit effort for TIB and TVH sectors for the years 2004-2015.....	22

Contact details

Environment Section	Torres Strait Tropical Rock Lobster Fishery
Paul Ryan	Dean Pease
Manager Environment	Senior Management Officer Torres Strait Fisheries
AFMA	AFMA
Phone: (02) 6225 5555	Phone: (07) 4069 1990
Paul.Ryan@afma.gov.au	Fax: (07) 4069 1277
	Dean.Pease@afma.gov.au

Executive summary

The Torres Strait Tropical Rock Lobster Fishery (the Fishery) was strategically assessed in May 2014 under Parts 10, 13 and 13A of the EPBC Act. Export approval was granted through declaring the Fishery a Wildlife Trade Operation (WTO) for a period of three years, valid until 4 May 2017.

This submission has been produced to allow the Department of the Environment to assess the current management arrangements under the EPBC Act prior to the expiry of the current WTO approval. A formal management plan for the Fishery is being developed by the Australian Fisheries Management Authority (AFMA) on behalf of the PZJA, the Plan is due to be implemented in 2018.

This report describes the current status and nature of the Fishery; the current management arrangements, the research and monitoring regime of the Fishery and trends of catch and effort, including spatial and temporal information.

This document has been developed in accordance with AFMA's obligations under the EPBC Act to declare the Fishery an approved WTO.

Torres Strait Tropical Rock Lobster Fishery Strategic Assessment Report – February 2017

Introduction

This draft assessment report for the Torres Strait Tropical Rock Lobster Fishery (the Fishery) The report provides the basis for the strategic assessment of the Fishery consistent with the requirements of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Consultation

The Protected Zone Joint Authority (PZJA) is responsible for making management decisions for PZJA fisheries, including the TRL Fishery. The PZJA membership is comprised of the Commonwealth Assistant Minister for Agriculture, The Queensland Government Minister for Agriculture, Fisheries and Forestry and the Chair of the Torres Strait Regional Authority. Further information regarding the PZJA is provided in **Section 2.2**.

1. Description of the fishery

At a glance	
Principle species	Tropical rock lobster (<i>Panulirus ornatus</i>)
Fishery sectors	Transferrable Vessel Holder (TVH) Traditional Inhabitant Boat (TIB) Papua New Guinea (PNG) cross-endorsed
No. concessions 2016	TVH: 12 licences, 33 tenders, limited entry TIB: 291 PNG: 0 (cross-endorsed) (ABARES Fishery Status Report 2016)
Fishing methods	Hookah – diving assisted by surface supply breathing apparatus Free diving – diving with breath hold only Lamp fishing – fishing at night with a light and collecting lobster by a handheld spear or net from a boat
Estimated catch and value or 2014/15	Australia TRL catch 303 t (~\$A12.2 million) PNG TRL catch 192 t (value uncertain) (ABARES Fishery Status Report 2016)
Primary markets	Live lobsters and frozen tails – domestic Frozen tails – United States Live lobsters – Hong Kong and China (ABARES fishery status report 2016)
Stock status	2014/15 not overfished 2014/15 not subject to overfishing (ABARES fishery status report 2016)
Management plan	None In preparation to move from the current predominantly effort based management system to one based on quota a management plan is being developed for the Fishery.
Management method	Under the current management system input controls are the primary management tool with restrictions on fishing gear and seasonal closures. These controls are complemented with a minimum size limit (115 mm tail length or 90 mm carapace length) and traditional landing and recreational bag limits.
Consultative mechanism	The PZJA is responsible for making management decisions for the Fishery. The PZJA has established two consultative forums for the Fishery: the Tropical Rock Lobster Resource Assessment Group (TRLRAG) and the Tropical Rock Lobster Working Group (TRLWG) who provide recommendations to the PZJA.

1.1 Target/permitted/prohibited species

The Tropical Rock Lobster Fishery is based on a single species, the tropical rock lobster (*Panulirus ornatus*). Other species of rock lobster (*P. versicolour*, *P. penicillatus* and *P. femoristriga* and *P. polyphagus*) have been recorded in the Torres Straits; however catches of these species are negligible.

Bycatch or by-product species are not encountered/taken due to the selective nature of the fishery. Other species may be targeted opportunistically by TRL fishers who hold other fishery endorsements.

1.2 Fishing method employed

The TRL Fishery is primarily a dive-based, hand-collection fishery using hookah or by free-diving, a small quantity of lobster is also taken by lamp fishing. The hookah dive method typically has one diver working from each fishing vessel (called tenders); tenders are generally four to six metres in length. Hookah divers work to about 20 metres in depth during daylight hours. Lamp fishing involves collecting lobsters at night by drifting over shallow reefs using handheld spears or scoops.

The TVH sector generally uses primary boats in conjunction with smaller fishing tenders and fish for lobster using hookah. The TVH sector normally undertakes trips to fishing grounds that last from a few days to several weeks.

The TIB sector typically uses smaller fishing tenders only with trips lasting for one or two days. However, recently an increasing number of TIB sector operators have started using larger primary boats in conjunction with fishing tenders and hookah dive equipment. Some TIB operators' lamp fish the shallow reefs at night.

1.3 Fishery area

See the map detailing the area of the fishery (**Attachment A**), available from: http://pzja.gov.au/wp-content/uploads/2011/05/lobster_map.gif.

Majority of the Tropical Rock Lobster is taken from the western and central zones of the fishery (**Section 3.9**).

1.4 Allocation between sectors

Catch sharing arrangements between Australia and PNG are defined under the under the *Treaty between Australia and the Independent State of Papua New Guinea concerning Sovereignty and Maritime Boundaries in the area between the two Countries, including the area known as the Torres Strait, and Related Matters* (the Treaty), for further information on the Torres Strait Treaty see **Section 2.1**.

Under the Treaty PNG cross-endorsed vessels are entitled to take 25 per cent of the TAC within the Australian area of jurisdiction and Australia is entitled to take 75 per cent of the TAC. The Australian TAC is notional and not used to control harvest of the TIB and TVH sectors, currently the level of catch is controlled by input controls. The proposed management plan will allocate quota units to TIB and TVH sectors and will be used to control harvest.

1.5 Status of export approval /accreditation under Environment Protection and Biodiversity Conservation Act 1999

The Fishery was granted export approval/accreditation under the EPBC Act on 7 May 2014 for a period of three years and is valid until 4 May 2017. The declaration of the harvest operations of the Torres Strait Tropical Rock Lobster Fishery as an approved wildlife trade operation (WTO) stipulates three additional provisions (**Attachment B**).

2. Management arrangements

2.1 Governing legislation

The Torres Strait Treaty establishes the Torres Strait Protected Zone (TSPZ) and aims to protect the traditional way of life and livelihood of the traditional inhabitants of the Torres Strait and adjacent coastal areas of the two countries. Australia and Papua New Guinea are obligated to cooperate in the conservation, management and utilisation of the Protected Zone fisheries and both countries have sovereign rights within the Protected Zone.

Management of Protected Zone fisheries in the Australian area of jurisdiction is subject to the *Torres Strait Fisheries Act 1984*. The purpose of the Act is to give effect, in Australian law, to the fisheries elements of the Torres Strait Treaty.

The Act also establishes the PZJA (**Section 2.2**) and a PZJA policy decision outlines which agencies are able to administer the day to day functions of the PZJA (**Section 2.3**).

In addition to the above Act, Protected Zone fisheries are subject to assessment under three parts of the EPBC Act for fisheries where:

- a formal management plan or regime is to be determined (part 10);
- there are interactions with listed threatened species and ecological communities (part 13); and
- fisheries product is to be exported (part 13A).

2.2 Protected Zone Joint Authority (PZJA)

The PZJA members comprise the Commonwealth and Queensland Ministers responsible for fisheries, and the Chair of the Torres Strait Regional Authority. The Australian Government Minister is the Chair of the PZJA.

To assist in the management of the PZJA fisheries, the PZJA has established advisory bodies comprising a wide range of stakeholders and fishery experts, including:

- industry (traditional inhabitant and non-traditional inhabitant);
- Australian and Queensland government officials; and
- other technical experts.

The PZJA is advised by several forums on issues associated with the Fishery; these are the PZJA Standing Committee (**Section 2.3**), the Torres Strait Scientific Advisory Committee (TSSAC), Tropical Rock Lobster Fishery Working Group (TRLWG), and the Tropical Rock Lobster Fishery Resource Assessment Group (TRLRAG).

The PZJA Standing Committee

The PZJA Standing Committee consists of senior representatives from the PZJA member agencies. Its function is to provide strategic and operational recommendations to the PZJA on the management of the fisheries in accordance with the PZJA's statutory obligations and to oversee the implementation of the PZJA's agreed policy commitments.

The Torres Strait Scientific Advisory Committee

The TSSACs main role is to advise on the strategic direction, priorities and funding for research undertaken by AFMA across all PZJA fisheries in the Protected Zone. This advice gives consideration to meeting research gaps in line with the objectives of the *Torres Strait Fisheries Act 1984*.

Tropical Rock Lobster Working Group

The TRLWG provides recommendations to PZJA forums on fishery specific issues, including input to research gaps, operational issues and compliance issues. The TRLWG is comprised of members and observers from industry, AFMA, QDAF, TSRA, fishery scientists. Observers to the TRLWG are Malu Lamar registered native title body corporate (RNTBC), PNG National Fisheries Authority (NFA) and industry members (TIB, TVH and PNG). The TRLWG enables greater participation from industry members (traditional inhabitant and non-traditional inhabitant) in the consultative process.

The Tropical Rock Lobster Resource Assessment Group

The TRLRAG provides advice on stock assessment related matters that address biological, economic and social/cultural factors affecting the Fishery. These matters include; the status of fish stocks, sub-stocks, species (target and non-target species) and the impact of fishing on the marine environment. Members of the TRLRAG include research members, industry members, AFMA, QDAF and TSRA. Observers to the TRLRAG are Malu Lamar RNTBC, industry members, PNG NFA and industry members (TIB, TVH and PNG).

2.3 Agencies roles and responsibilities

The PZJA Standing Committee is comprised of AFMA, QDAF, TSRA and the Australian Government Department of Agriculture and Water Resources.

Australian Fisheries Management Authority

AFMA undertakes fisheries management and licencing functions in consultation with the other agencies and maintains an office on Thursday Island. AFMA is responsible for developing fisheries management arrangements such as management plans and provides support and secretariat services for the PZJA, TSSAC, the TRLRAG and the TRLWG. AFMA is also responsible for foreign compliance in Commonwealth waters.

Queensland Department of Agriculture and Fisheries

Fisheries Queensland is the delegate for Torres Strait domestic compliance. They also provide fisheries management and licencing advice on day-to-day operational issues at an officer level and through the Standing Committee.

The Torres Strait Regional Authority

The TSRA provide input to fisheries management decisions and represent the interests of Traditional Inhabitants in fisheries management.

The TSRA have also taken the lead on the development of community management plans for Turtle and Dugong. Additionally, Turtle and Dugong are detailed as a fishery under the *Torres Strait Fisheries Act 1984* meaning that current legislation regarding sustainability is administered by AFMA.

The Commonwealth Department of Agriculture and Water Resources

The Commonwealth Department of Agriculture continues to work closely with AFMA in assisting with legislative reform and policy advice.

2.4 Proposed management arrangements for the fishery

Current arrangements

The Fishery is managed by a range of input controls such as size limits and gear restrictions and output controls such as minimum size limits. These management measures exist in the form of management notices and licence conditions (**Table 1**).

A recommended biological catch (the maximum amount of TRL that should be taken in a season) and a notional total allowable catch are set each year. The notional TAC is used to measure the stock status and for catch sharing arrangements with PNG, it is not used to control harvest in the Fishery.

Vessel monitoring system will be mandatory on all commercially licenced primary and carrier vessels operating under the *Torres Strait Fisheries Act 1984* by 1 July 2017. The introduction of VMS will improve monitoring, control and surveillance of licenced fishing vessels in the Torres Strait.

Proposed arrangements

AFMA is working with the PZJA to develop a mandatory fish receiver system for all Torres Strait Fisheries to replace the voluntary Torres Strait Seafood Buyers and Processors Docket Book (TDB01). Currently the TDB01 provides the principle source of catch and effort information for the TIB sector, however because it is voluntary some TIB catch is unaccounted each year.

Under the proposed fish receiver system licenced fish receivers will be required to report the catch and fishing effort information for both TIB and TVH fishers. The system will improve reporting of catch and effort data for the TIB sector and further reduce uncertainty in the stock assessment. The fish receiver system will be used to reconcile catch against quota and improve monitoring, control and surveillance supporting the proposed quota management system.

A plan of management is being developed for the Fishery to transition the management arrangements to output controls through the allocation of TRL quota units to the TIB and TVH sectors. Output controls regulate the fishing activity by restricting the amount of fish that can be landed. The Plan pursuant to section 15A of the *Torres Strait Fisheries Act 1984* will:

- determine a total allowable catch (TAC) (a measure of fishing capacity (s15A(4)) each fishing season for tropical rock lobster (*Panulirus spp.*);

- allocate units (division and allocation of fishing capacity (s15A(6))) to eligible persons and/or entities. Each unit (known as quota units) will entitle the holder to an equal share of the TAC; and
- allow for the trading (selling and leasing) of quota units (s15A(6)).

The total allowable catch (TAC) will be determined by the PZJA in line with requirements of the TRL Harvest Strategy and following advice from the TRLRAG and TRLWG.

Table 1. Torres Strait Tropical Rock Lobster Fishery management measures.

Management measures	Traditional Inhabitant Sector (TIB)	Non-Indigenous Sector (TVH)	What instrument is used to impose the measure	Will the arrangement continue immediately after the Management Plan (MP)*	Will the arrangement be in the MP ¹ .
Requirement to hold a licence	Yes	Yes	<i>Torres Strait Fisheries Act 1984 and Community Fishing Notice 1.</i>	Yes	MP
Tender/dinghy number restrictions	No ²	Yes (maximum 7)	TVH sector: result of limited entry policy.	Yes	No, other instrument.
Catch reporting	No	Yes	Licence conditions	Yes	No, other instrument.
Moon-tide hookah closures	Yes	Yes	Licence conditions	Yes	No, other instrument.
Fishery closure (1 Oct – 30 Nov)	Yes	Yes	Torres Strait Fisheries Management Instrument No.9	Yes, to be reviewed.	No, other instrument.
Hookah closure (1 Dec – 31 Jan)	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes, to be reviewed.	No, other instrument.
Size restrictions, minimum tail size of 115 mm or minimum carapace length of 90 mm.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
Prohibition on using SCUBA or any kind of equipment used for breathing underwater other than hookah gear.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.

*Note: All management arrangements are subject to periodic review.

¹ Details will be set out in other instruments or licence conditions.

² Policy removed in 2014. Tender numbers are now constrained by vessel survey standards

Management measures	Traditional Inhabitant Sector (TIB)	Non-Indigenous Sector (TVH)	What instrument is used to impose the measure	Will the arrangement continue immediately after the Management Plan (MP)*	Will the arrangement be in the MP or operational detail be in the actual MP
Collection by hand, spear, scoop net only.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
Prohibition on carrying meat removed from lobster.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
Prohibition on carrying diving equipment at night.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
A Master Fisherman's licence must be held by person in charge of the boat.	Yes	Yes	Policy	Yes	MP
A processor/carrier licence is required to carry or process TRL at sea.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	MP
A bag limit of three lobsters per person or six lobsters per boat applies to traditional fishing (Islander or visiting PNG Traditional Inhabitants) and recreational fishing.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument
Boat length restrictions and boat replacement policy ³	Yes (maximum 20m)	Yes (maximum 18m)	Licence conditions and <i>Fisheries Management Notice No.47</i> (maximum 20m)	Yes	No, other instrument

- ³ • boats up to six metres may be replaced by another boat up to six metres;
- boats greater than six metres and less than or equal to ten metres may be replaced by a boat up to and including 10 metres;
 - boats greater than ten metres and less than or equal to 14 metres may be replaced by a boat up to and including 14 metres; and
 - boats greater than 14 metres may be replaced by another boat of equal length. The maximum size for fishing boats is 20 metres.

2.5 Statement of the performance of the fishery against objectives, performance indicators and performance measures

A statement of the performance of the TRL Fishery against its objectives, performance indicators and performance measures is made annually in PZJA's annual report. A copy of the current statement can be found on the PZJA website.

2.6 Compliance risks present in the fishery and actions taken to reduce these risks

Queensland Boating and Fisheries Patrol (QBFP) carries out the domestic compliance programs for the Torres Strait under an agreement between the Commonwealth of Australia and the State of Queensland relating to the cost of management of fisheries in the Australian area of jurisdiction.

AFMA is responsible for the foreign compliance program for the Torres Strait and it liaises closely with PNG National Fisheries Authority (NFA) and Australian Border Force - Maritime Border Command.

QBFP compliance regime

During 2014/15 Queensland Boating and Fisheries Patrol (QBFP) had four matters involving the Torres Strait Tropical Rock Lobster Fishery referred to the Commonwealth Director of Public Prosecutions. Decisions on these matters are still pending; they involve offences including: unlicensed fishing, breaches of licence conditions and commercial sale of no take species.

AFMA compliance regime

AFMA and (QBFP) undertake an annual compliance risk assessment process for the Torres Strait. The 2015 compliance risk assessment process identified six moderate to high level risks within the area of the Torres Strait. Three identified risks are of direct relevance to the Torres Strait Tropical Rock Lobster Fishery.

The breaching of trip, gear, size and jurisdictional limits:

- breach of gear restrictions, in particular the use of surface supply breathing apparatus (hookah) and seasonal closures.
- breach of possession limits, size limits and fishing during seasonal closures.

The occurrence unauthorized fishing:

- unlicensed domestic (non-traditional and traditional) operators and unlicensed PNG nationals.

The occurrence of logbook misreporting:

- failure to accurately complete logbooks (TVH sector only).
- failure to submit logbooks within the required timeframe (TVH sector only).

At the 2014 and 2015 bilateral meetings between AFMA and PNG, officials discussed the options currently in place for enhancing the foreign compliance regime in the Torres Strait, including:

PNG Treaty Awareness Program and Treaty Village Identification Scheme

Australian and PNG government agencies conduct visits to the 13 PNG Torres Strait Treaty Villages, situated along the Southern Coastline of Western Province, PNG, as a part of the Department of Foreign Affairs (DFAT) led Treaty Awareness Program.

The Treaty Awareness Program is designed to educate and advise members of the Treaty villages on their rights and responsibilities under the Torres Strait Treaty between Australia and Papua New Guinea. The visits involve agencies responsible for fisheries, immigration, biosecurity, maritime safety and health. AFMA officers discuss traditional fishing rights under the Torres Strait Treaty, Australian fisheries law and the ramifications of not adhering to fisheries legislation. AFMA has also implemented the Traditional Vessel Identification Scheme as part of these treaty awareness visits. Identified treaty village vessels are marked with unique identification labels which assist the Australian Border Force and AFMA in monitoring the movements of fishing vessels under the Treaty arrangements. Approximately 90 per cent of all vessels (152 boats) in the area have Treaty Village Identification labels. Only one labelled treaty village boat has been apprehended for illegal fishing since implementation of this scheme in 2012.

Joint Patrols and activities

During the 2014/2015 year AFMA and PNG National Fisheries Authority (NFA) coordinated respective patrol boat movements on both sides of the TSPZ during two operations. Suspected illegal fishing activity decreased noticeably during these periods. One PNG NFA officer also joined AFMA and Royal Australian Navy (RAN) officers for a targeted operation against illegal TRL fishing on Warrior Reef.

PNG NFA and police officers based in Daru have conducted a series of at sea transfers of apprehended PNG nationals from Australian patrol boats this year. These transfers provide for repatriation and subsequent processing and prosecution of the offenders under PNG legislation and in keeping with the spirit of the Torres Strait Treaty.

Monitoring, Control and Surveillance

The foreign compliance regime in the Torres Strait is conducted by Australian Border Force - Maritime Border Command working closely with the AFMA Foreign Compliance Operations sector and fishery stakeholders to detect, intercept and disrupt illegal maritime activity.

From October 2013 – January 2016 a total of 27 foreign fishing vessels with PNG origin have been apprehended or otherwise subject to enforcement action within the TSPZ. Of these apprehended vessels 15 resulted in forfeiture of vessels and related fishing gear, including a total number of 247kgs of whole TRL and 50kgs of tailed TRL.

Maritime Border Command has a dedicated Operations Centre which coordinates the civil maritime surveillance program, identifying incursions into Australia's Exclusive Economic Zone (EEZ) and the TSPZ. The intelligence-led, risk-based intervention approach is drawn upon to plan, prioritise and coordinate operations to counter maritime security threats.

AFMA carries out a role as an ongoing patrol presence in response to compliance risks associated with the region. Periods of identified heightened risk through ongoing methods of surveillance may lead to the request of additional assets and patrols for certain areas.

Border Force assets include Bay Class and Cape Class patrol vessels, contracted fixed wing and rotary aircraft including; Dash-8 and Rheims surveillance aircraft, AS350 Squirrel and Bell 412 rotary aircraft. Defence-assigned assets include Royal Australian Air Force AP-3 Orion maritime patrol aircraft and Royal Australian Navy patrol boats. Maritime Border Command also utilises commercial satellite imagery to conduct surveillance of remote areas of our ocean.

The goal is to maintain a secure and safe maritime operating environment for industry participants to be able to conduct their business. The AFMA Foreign Compliance Operations Section in the Torres Strait engages with industry to improve on water awareness, prevention, preparedness and response to potential incidents.

2.7 Description of cross-jurisdictional management arrangements

Australia and PNG entered into the Treaty on 15 February 1985. The Treaty requires Australia and PNG to cooperate in the conservation, management and optimum utilisation of all Article 23 commercial fisheries in the TSPZ. It also allows for catch sharing arrangements between the two countries which are negotiated annually at the fisheries bilateral meeting (**Section 1.4**).

2.8 Demonstration of compliance with Threat Abatement Plan's, recovery plans etc

As the fishery is a highly selective single species fishery (**Section 1.1**) and no bycatch is taken, there are no threat abatement plans, recovery plans or bycatch reduction strategies applicable to the fishery.

3. Research and monitoring

3.1 Research priorities and funding

Research proposals are considered by a number of consultative forums; these forums evaluate the research proposals and advise AFMA on research priorities and funding. The consultative process for research proposals is described below:

AFMA sends a call for pre-proposals for fisheries research in the Torres Strait region. The call for research details priority projects (identified by the TSSAC). Applicants may also submit pre-proposals for projects not identified as priority work.

All pre-proposals are considered by the TRLRAG and the TRLWG, these forums will advise on the preferred research projects based the fishery priorities. The TRLRAG and TRLWG meeting records, including any recommendations, will be provided to the TSSAC for consideration.

The TSSAC will evaluate pre-proposals based on the specific criteria detailed in the annual operational plan. A strong emphasis is placed on the ability of research proposals and principal investigators to engage Torres Strait Islanders in the research process in

meaningful and culturally appropriate ways. The TSSAC will also consider recommendations from the TRLRAG and TRLWG.

Researchers are notified of the TSSACs evaluation of proposals. Individual applicants are then invited to prepare a full (detailed) proposal based on evaluation of the pre-proposals. Full proposals are considered and if accepted endorsed by the TRLRAG, TRLWG and TSSAC.

3.2 Fishery independent surveys

Annual fishery-independent monitoring of the Torres Strait TRL population has been carried out since 1989. Dive surveys are conducted mid-year (June) and additionally pre-season (November) for the years 2005-2008 and 2015, provide information on the relative abundance of recruiting and fished lobsters. The most recent information on the monitoring program and the Fishery stock assessment is provided annually in the 'Torres Strait Tropical Rock Lobster Fishery Survey and Stock Assessment, Research Project RR2013/803, Final Report - Draft' produced by CSIRO **Attachment C**.

There have been several changes to the sampling method since 1989, however abundance data has been standardised for the duration of the monitoring program. A total of 140 (full-scale) or 74 (reduced-scale) sites are allocated to the established sampling strata. Measured belt transects (500 m by 4 m) comprise the primary sampling unit. At the completion of each transect a diver records; the number of lobsters caught (and measured), the number and age-class of those observed but not caught, depth, visibility, distance swum, numbers of pearl shell (*Pinctada maxima*) and holothurian species observed, percent covers of standard substratum and biota (including seagrass and algae species) categories.

Pre-season population surveys inform the abundance recruiting lobster; these surveys were identified by the TRLRAG as critical to support the move of the TRL Fishery to quota management, first proposed by the PZJA in 2005. As a result pre-season surveys were conducted in 2005-2008 and 2015, in addition to mid-year surveys, to provide managers with information on the abundance and biomass of recruiting TRL and the likely stock biomass available to be fished each season. This information underpins the outputs of the stock assessment model which has been developed to assess the fishery status and to forecast the recommended biological catch of TRL for each fishing season. The reduced scale (77 sites) pre-season surveys are considered to be representative for the Fishery. There is a strong correlation ($R=0.97$) between the index of abundance for 1+ TRL from the mid-season and pre-season survey.

A stock assessment is completed for the Fishery annually to provide a recommended biological catch (RBC) for the shared fishery (Australia and PNG). The stock assessment model is informed by historic catch per unit effort (CPUE) information for the TIB sector (years 2004-2015) and for the TVH sector (years 1994-2015), catch information from PNG and results of the fishery independent survey. The CPUE information provides data on the abundance of fished lobsters and informs model predictions of the spawning biomass; this is a fundamental parameter to forecast the RBC. The model also incorporates the southern oscillation index (strength of El Nino or La Nina events) into the RBC calculation.

3.3 Catch and effort reporting

Mandatory catch and effort reporting requirements are in place for the TVH sector. Catch and effort data for the TVH sector is recorded in the Tropical Rock Lobster Logbook (TRL04), an example of the TRL04 logbook page is provided at **Attachment D**. For each vessel day there can be multiple shots (up to four) with each shot consisting of up to eight tenders. Each tender has a catch record by dive method (hookah, freedive or unknown) and by processed form (whole, tailed or unknown). Currently reporting of catch and effort data is not compulsory for the TIB sector due to legislative limitations.

In January 2004, AFMA introduced the Torres Strait Seafood Buyers and Processors docket-book (TDB01) to commercial and community freezer operators to collect data on Torres Strait Islander catch. Unlike the TRL04 logbook, which requires catch and effort data to be recorded for individual fishing operations related to each vessel tender, the docket-book requires only aggregate catch and effort data to be recorded at the end of each trip. The use of the TDB01 docket-book is voluntary. An example of the TDB01 docket book page is available at **Attachment E**. Currently there is no observer program for the Torres Strait Tropical Rock Lobster Fishery. Traditional and recreational catch is considered to be negligible (a bag limit of 3 per person and 6 per boat applies to traditional and recreational fishing east of Cape York Peninsula) and constant over time, it is not incorporated into the fishery stock assessment.

A mandatory fish receiver system is being developed for all Torres Strait Fisheries to replace the TDB01 docket-book. The fish receiver system will improve the reporting of catch information for the TIB sector. Licenced fish receivers will be required to report the landed catch of TRL and fishing effort information for both TIB and TVH fishers. The fish receiver system will be used to reconcile catch against quota and improve monitoring, control and surveillance supporting the proposed quota management system.

3.4 Total catch of target species

The total reported global catches (Australia and PNG) of TRL and the global total allowable catch for the years 2012 to 2015 is provided in **Table 2**.

Table 2. Global reported catch and total allowable catch of TRL (tonnes in live weight) from 2012-2016.

Year	Australia Catch (tonnes)	PNG Catch (tonnes)	Total Allowable Catch (tonnes)
2012	521	174	964
2013	489	108	871
2014	405	261	616
2015	326.6	235.7	869
2016	444.7	127.1	796

3.5 Total catch of target species taken by other fisheries

The Torres Strait Prawn Fishery (TSPF) has historically interacted with TRL. Licensing conditions limit TSPF operators to retain 20 kg of TRL per trip if caught in trawl nets and all

TRL catches must be reported. PNG have reported catches of TRL in demersal trawl fisheries targeting prawns. The combined quantity of TRL reported taken in PNG fisheries (dive and trawl caught) is provided in **Table 2**.

An AFMA independent fishery observer was on-board two TSPF vessel trips during 2015, observing a total of 54 fishing days and a total of 203 shots. The number of Tropical Rock Lobster observed during this period is provided in **Table 3**.

Table 3. Number of TRL caught and discarded on TSPF observer voyage OB15/043.

Species	Common name	Number caught	Discarded alive	Discarded dead	Per cent discarded dead
<i>Panulirus ornatus</i>	Tropical Rock Lobster	628	613	15	2.5

3.6 Bycatch and byproduct species

The fishery is a highly selective single species fishery as a result of the hand collection fishing method (**Section 1.2**). There is no bycatch or byproduct species reported in the fishery. However, operators with other fishery endorsements may harvest those species opportunistically while targeting TRL.

3.7 Harvest by each sector

The total catch of Tropical Rock Lobster (tonnes in live weight) for the Australian sectors (TIB and TVH) and PNG for the years 2004-2015 is provided at **Table 4**. The number of TIB sector docket-book records decreased significantly after 2012. This is due to the fact that 43% of the catch in 2013 was not recorded in the docket-book but instead was attributed to two aggregate catch records added to the TIB database to account for 40,029 kgs of whole lobsters and 5,746 kgs of tails received by processors. This occurred again in 2014 and 2015 when two aggregate catch records (representing around 50% of the total catch for both years) were added to the TIB database to account for catch received by processors but not recorded in the docket-book. These amounts were an additional 45,312 kgs of whole lobsters and 7,975 kgs of tails for 2014 and an additional 56,133 kgs of whole lobsters and 7,759 kgs of tails for 2015.

Table 4. Australia (TIB and TVH) and PNG annual catch (tonnes live weight) of Tropical Rock Lobster and Total Allowable Catch for the years 2004 to 2015.

Year	TIB	TVH	PNG	Total Catch	Total Allowable Catch	Catch as % of TAC
2004	211	481	192	874	*	*
2005	345	545	228	1118	*	*
2006	143	135	142	420	471	89
2007	267	269	228	764	842	91
2008	207	100	221	528	751	70

2009	135	91	161	387	450	86
2010	182	279	293	754	853	88
2011	201	503	165	869	803	108
2012	151	370	174	695	964	72
2013	127	362	108	597	871	69
2014	132	173	261	666	616	108
2015	173.9	152.7	235.7	562.3	769	73
2016	207.1	237.6	127.1	571.8	796	72

*Information not available

3.8 Effort data including information on trends

Between 2004 and 2016 there are a total of 35,869 TRL04 records for the TVH sector. The distribution of these records by year and month are given in **Table 5**. It is apparent that there has been little if any effort during October and November before 2006 and since 2006 there has been zero effort in the months October-to-January.

Effort is recorded as 'Hours-Fished' which records the duration of the fishing trip for each tender-set. The number of hours fished recorded for only 31,171 (93.8%) of the 33,235 records. A total of 30,831 records (92.8% of all tender-sets) recorded effort between 0.5 and 12 hours. There were 20 records where the recorded hours fished was greater than 12 hours, two records where effort was less than 0.5 hours and 315 records where effort was recorded as 24 hours (1.2% of records). Effort in the TVH sector declined between 2006 and 2009 as a result of the removal of licences in the fishery through the voluntary buyback process. Effort increased in 2010, and has been relatively constant from 2010-2015.

Table 5. Number of TVH catch records by year and month.

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2004	24	607	712	571	662	761	729	633	395			106
2005	13	662	615	543	519	538	552	533	323			4
2006		409	436	361	286	206	349	289	92			
2007		288	427	446	542	489	402	184	91			
2008		133	222	113	161	96	159	175	152			
2009		148	227	174	201	200	125	163	70			
2010		255	333	302	324	292	309	294	253		6	
2011		286	384	371	322	380	356	310	261			
2012		166	344	371	311	366	318	264	201			
2013		461	383	414	424	324	374	385	243			
2014		357	395	297	433	408	445	274	291		1	
2015		419	408	441	355	313	250	346	127			

2016	12	500	444	315	379	334	313	183	124			
TOTAL	49	4691	5330	4719	4919	4707	4681	4033	2623	0	7	110

Between 2004 and 2016 there are a total of 72,930 TDB01 docket-book records for the TIB sector. The structure of the docket-book indicates that there should be a unique record for each vessel, date and seller-name. However, there are often multiple records where for the same vessel, date and seller name there are multiple unique records where the number of days fished is different. The annual listing of the number of TIB docket-book seller records and number of days fished is provided in **Table 6**.

Table 6. Annual listing of the number of TIB seller records against the number of days fished.

Days-Fish	04	05	06	07	08	09	10	11	12	13	14	15
0	688	407	336	345	165	89	110	217	240	411	223	118
1	3000	4752	2926	4652	3859	2716	2184	2303	650	39	1170	868
2	354	398	257	376	311	260	67	82	195	99	124	142
3	129	183	138	123	116	131	77	60	110	77	56	88
4	87	89	60	45	35	64	19	44	41	2	17	43
5	55	97	50	61	37	52	3	32	25	1	6	34
6	12	38	3	5	8	13	2	22	36	0	1	8
7	12	24	15	5	9	17	2	11	16	0	4	4
8	10	10	6	8	4	5	4	5	10	0	2	7
9	11	5	1	2	0	0	0	3	5	0	1	5
10	2	5	2	2	1	7	0	8	2	0	0	0
11	3	0	0	0	3	5	0	1	7	0	0	0
12	0	5	0	1	0	2	0	0	0	0	0	0
13	4	1	1	2	0	0	0	0	0	0	0	0
14	2	1	1	1	0	0	0	1	0	0	0	0
15	0	0	0	1	0	1	0	0	0	0	0	0
16	0	0	3	0	0	0	0	0	0	0	0	0
TOT	4369	6015	3799	5629	4548	3362	2468	2789	1337	629	1604	1317

The nominal catch per unit effort (CPUE) (total catch/total effort) for the TVH and TIB sectors is provided in **Table 7**. The nominal CPUE for TIB and TVH sectors is variable; this is consistent with the high natural variability of the Torres Strait Tropical Rock Lobster and may also be attributed to changes to management arrangements and changes to the fishing fleet through time.

Table 7. Nominal catch per unit effort for TIB and TVH sectors for the years 2004-2015.

Year	Nominal CPUE TIB sector	Nominal CPUE TVH sector
2004	0.98	1.08
2005	1.17	1.47
2006	0.80	0.67
2007	0.96	1.07
2008	0.95	0.86
2009	0.83	0.61
2010	1.02	1.22
2011	1.40	2.08
2012	1.38	1.62
2013	*	1.26
2014	0.76	1.02
2015	0.73	0.61
2016	1.04	1.10

*Data not available

3.9 Spatial and temporal issues/trends

The spatial distribution of TRL is reported by the TIB sector using the 21 zones identified in the TDB01 docket-book. Since 2004, the western zones of the TSPZ (Thursday Island Bridge, Mabuiag and Badu strata) have accounted for approximately 65 per cent of the TIB sectors catch. The eastern zones (Warrior and Warraber strata) have accounted for approximately nine and eight per cent of the TIB sectors catch respectively.

The spatial distribution of TRL is reported by the TVH sector using modified docket book zones. Since 1994, the central zones (Kircaldie and Warraber strata) have accounted for approximately 65 per cent of the TVH sectors catch. The northern zones (Buru and Numar strata) have accounted for approximately 20 per cent of the TVH sectors catch.

Stock assessment surveys conducted by CSIRO reported that there were no significant trends or correlation between spatial information and lobster density. Lobster density was reported to be 'loosely' correlated with seagrass habitat. However, seagrass coverage is highest in the Thursday Island Bridge and Mabuiag strata and the correlations between seagrass coverage and lobster density were poor.

Tagging studies of Torres Strait Tropical Rock Lobster has shown that during the months of August to October each year most 2+ lobsters (at least two years old) emigrate from the western and central Torres Strait and move north-east into the Gulf of Papua, undergoing reproductive development at the same time. Lobsters arriving in Papuan waters are in very poor condition and almost all lobsters die after breeding. Annual variability observed in Tropical Rock Lobster distribution is influenced by environmental conditions such as strong

trade winds, food availability and high turbidity. These factors may also result in spatial and temporal changes to fishing operations.

3.10 Benthic communities

The benthic habitat of the Torres Strait was surveyed in May-June 1989, using almost 600 transects randomly dispersed over an area of approximately 25 000 km² (Pitcher et al. 1992). The distribution and relative abundance of seagrasses tended to increase from almost zero abundance in the southern and eastern areas of the survey to moderately dense in north-western Torres Strait. The substratum type also varied greatly, with the greatest diversity and abundance of biota associated with the harder substrata. The ongoing TRL monitoring program (**Section 3.1**) has shown that seagrass coverage may change overtime, while substrate (sand, rubble, hard cover) has been consistent through the monitoring period (CSIRO unpublished data).



Australian Government

Department of the Environment and Energy

Assessment of the
Torres Strait Tropical Rock Lobster Fishery

December 2017

CONTENTS

{ TOC \O "1-3" \H \Z \U }

© Copyright Commonwealth of Australia, 2017.



Assessment of the Torres Strait Tropical Rock Lobster Fishery December 2017 is licensed by the Commonwealth of Australia for use under a Creative Commons By Attribution 3.0 Australia licence with the exception of the Coat of Arms of the Commonwealth of Australia, the logo of the agency responsible for publishing the report, content supplied by third parties, and any images depicting people. For licence conditions see: <http://creativecommons.org/licenses/by/3.0/au/>.

This report should be attributed as '*Assessment of the Torres Strait Tropical Rock Lobster Fishery December 2017*, Commonwealth of Australia year'.

Disclaimer

This document is an assessment carried out by the Department of the Environment and Energy of a commercial fishery against the Australian Government *Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition*. It forms part of the advice provided to the Minister for the Environment and Energy on the fishery in relation to decisions under Parts 13 and 13A of the *Environment Protection and Biodiversity Conservation Act 1999*. The views expressed do not necessarily reflect those of the Minister for the Environment and Energy or the Australian Government.

While reasonable efforts have been made to ensure that the contents of this report are factually correct, the Australian Government does not accept responsibility for the accuracy or completeness of the contents, and shall not be liable for any loss or damage that may be occasioned directly or indirectly through the use of, or reliance on, the contents of this report. You should not rely solely on the information presented in the report when making a commercial or other decision.

EXECUTIVE SUMMARY OF THE ASSESSMENT OF THE TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY

On 12 April 2017, the Australian Fisheries Management Authority (AFMA) submitted an application on behalf of the Torres Strait Protected Zone Joint Authority (PZJA), for assessment of the Torres Strait Tropical Rock Lobster Fishery under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) as a Wildlife Trade Operation (WTO).

The Department of the Environment and Energy assessed this application against the Australian Government 'Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition'. Public consultation on the application was undertaken 26 April to 31 May 2017. No comments were received.

The Torres Strait Tropical Rock Lobster Fishery targets a single species, *Panulirus ornatus*, using hand-collection methods in the Torres Strait Protected Zone. The target stock is not considered overfished and bycatch is negligible. While log books do not facilitate reporting of interactions with EPBC Act-listed species, the risk of interactions is considered to be low based on hand collection of the target stock.

The fishery is unlikely to have an unsustainable ecological impact during the period of the proposed approval (three years). The Department has proposed conditions, specified in Section 4 of this assessment, to ensure risks are managed.

The proposed conditions include the development and implementation of a harvest strategy and improvements to data collection and analysis protocols. A number of measures are already underway. Most notably, AFMA's capacity to monitor and manage catches has significantly improved since 1 December 2017 with the introduction of its fisher receiver system.

The Department recommends that, subject to the conditions specified in Section 4 of this report, the Torres Strait Tropical Rock Lobster Fishery be declared an approved Wildlife Trade Operation for a period of three years until 18 December 2020. Product derived from the fishery should be included on the List of Exempt Native Specimens while a declaration for an approved wildlife trade operation is in place.

Unless a specific time frame is provided, each condition must be addressed within the period of the approved wildlife trade operation declaration for the fishery.

SECTION 1: ASSESSMENT SUMMARY OF THE TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION), CONSISTENT WITH THE EPBC ACT.

	Meets	Partially meets	Does not meet	Details
Guidelines				
Management regime	5 of 9 & 1 N/A	3 of 9	0 of 9	Improvements in management are occurring with actions being implemented. Capacity to monitor and manage catches has significantly improved since the last assessment. Further reforms are expected within the life of the recommended WTO.
Principle 1 (target stocks)	1 of 11 & 2 N/A	8 of 11	0 of 11	The species is not considered overfished or subject to overfishing. The fishery is seeking to manage uncertainty in a precautionary way. Accounting for all sources of mortality is expected to within the life of the recommended WTO.
Principle 2 (bycatch and TEPS)	5 of 12 & 5 N/A	1 of 12	1 of 12	Logbooks do not require reporting of TEP interactions. Collection methods used in this fishery are considered to be low risk.
Principle 2 (ecosystem impacts)	0 of 5	5 of 5	0 of 5	An ecological risk assessment of the fishery found no species, habitats or communities at high risk. The assessment is intended to be revised at least every four years, including during the life of the recommended WTO. Collection methods used in this fishery are considered to be low risk.
EPBC requirements				
Part 12				No marine bioregional plans apply to the area of the Torres Strait.
Part 13	Meets			Impact on EPBC listed species likely to be low. No interactions reported to date.
Part 13A	Meets			This assessment report recommends declaring the fishery a Wildlife Trade Operation for three years until 18 December 2020.
Part 16	Meets			The management regime and collection methods are sufficiently precautionary to prevent serious or irreversible environmental damage.

Assessment history:

- 1st assessment finalised November 2004 – WTO with 3 conditions; 10 recommendations
- 2nd assessment finalised November 2007 – WTO with 3 conditions; 5 recommendations
- 3rd assessment finalised November 2010 – WTO with 3 conditions; 5 recommendations
- 4th assessment finalised May 2014 – WTO with 3 conditions; 3 recommendations

Fishery reporting:

- Annual report – no reports have been provided.
- { HYPERLINK "http://www.afma.gov.au/sustainability-environment/protected-species-management/protected-species-interaction-reports/" }
- { HYPERLINK "http://pzja.gov.au/resources/publications/annual-reports/pzja-annual-report-2011-2014/" \l ".WWbP-f7QCUk" }

Enforcing legislation:

- { HYPERLINK "https://www.legislation.gov.au/Details/C2016C00677" }
- { HYPERLINK "http://www.comlaw.gov.au/comlaw/management.nsf/lookupindexpagesbyid/IP200400637?OpenDocument" \t "_blank" \o "Torres Strait Fisheries Regulations 1985" }
- { HYPERLINK "https://www.legislation.gov.au/Details/C2004A02886/Download" }
- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/09/Fisheries-Management-Instrument-9.pdf" } { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/09/Logbook-Instrument-No-1.pdf" } (pdf copy marked as 'current' on PZJA website but repealed 26 August 2014. Replaced by { HYPERLINK "https://www.legislation.gov.au/Details/F2015L01256" } (Registered 12 August 2015 and valid to 1 June 2018).
- { HYPERLINK "https://www.legislation.gov.au/Details/F2008B00509" } (not listed on PZJA website)
- { HYPERLINK "https://www.legislation.gov.au/Details/F2008B00528" }
- Fisheries Management Notice No. 42 (Incomplete pdf copy on PZJA website. Full copy on { HYPERLINK "https://www.legislation.gov.au/Details/F2008B00528" }).
- { HYPERLINK "https://www.legislation.gov.au/Details/F2008B00753" }
- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/cfn01.pdf" } (pdf on PZJA website not legislation.gov.au)
- { HYPERLINK "http://www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/TREATIES/AUS-PNG1978TS.PDF" }

Risk assessment and mitigation:

- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/4.pdf" } ([April 2007](#))
- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf" }

Stock assessment:

- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/Refined-Stock-Assessment-and-TAC-Estimation-for-the-Torres-Strait-Rock-Lobster-TRL-Fishery.pdf" }
- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/Revised-2010-Assessment-of-the-Tropical-Rock-Lobster-Panulirus-ornatus-Fishery-in-the-Torres-Straits.pdf" }

Other:

- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/torres-rock-lobster.pdf" }
- { HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/6.pdf" }

SECTION 2: DETAILED ANALYSIS OF THE TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY AGAINST THE GUIDELINES FOR THE ECOLOGICALLY SUSTAINABLE MANAGEMENT OF FISHERIES (2ND EDITION)

	Comment
THE MANAGEMENT REGIME	
The management regime does not have to be a formal statutory fishery management plan as such, and may include non-statutory management arrangements or management policies and programs. The regime should:	
Be documented, publicly available and transparent	Partially meets While information is available on the PZJA website, some information is unavailable, inaccurate, inconsistent or difficult to locate. This makes it difficult to determine what arrangements apply to the fishery and could affect fisher's capacity to understand and comply with the arrangements. The Queensland Boating and Fisheries Patrol reported fisher's "lack of knowledge of relevant licensing conditions" as a compliance issue for this fishery ({ HYPERLINK "http://pzja.gov.au/resources/publications/annual-reports/pzja-annual-report-2011-2014/" \l ".WWbP-f7QCuk" }). AFMA has committed to review the PZJA website by July 2018.
Be developed through a consultative process providing opportunity to all interested and affected parties, including the general public	Meets The management regime is developed through a consultative process. The PZJA established advisory bodies in 2003 and records of various meetings are published on the { HYPERLINK "http://pzja.gov.au/pzja-and-committees/" \l ".WYKur_7QAY9" } . Traditional Inhabitant representatives are chosen by their communities, and together with industry and government representatives (Commonwealth and state), participate in the development of management arrangements. The PZJA is also advised by the Torres Strait Protected Zone Joint Authority Standing Committee, management advisory committees, the Torres Strait Scientific Advisory Committee, working groups, and resource assessment groups. The PZJA consults Australian traditional inhabitant fishers (commercial and traditional fishing), non-traditional inhabitant commercial fishers, Australian and Queensland government officials, and other technical experts, and conducts Native Title notification in accordance with the <i>Native Title Act 1993</i> .
Ensure that a range of expertise and community interests are involved in individual fishery management committees and during the stock assessment process	Meets Consultative groups include relevant expertise and community interest. Details are prescribed in the terms of reference for groups such as the { HYPERLINK "http://pzja.gov.au/pzja-and-committees/torres-strait-scientific-advisory-committee-tssac/torres-strait-scientific-advisory-committee-tssac-terms-of-reference/" \l ".WV3u2f7QCuk" } . The policy guiding membership, operation, administration and key decision making processes of the advisory bodies (other than the Torres Strait Protected Zone Joint Authority Standing Committee) is documented in { HYPERLINK "http://www.pzja.gov.au/wp-content/uploads/2011/06/fisheries-management-paper-no1.pdf" } on the PZJA website.
Be strategic, containing objectives and performance criteria by which the effectiveness of the management arrangements are measured	Meets The fishery is managed in accordance with the "Interim Torres Strait Tropical Rock Lobster Fishery Harvest Strategy, 2008". This includes objectives and performance criteria to measure fishery performance. A revised harvest strategy, informed by a management strategy evaluation will also be implemented from December 2019.

<p>Be capable of controlling the level of harvest in the fishery using input and/or output controls</p>	<p>Partially meets</p> <p>A mix of input and output controls are used. There are a limited number of non-traditional (TVH) commercial licenses, but the number of traditional inhabitant (TIB) licenses is unlimited. Licensed vessels operate up to 14 tenders which are usually around five meters long and typically carry two divers (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/Refined-Stock-Assessment-and-TAC-Estimation-for-the-Torres-Strait-Rock-Lobster-TRL-Fishery.pdf").</p> <p>Each year notional catch limits are set for the fishery based on pre-season surveys and recommendations from the fishery's resource assessment group. Catch is then allocated between Australian and Papua New Guineas fishers in accordance with catch sharing arrangements under the Torres Strait Treaty. There are no individual quota allocations; the notional catch limit applies to the fishery and is fished competitively.</p> <p>From 1 December 2017 all commercial fishers are required to unload their catches to licenced fish receivers, who must then report the catch to AFMA within three days. This measure provides AFMA with much greater capacity to monitor and manage fishing effort than was previously the case.</p> <p>The ecological risk management strategy for the fishery (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf") anticipated introduction of a quota management system before 2011. AFMA is still pursuing these reforms but they have not yet occurred. AFMA also expects to implement a revised harvest strategy, which will be subject to a management strategy evaluation, from December 2019. When implemented these measures should improve AFMA's capacity to control the level of harvest in the fishery.</p> <p>The Minister responsible for the fishery can control fishing via legislative instrument (s16 <i>Torres Strait Fisheries Act 1984</i>), but this mechanism is likely to be reserved for emergency situations.</p>
<p>Contain the means of enforcing critical aspects of the management arrangements</p>	<p>Meets</p> <p>The <i>Torres Strait Fisheries Act 1984</i> outlines penalties for non-compliance with fisheries management arrangements and the Queensland Boating and Fisheries Patrol currently provide enforcement for Australian fishers in the Torres Strait.</p> <p>AFMA is responsible for foreign compliance in the Torres Strait and liaises closely with the Papua New Guinean National Fisheries Authority and Australian Border Force - Maritime Border Command in this process.</p> <p>AFMA and the Queensland Boating and Fisheries Patrol undertake an annual compliance risk assessment for the Torres Strait and in 2015 identified six moderate to high level risks, of which three are directly relevant to the Torres Strait Tropical Rock Lobster Fishery. During 2014–2015 fishing season the Queensland Boating and Fisheries Patrol referred four matters involving the Torres Strait Tropical Rock Lobster Fishery to the Commonwealth Director of Public Prosecutions. These included unlicensed fishing, breaches of licence conditions and commercial sale of no take species.</p>
<p>Provide for the periodic review of the performance of the fishery management arrangements and the management strategies, objectives and criteria</p>	<p>Meets</p> <p>The fishery is managed in accordance with the "Interim Torres Strait Tropical Rock Lobster Fishery Harvest Strategy, 2008". This includes objectives and performance criteria which are considered each year by the fishery's resource assessment group. A revised harvest strategy, informed by a Management Strategy Evaluation, is also expected to be implemented from December 2019. The Australian Government Bureau of Agricultural and Resource Economics and Sciences undertake annual assessments of the fishery based on available information.</p>

<p>Be capable of assessing, monitoring and avoiding, remedying or mitigating any adverse impacts on the wider marine ecosystem in which the target species lives and the fishery operates</p>	<p>Partially meets</p> <p>An ecological risk assessment of the fishery found no species, habitats or communities at high risk, and states that it will be revised at least every four years (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/4.pdf"). However, the ecological risk assessment has not been amended since 2007 (10 years) though it is scheduled to be reviewed in 2019–2020.</p> <p>At the end of each year, the fishery's management advisory committee considers changes in spatial distribution of effort, total fishing effort, and any expansion of new gear type or configuration, and if these changes occur, review the risk assessment.</p> <p>Although annual stock surveys (proposed to be triennial under a new harvest strategy) collect some information on habitats (e.g. sea grass beds and sand incursions), these observations do not appear to be driven by the ecological risk assessment and mitigation strategies. Notwithstanding, hand collection (including use of spears and scoop nets) is likely to have a minimal impact on the physical environment.</p> <p>The ecological risk management strategy (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf") anticipated introduction of a quota management system before 2011, but this has still not occurred. Risk mitigation strategies are expected to be reviewed when the risk assessment is revised.</p>
<p>Requires compliance with relevant threat abatement plans, recovery plans, the National Policy on Fisheries Bycatch, and bycatch action strategies developed under the policy</p>	<p>Not applicable</p> <p>There are no threat abatement plans, recovery plans, national bycatch policies or action strategies applicable to this fishery.</p>
<p>PRINCIPLE 1 - A fishery must be conducted in a manner that does not lead to over-fishing, or for those stocks that are over-fished, the fishery must be conducted such that there is a high degree of probability the stock(s) will recover.</p>	
<p>Objective 1 - The fishery shall be conducted at catch levels that maintain ecologically viable stock levels at an agreed point or range, with acceptable levels of probability.</p>	
<p>Information requirements</p>	
<p>1.1.1 There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring.</p>	<p>Partially meets</p> <p>From 1 December 2017, all commercial fishers are required to unload their catch to a licenced fish receiver, who then must report this information to AFMA within three days.</p> <p>Reporting information, other than what the fish receivers report on their behalf, is entirely voluntary (ie. location, effort, discards). This applies to more than 96 per cent of licenses. AFMA is pursuing legislative changes to enable it to mandate reporting of fishery data by all fishers (including commercial Traditional Inhabitant fishers).</p> <p>AFMA considers Traditional (non-commercial) and recreational catch to be negligible, constant over time and does not consider them in fishery stock assessments.</p> <p>Fishery-independent monitoring of the Torres Strait tropical rock lobster population has been carried out since 1989. This program currently involves a pre-season dive survey to provide information on the relative abundance of recruiting lobsters and the likely stock biomass available to be fished each season. These surveys are expected to occur triennially under a new harvest strategy (in development).</p>
<p>Assessment</p>	

<p>1.1.2 There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and /or reproductive capacity. Review should take place at regular intervals but at least every three years.</p>	<p>Partially meets</p> <p>Stock assessments are undertaken each year but do not attempt to identify any change in biological diversity or reproductive capacity. The 2015 stock assessment used catch and effort data as well as annual fishery-independent survey data. The fishery is characterised by highly variable annual recruitment and a small number of age classes. Estimates of maximum sustainable yield can be uncertain and annual yields tend to fluctuate widely around deterministically predicted estimates. On this basis, conservative, but non-binding total allowable catch limits are calculated each year, with the aim of keeping the biomass at roughly current levels. At the end of each year, the fishery's management advisory committee considers changes in spatial distribution of effort, total fishing effort, and any expansion of new gear type or configuration, and if these changes occur, review the risk assessment.</p>
<p>1.1.3 The distribution and spatial structure of the stock(s) has been established and factored into management responses.</p>	<p>Partially meets</p> <p>Tropical rock lobster populations in Torres Strait (managed under the PZJA), the Coral Sea (managed by the Commonwealth) and Queensland (managed by Queensland) are thought to comprise a single biological stock due to the mixing of larvae in the Coral Sea (HYPERLINK "http://frdc.com.au/research/Final_Reports/2002-008-DLD.pdf"). However, unlike Coral Sea and Queensland stocks, Torres Strait lobsters are thought to migrate to Papua New Guinea to spawn, after which time they die. Stock assessments for the Torres Strait Tropical Rock Lobster Fishery therefore do not consider catch data from outside the Torres Strait.</p> <p>The pre-season stock surveys in the Torres Strait focus on areas of the Torres Strait Tropical Rock Lobster Fishery which are considered to be representative of the Torres Strait Tropical Rock Lobster Fishery as a whole. The surveys are undertaken as close to the start of the new season as possible, to give the best indication of fishable biomass.</p> <p>At the end of each year, the fishery's management advisory committee considers changes in spatial distribution of effort, total fishing effort, and if these changes occur, review the risk assessment.</p>
<p>1.1.4 There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels.</p>	<p>Partially meets</p> <p>Reporting fishery data is not mandatory for the Traditional Inhabitant Boat (TIB) sector, or for any operator with a boat seven metres or less in length. However as of 1 December 2017, all commercial fishers are required to unload their catch to a licenced fish receiver, who then must report this information to AFMA within three days.</p> <p>Information other than landed catch volumes are reported on an almost entirely voluntary basis (more than 96 per cent of licenses), but generally at a coarse scale. AFMA is pursuing legislative changes to enable it to mandate reporting of fishery data by all fishers (including commercial Traditional Inhabitant fishers).</p> <p>Tropical rock lobsters are also caught as bycatch in the Torres Strait Prawn Fishery but, based on observer records from 2015, the majority are discarded alive (HYPERLINK "http://www.environment.gov.au/system/files/pages/89160a83-68a6-4f07-81d3-e7df1a02bdbd/files/torres-strait-tropical-rock-lobster-application-2017.pdf").</p> <p>The extent of any traditional (non-commercial) or other catch in the area of the fishery is unknown.</p>

1.1.5 There is a sound estimate of the potential productivity of the fished stock/s and the proportion that could be harvested.

Partially meets

Estimates of potential productivity are uncertain due to highly variable annual recruitment and the limited number of age classes in the stock. However, annual yields can be expected to fluctuate widely around deterministically predicted estimates ([HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf"](http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf)).

AFMA attempt to account for this uncertainty by undertaking pre-season stock surveys as close to the start of the new season as possible, to give the best indication of fishable biomass. The survey results are then used in conjunction with the interim harvest strategy (which includes biological reference points) to set the notional total allowable catch limits for the fishery. The catch limits are non-binding and not used to control harvest ([HYPERLINK "http://www.environment.gov.au/system/files/pages/89160a83-68a6-4f07-81d3-e7df1a02bdbd/files/torres-strait-tropical-rock-lobster-application-2017.pdf"](http://www.environment.gov.au/system/files/pages/89160a83-68a6-4f07-81d3-e7df1a02bdbd/files/torres-strait-tropical-rock-lobster-application-2017.pdf)), but fishing can be controlled at any time by a Ministerial direction under section 16 of the *Torres Strait Fisheries Act 1984*.

Management responses

1.1.6 There are reference points (target and/or limit), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken.

Partially meets

An interim harvest strategy is in place for the fishery and includes a number of reference points based on unfished biomass, but no decision rules. The interim harvest strategy is used to determine the nominal (non-binding) total allowable catch limit for the fishery, but this catch limit is not used to control harvest ([HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf"](http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf)).

A revised harvest strategy is in development and expected to include fishery-specific target and limit reference points which will support the fishery's transition from effort-based to quota-based controls, and also contain a harvest control rule that reduces exploitation rate linearly to zero as the spawning biomass declines from trigger to limit reference points ([HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf"](http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf)). It is unclear when the transition to quota-based management will occur. This was initially forecast for 2007, then by 2011, and continues to receive opposition from some stakeholders. Fishing can however, be controlled at any time via a Ministerial direction under section 16 of the *Torres Strait Fisheries Act 1984*.

<p>1.1.7 There are management strategies in place capable of controlling the level of take.</p>	<p>Partially meets</p> <p>An interim harvest strategy is in place for the fishery but this does not include decision rules. A new harvest strategy, informed by a management strategy evaluation is currently being developed and is expected to be implemented from December 2019.</p> <p>AFMA is also seeking to introduce quota management reforms which, if successful, will significantly improve the capacity to manage the level of take in the fishery. In lieu of these changes, fishing can be controlled via a Ministerial direction under section 16 of the <i>Torres Strait Fisheries Act 1984</i>, but this is unlikely to be used as a routine management tool.</p> <p>Other issues which affect capacity to control take in the fishery include the complex set of input and output controls, which differ for the Traditional Inhabitant Boat and non-traditional Transferable Vessel Holder sectors and contain various exceptions. For example persons are prohibited from taking, processing or carrying tropical rock lobsters unless they hold a licence; do so in the course of traditional fishing; or do so for private purposes with the use of an Australian boat.</p> <p>Not all of the arrangements are well communicated and only some are documented on the { HYPERLINK "http://pzja.gov.au/resources/publications/fisheries-management-and-logbook-notices/" \l ".WV35fP7QCUm" }. Information presented via the site is often incomplete, inconsistent or out of date. The PZJA website is expected to be updated by July 2018.</p>
<p>1.1.8 Fishing is conducted in a manner that does not threaten stocks of byproduct species.</p>	<p>Meets</p> <p>Hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising the risk of catching byproduct.</p>
<p>(Guidelines 1.1.1 to 1.1.7 should be applied to byproduct species to an appropriate level)</p>	
<p>1.1.9 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Partially meets</p> <p>The issues identified in items 1.1.1 to 1.1.7 above are likely to affect fisher's ability to understand and comply with the management requirements, and the various management and compliance agencies capacity to enforce the arrangements.</p>
<p>If overfished, go to Objective 2: If not overfished, go to PRINCIPLE 2:</p>	
<p>Objective 2 - Where the fished stock(s) are below a defined reference point, the fishery will be managed to promote recovery to ecologically viable stock levels within nominated timeframes.</p>	
<p>Management responses</p>	
<p>1.2.1 A precautionary recovery strategy is in place specifying management actions, or staged management responses, which are linked to reference points. The recovery strategy should apply until the stock recovers, and should aim for recovery within a specific time period appropriate to the biology of the stock.</p>	<p>Not applicable</p> <p>Species in the Torres Strait Tropical Rock Lobster Fishery are not currently considered overfished or subject to overfishing ({ HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr17d9abm_20170929/17_FishStatus2017TorresStraitTropicalRockLobster_1.0.0.pdf" }).</p>
<p>1.2.2 If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a 'whole of fishery' effort or quota reduction are implemented.</p>	<p>Not applicable</p> <p>Species in the Torres Strait Tropical Rock Lobster Fishery are not currently considered overfished or subject to overfishing ({ HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr17d9abm_20170929/17_FishStatus2017TorresStraitTropicalRockLobster_1.0.0.pdf" }).</p>
<p>PRINCIPLE 2 - Fishing operations should be managed to minimise their impact on the structure, productivity, function and biological diversity of the ecosystem.</p>	
<p>Objective 1 - The fishery is conducted in a manner that does not threaten bycatch species.</p>	
<p>Information requirements</p>	

2.1.1 Reliable information, appropriate to the scale of the fishery, is collected on the composition and abundance of bycatch.	Not applicable Hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising potential for interactions with bycatch.
Assessments	
2.1.2 There is a risk analysis of the bycatch with respect to its vulnerability to fishing.	Partially meets An ecological risk assessment of the fishery found no species, habitats or communities at high risk but committed to revise the assessment at least every four years. However, it has not been amended since 2007 (10 years) though it is scheduled to be reviewed in 2019–2020. While not a full ecological risk assessment, at the end of each year the fishery's management advisory committee considers changes in spatial distribution of effort, total fishing effort and gear. If changes are considered necessary, the committee reviews the fishery's risk assessment.
Management responses	
2.1.3 Measures are in place to avoid capture and mortality of bycatch species unless it is determined that the level of catch is sustainable (except in relation to endangered, threatened or protected species). Steps must be taken to develop suitable technology if none is available.	Meets Hand collection methods (hand-held snares, spears and scoop nets) are highly selective, allowing bycatch to be avoided. In addition, AFMA's ecological risk management strategy for the fishery took this into account and concluded the risk to be negligible (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf").
2.1.4 An indicator group of bycatch species is monitored.	Not applicable Hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising potential for interactions with bycatch.
2.1.5 There are decision rules that trigger additional management measures when there are significant perturbations in the indicator species numbers.	Not applicable Hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising potential for interactions with bycatch.
2.1.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.	Meets Hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising potential for interactions with bycatch.
Objective 2 - The fishery is conducted in a manner that avoids mortality of, or injuries to, endangered, threatened or protected species and avoids or minimises impacts on threatened ecological communities.	
Information requirements	

<p>2.2.1 Reliable information is collected on the interaction with endangered, threatened or protected species and threatened ecological communities.</p>	<p>Does not meet</p> <p>While there have been no reported interactions with endangered, threatened or protected species and threatened communities in this fishery, and the risks are low, there is no means to verify this.</p> <p>Existing reporting tools (HYPERLINK "http://www.environment.gov.au/system/files/pages/89160a83-68a6-4f07-81d3-e7df1a02bdbd/files/attachment-d-torres-strait-tropical-rock-lobster-daily-fishing-log.pdf" \o "Attachment D - Torres Strait Tropical Rock Lobster Daily Fishing Log" } and HYPERLINK "http://www.environment.gov.au/system/files/pages/89160a83-68a6-4f07-81d3-e7df1a02bdbd/files/attachment-e-torres-strait-seafood-buyers-processors-docket-book.pdf" \o "Attachment E - Torres Strait Seafood Buyers and Processors Docket Book" } make no mention of protected species reporting obligations and do not facilitate reporting and it is unlikely that fishers are aware of their obligations under the EPBC Act.</p> <p>The Department has a memorandum of understanding with AFMA to allow fishers to report interactions via AFMA, but AFMA does not have the legislative capacity to mandate reporting by Traditional Inhabitant fishers (96% of licences in the fishery).</p> <p>AFMA is pursuing legislative changes in order to mandate reporting by all fishers (including commercial Traditional Inhabitant fishers), but this is unlikely to occur in the short term.</p>
<p>Assessments</p>	
<p>2.2.2 There is an assessment of the impact of the fishery on endangered, threatened or protected species.</p>	<p>Meets</p> <p>An ecological risk assessment considered 90 protected species, including 27 marine reptile, six seabird, six marine mammal and 51 teleost (bony fish) species (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/4.pdf" } HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf" }. None of these species were assessed to be above negligible or minor risk in the ecological risk assessment. This risk assessment is expected to be reviewed in 2019–2020.</p>
<p>2.2.3 There is an assessment of the impact of the fishery on threatened ecological communities.</p>	<p>Not applicable</p> <p>There are no threatened ecological communities in the area of the fishery.</p>
<p>Management responses</p>	
<p>2.2.4 There are measures in place to avoid capture and/or mortality of endangered, threatened or protected species.</p>	<p>Meets</p> <p>An ecological risk mitigation strategy has been developed for the fishery but risk of interaction with or impacts on threatened species was considered negligible and therefore did not specify mitigation measures (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf"). The mitigation strategy defers to international plans of action (e.g. Recovery Plan for Marine Turtles in Australia) and commits to take all reasonable steps to minimise interactions with protected species. In addition, hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising potential for interactions with bycatch.</p>
<p>2.2.5 There are measures in place to avoid impact on threatened ecological communities.</p>	<p>Not applicable</p> <p>There are no threatened ecological communities in the area of the fishery.</p>
<p>2.2.6 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Meets</p> <p>While reporting information is not being facilitated through log books, various ecological risk assessments have concluded that the fishery is managed in a way to minimise impacts. This is further supported by the annual review of effort, area and gear undertaken by the fishery's advisory committee. In addition, hand collection methods (hand-held snares, spears and scoop nets) are highly selective, minimising potential for interactions with non-target species.</p>
<p>Objective 3 - The fishery is conducted, in a manner that minimises the impact of fishing operations on the ecosystem generally.</p>	
<p>Information requirements</p>	

<p>2.3.1 Information appropriate for the analysis in 2.3.2 is collated and/or collected covering the fisheries impact on the ecosystem and environment generally.</p>	<p>Partially meets While an ecological risk assessment of the fishery found no species, habitats or communities at high risk this has not been amended since 2007. This is scheduled to be reviewed in 2019–2020.</p>
<p>Assessment</p>	
<p>2.3.2 Information is collected and a risk analysis, appropriate to the scale of the fishery and its potential impacts, is conducted into the susceptibility of each of the following ecosystem components to the fishery.</p> <ol style="list-style-type: none"> 1. Impacts on ecological communities <ul style="list-style-type: none"> • Benthic communities • Ecologically related, associated or dependent species • Water column communities 2. Impacts on food chains <ul style="list-style-type: none"> • Structure • Productivity/flows 3. Impacts on the physical environment <ul style="list-style-type: none"> • Physical habitat • Water quality 	<p>Partially meets The ecological risk mitigation strategy for the fishery determined that there was little risk posed to ecosystem components from fishing (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf"). However, there is no established system to collect information on ecosystem components in the fishery. The ecological risk assessment for this fishery is scheduled to be reviewed in 2019–2020.</p>
<p>Management responses</p>	
<p>2.3.3 Management actions are in place to ensure significant damage to ecosystems does not arise from the impacts described in 2.3.1.</p>	<p>Partially meets There is no means to monitor ecosystem impacts, however these impacts are likely to be minimal based on the results of the ecological risk mitigation strategy (HYPERLINK "http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf").</p>
<p>2.3.4 There are decision rules that trigger further management responses when monitoring detects impacts on selected ecosystem indicators beyond a predetermined level, or where action is indicated by application of the precautionary approach.</p>	<p>Partially meets Although the ecological risk assessment found little risk directly associated with the fishery, some risk was associated with external factors (e.g. coastal development, oil spills, line-fishing and Traditional Inhabitant catches of turtles and dugongs that may affect the same fish communities). The PZJA and AFMA do not have management responsibility for these external factors, but do have some capacity to respond via legislative instrument (s16 <i>Torres Strait Fisheries Act 1984</i>). This mechanism is likely to be reserved for emergency situations.</p>
<p>2.3.5 The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective.</p>	<p>Partially meets The risk posed by the fishery is relatively low. There is no apparent system to account for the impacts of external factors which were identified in the ecological risk assessment for the fishery.</p>

SECTION 3: ASSESSMENT OF THE TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY AGAINST THE REQUIREMENTS OF PARTS 12, 13 (13A) AND 16 OF THE EPBC ACT

The table below is not a complete or exact representation of the EPBC Act. It is intended to show that the relevant sections and components of the EPBC Act have been taken into account in the formulation of advice on the fishery in relation to decisions under Part 13 and Part 13A.

Part 12

Section 176 Bioregional Plans	Comment
(5) Minister must have regard to relevant bioregional plans	Not applicable There is no marine bioregional plan in place for the Torres Strait.

Part 13

Accreditable plan, regime or policy (Division 1, Division 2, Division 3, Division 4)	Comment
s. 208A (1) (a-e) , s.222A (1) (a-e), s.245A (1) (a-e), s.265 (1) (a-e) Does the fishery have an accreditable plan of management, regime or policy?	Yes The "Torres Strait Tropical Rock Lobster Fishery management policy" was { HYPERLINK "http://www.environment.gov.au/system/files/pages/e137c539-ec79-44c0-9b4d-43ebb552c0d4/files/accreditation-may-2014.pdf" } The management regime for the fishery is described in this assessment report and forms the basis for ongoing accreditation.
Division 1 Listed threatened species, Section 208A Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed threatened species (other than conservation dependent species) are not killed or injured as a result of the fishing?	Yes The ecological risk mitigation strategy acknowledges protected species and considers the risks posed by the fishery to be negligible. It commits the fishery to taking all reasonable steps to avoid interactions.
(g) And, is the fishery likely to adversely affect the survival or recovery in nature of the species.	No AFMA records show no reported interactions with listed protected species in the fishery during the period 1 January 2012 to 30 June 2017.
Division 2 Migratory species, Section 222A Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed migratory species are not killed or injured as a result of the fishing?	Yes The ecological risk mitigation strategy acknowledges protected species and considers the risks posed by the fishery to be negligible. It commits the fishery to taking all reasonable steps to avoid interactions.
(g) And, is the fishery likely to adversely affect the conservation status of a listed migratory species or a population of that species?	No AFMA records show no reported interactions with listed migratory species in the fishery during the period 1 January 2012 to 30 June 2017.
Division 3 Whales and other cetaceans, Section 245 Minister may accredit plans or regimes	

(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that cetaceans are not killed or injured as a result of the fishing?	Yes The ecological risk mitigation strategy acknowledges protected species and considers the risks posed by the fishery to be negligible. It commits the fishery to taking all reasonable steps to avoid interactions.
(g) And is the fishery likely to adversely affect the conservation status of a species of cetacean or a population of that species?	No AFMA records show no reported interactions with cetaceans in the fishery during the period 1 January 2012 to 30 June 2017.
Division 4 Listed marine species, Section 265 Minister may accredit plans or regimes	
(f) Will the plan, regime or policy require fishers to take all reasonable steps to ensure that members of listed marine species are not killed or injured as a result of the fishing?	Yes The ecological risk mitigation strategy acknowledges listed species and considers the risks posed by the fishery to be negligible. It commits the fishery to taking all reasonable steps to avoid interactions.
(g) And is the fishery likely to adversely affect the conservation status of a listed marine species or a population of that species?	No AFMA records show no reported interactions with listed marine species in the fishery during the period 1 January 2012 to 30 June 2017.
Section 303AA Conditions relating to accreditation of plans, regimes and policies	
(1) This section applies to an accreditation of a plan, regime or policy under section 208A, 222A, 245 or 265.	Accreditation is recommended No interactions with protected species have been reported and the risk of interactions occurring is considered negligible under existing arrangements.
(2) The Minister may accredit a plan, regime or policy under that section even though he or she considers that the plan, regime or policy should be accredited only: (a) during a particular period; or (b) while certain circumstances exist; or (c) while a certain condition is complied with. In such a case, the instrument of accreditation is to specify the period, circumstances or condition.	No conditions required
(7) The Minister must, in writing, revoke an accreditation if he or she is satisfied that a condition of the accreditation has been contravened.	Not applicable

Part 13A

Section 303BA Objects of Part 13A	
<p>(1) The objects of this Part are as follows:</p> <ul style="list-style-type: none"> (a) to ensure that Australia complies with its obligations under CITES and the Biodiversity Convention; (b) to protect wildlife that may be adversely affected by trade; (c) to promote the conservation of biodiversity in Australia and other countries; (d) to ensure that any commercial utilisation of Australian native wildlife for the purposes of export is managed in an ecologically sustainable way; (e) to promote the humane treatment of wildlife; (f) to ensure ethical conduct during any research associated with the utilisation of wildlife; and (h) to ensure the precautionary principle is taken into account in making decisions relating to the utilisation of wildlife. 	
Section 303 CG Minister may issue permits (CITES species)	Comment
<p>(3) The Minister must not issue a permit unless the Minister is satisfied that:</p> <ul style="list-style-type: none"> (a) the action or actions specified in the permit will not be detrimental to, or contribute to trade which is detrimental to: <ul style="list-style-type: none"> i the survival of any taxon to which the specimen belongs; or ii. the recovery in nature of any taxon to which the specimen belongs; or iii any relevant ecosystem (for example, detriment to habitat or biodiversity). 	Not applicable
Section 303DC Minister may amend list (non CITES species)	
<p>(1) The Minister may, by legislative instrument, amend the list referred to in section 303DB [list of exempt native specimens] by:</p> <ul style="list-style-type: none"> (a) doing any of the following: <ul style="list-style-type: none"> (i) including items in the list; (ii) deleting items from the list; (iii) imposing a condition or restriction to which the inclusion of a specimen in the list is subject; (iv) varying or revoking a condition or restriction to which the inclusion of a specimen in the list is subject; or (b) correcting an inaccuracy or updating the name of a species. 	The Department recommends that specimens derived from species harvested in the Torres Strait Tropical Rock Lobster Fishery, other than specimens that belong to species listed under Part 13 of the EPBC Act, be included in the list of exempt native specimens while the Torres Strait Tropical Rock Lobster Fishery is subject to a declaration as an approved wildlife trade operation.

<p>(1A) In deciding to amend the LENS, the Minister must rely primarily on outcomes of Part 10, Div 1 or 2 assessment</p>	<p>Meets The Torres Strait Tropical Rock Lobster Fishery was assessed under Part 10 of the EPBC Act in November 2004 and the management regime was accredited pursuant to section 33 of the EPBC Act on 10 May 2005. There have been no significant changes to the management regime since that time. The Department recommends that you amend the LENS under section 303DC(1)(a) to include product derived from the Torres Strait Tropical Rock Lobster Fishery while the specimens are covered by an approved wildlife trade operation declaration under section 303FN.</p>
<p>(1C) The above does not limit matters that may be considered when deciding to amend LENS.</p>	<p>Meets The Torres Strait Tropical Rock Lobster Fishery is consistent with Objects of Part 13A.</p>
<p>(3) Before amending the LENS, the Minister must consult:</p> <ul style="list-style-type: none"> (a) other Minister or Ministers as appropriate; and (b) other Minister or Ministers of each State and self-governing Territory as appropriate; and (c) other persons and organisations as appropriate. 	<p>Meets The Department considers that the consultation requirements have been met. The application for the Torres Strait Tropical Rock Lobster Fishery was released for public comment from 26 April 2017 to 31 May 2017. No comments were received.</p>
<p>Section 303FN Approved wildlife trade operation</p>	
<p>(2) The Minister may, by instrument published in the <i>Gazette</i>, declare that a specified wildlife trade operation is an approved wildlife trade operation for the purposes of this section.</p>	
<p>(3) The Minister must not declare an operation as an approved wildlife trade operation unless the Minister is satisfied that:</p> <ul style="list-style-type: none"> (a) the operation is consistent with the objects of Part 13A of the Act; and 	<p>Meets Fishery is consistent with Objects of 13A – see above assessment.</p>
<ul style="list-style-type: none"> (b) the operation will not be detrimental to: <ul style="list-style-type: none"> i. the survival of a taxon to which the operation relates; or ii. the conservation status of a taxon to which the operation relates; and (ba) the operation will not be likely to threaten any relevant ecosystem including (but not limited to) any habitat or biodiversity; and 	<p>Meets The fishery will not be detrimental to the survival or conservation status of a taxon to which it relates, nor will it threaten any relevant ecosystem, within the life of the WTO, given the management measures currently in place.</p>

(c) if the operation relates to the taking of live specimens that belong to a taxon specified in the regulations – the conditions that, under the regulations, are applicable to the welfare of the specimens are likely to be complied with; and	Not applicable. The Environment Protection and Biodiversity Conservation Regulations 2000 (EPBC Regulations) do not specify crustacea or fish as a class of animal in relation to the welfare of live specimens.
(d) such other conditions (if any) as are specified in the regulations have been, or are likely to be, satisfied.	Not applicable No other conditions are specified in relation to commercial fisheries in the EPBC Regulations.
(4) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to: (a) the significance of the impact of the operation on an ecosystem (for example, an impact on habitat or biodiversity); and	Meets The Torres Strait Tropical Rock Lobster Fishery will not have a significant impact on any relevant ecosystem within the next three years, given the current management measures currently in place.
(b) the effectiveness of the management arrangements for the operation (including monitoring procedures).	Meets The management arrangements that will be employed for the Torres Strait Tropical Rock Lobster Fishery as outlined in this assessment are likely to be effective.
(5) In deciding whether to declare an operation as an approved wildlife trade operation the Minister must have regard to: (a) whether legislation relating to the protection, conservation or management of the specimens to which the operation relates is in force in the State or Territory concerned; and (b) whether the legislation applies throughout the State or Territory concerned; and (c) whether, in the opinion of the Minister, the legislation is effective.	Meets The Torres Strait Tropical Rock Lobster Fishery is managed in accordance with the <i>Torres Strait Fisheries Act 1984</i> and Torres Strait Fisheries Regulations 1985. The Torres Strait Fisheries Act applies throughout the Torres Strait Protected Zone. This legislation is likely to be effective.
(10) For the purposes of section 303FN, an operation is a wildlife trade operation if, and only if, the operation is an operation for the taking of specimens and: (a) the operation is a commercial fishery.	Meets The Torres Strait Tropical Rock Lobster Fishery is a commercial fishery.
(10A) In deciding whether to declare that a commercial fishery is an approved wildlife trade operation for the purposes of this section, the Minister must rely primarily on the outcomes of any assessment in relation to the fishery carried out for the purposes of Division 1 or 2 of Part 10.	Meets The Torres Strait Tropical Rock Lobster Fishery was assessed under Part 10 of the EPBC Act in November 2004 and the management regime was accredited pursuant to section 33 of the EPBC Act on 10 May 2005. Actions taken under the management regime were considered unlikely to have an unacceptable or unsustainable impact on the environment in a Commonwealth marine area.
(10B) Subsection (10A) does not limit the matters that may be taken into account in deciding whether to declare that a fishery is an approved wildlife trade operation for the purposes of this section.	

Section 303FR Public consultation	
<p>(1) Before making a declaration under section 303FN, the Minister must cause to be published on the Internet a notice:</p> <p>(a) setting out the proposal to make the declaration; and</p> <p>(b) setting out sufficient information to enable persons and organisations to consider adequately the merits of the proposal; and</p> <p>(c) inviting persons and organisations to give the Minister, within the period specified in the notice, written comments about the proposal.</p> <p>(2) A period specified in the notice must not be shorter than 20 business days after the date on which the notice was published on the Internet.</p>	<p>Meets</p> <p>A public notice, which set out the proposal to declare the Torres Strait Tropical Rock Lobster Fishery an approved wildlife trade operation and included the application from AFMA, was released for public comment on 26 April 2017 to 31 May 2017, a total of 26 business days.</p>
<p>(3) In making a decision about whether to make a declaration under section 303FN, the Minister must consider any comments about the proposal to make the declaration that were given in response to the invitation in the notice.</p>	<p>Not applicable</p> <p>No public comments about the proposal were received.</p>
Section 303FT Additional provisions relating to declarations	
<p>(1) This section applies to a declaration made under section 303FN, 303FO or 303FP.</p>	<p>A declaration for the Torres Strait Tropical Rock Lobster Fishery will be made under section 303FN.</p>
<p>(4) The Minister may make a declaration about a plan or operation even though he or she considers that the plan or operation should be the subject of the declaration only:</p> <p>(a) during a particular period; or</p> <p>(b) while certain circumstances exist; or</p> <p>(c) while a certain condition is complied with.</p> <p>In such a case, the instrument of declaration is to specify the period, circumstances or condition.</p>	<p>The standard conditions applied to commercial fishery wildlife trade operations include:</p> <ul style="list-style-type: none"> • operation in accordance with the management regime • notifying the Department of changes to the management regime, and • annual reporting in accordance with the requirements of the Australian Government <i>Guidelines for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i>. <p>The Wildlife Trade Operation instrument for this fishery specifies these standard conditions and others in Section 4 of this report.</p>
<p>(8) A condition may relate to reporting or monitoring.</p>	<p>Conditions specified in Section 4 of this report include reporting requirements..</p>
<p>(9) The Minister must, by instrument published in the <i>Gazette</i>, revoke a declaration if he or she is satisfied that a condition of the declaration has been contravened.</p>	
<p>(11) A copy of an instrument under section 303FN, or this section is to be made available for inspection on the internet.</p>	<p>The instrument for the Torres Strait Tropical Rock Lobster Fishery made under sections 303FN and the conditions under section 303FT will be registered as a notifiable instrument and made available through the Department's website.</p>

Part 16

Section 391 Minister must consider precautionary principle in making decisions	Comment
<p>(1) Minister must take account of precautionary principle.</p> <p>(2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.</p>	<p>Meets</p> <p>The management regime is sufficiently precautionary to prevent serious or irreversible environmental damage being caused by this fishery.</p>

SECTION 4: TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY – SUMMARY OF ISSUES REQUIRING CONDITIONS, DECEMBER 2017

Issue	Condition
<p><u>General Management</u></p> <p>Export decisions relate to the arrangements in force at the time of the decision. To ensure that these decisions remain valid and export approval continues uninterrupted, the Department of the Environment and Energy needs to be advised of any changes that are made to the management regime and make an assessment that the new arrangements are equivalent or better, in terms of ecological sustainability, than those in place at the time of the original decision. This includes operational and legislated amendments that may affect sustainability of the target species or negatively impact on byproduct, bycatch, EPBC Act protected species or the ecosystem.</p>	<p>Condition 1:</p> <p>Operation of the Torres Strait Tropical Rock Lobster Fishery will be carried out in accordance with management arrangements in force under the <i>Torres Strait Fisheries Act 1984</i>.</p> <p>Condition 2:</p> <p>The Torres Strait Protected Zone Joint Authority to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Tropical Rock Lobster Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.</p>
<p><u>Annual Reporting</u></p> <p>It is important that reports be produced and presented to the Department annually in order for the performance of the fishery and progress in implementing the conditions in this report and other managerial commitments to be monitored and assessed throughout the life of the declaration. Annual reports should follow Appendix B to the 'Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition' and include a description of the fishery, management arrangements in place, research and monitoring outcomes, recent catch data for all sectors of the fishery, status of target stock, interactions with EPBC Act protected species, impacts of the fishery on the ecosystem in which it operates and progress in implementing the Department's conditions. Electronic copies of the guidelines are available from the Department's website at http://www.environment.gov.au/resource/guidelines-ecologically-sustainable-management-fisheries</p>	<p>Condition 3:</p> <p>The Torres Strait Protected Zone Joint Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the <i>Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition</i>.</p>

Issue	Condition
<p><u>Harvest controls</u></p> <p>Effective harvest controls are necessary to manage the ecological effects of fishing. The Torres Strait Tropical Rock Lobster Fishery includes various controls, and an interim harvest strategy. However the strategy is not publicly available and does not include decision rules. There are also a number of issues that affect the fishery's capacity to manage risk. These include:</p> <ul style="list-style-type: none"> • unconstrained effort. • problems with catch reporting and limited ability to respond quickly to catches. • complexity and exceptions to management controls. <p>The PZJA has committed to address these issues over the next two years.</p>	<p>Condition 4:</p> <p>The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion in the fishery.</p> <p>This may include data collection and analysis protocols to manage risks, triggers and/or limits for managing harvest, and should also account for all sources of stock mortality, including commercial, recreational, Traditional and illegal harvest.</p>

REFERENCES

- AFMA (Australian Fisheries Management Authority), 2009. Ecological Risk Management Report for the Torres Strait Tropical Rock Lobster Fishery, June 2009. { HYPERLINK "<http://pzja.gov.au/wp-content/uploads/2011/06/5.pdf>" }. Last accessed 10 August 2017.
- AFMA (Australian Fisheries Management Authority), 2015. Torres Strait Tropical Rock Lobster Resource Assessment Group – TRLRAG 14 Meeting Record, 25-26 August 2016. { HYPERLINK "<http://pzja.gov.au/wp-content/uploads/2017/05/Ratified-Meeting-Record-TRLRAG-14.pdf>" }. Last accessed 13 October 2017.
- AFMA (Australian Fisheries Management Authority), 2017. Strategic Assessment Report Torres Strait Tropical Rock Lobster Fishery February 2017. { HYPERLINK "<http://www.environment.gov.au/marine/fisheries/commonwealth/torres-strait/application-2017>" }. Last accessed 9 August 2017.
- Campbell, R., Dennis, D., Plaganyi, E. and Deng, R. 2016a. An Abundance Index for Torres Strait Rock Lobster using TIB data: TSRL RAG 13 December 2016. Use of TIB Docket-Book Data to construct an Annual Abundance Index for Torres Strait Rock Lobster – 2016 Update.
- Campbell, R., Dennis, D., Plaganyi, E. and Deng, R. 2016b. An Abundance Index for Torres Strait Rock Lobster using TVH data: TSRL RAG 13 December 2016. Use of TVH Logbook Data to construct an Annual Abundance Index for Torres Strait Rock Lobster – 2016 Update.
- Furlani, D., Dennis, D., Dowdney, J. Butler, A. and Mason, F., 2007. Ecological Risk Assessment for the Effects of Fishing: Report for the Torres Strait Rock Lobster Fishery. Report for the Australian Fisheries Management Authority, Canberra. { HYPERLINK "<http://pzja.gov.au/wp-content/uploads/2011/06/4.pdf>" }. Last accessed 10 August 2017.
- Patterson, H., Noriega, R., Georgeson, L., Stobutzki, I. and Curtotti, R., 2016. *Fishery status reports 2016*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. pp314-324. { HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr16d9abm_20160930/17_FishStatus2016TorresStraitTropicalRockLobster_1.0.0.pdf" }. Last accessed 9 August 2017.
- Patterson, H., Noriega, R., Georgeson, L., Larcombe, J. and Curtotti, R., 2017. *Fishery status reports 2017*, Australian Bureau of Agricultural and Resource Economics and Sciences, Canberra. pp316-326. { HYPERLINK "http://data.daff.gov.au/data/warehouse/9aam/fsrXXd9abm_/fsr17d9abm_20170929/17_FishStatus2017TorresStraitTropicalRockLobster_1.0.0.pdf" }. Last accessed 9 August 2017.
- Pitcher, CR, Turnbull, CT, Atfield, J, Griffin, D, Dennis, D. and Skewes, T., 2005. *Biology, larval transport modelling and commercial logbook data analysis to support management of the NE Queensland rocklobster Panulirus ornatus fishery*, Fisheries Research and Development Corporation project 2002/008, CSIRO Marine Research, Brisbane. { HYPERLINK "http://frdc.com.au/research/Final_Reports/2002-008-DLD.pdf" }. Last accessed 6 September 2017.
- Plagányi, E., Kienzie, M., Dennis, D., Venables, W., Tonks, M., Murphy, N. and Wassenberg, T., 2010. Refined Stock Assessment and TAC estimation for TS lobster fishery. AFMA Project Number: 2009/837. CSIRO Marine and Atmospheric Research. { HYPERLINK "<http://pzja.gov.au/wp-content/uploads/2011/06/Refined-Stock-Assessment-and-TAC-Estimation-for-the-Torres-Strait-Rock-Lobster-TRL-Fishery.pdf>" }. Last accessed 10 August 2017.

Plagányi, E., Dennis, D. and Kienzie, M., 2010. Revised 2010 Assessment of the Tropical Rock Lobster (*Panulirus ornatus*) Fishery in the Torres Straits. CSIRO Marine and Atmospheric Research. { HYPERLINK "<http://pzja.gov.au/wp-content/uploads/2011/06/Revised-2010-Assessment-of-the-Tropical-Rock-Lobster-Panulirus-ornatus-Fishery-in-the-Torres-Straits.pdf>" }. Last accessed 10 August 2017.

Taylor, S., Prescott, J. and Kung, J., 2004 (eds and rev.). A guide to management arrangements for Torres Strait Fisheries, June 2004. Australian Fisheries Management Authority. { HYPERLINK "<http://pzja.gov.au/wp-content/uploads/2011/06/6.pdf>" }. Last accessed 3 August 2017.

Ref: 002068366

Senator the Hon Anne Ruston
Assistant Minister for Agriculture and Water Resources
Parliament House
CANBERRA ACT 2600

Dear Senator

I am writing to you as Delegate of the Minister for the Environment and Energy in relation to the reassessment of seven Commonwealth-managed fisheries under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In early 2017, the Australian Fisheries Management Authority (AFMA) applied for export approvals for the Commonwealth Coral Sea, Commonwealth North West Slope and Western Deepwater Trawl, Torres Strait Bêche-de-mer, Torres Strait Finfish, Torres Strait Prawn, Torres Strait Trochus, and Torres Strait Tropical Rock Lobster fisheries under the EPBC Act.

These applications have now been assessed and I have agreed to declare five fisheries (Commonwealth Coral Sea, Commonwealth North West Slope and Western Deepwater Trawl, Torres Strait Bêche-de-mer, Torres Strait Finfish and Torres Strait Tropical Rock Lobster fisheries) as approved wildlife trade operations under section 303FN (Part 13A) of the EPBC Act for three years, until 18 December 2020. These approvals are subject to conditions agreed by officials from both departments as areas requiring ongoing attention (Attachment 1).

Based on current management arrangements, I have also agreed to exempt the Torres Strait Prawn and Torres Strait Trochus Fisheries from requiring EPBC Act export permits for nine years, until 9 October 2026. Should fishing effort reach any of the trigger limits in the Torres Strait Prawn Fishery Harvest Strategy 2011, or recommence in the Torres Strait Trochus Fishery, the Department will consider reassessing these fisheries.

The list of exempt native specimens has been amended to allow export of product from these seven fisheries for the duration that the respective approvals are in place. Please note that any person whose interests are affected by this decision may make an application to the Department for the reasons for the decision, and may apply to the Administrative Appeals Tribunal to have this decision reviewed. I have enclosed further information on these processes at Attachment 2.

The Department of the Environment and Energy requires AFMA to report annually on each of the seven fisheries, as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.

I wish to acknowledge the strong engagement and collaboration of AFMA officials in completing these assessments.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'IK' with a long horizontal stroke extending to the right.

Dr Ilse Kiessling
Delegate of the Minister for the Environment and Energy
20 December 2017

**Conditions on the approved wildlife trade operation declaration for the
Commonwealth Coral Sea, North West Slope and Western Deepwater Trawl fisheries,
and the Torres Strait Bêche-de-mer, Finfish, and Tropical Rock Lobster fisheries –
December 2017**

Commonwealth Coral Sea Fishery

1. Operation of the Coral Sea Fishery will be carried out in accordance with management arrangements in force under the Commonwealth *Fisheries Management Act 1991*, Fisheries Management Regulations 1992 and relevant Commonwealth fisheries policies.
2. The Australian Fisheries Management Authority to inform the Department of the Environment and Energy of any intended material changes to the Coral Sea Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* decisions are made.
3. The Australian Fisheries Management Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.
4. AFMA to limit the take of species listed under the Convention on the International Trade of Endangered Species (CITES), from the area of the Coral Sea Fishery to no more than:
 - a. 40 tonnes of any mixture of species belonging to the family Acroporidae per year (1 July – 30 June).
 - b. 50 individual humphead Maori wrasse (*Cheilinus undulates*) per year (1 July – 30 June).
5. AFMA to:
 - a. review the species composition and spatial extent of all coral harvest when 20 tonnes of coral has been harvested.
 - b. ensure that a disproportionate amount of coral species are not taken from a single reef.
6. AFMA to evaluate, document and seek to mitigate any risks posed by the Coral Sea Fishery to CITES-listed species. For coral species this will be undertaken at the reef-level, while for humphead Maori wrasse this will be undertaken at the sub-reef level.
7. AFMA to report the following to the CITES Scientific Authority of Australia, as part of the annual reporting referred to in Condition 3:
 - a. the harvested weight and locations of harvest for each coral species
 - b. the number of individual humphead Maori wrasse, their sex, lengths and locations of harvest
 - c. any assessments, management changes or findings relevant to the management of CITES listed species in the Coral Sea Fishery.
8. AFMA to complete the following for all sectors of the Coral Sea Fishery:
 - a. review and revise the ecological risk assessments
 - b. develop and implement ecological risk management strategies
 - c. review and revise the Bycatch and Discarding Workplan.

Commonwealth North West Slope Trawl and Western Deepwater Trawl Fisheries

1. Operation of the Western Deepwater Trawl and North West Slope Trawl fisheries will be carried out in accordance with management arrangements in force under the Commonwealth *Fisheries Management Act 1991*, Fisheries Management Regulations 1992 and relevant Commonwealth fisheries policies.
2. The Australian Fisheries Management Authority to inform the Department of the Environment and Energy of any intended material changes to the Western Deepwater Trawl and North West Slope Trawl fisheries management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* decisions are made.
3. The Australian Fisheries Management Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.
4. AFMA to ensure ecological risk assessments and associated management strategies are reviewed, updated and implemented.
5. AFMA to ensure:
 - a. that the harvest strategy for the North West Slope and Western Deepwater Trawl fisheries contains triggers and/or limits which are specific, measurable, time bound, and capable of managing the ecological effects of fishing.
 - b. that the fisheries' performance under harvest strategy triggers and limits is monitored; and triggered management actions are undertaken within specified timeframes.

Harvest strategy performance should be reported as part of the requirements specified in Condition 3 above.

Torres Strait Bêche-de-mer Fishery

1. Operation of the Torres Strait Bêche-de-mer Fishery will be carried out in accordance with the management regime in force under the *Torres Strait Fisheries Act 1984*.
2. The Torres Strait Protected Zone Joint Authority to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Bêche-de-mer Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* decisions are made.
3. The Torres Strait Protected Zone Joint Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.
4. The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion for all species harvested in the fishery. This may include data collection and analysis protocols to manage risks, triggers and/or limits for managing harvest, and should also account for all sources of stock mortality, including commercial, recreational, Traditional and illegal harvest.
5. Torres Strait Protected Zone Joint Authority to complete an ecological risk assessment and implement an ecological risk mitigation strategy to ensure all environmental and ecological risks are appropriately managed.
6. Torres Strait Protected Zone Joint Authority to continue to pursue the changes necessary to facilitate reporting of interactions with species listed in Part 13 of the *Environment Protection and Biodiversity Act 1999*.

Torres Strait Finfish Fishery

1. Operation of the Torres Strait Finfish Fishery will be carried out in accordance with management arrangements in force under the *Torres Strait Fisheries Act 1984*.
2. The Torres Strait Protected Zone Joint Authority to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Finfish Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* decisions are made.
3. The Torres Strait Protected Zone Joint Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.
4. The Torres Strait Protected Zone Joint Authority to implement strategies to improve data collection, and monitoring and management of catch in all sectors of the Torres Strait Finfish Fishery by 2019.
5. The Torres Strait Protected Zone Joint Authority to complete an ecological risk assessment for the Torres Strait Finfish Fishery.
6. The Torres Strait Protected Zone Joint Authority to improve estimates of stock abundance and harvest potential for all target species in the Torres Strait Finfish Fishery.
7. The Torres Strait Protected Zone Joint Authority to develop and implement reference points and relevant management triggers, including timeframes for management responses, for the Torres Strait Finfish Fishery.

Torres Strait Tropical Rock Lobster Fishery

1. Operation of the Torres Strait Tropical Rock Lobster Fishery will be carried out in accordance with management arrangements in force under the *Torres Strait Fisheries Act 1984*.
2. The Torres Strait Protected Zone Joint Authority to inform the Department of the Environment and Energy of any intended material changes to the Torres Strait Tropical Rock Lobster Fishery management arrangements that may affect the assessment against which *Environment Protection and Biodiversity Conservation Act 1999* decisions are made.
3. The Torres Strait Protected Zone Joint Authority to produce and present reports to the Department of the Environment and Energy annually as per Appendix B of the *Guidelines for the Ecologically Sustainable Management of Fisheries - 2nd Edition*.
4. The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion in the fishery.

This may include data collection and analysis protocols to manage risks, triggers and/or limits for managing harvest, and should also account for all sources of stock mortality, including commercial, recreational, Traditional and illegal harvest.

Attachment 2

Notification of Reviewable Decisions and Rights of Review¹

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

Section 303GJ of the EPBC Act provides that applications may be made to the Administrative Appeals Tribunal for the review of the following decisions of the Minister:

(1) Subject to subsection (2), an application may be made to the Administrative Appeals Tribunal for review of a decision:

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

(2) Subsection (1) does not apply to a decision made personally by the Minister (but the subsection does apply to a decision made by a delegate of the Minister).

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

- by notice, provided in writing, request that the Minister or the Minister's delegate give you a statement in writing setting out the reasons for the decision; and
- apply to the Administrative Appeals Tribunal (AAT) for independent merits review of the decision. Application for review of a decision must be made to the AAT within 28 days after the day on which you have received the reviewable decision. However an extension of time for lodging an application may be granted by the AAT under certain circumstances. Please visit the AAT's website at <http://www.aat.gov.au/> or telephone 1300 366 700 for further information. The role of the AAT is to provide a review mechanism that is fair, just, economical, informal and quick.

Applications & Costs

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

There are no strict timelines in which the AAT must review the decision, however the first Conference between the parties will usually be held within 6-10 weeks of the Application

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

being lodged. The time frame for review of certain decisions can be expedited in some circumstances.

The cost of lodging an application for review is \$884 (GST inclusive) (current as of 1 July 2016).

You may be eligible to pay a reduced fee of \$100.00 if:

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

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

Contact Details

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

The Director
Wildlife Trade Assessments Section
Department of the Environment and Energy
GPO Box 787
Canberra ACT 2601
Telephone: +61 (0) 2 6274 1917
Email: sustainablefisheries@environment.gov.au

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

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

Freedom of Information Request

You may make an application under the *Freedom of Information Act 1982* (FOI Act) to access documents. Further information can be found at <http://www.environment.gov.au/foi/index.html>. Please contact the Freedom of Information Contact Officer at foi@environment.gov.au for more information.

PZJA Torres Strait Tropical Rock Lobster Fishery Resource Assessment Group	Meeting 2018 27-28 March 2018
Legislative amendments update	Agenda Item 2.2.3 FOR NOTING

RECOMMENDATION

1. The RAG **NOTE** the status of proposed amendments to the *Torres Strait Fisheries Act 1984* (the Act) and *Torres Strait Fisheries Regulations 1985* (the Regulations), which govern how fisheries are managed in the Torres Strait.

BACKGROUND

What are the proposed amendments?

2. Following PZJA approval, AFMA is progressing amendments to the Act and Regulations. The proposed amendments are administrative in nature and will provide improvements to the efficiency and effectiveness of fisheries administration in the Torres Strait.
3. The proposed amendments will provide:
 - a. the ability to require catch reporting across all licence holders;
 - b. the ability to provide electronic licensing and monitoring to licence holders;
 - c. the ability to delegate the powers to grant and vary scientific and development permits;
 - d. the ability to simplify the renewal of fishing licences;
 - e. the ability to delegate powers to contracted service providers;
 - f. for the simplification of the disclosure of fisheries information; and
 - g. the ability to issue Fisheries Infringement Notices.
4. A number of additional amendments are also being considered for inclusion and will go to the PZJA shortly for approval before being progressed any further. These include:
 - a. the ability for a single licence to be issued for primary and tender packages;
 - b. the ability for all licences to be granted for up to five years; and
 - c. the ability for a licence to be issued without a nominated boat.

Further details on the proposed amendments will be provided as this project progresses.

5. Of particular relevance to the Working Group is for the amendment to provide for catch reporting across all licence holders will allow for the implementation of mandatory daily logbook reporting by TIB licence holders. This will provide for improved data on which to base management advice and decisions.

When will stakeholders be consulted?

6. AFMA will work closely with the TSRA and Queensland Department of Agriculture and Fisheries in progressing the proposed amendments. Opportunities to provide comment on the proposed amendments will also be provided to fishers, their communities and the general public as the amendments are progressed. This will be done so through direct communication with fishers, public notices as well as through the PZJA RAGs, MACs and Working Groups. Further details on when these opportunities will be publicised once determined.

How long will the amendments take?

7. AFMA now has dedicated resources to be able to progress this important piece of work. However, the amendment process is a lengthy and complex one, and is expected to take a number of years (please refer to the below table).

Regulation amendments	Indicative Timeline	Act amendments	Indicative Timeline
Submit proposed amendments to the PZJA then Minister for Agriculture and Fisheries for approval	Completed	Submit proposed amendments to the PZJA then Prime Minister and/or Cabinet for approval	June 2018
Prepare bid for drafting resources	Completed	Prepare bid for drafting resources	June 2018
Prepare drafting instructions in consultation with relevant government agencies	Now-June 2018	Prepare drafting instructions in consultation with relevant government agencies	Now-December 2018
If required, prepare regulation impact statement and conduct public consultation	Now-June 2018	If required, prepare regulation impact statement and conduct public consultation	Now-December 2018
Amending regulations prepared by Office of Parliamentary Counsel	August-December 2018	Bill prepared by Office of Parliamentary Counsel	January-April 2019
Conduct public consultation on exposure draft of amending regulations	January-March 2019	Conduct public consultation on exposure draft of Bill	May-July 2019
Office of Parliamentary Counsel to prepare any changes to amending regulations identified as a result of public consultation	April 2019	Office of Parliamentary Counsel to prepare any changes to amending regulations identified as a result of public consultation	August 2019
Prepare associated legislation documents (Executive Council minute, explanatory memorandum, explanatory statement, statement of compatibility with human rights etc)	April 2019	Prepare associated legislation documents (explanatory memorandum, statement of compatibility with human rights, second reading speech etc)	August 2019
Submit legislative package to the Minister for Agriculture and Fisheries for approval	May 2019	Submit legislative package to the Minister for Agriculture and Fisheries for approval	September 2019

Submit legislative package to Federal Executive Council (ExCo)	June 2019	Give notice to the Clerk of the House, who will arrange for the Bill to be listed on the Notice Paper	TBA
Governor General to make the amending regulations	June 2019	Minister for Agriculture and Fisheries to present Bill to the House of Representatives for debate and agreement	TBA
Register amending regulations on the Federal Register of Legislative Instruments (FRLI), at which point they will come into force	June 2019	Bill presented to the Senate for debate and agreement	TBA
Table regulations in both houses of Parliament for a disallowance period of 15 sitting days	June 2019	Once the Bill has been agreed by both Houses in identical form, present Bill to the Governor-General for royal assent	TBA
Notify stakeholders of making of amending regulations	June 2019	Register Act on the Federal Register of Legislative Instruments (FRLI)	TBA
Implement new provisions of amending regulations	June 2019 onwards	Notify stakeholders of making of the Act	TBA
		Implement new provisions of the Act	TBA

TROPICAL ROCK LOBSTER WORKING GROUP	MEETING No. 7 28-29 March 2018
FISHERY UPDATES PNG National Fisheries Authority update	Agenda Item 2.3 For NOTING

RECOMMENDATIONS

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

BACKGROUND

2. A verbal report will be provided under this item subject to the availability of NFA officers.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2018
Finalising a total allowable catch (TAC) for the 2017/18 fishing season	Agenda Item 1 For discussion and advice

RECOMMENDATION

1. The Working Group **DISCUSS** and **PROVIDE ADVICE** on the notional total allowable catch (TAC) for the 2017/18 fishing season noting that:
 - a. the Tropical Rock Lobster Resource Assessment Group (TRLRAG) preliminary advice on the Recommended Biological Catch for the current season is 299 tonnes. The RBC covers the Protected Zone (Australia and Papua New Guinea). The Australian catch share would be 201.85 tonnes;
 - b. the TRLRAG is meeting on 27-28 March and will provide final advice on the RBC;
 - c. the RBC is based on interim harvest strategy for the Fishery; and
 - d. to date based on RAG advice, other sources of mortality (for example traditional and recreational catches), have not been deducted from the RBC when the TRLWG has provided notional TAC advice.

KEY ISSUES

2. The Working Group is being asked to provide advice on the notional TAC for the 2017/18 fishing season.
3. Since 2006 and in preparation for implementing a quota management system (includes an enforceable TAC) a notional total allowable catch (non-binding) has been advised by the TRLRAG and has been used to agree catch sharing arrangements with the Papua New Guinea Government.
4. The preliminary RBC of 299t was calculated by applying the interim harvest strategy to the preliminary results of the integrated fishery stock assessment. The stock assessment takes into account the results of the November 2017 pre-season survey, catch and effort information from the TIB and TVH sectors, TRL biological information and environmental information.
5. The reduction in the preliminary RBC is primarily due to the stock assessment responding to the low pre-season survey indices for 1+ lobster (these are lobsters that will recruit into the Fishery during the fishing season). The 0+ index of lobster is the lowest ever recorded by a pre-season survey.
6. Current stock biomass is estimated at 76 per cent of B1973 which is above the target biomass of 65 per cent. The stock biomass is predicted to drop to 59 per cent of B1973 in 2019.
7. The TRLRAG are considering possible causes for the reduction in 1+ lobsters. Possible drivers include:

- a. natural fluctuations based on environmental conditions and density dependence of the lobster stock;
 - b. environmental anomaly relating to the strong El Nino event in 2015 and 2016 that led to highest ever recorded sea surface temperatures. High sea surface temperatures are known to influence growth and survival of lobsters and changes to oceanic currents may have impacted on larval advection; and
 - c. there was reported loss of habitat recently with sand incursions and coral bleaching that may have reduced the productivity of the ecosystem and had a negative impact on lobster abundance; and
 - d. overfishing may be a potential factor, the stock has been observed to decline in the past due trawling of migrating and spawning lobster. The high reported trawl catch in 2014 may have reduced the abundance of 1+ lobster in 2016.
8. A copy of the TRLRAG 21 meeting record is at **Attachment A**.
9. When setting a TAC generally all sources of fishing mortality (catch) are taken into account and, if needed, a discount is applied to the RBC. This generally means the TAC equates to the RBC for the species minus expected catches that will be taken outside of the Fishery (for example, recreational and traditional take). This is consistent with the principles of the *Commonwealth Harvest Strategy Policy and Guidelines 2007*.
10. To date estimates of catches taken outside of the Fishery (recreational, charter, subsistence) have not be deducted from the RBC when providing advice on the notional TAC each fishing season.
11. At TRLRAG meeting no. 18 the RAG recommended that traditional and recreational catches are not estimated in the stock assessment model or when setting the TAC for the Fishery. This advice was re-affirmed at TRLRAG meeting no 20.
12. This advice was based on the fact that: 1) the traditional and recreational catches are likely to be relatively low, 2) the catches have remained constant overtime and 3) there is a lack of accurate data for traditional and recreational catch.

BACKGROUND

13. The interim harvest strategy was first developed by the TRLRAG in 2006 to support the setting of a TAC under a quota management system. The interim harvest strategy has not been agreed by PZJA. The interim harvest strategy is based on the following reference points:
- a) **target reference point** of $B_{0.65}$. The RAG agreed to a target biomass reference point of 65 per cent of the unfished biomass (B_0) to be the proxy for B_{MEY} . The target biomass was set as the average biomass level over the past 20 years, this corresponded to an $F_{TARG} = 0.15\text{year}^{-1}$; and
 - b) **limit reference point** of $B_{0.4}$. The estimation of unfished biomass (B_0) has varied and the estimated target spawning biomass level (B_{TARG}) has also varied between 65 and 80 per cent of unfished biomass. The biomass limit

reference point was set at half of the upper limit of the target reference point (80 per cent of unfished biomass) therefore $B_{LIM} = 0.4$.

14. The revised harvest strategy using the proposed empirical harvest control rule (eHCR) have not been agreed by the PZJA and therefore does not currently apply.
15. In accordance with agreed catch sharing formula the Papua New Guinea Government, a global TAC of 299 t means the Australian catch share is 201.85t - including Australian cross endorsement allocation [(a) minus (b) plus (c) 11.2t]
 - a. Allocation to Australian waters (85%) = 254.15t
 - b. Allocation to PNG vessels crossed endorsed to fish in Australian waters (25% of Australian water allocation) = 63.5t
 - c. Allocation to PNG waters (15%) = 44.85t
 - d. Allocation to Australian vessels crossed endorsed to fish in PNG waters (25% of PNG water allocation) = 11.2t

Current Fishery Catches

16. The current reported catch for the Fishery is 70.4 tonnes based on returns from the Torres Strait Catch Disposal Record (TDB02). A breakdown of catch by sector and by month is provided in **Table 1**.
17. A comparison average cumulative catch for years 2004 to 2018 and cumulative catch for 2018 fishing season for the TRL Fishery is provided in **Attachment B**.
18. A comparison of historical catches and total allowable catches from 1973 to the month of March 2018 is provided in **Attachment C**.

Table 1. Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Torres Strait Tropical Rock Lobster Fishery from the period 1 December 2017 to 8 March 2018. Source: catch records from the Torres Strait Tropical Rock Lobster Catch Disposal Record (TDB02).

Dates	TIB (kg's)	TVH (kg's)	Combined catch (kg's)	Number of records
01/12/2017 to 31/12/2017	8,302.8	31.3	8,334.1	402
01/01/2018 to 31/01/2018	9,732.7	0.0	9,732.7	487
01/02/2018 to 28/02/2018	21,454.6	27,307.8	48,762.4	747
1/03/2018 to 08/03/2018	961.8	2,638.6	3,600.4	58
Total	40,451.9	29,977.8	70,429.6	1,694

*Please note that there may be some outstanding catch disposal records (TDB02) for the period 1 to 8 March. Therefore the landed catch reported for the March period may be under-reported.

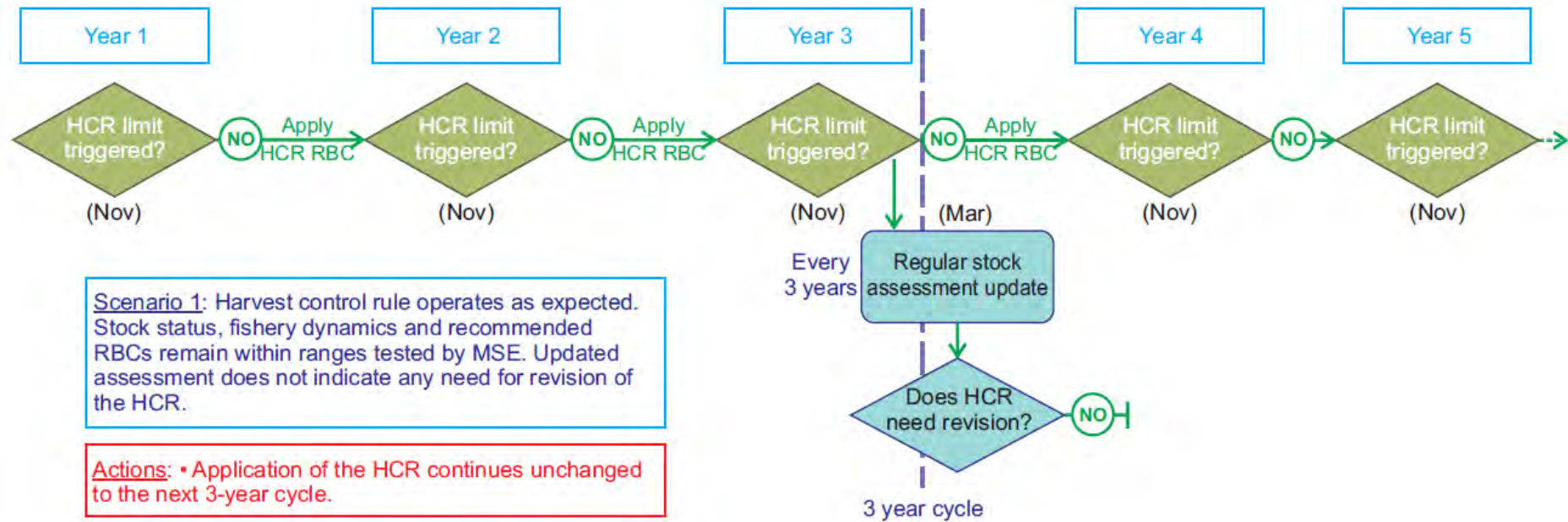
Interim TRL Harvest Strategy

- B_0 = varied between 0.65 and 0.80 of unfished biomass
- $B_{TARG} = 0.65 B_0$
- B_{THRES} is the RAG-agreed threshold biomass level below which more stringent rules for calculating the TAC apply, $B_{THRES} = 0.48$.
- $B_{LIM} = 0.4 B_0$
- $F_{TARG} = 0.15 \text{ year}^{-1}$
- $F_{LIM} = F_{TARG}$

ATTACHMENTS

- A. Torres Strait Tropical Rock Lobster Resource Assessment Group, Meeting Record 21, 12 & 13 December 2017.
- B. Comparison average cumulative catch for years 2004 to 2018 and cumulative catch for 2018 fishing season.
- C. Historical catches and total allowable catches for the Torres Strait Tropical Rock Lobster Fishery.

APPENDIX A

Torres Strait Tropical Rock Lobster Fishery – alternative annual Harvest Control Rule application scenarios**Figure 1.** Torres Strait Tropical Rock Lobster Fishery decision rule scenario 1.

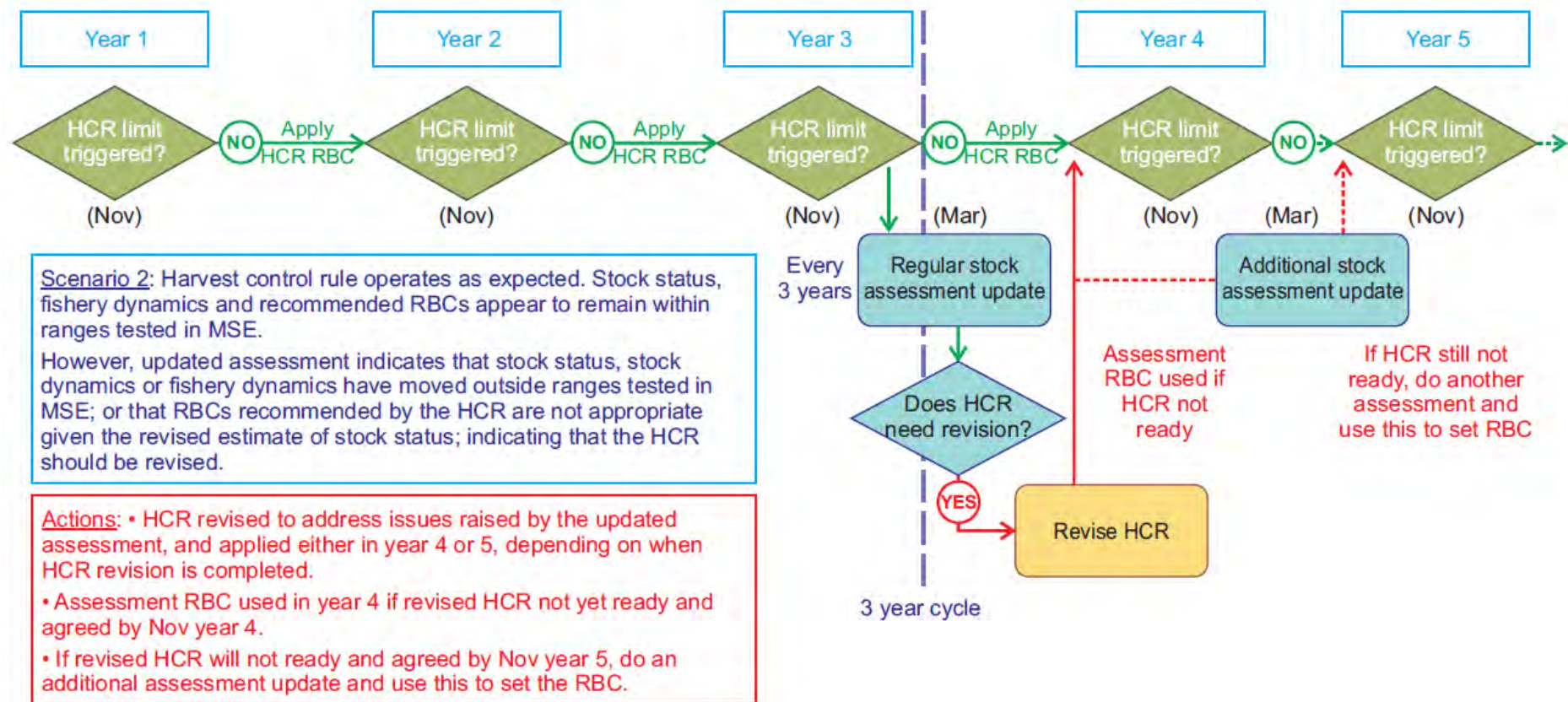
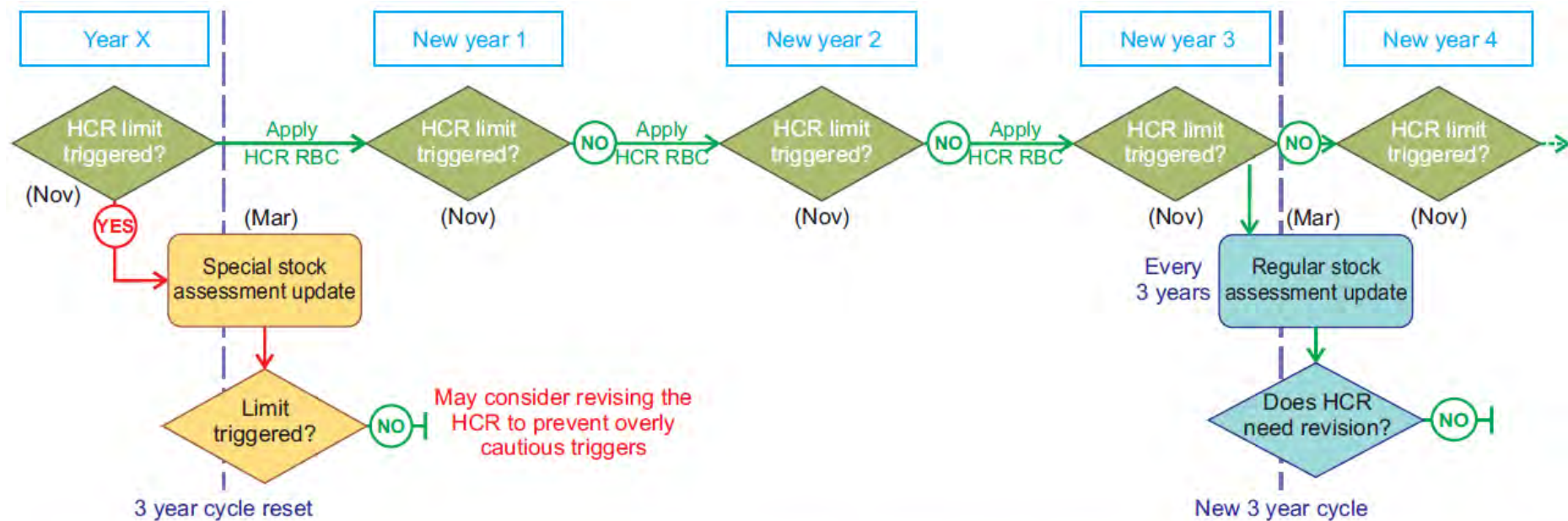


Figure 2. Torres Strait Tropical Rock Lobster Fishery decision rule scenario 2.

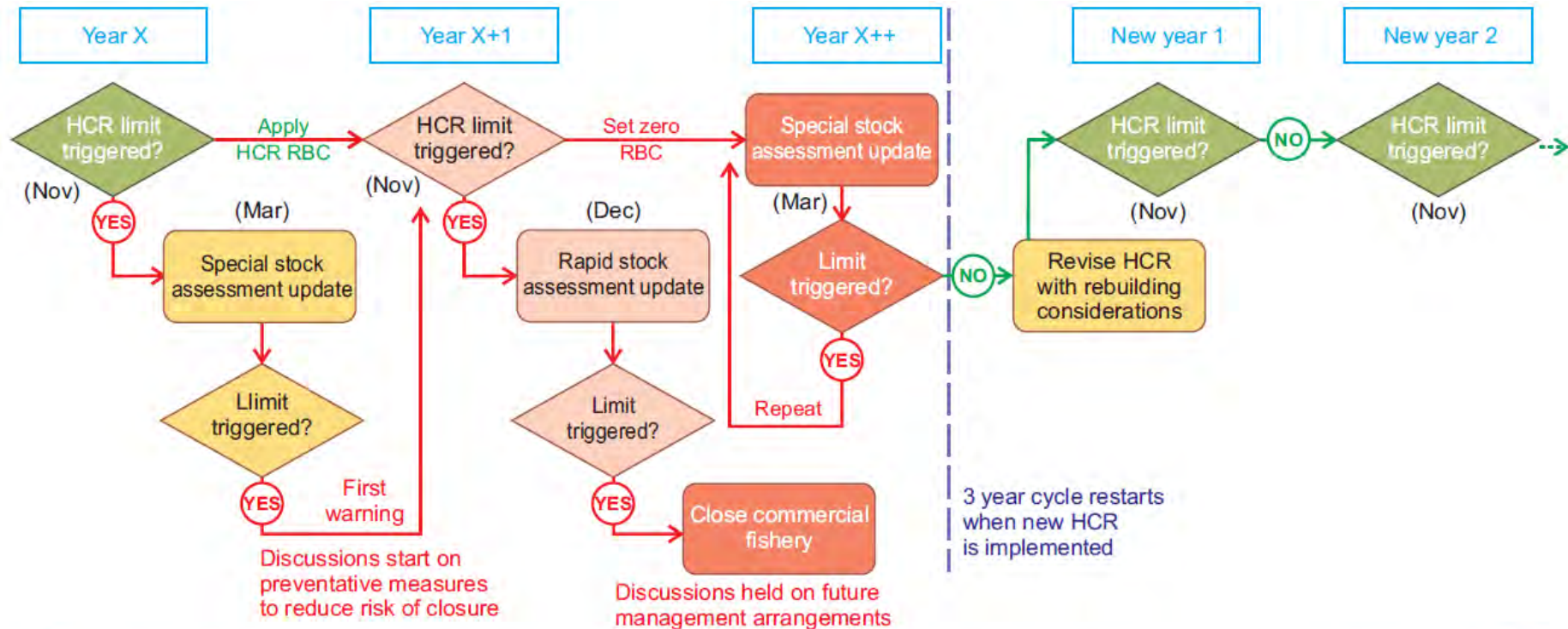


Scenario 3: Application of the HCR in a particular year results in the limit being triggered, requiring a special assessment update to confirm whether the limit has indeed been breached. However, this assessment update determines that the limit has not been breached.

Actions:

- Application of the HCR continues unchanged, although consideration may be given to revising the HCR to prevent overly cautious triggering of the limit (refer to Scenario 2).
- The three-year cycle is reset, postponing the next regular assessment update to retain the 3 year spacing between assessments, provided the HCR does not breach the limit again in that period.

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



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

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

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

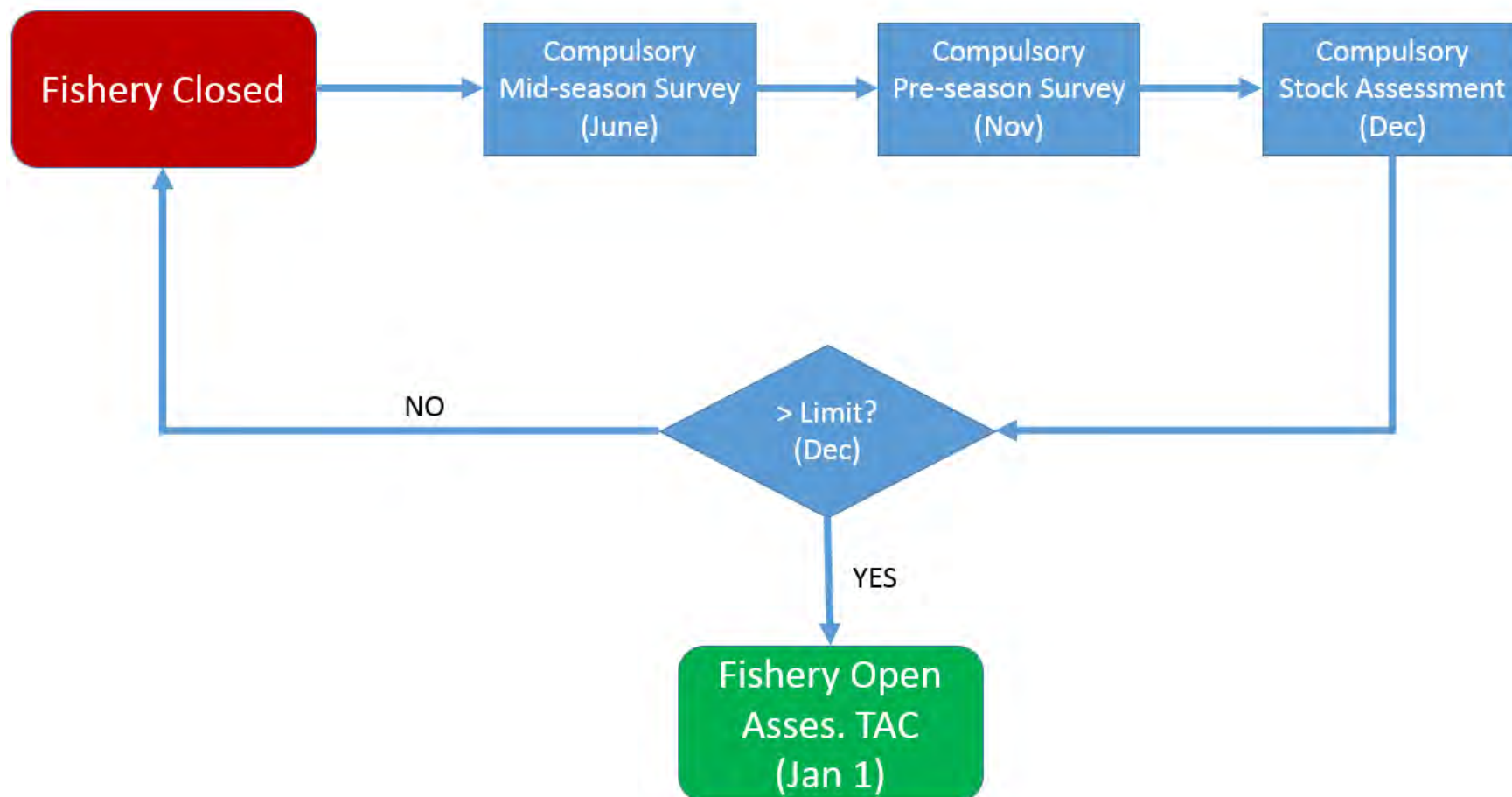
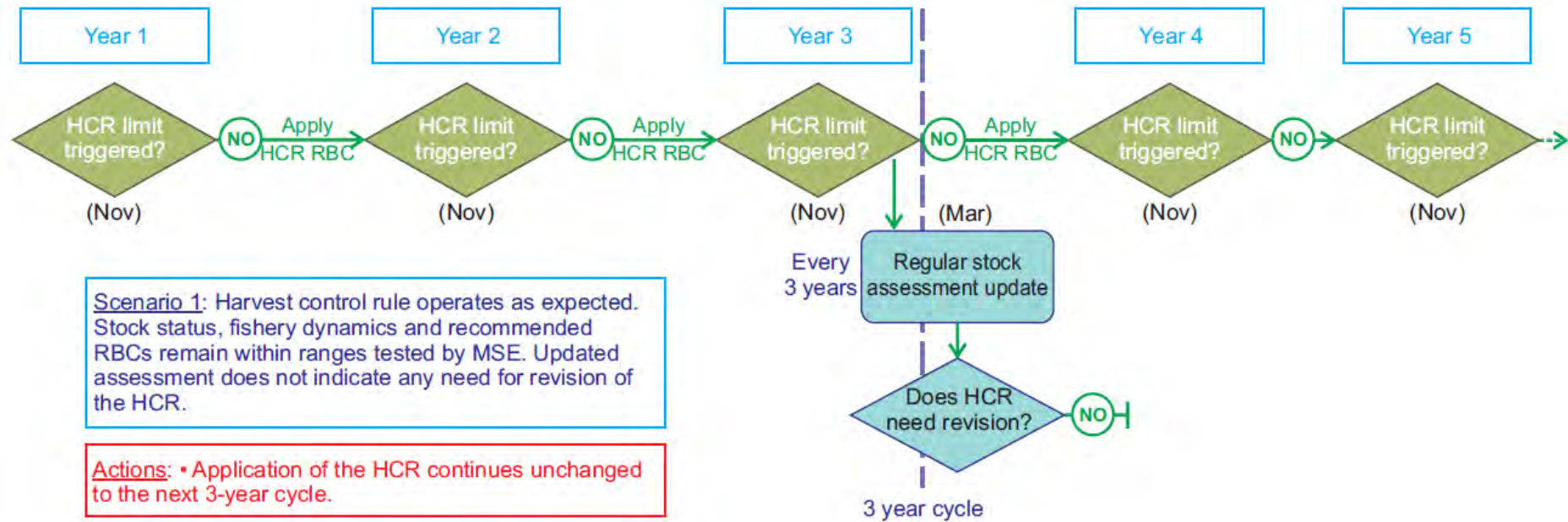


Figure 5. Torres Strait Tropical Rock Lobster Fishery closure and re-opening rule.

APPENDIX A

Torres Strait Tropical Rock Lobster Fishery – alternative annual Harvest Control Rule application scenarios**Figure 1.** Torres Strait Tropical Rock Lobster Fishery decision rule scenario 1.

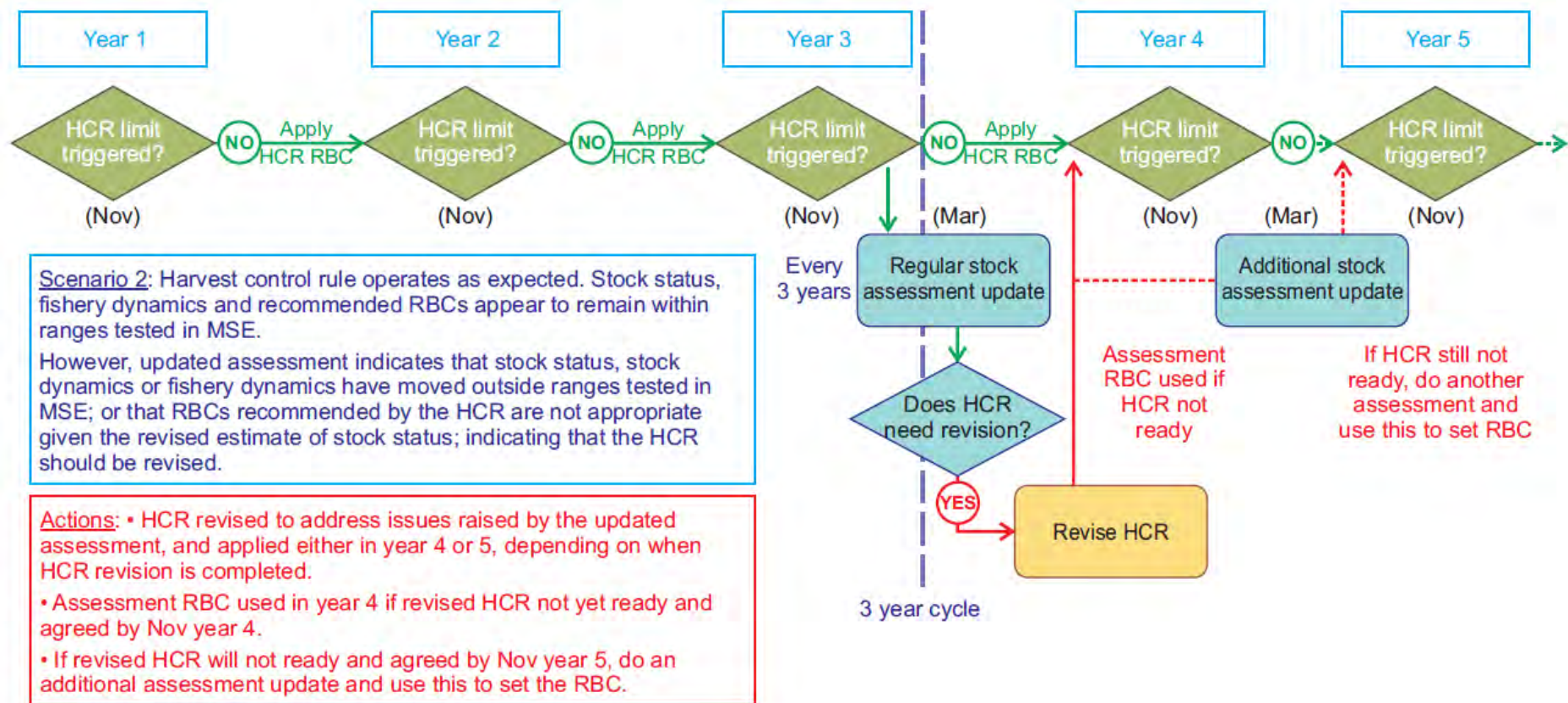
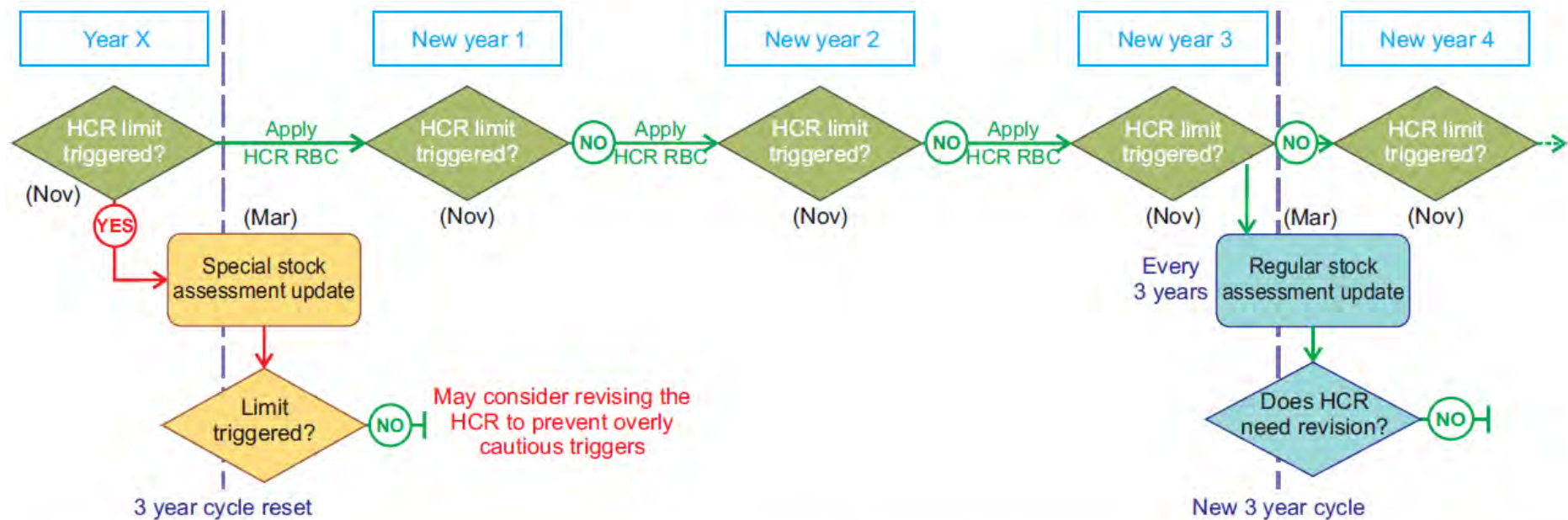


Figure 2. Torres Strait Tropical Rock Lobster Fishery decision rule scenario 2.



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

Actions:

- Application of the HCR continues unchanged, although consideration may be given to revising the HCR to prevent overly cautious triggering of the limit (refer to Scenario 2).
- The three-year cycle is reset, postponing the next regular assessment update to retain the 3 year spacing between assessments, provided the HCR does not breach the limit again in that period.

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

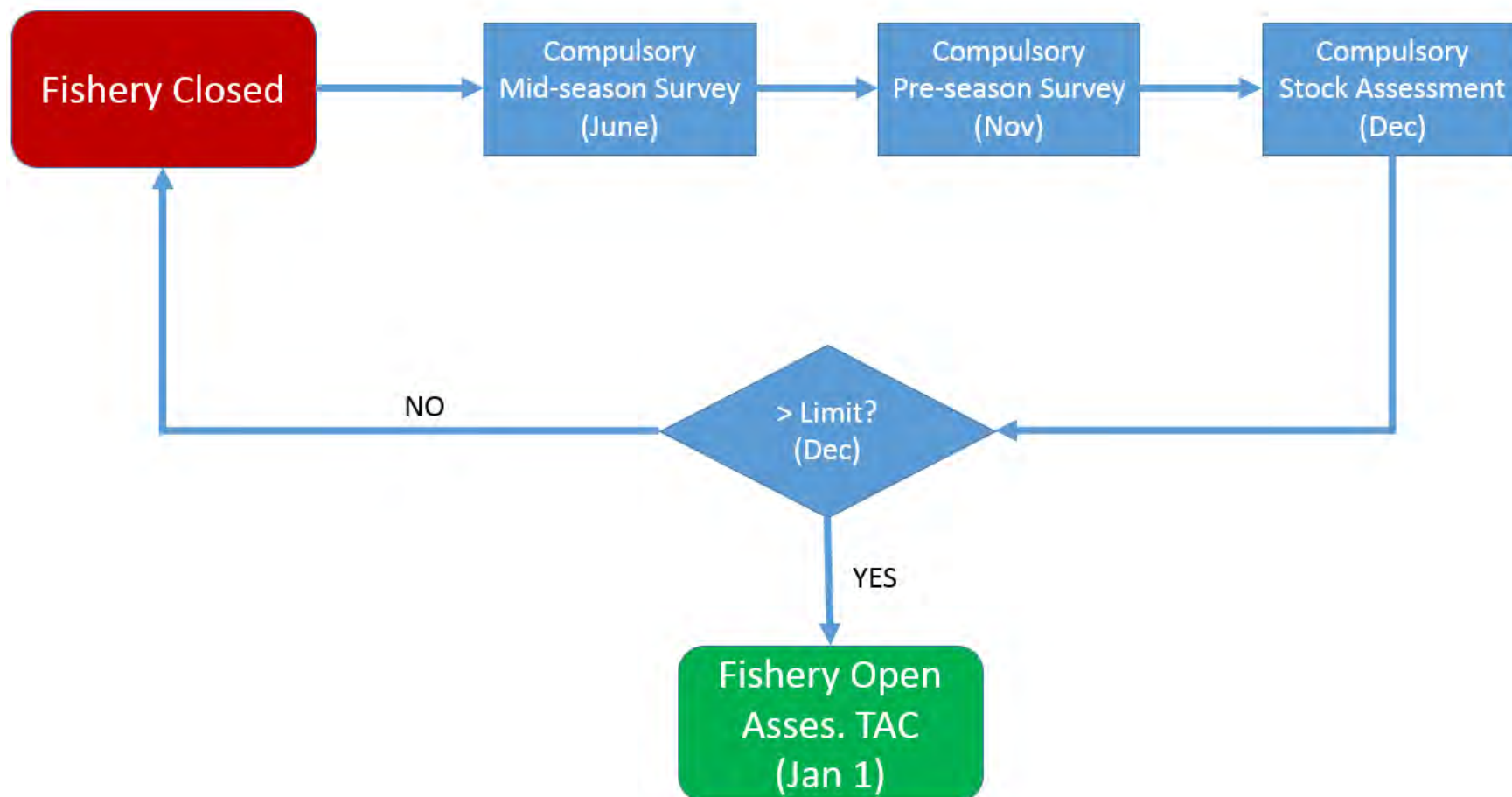


Figure 5. Torres Strait Tropical Rock Lobster Fishery closure and re-opening rule.



Australian Government

Australian Fisheries Management Authority

Contents

Contents.....	2
Meeting participants	3
Action items and recommendations.....	6
Agenda Item 1 - preliminaries	7
1.1 Apologies	7
1.2 Adoption of agenda	7
1.3 Declaration of interest	7
1.4 Action items from previous meetings	7
Agenda Item 2 - updates.....	8
Industry	8
Government	9
PNG NFA	10
Native title.....	10
Agenda Item 3 – catch summary	10
Agenda Item 4 – catch per unit effort indices.....	11
Agenda item 5 – pre-season survey results	12
Agenda item 6 – larval movement.....	13
Agenda item 7 – stock assessment update	14
Agenda item 8 – stock assessment data rules	16
Agenda item 9 – harvest strategy.....	16
Agenda item 10 – other business	16
Agenda item 11 – next meeting	16

Meeting participants

Members

Name	Position	Declaration of interest
Ian Knuckey	Chair	Nil Member of other RAG's and conducts various AFMA research projects. No research projects in the Torres Strait.
Dean Pease	TRLRAG Executive Officer	Nil
Selina Stoute	AFMA Member	Nil
Mariana Nahas	TSRA Member	Nil – public servant employed by TSRA, a government authority. TSRA holds multiple TVH TRL fishing licences on behalf of Torres Strait Communities but does not benefit from them. Partner holds a Fish Receiver Licence.
Eva Plaganyi	CSIRO Scientific Member	Project staff for AFMA funded TRL research projects.
Andrew Penney	Independent Scientific Member	Member of other RAG's and research consultant. None research projects in the Torres Strait.
Mark David	Industry Member	TIB licence holder and industry representative
Terrence Whap	Industry Member	Industry representative, does not hold a TIB licence.
Les Pitt	Industry Member	TIB licence holder and industry representative
Phil Ketchell	Industry member	TIB licence holder and industry representative
Brett Arlidge	Industry Member	General Manager MG Kailis Pty Ltd, holder of TVH licences

Name	Position	Declaration of interest
Daniel Takai	Industry Member	Pearl Island Seafood, Tanala Seafood, TIB licence holder and TVH lease applicant

Observers

Name	Position	Declaration of interest
Jerry Stephen	TSRA Deputy Chair TSRA Fisheries Portfolio	TIB licence holder
Robert Campbell	Scientific Observer	Project staff for AFMA funded TRL research projects
Mark Tonks	Scientific Observer	Project staff for AFMA funded TRL research projects
Suzannah Salam	Industry Observer	Fish Receiver licence holder and buyers of Torres Strait seafood
Tony Salam	Industry Observer	TIB licence holder
Ken McKenzie	Industry Observer	TVH licence holder
David Sabatino	Industry Observer	TIB licence holder
Trent Butcher ¹	Industry Observer	TVH licence holder
Mark Dean ²	Industry Observer	TVH fisher
Ian Liviko ²	PNG NFA	NIL

¹ Attended the meeting on the morning of day one only.

² Attended the meeting on day two only.

Action items and recommendations

Action Items

Number	Action
1.	Tropical Rock Lobster Fishery catch and effort data should be provided by 31 October each year to allow sufficient time for the stock assessment model to be updated.
2.	AFMA to investigate the potential cause of the TVH sector misreporting of fishing hours.
3.	Lamp fishing data should be used for future TIB CPUE analyses
4.	<p>The RAG AGREED to defer the decision on the Torres Strait Docket Book (TDB01) data rules to the next RAG meeting scheduled for March 2018, this was due to a lack of time to present and discuss the results of the paper.</p> <p>The RAG AGREED that members and observers review the meeting paper out of session and provide any comments on the paper at the next meeting.</p>
5.	The RAG AGREED to defer discussion on the harvest strategy agenda item to the next RAG meeting scheduled for March 2018 due to a lack of time to adequately present and discuss the agenda item.

Recommendations

Recommendations
<p>The RAG RECOMMENDED a preliminary recommended biological catch (RBC) of 299 tonnes for Australia and PNG inclusive, based on the following:</p> <ul style="list-style-type: none"> the current stock biomass is estimated at 76 per cent of B_{1973} which is above the target biomass of 65 per cent; the RBC was calculated by applying the interim harvest strategy to the preliminary results of the integrated fishery stock assessment; the reduction in the RBC is primarily due to the stock assessment responding to the low indices for 1+ lobster; and the 0+ index of lobster is the lowest ever recorded by a pre-season survey, however the 0+ indices is uncertain due to the small size and cryptic nature of 0+ lobster; and, although poorly estimated, the stock biomass is predicted to drop to 59 per cent of B_{1973} in 2019.
<p>The RAG STRONGLY RECOMMENDED that under the current low levels of abundance, all management actions should be considered to ensure the 2018 RBC of 299 tonnes is not breached.</p>

Agenda Item 1 - preliminaries

1.1 Apologies

Apologies were received from Tom Roberts (QDAF member); Samantha Miller (QDAF member); Ray Moore (industry member); Aaron Tom (industry member); Meremi Maina (PNG industry observer) and Maluwap Nona (Chairperson Malu Lamar RNTBC).

1.2 Adoption of agenda

The RAG adopted the agenda without any changes. The TSRA observer requested that a discussion on moon-tide hookah closures be included in other business at Agenda Item 10.

1.3 Declaration of interest

The RAG generally noted that there could be potential conflicts of interest for members and observers when providing information and advice on some agenda items and these conflicts should be tabled by members. The Chair requested members and observers to leave the meeting room in groups so RAG members could consider the potential conflicts of interest and agree on how those potential conflicts should be managed.

Scientific Member and Observers

The remaining RAG members noted that CSIRO is the major research provider for the Fishery and have interests in fishery research projects. The RAG noted that no new research projects were being discussed at this meeting and that advice from CSIRO members and observers was important for the RAG agenda items. No conflict of interest issues were identified.

Industry Members and Observers

The remaining RAG members noted that industry members and observers have pecuniary interests in the Fishery, however industry is needed at the meeting for their advice and expertise. The RAG considered that there was a diverse representation of industry across the various sectors and it was unlikely the discussion may be biased by a single sector or individual. The RAG agreed it did not need to remove industry members or observers for any of the agenda items. The remaining RAG members noted that in the event that one person's views biased the discussions the RAG Chair may ask them to leave for the discussion or recommendations.

1.4 Action items from previous meetings

The RAG noted progress against action items from previous meetings. The up-to-date list of action items and progress is provided in **Attachment A**.

The independent scientific member noted that for action item 4 'AFMA preparing a summary of evidence of a single stock'; the information paper should include the historical information and the results of the larval modelling research (agenda item 6) that reconfirms the tropical rock lobster fishery is a single stock.

The RAG noted that for agenda item 5 'naming of reefs and significant areas', that Malu Lamar RNTBC is best placed to provide the names of reefs and significant areas. The

scientific observer noted that CSIRO have included the traditional names of some reefs in their meeting papers and presentations.

The RAG noted that the RAG 21 meeting record was ratified out-of-session. Some comments were received from members and these were provided in the RAG meeting papers with track changes (pages 29-45). No further comments were received on the draft meeting record and the RAG agreed the record was a true and accurate representation of the meeting.

Agenda Item 2 - updates

Industry

The RAG noted the updates provide by industry members.

- One industry observer asked whether any further research had been undertaken to provide more information on the spawning of tropical rock lobster, noting that this information is important for managing the stock sustainably. The scientific member noted that research is expensive and there is a limited amount of funding for Torres Strait research projects. The larval advection modelling project (agenda item 6) was cost effective research that aimed to improve the understanding of lobster larval dispersal into the Torres Strait from Yule Island, PNG and Princess Charlotte Bay, QLD.
- One industry member noted that there was a low abundance of lobsters throughout 2017 that corresponded to the low recommended biological catch (RBC) and total allowable catch (TAC) figure of 495 tonnes. The member noted that he was not aware of any exemptions being issued to PNG trawlers in 2017 and to his knowledge there was not any large volumes of PNG trawl caught lobster tails on the market.
- Some industry observers were concerned that the low abundance of lobsters in 2017 and 2018 was a result of PNG trawlers taking spawning lobsters on their migration to Yule Island.
- One industry member noted that fishing on Darnley Island has been slow since the season start on 1 December. The member noted that he has observed large numbers of berried lobsters from Don Cay to Dowar Island. One industry member stated it was too early to comment on the fishing conditions around Mabuiag Island.
- One industry member noted the start of the 2017/18 fishing season is similar to 2016/17 season. The member noted that lobsters had already moulted and this was unusual for the start of the season and it was believed to be due to high water temperature.
- One industry member noted that the tides had not been favourable for the start of the fishing season, however the catches around Yam Island have been good with free dive fisher's landing between 50-80 kilograms of tails for one days fishing, however there has been high number of double skin (moulting lobsters). The member noted

that most of the catch was coming from the shallow water and there was low numbers of lobsters in the deeper water.

- The scientific observer asked industry members what the level of discard in the fishery is. Industry member noted discarding is unlikely for the TIB dinghies because any mortality is processed to a tailed lobster. The AFMA EO noted that the TVH sector complete a daily fishing log and that any post capture mortality and discarding should be captured by the daily fishing log (TRL04).
- One industry member asked other members and observers for any information about PNG fisheries and if they have changed their fishing methods or practices over time and whether this may be having an impact on the stock. One industry member stated he did not believe that PNG had a large increase in fishing efficiency and they are fishing with the same equipment as previous, the member noted that the Australia industry has become more efficient over time with GPS, sounders and faster vessels.
- The scientific member noted that the catch history for the fishery starts in 1973 and there was approximately 573 tonnes of reported trawl catch from PNG. The scientific member noted that the stock assessment includes all sources of fishing mortality and historically the Fishery was trending well and that it seems like in recent years the Fishery has experienced anomalous conditions.
- One industry member noted that there could be some link between the environmental conditions in the Fly River and impacts on the lobster stock, the member noted that recently the Gulf of Papua barramundi fishery had collapsed and black jewfish was in decline. The scientific member noted there are reported increasing levels of toxins in the Fly River, however the impact was further to the north east and unlikely to impact the lobster stock, however further analysis could be undertaken.

Government

The RAG noted the update provided by the AFMA member:

- The introduction of a mandatory fish receiver system (also known as catch disposal record) for Torres Strait fisheries was implemented on 1 December 2017. Since the introduction of the system there has been an increase in licensing and reporting from the TIB sector. The timely reporting of catch landing will help to monitor total catch for the Fishery.
- At its last meeting the TRL Working Group considered outcomes of the consultation process undertaken for the TRL management Plan. The TIB sector representatives noted they want to take into account findings of a New Zealand study tour on Maori fishing entitlements. The TSRA observer noted that a fisheries summit will be held in 2018 for the TIB sector to discuss and agree on the preferred management of the Fishery.

The RAG noted the updated provided by the TSRA Member that:

- In the past year TSRA has purchased 3 TVH licences and noted that there may be some changes to catch and effort for the fishery. The TSRA noted they are intending to lease the three licences out to traditional inhabitants. The Chair asked if leasing the TVH licences was to be ongoing or a once off. The TSRA member stated the objective was to work towards 100 per cent ownership of Torres Strait fisheries by traditional inhabitants and that leasing revenue as well as other sources of funding may be used.

PNG NFA

The RAG noted the update provided by the PNG National Fisheries Authority observer:

- There have been no exemptions issued to PNG prawn trawlers for 2017 or 2018 allowing them to retain tropical rock lobster;
- Observer coverage on the PNG prawn trawler fleet is ongoing, observer coverage is high during the months of September and October when there is a high risk of incidental catch of lobster. PNG NFA officials also monitor the unloads of prawn trawlers;
- Data reporting by the PNG prawn fleet is slow and the NFA are aiming to improve data reporting by implementing a logbook system that is consistent with the PNG tuna fishery.
- The NFA are introducing mandatory bycatch reduction devices (BRDs) for the prawn fleet including turtle excluder device (TED) to reduce turtle bycatch; square mesh panel and fish eye reduction device to reduce the bycatch of finfish.

Native title

The Chairperson for Malu Lamar RNTBC was an apology for the meeting, no update was provided.

Agenda Item 3 – catch summary

The RAG noted an update on the fishery catch and effort information based on the paper titled '*Torres Strait Tropical Rock Lobster Catch Data Summary*' and '*Estimation of Total Annual Effort in the Torres Strait Rock Lobster Fishery – 2017 Update*.'

The RAG noted advice from the scientific observer that:

- The 2016/17 notional TAC was set at 495 tonne for Australia and PNG inclusive. The Australian catch was 255.4 tonnes (TIB caught 104.6 tonnes and TVH sector caught 149.0 tonnes);
- The PNG catch was 113.0 tonnes;
- There was zero reported trawl catch from PNG in 2016/17; and
- There are some uncertainties in the PNG data. When comparing figures from PNG processors and the PNG export data there are large discrepancies in reported PNG

catch in some years. A precautionary approach was taken and the higher catch figures from each year for PNG were used for stock assessment purposes.

The scientific observer noted that AFMA provided the last four years of catch and effort data for the 2017 update. A large number of late returns of the TDB01 docket book were received and this has resulted in an increase in the total reported catch. The scientific member noted that a standard procedure should be developed for receiving fishery data because there is a tight deadline to meet.

The RAG **AGREED** that the Tropical Rock Lobster Fishery catch and effort data should be provided by 31 October each year to allow sufficient time for the stock assessment model to be updated.

The AFMA member noted that there should be an improvement with the provision of accurate and timely data with the introduction of the Torres Strait Fish Receiver System and the Catch Disposal Record.

The AFMA EO questioned whether the increase in unreported fishing hours by the TVH sector from ~2 per cent to ~12 per cent from 2016 to 2017 was accurate. The scientific observer noted that this was an accurate representation.

The RAG **AGREED** for AFMA to investigate the potential cause of the TVH sector under-reporting of fishing hours.

The scientific observer noted that the 2016-17 TIB sector data had a significant change in the reported fishing location. The number of docket book returns with no fishing location recorded significantly decreased and the number of returns with Thursday Island listed as the fishing location significantly increased. One industry member noted that the Thursday Island fishing location (area 9) is likely to be incorrect and over reported for 2016-17.

The independent scientific member recommended that the area effect (whether the reported fishing location impacts on catch and catch rates) be removed from the CPUE standardisation to examine if it is influencing the results in any significant way. The scientific observer undertook an analysis of area effect and reported to the RAG that it is not having a strong influence of the CPUE standardisation.

The RAG Chair questioned if there was any trends of increasing fishing efficiency captured in the time series of data. The scientific member noted that the absence of fine scale spatial information precludes the ability to identify if there has been a trend to accessing deeper water, however it can be captured by looking at when hookah equipment was introduced or the amount of fishing effort at Kirkaldie.

Agenda Item 4 – catch per unit effort indices

The RAG noted an update by Scientific Observer Dr Robert Campbell on the fishery catch per unit effort (CPUE) standardisation for the TIB and TVH sectors as per the papers titled '*An Abundance Index for Torres Strait Rock Lobster using TIB data*' and '*An Abundance Index for Torres Strait Rock Lobster using TVH data*.' **4A – TVH sector standardisation**

Robert noted the stock assessment relies on an index of abundance that is provided by the pre-season survey and the standardised CPUE for the TIB and TVH sectors. The CPUE is standardised to account for changes that influence catch and catch rates. The standardisation process also looks at whether a combination of factors influence catch or catch rates. The relative fishing power across the fleet has the largest effect in the model for the TVH data and it varies from 36 per cent to 192 per cent.

Robert noted that for the TVH CPUE the area effect and fishing method effect did not appear to have a large influence on the model.

4B – TIB sector standardisation

Robert noted that in 2013 there was a reduction in the reporting of fishing effort for the TIB sector and more recently in 2015 and 2016 there was a reduction in the reporting of effort information because some processors reported aggregate catch. This had made the CPUE analysis more difficult for the TIB sector.

Robert noted that in previous years the TIB sector docket book records for lamp fishing (n=4,435 records) were not used in the analysis. The RAG **AGREED** that lamp fishing data should be used for future TIB CPUE analyses.

Robert noted that as per previous discussions, there was a reduction in catch by unknown area and increase in reported catch for Thursday Island (area 9). The RAG noted the increase in reported catch for the Thursday Island was likely to be incorrect and over represented. The RAG noted that when the area effect (the impact of the reported fishing area on model results) was tested it had limited influence on the stock assessment results.

The RAG noted that the Main-Effects model (the base-case used for the fishery assessment) increased by 20 per cent for 2017 when compared to the long-term average. The scientific observer noted that further checks were undertaken and the increase was due to a recent shift from predominately tailed lobster to live lobster for the TIB sector (it was not due to the over representation of catch for Thursday Island, area 9).

Agenda item 5 – pre-season survey results

The RAG noted an update on the fishery independent pre-season survey that was held from 1 to 12 November 2017 presented by the scientific observer Mark Tonks.

Mark noted that:

- There was good visibility and mostly favourable weather conditions throughout the duration of the dive survey;
- A total of 77 reef sites were surveyed, each site is surveyed by diving and observing lobsters over a 400 metre long by 4 metre wide belt transect;
- The 2017 1+ index is the lowest ever recorded for the pre-season survey, there was an average of 1.78 lobsters per transect. This is down 75 per cent from 2015 and 15 per cent from 2016;

- The pre-season survey does not provide an index for 2+ lobsters because these lobsters have already migrated from the Torres Strait, instead the Fishery uses the standardised CPUE indices for the 2+ indices;
- Across the 77 sites surveyed only 18 0+ lobsters were observed, this was a substantial decrease from 2016 pre-season survey of 90 0+ lobsters;
- There was no observations of extraordinary changes to benthic habitat at survey sites.

The Chair questioned whether inter-diver comparisons are made to check if one diver or a dive team may be biasing the results. The scientific observer noted that the survey procedures minimise the effect of individual divers on the lobster count. However, there may be up to 15 per cent undercount of 0+ lobster from 2016, due to Darren Dennis retiring (Darren conducted CSIRO lobster dive surveys from 1989 to 2016).

Mark noted that the 77 dive sites do not include deeper dive sites on the eastern edge of Warrior Reef that have previously been included in the dive surveys. The scientific member Eva Plaganyi noted that the survey was at a reduced scale with 77 sites, however before reducing the scale of the survey the RAG made considered the data and agreed that 77 sites would be representative. Eva noted that the survey number of 0+ lobster are so low that the model cannot fit the data well (the model over estimates the number of 0+).

Eva noted the potential factors that may have led to the low 2017 pre-season survey results were:

- overfishing may be a potential factor, the stock has been observed to decline in the past due trawling of migrating and spawning lobster. The high reported trawl catch in 2014 may have reduced the abundance of 1+ lobster in 2016;
- natural fluctuations based on environmental conditions and density dependence of the lobster stock;
- environmental anomaly relating to the strong El Nino event in 2015 and 2016 that led to highest ever recorded sea surface temperatures. High sea surface temperatures are known to influence growth and survival of lobsters and changes to oceanic currents may have impacted on larval advection;
- there was reported loss of habitat recently with sand incursions and coral bleaching that may have reduced the productivity of the ecosystem and had a negative impact on lobster abundance;
- the survey method and procedures were consistent with previous years and undertaken by an experienced dive team. The survey method was not considered to be a factor for the low survey count.

Agenda item 6 – larval movement

The RAG noted the preliminary results of the research project titled '*Environmental update for the Torres Strait tropical lobster *Panulirus ornatus**' presented by the scientific member Dr Eva Plaganyi. The aim of the research was to gather better understanding about the

connectivity of the tropical rock lobster population between Papua New Guinea, Torres Strait and Queensland East Coast and to improve the reliability of the fishery stock assessment.

The RAG noted the following information and results from research project presented by the scientific member:

- The project modelled larvae dispersal from two location, Yule Island in Papua New Guinea and Princess Charlotte Bay in Queensland;
- Once larvae are released they spend five months travelling in oceanic currents before they settle as a 0+ lobster, and only a very small percentage of larvae survive and settle as a 0+ lobster;
- There is clear evidence that the Torres Strait Tropical Rock Lobster Fishery, the PNG Tropical Rock Lobster Fishery and the Queensland East Coast Lobster Fishery are based on a single stock of tropical rock lobster;
- The plots show that some larvae released at Yule Island and Princess Charlotte Bay settle in the Torres Strait, however there was no clear relationship between larvae modelling, the pre-season survey and stock assessment results and the level of catch;
- There is a lack of tidal flow information for the Torres Strait and as a result the model does not accurately predict the dispersal of larvae once it reaches the Torres Strait.

The independent scientific member noted that the modelling confirmed that the fisheries are based on a single stock and the model is not able to predict how the stock may be influenced by various fishing or environmental conditions. The independent scientific member noted that the model does not predict how the stock may be influenced by anomalous environmental conditions because it did not explore these event in detail.

The independent scientific member noted the modelling results show that the Fishery recruitment is variable from year to year and is reliant on a healthy spawning biomass throughout the range of the lobster population. This is because across multiple years there is likely to be changing conditions that favour the settlement of larvae in the Torres Strait from different locations.

One industry observer noted that Cape Grenville is an important spawning area for tropical rock lobster on the east coast of Queensland and that lobsters spawning in this area may be important for the recruitment of tropical rock lobster into the Torres Strait.

Agenda item 7 – stock assessment update

The RAG noted the preliminary results of the stock assessment update and the recommended biological catch (RBC) based on the presentation titled '*Draft Updated 2017 Integrated Stock Assessment to provide management advice on the Torres Strait rock lobster fishery*' by Dr Eva Paganyi.

Eva noted the stock assessment model is not fitting to the pre-season season survey 0+ lobster indices. The poor model fit relates to the difficulty of accurately sampling 0+ lobsters and the model is unable to predict the trend in abundance of 0+ lobsters.

The independent scientific member noted the model is predicting that there are more 0+ lobster than what were observed in the pre-season survey. As a result, the stock assessment is providing a slightly more optimistic RBC.

Eva noted that the predicted biomass for the Fishery in 2018 is 0.76 (90% CI 0.54 to 0.98) and dropping to 0.59 in 2019. The target biomass reference point for the Fishery is 0.65. The Chair noted that the model is responding (by reducing the recommended biological catch) to what the potential catch will be for 2018, the model does this by placing a large weighting on the 1+ survey index of abundance, rather than the stock biomass.

Eva advised that in line with the stock assessment outcomes and the interim Harvest Strategy the recommended biological catch (RBC) for 2017/18 fishing season is 299 tonnes. The large reduction from 495 tonne in 2016/17 to 299 tonnes is primarily due to the reduction in the 1+ lobster indices.

Eva noted that the draft empirical harvest control rule (eHCR) can only be implemented once the PZJA agreed to the fishery Harvest Strategy. If the RBC was set based on the eHCR the RBC would have been higher, this is due to the eHCR averaging the indices over the previous 5 years to reduce the variability. The independent scientific member noted that if the eHCR uses data from the past four years it would set an RBC of 280 tonnes, this is consistent with the stock assessment result.

The RAG **RECOMMENDED** a preliminary recommended biological catch (RBC) of 299 tonnes for Australia and PNG inclusive, based on the following:

- the current stock biomass is estimated at 76 per cent of B_{1973} which is above the target biomass of 65 per cent;
- the RBC was calculated by applying the interim harvest strategy to the preliminary results of the integrated fishery stock assessment;
- the reduction in the RBC is primarily due to the stock assessment responding to the low indices for 1+ lobster; and
- the 0+ index of lobster is the lowest ever recorded by a pre-season survey, however the 0+ indices is uncertain due to the small size and cryptic nature of 0+ lobster; and,
- although poorly estimated, the stock biomass is predicted to drop to 59 per cent of B_{1973} in 2019.

The RAG noted the stock assessment results will be finalised in March 2018 and presented to the RAG at its next meeting, however it is unlikely that the results will change significantly.

The RAG **STRONGLY RECOMMENDED** that under the current low levels of abundance, all management actions should be considered to ensure the 2018 RBC of 299 tonnes is not breached.

The following members and observers left the meeting: Eva Plaganyi (scientific member); Mariana Nahas (TSRA member); Brett Arlidge (industry member) and Phil Ketchell (industry member).

Agenda item 8 – stock assessment data rules

The RAG **AGREED** to defer the decision on the Torres Strait Docket Book (TDB01) data rules to the next RAG meeting scheduled for March 2018, this was due to a lack of time to present and discuss the results of the paper. The scientific observer recommended that RAG members and observers read the meeting paper prior to discussing this agenda item at the next meeting.

The RAG **AGREED** that members and observers review the meeting paper out of session and provide any comments on the paper at the next meeting.

Agenda item 9 – harvest strategy

The RAG **AGREED** to defer discussion on the harvest strategy agenda item to the next RAG meeting scheduled for March 2018 due to a lack of time to present and discuss the agenda item.

Agenda item 10 – other business

The RAG Chair noted that the TSRA observer requested to discuss the setting of moon-tide hookah closures for the fishery and wanted the RAG to consider if a second moon-tide closure should be implemented during the months February to September.

The RAG Chair recommended the TSRA observer provide a paper to the RAG prior to the next meeting to support an informed discussion.

Agenda item 11 – next meeting

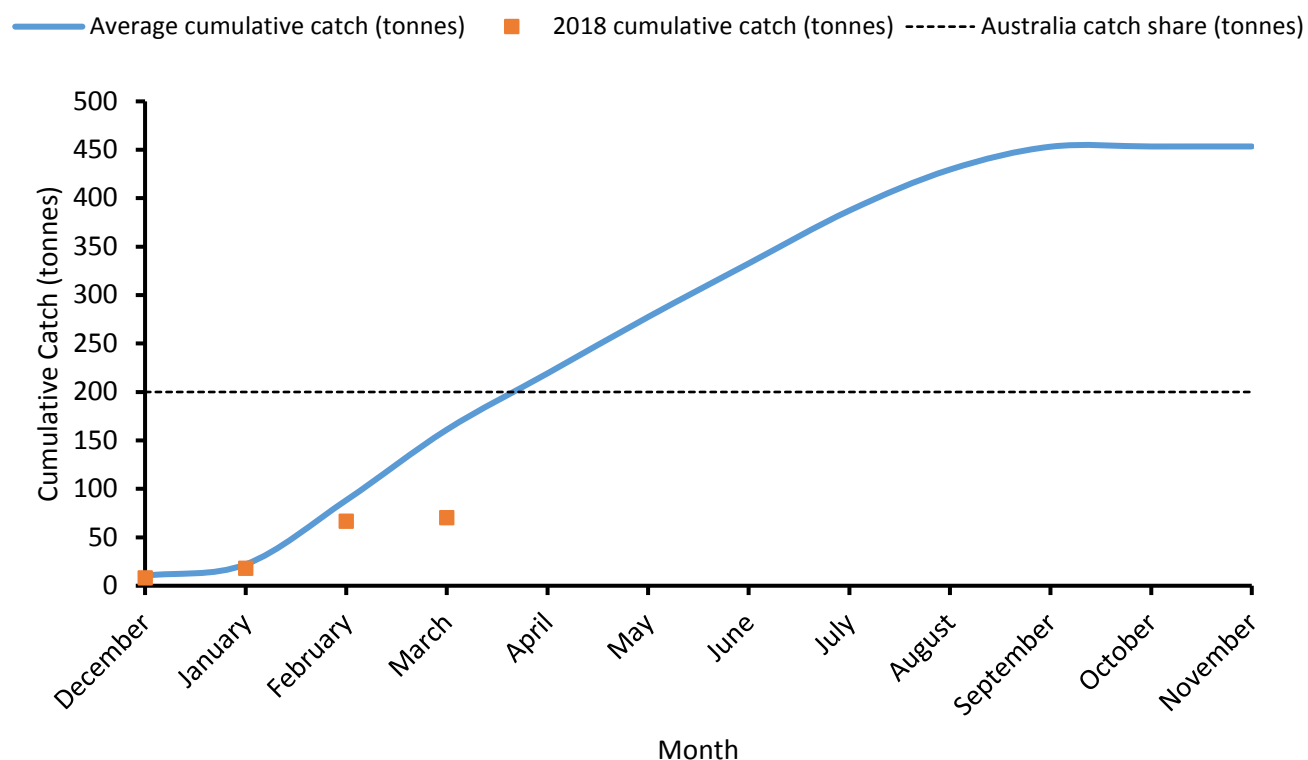
The Chair noted the next meeting was scheduled for March 2018. The meeting was closed.

ATTACHMENT B

Table 1. Comparison of average cumulative catch for years 2004 to 2018 and cumulative catch for 2018 fishing season.

Month	Average cumulative catch (kg's) years 2004 to 2017	2018 cumulative catch (kg's)	Per cent comparison
December	10,405	8,334	80.1%
January	22,055	18,067	81.9%
February	88,316	66,829	75.7%
March	161,156	70,430	43.7%
April	219,229		
May	277,421		
June	332,709		
July	387,264		
August	429,603		
September	453,210		
October	453,428		
November	453,444		

*Data from 1 to 8 March 2018 only.

**Figure 1.** Comparison of average cumulative catch for years 2004 to 2018 (blue line), cumulative catch for 2018 fishing season (orange dots) and preliminary Australian catch share of 200 tonnes (dotted line).

Attachment C

Table 1. Historical catches (tonnes) for the Torres Strait Tropical Rock Lobster Fishery.

YEAR	TIB	TVH	AUS DIVERS TOTAL	AUS TRAWL	AUS TOTAL	PNG DIVERS	YULE DIVERS	PNG DIVERS TOTAL	PNG_TRAWL	PNG TOTAL	TORRES STRAIT TOTAL	TORRES STRAIT TAC	AUS SHARE	PNG SHARE
1973			0	0	0	54.0	19	73	562	635	635	-		
1974			0	0	0	75.0	83	158	107	265	265	-		
1975			0	0	0	62.0	13	75	214	289	289	-		
1976			0	0	0	48.0	0	48	262	310	310	-		
1977			0	0	0	72.0	35	107	131	238	238	-		
1978			296.1	0	296	43.0	3	46	187	233	530	-		
1979			308.5	0	309	56.0	13	69	0	69	378	-		
1980			328.4	21	349	94.0	3	97	589	686	1035	-		
1981			495.1	131	626	96.0	3	99	262	361	987	-		
1982			669.2	201	870	102.0	3	105	399	504	1374	-		
1983			432.9	139	572	86.0	0	86	112	198	770	-		
1984			330.9	8	339	86.0	0	86	29	115	454	-		
1985			537.4	24	561	187.0	16	203	0	203	764	-		
1986			890.6	21	912	198.0	62	260	0	260	1172	-		
1987			622.0	0	622	128.0	54	182	0	182	804	-		
1988			537.4	0	537	150.0	5	155	0	155	692	-		
1989			651.0	0	651	211.0	24	235	0	235	886	-		
1990			490.1	0	490	158.0	0	158	0	158	648	-		
1991			444.1	0	444	168.0	0	168	0	168	612	-		
1992			423.2	0	423	134.0	0	134	0	134	557	-		
1993			505.7	0	506	166.0	0	166	0	166	672	-		
1994		123.0	577.8	0	578	247.0	0	247	0	247	825	-		
1995		101.0	556.9	0	557	257.0	0	257	0	257	814	-		
1996		226.9	584.1	0	584	228.0	0	228	0	228	812	-		
1997		275.0	653.1	0	653	241.0	0	241	0	241	894	-		
1998		329.6	661.4	0	661	201.0	0	201	0	201	862	-		
1999		95.1	409.6	0	410	163.0	0	163	0	163	573	-		
2000		128.9	418.0	0	418	235.0	0	235	0	235	653	-		
2001	52.0	69.1	121.1	0	121	173.0	0	173	5	178	299	-		
2002	68.0	147.7	215.7	0	216	327.0	0	327	43	370	585	-		
2003	123.0	361.4	484.4	0	484	211.0	0	211	5	216	701	-		
2004	232.0	481.1	713.1	0	713	182.0	0	182	0	182	895	-		
2005	358.5	545.0	903.5	0	903	228.0	0	228	0	228	1131	-		
2006	146.9	135.4	282.4	0	282	142.0	0	142	0	142	424	471	317.9	153.1
2007	260.1	268.6	528.7	0	529	228.0	0	228	0	228	757	842	568.4	273.7
2008	184.9	100.4	285.4	0	285	221.0	0	221	0	221	506	751	506.9	244.1
2009	143.9	91.1	234.9	0	235	161.4	0	161.4	0	161	396	450	303.8	146.3
2010	141.2	282.6	423.8	0	424	292.8	0	292.8	0	293	717	853	575.8	277.2
2011	201.2	503.5	704.7	0	705	165.0	0	165.0	0	165	870	803	542.0	261.0
2012	136.4	370.5	506.9	0	507	173.7	0	173.7	0	174	681	964	650.7	313.3
2013	146.1	361.7	507.8	0	508	108.3	0	108.3	0	108	616	871	587.9	283.1
2014	204.6	273.2	477.8	0	478	151.4	0	151.4	110	261	739	616	415.8	200.2
2015	196.2	152.7	348.9	0	349	235.7	0	235.7	0	236	585	769	519.1	249.9
2016	266.1	243.7	509.8	0	510	248.0	0	248.0	0	248	758	796	537.3	258.7
2017	106.4	149.0	255.4	0	255	113	0	113.0	0	113	368	495	334.1	160.9
2018	-	-	70.4	0	-	-	-	-	-	-	-	299	201.8	97.2

*2018 reported AUS DIVERS catch based on CDR returns from 1 December 2017 to 8 March 2018.

*299 tonne provisional RBC for 2018 fishing season

*2017 PNG catch data needs to be verified

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2017
Management arrangements for the 2017/18 fishing season	Agenda Item 4 For Discussion and advice

RECOMMENDATION

1. That the working Group **DISCUSS** and **PROVIDE ADVICE** on any additional management measures necessary to ensure catches for the 2017/18 fishing season do not exceed the notional TAC recommended under Agenda item 3 noting that:
 - a. the Tropical Rock Lobster Resource Assessment Group (TRLRAG) preliminary advice on the Recommended Biological Catch (RBC) for the current season is 299 tonnes. The RBC covers the Protected Zone (Australia and Papua New Guinea). The Australian catch share would be 201.85 tonnes;
 - b. the TRLRAG is meeting on 27-28 March 2018 and will provide final advice on the RBC;
 - c. the reported catch for the Fishery (TIB and TVH sectors) is 70,430 kilograms or ~35 per cent of the Australian catch share of 201.85 tonnes from 1 December 2017 to 8 March 2018 (**Attachment A**);
 - d. although catch rates can vary throughout the season, current management arrangements may not keep catches within Australia's catch share of 201.85 tonnes;
 - e. an update of catch and effort data for the fishing season will be considered by the TRLRAG and presented to the Working Group; and
 - f. TRLRAG strongly recommended that under the current low levels of abundance, all management actions should be considered to ensure the 2018 RBC is not breached.
2. That the Working Group **NOTE** AFMA wrote to all licence holders on 22 February 2017 to advise them of the preliminary RBC of 299 t for the 2017/18 fishing season (**Attachment B**)
3. That the Working Group **NOTE** AFMA convened an industry meeting on 27 February 2018 on Thursday Island to outline the preliminary RBC advice, the management process to finalise the RBC advice and the possible need for additional management measures to keep catches within an agreed catch limit.
 - a. A copy of the draft industry meeting record is provided at **Attachment C**.
 - b. A copy of the industry meeting presentation is provided in **Attachment D**.

KEY ISSUES

4. The Working Group is asked to provide advice on any additional management measures necessary to ensure catches for the 2017/18 fishing season remain within the notional TAC recommended under Agenda Item 3.
5. The TRL Fishery is currently managed by a range of input controls, including seasonal closures, moon-tide closures, gear restrictions and one output control, minimum size limits. These measures exist in the form of legislative instruments, licence conditions and policy.
6. Regulated catch limits are not in place however the Australian and Papua New Guinea (PNG) Government's agree a global TAC (TAC for both Australian and PNG jurisdiction) from which catch shares are then calculated. Catching is competitive across all Australian licence holders.
7. A list of the current Fishery management arrangements is provided in **Attachment E**.
8. Since recommending a TAC (commenced 2006) catches have generally remained below the global TAC (**Attachment F**). A global TAC of 299 tonnes is relatively low compared with the average over the period 2006-2017 of 723 tonnes (25th percentile 585 t and 75th percentile 845 t). The agreed global TAC has ranged between 450 t and 964 t between the years 2006-2017.
9. Subject to final advice from the TRLRAG and noting current catches to date (**Attachment A**), there is risk that current management arrangements for the Fishery will not keep catches within the agreed TAC. A further update on catch and effort for the season will be considered by the TRLRAG and provided to the Working Group.
10. The preliminary RBC has been calculated using the interim harvest strategy. An objective of the interim harvest is to maintain the stock biomass at 65 per cent of the unfished biomass ($B_{0.65}$). The TRLRAG has recommended maintaining this target under the revised draft harvest strategy to:
 - Maintain the stock at (on average), or return to, a target biomass point B_{TARG} equal to recent levels (2005-2015) that take account of the fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable.
 - The agreed B_{TARG} is more precautionary than the default proxy B_{MEY} (biomass at maximum economic yield) level as outlined in the Commonwealth Harvest Strategy Policy and Guidelines 2007 (HSP).
11. The benefits from maintaining relatively high stock biomass ($B_{0.65}$) will not be realised if catches are not kept within the recommended RBC. As listed above these are delivering good economic yield and ensuring stocks are readily available to support the traditional way of life and livelihoods and recreational fishing.
12. AFMA will not support allowing commercial fishing to exceed the agreed catch limit.

DISCUSSION

13. Notwithstanding any advice that may come from the Working Group, AFMA identifies three regulatory options to consider:
 - a. cease fishing when catches reach the agreed limit;
 - b. apply additional controls to limit catch rates; or
 - c. a combination of (a) and (c).
14. Industry may agree on other measures where there is broad agreement and those measures would be effective.
15. On 27 February 2018 AFMA convened 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. AFMA informed members that additional measures may be needed to regulate catch in the 2017/18 fishing season and sought industry views.
16. Some industry participants provided recommendations to implement additional management measures to slow down catch rates and allow operators to fish throughout the entire season, including:
 - a. implementing additional hookah closures;
 - b. a 10 nautical mile closure for the TVH sector around inhabited islands;
 - c. 30 per cent tender boat reduction for primary licences, which is consistent with the 2007 interim tender boat reduction; and
 - d. industry entering into voluntary arrangements to limit catches to their provisional catch shares.
17. Input controls limit catches by placing restrictions on how fishers fish. Input controls can lower catch rates by making fishers less efficient. In doing so input controls can prolong the fishing season for all licence holders. Additional input controls however are likely to increase fishing costs but may be beneficial from other perspectives, such as maintaining markets.
18. In considering any additional measures, options should be evaluated against the objectives of the *Torres Strait Fisheries Act 1984*. They are:

Number	Objective
a)	to acknowledge and protect the traditional way of life and livelihood of traditional inhabitants, including their rights in relation to traditional fishing
b)	to protect and preserve the marine environment and indigenous fauna and flora in and in the vicinity of the Protected Zone
c)	to adopt conservation measures necessary for the conservation of a species in such a way as to minimise any restrictive effects of the measures on traditional fishing
d)	to administer the provisions of Part 5 of the Torres Strait Treaty (relating to commercial fisheries) so as not to prejudice the achievement of the purposes of Part 4 of the Torres Strait Treaty in regard to traditional fishing

e)	to manage commercial fisheries for optimum utilisation
f)	to share the allowable catch of relevant Protected Zone commercial fisheries with Papua New Guinea in accordance with the Torres Strait Treaty
g)	to have regard, in developing and implementing licensing policy, to the desirability of promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants

ATTACHMENTS

- A. Landed Australian catch of tropical rock lobster for the Torres Strait Tropical Rock Lobster Fishery 2018 fishing season.
- B. Letter to licence holders about preliminary RBC of 299 tones – 22 February 2017.
- C. Draft meeting record – TRL Fishery industry meeting 27 February 2018.
- D. Meeting presentation – TRL Fishery industry meeting 27 February 2018
- E. Torres Strait Tropical Rock Lobster Fishery management measures.
- F. Torres Strait Tropical Rock Lobster Fishery catches and TACs from 2006 to 2018.

TROPICAL ROCK LOBSTER	MEETING No. 22
RESOURCE ASSESSMENT GROUP (TRLRAG)	27-28 March 2018
2017/18 Catch and Effort Update	Agenda Item 3 For Noting

RECOMMENDATIONS

1. That the RAG **NOTE:**

- a. the reported catch for the Fishery (TIB and TVH sectors only) is 70,430 kilograms from 1 December 2017 to 8 March 2018;
- b. if available, total landed catch reported to date for the PNG TRL Fishery; and
- c. an update on catch and effort to date for the fishing season to be provided by CSIRO.

KEY ISSUES

2. As reported through the new mandatory fish receiver system (implemented on 1 December 2017) the total landed catch reported for the Australian TRL Fishery from 1 December 2017 to 8 March 2018 is 70,430 kgs (**Table 1**).
3. AFMA is awaiting an update from the PNG National Fisheries Authority on catches to date for the PNG TRL Fishery.
4. CSIRO will provide a further summary of catch and effort data to date at the meeting.

Table 2. Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Torres Strait Tropical Rock Lobster Fishery from the period 1 December 2017 to 8 March 2018. Source: catch records from the Torres Strait Tropical Rock Lobster Catch Disposal Record (TDB02).

Dates	TIB (kg's)	TVH (kg's)	Combined catch (kg's)	Number of records
01/12/2017 to 31/12/2017	8,302.8	31.3	8,334.1	402
01/01/2018 to 31/01/2018	9,732.7	0.0	9,732.7	487
01/02/2018 to 28/02/2018	21,454.6	27,307.8	48,762.4	747
1/03/2018 to 08/03/2018	961.8	2,638.6	3,600.4	58
Total	40,451.9	29,977.8	70,429.6	1,694

*Please note that there may be some outstanding catch disposal records (TDB02) for the period 1 to 8 March. Therefore the landed catch reported for the March period may be under-reported.



Australian Government
Australian Fisheries Management Authority

22 February 2018

Dear Licence Holder

I am writing to update you with information about the preliminary stock assessment and preliminary recommended biological catch (RBC) for the Torres Strait Tropical Rock Lobster Fishery (the Fishery) for 2018.

The Torres Strait Tropical Rock Lobster Resource Assessment Group (TRLRAG) met on 12 and 13 December 2017 to provide a preliminary recommended biological catch (RBC) for the Fishery which is based on an updated fishery stock assessment.

The preliminary RBC for Australia and Papua New Guinea inclusive was recommended to be set at 299 tonnes. The fishery stock assessment will be finalised at a TRLRAG meeting scheduled for late March 2018 on Thursday Island. The preliminary RBC of 299 tonnes is low, however it is within the historical range of catches for the Fishery (**Attachment A**). The RBC is shared between Australia and Papua New Guinea under Treaty arrangements resulting in the Australian share being around 200 tonnes. The reported catch landings of Australian operators for this fishing season, which started on 1 December 2017, are provided in **Attachment B**.

To ensure that the Fishery is managed sustainably a Tropical Rock Lobster Working Group (TRLWG) meeting will be held immediately after the TRLRAG meeting to discuss measures to keep catches in line with the RBC. AFMA will consider the advice of the TRLWG prior to deciding whether additional measures need to be taken to control fishing effort and/or catch.

If you have any questions please contact Dean Pease (dean.pease@afma.gov.au) or Selina Stoute (selina.stoute@afma.gov.au) at the AFMA Thursday Island office by email or by phoning (07) 4069 1990.

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

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

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

Yours sincerely



Selina Stoute

Manager Torres Strait Fisheries

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

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

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

YEAR	TIB	TVH	AUS DIVERS TOTAL	AUS TRAWL	AUS TOTAL	PNG DIVERS	YULE DIVERS	PNG DIVERS TOTAL	PNG_TRAWL	PNG TOTAL	TORRES STRAIT TOTAL	TORRES STRAIT TAC	AUS SHARE	PNG SHARE
1973			0	0	0	54.0	19	73	562	635	635	-		
1974			0	0	0	75.0	83	158	107	265	265	-		
1975			0	0	0	62.0	13	75	214	289	289	-		
1976			0	0	0	48.0	0	48	262	310	310	-		
1977			0	0	0	72.0	35	107	131	238	238	-		
1978			296.1	0	296	43.0	3	46	187	233	530	-		
1979			308.5	0	309	56.0	13	69	0	69	378	-		
1980			328.4	21	349	94.0	3	97	589	686	1035	-		
1981			495.1	131	626	96.0	3	99	262	361	987	-		
1982			669.2	201	870	102.0	3	105	399	504	1374	-		
1983			432.9	139	572	86.0	0	86	112	198	770	-		
1984			330.9	8	339	86.0	0	86	29	115	454	-		
1985			537.4	24	561	187.0	16	203	0	203	764	-		
1986			890.6	21	912	198.0	62	260	0	260	1172	-		
1987			622.0	0	622	128.0	54	182	0	182	804	-		
1988			537.4	0	537	150.0	5	155	0	155	692	-		
1989			651.0	0	651	211.0	24	235	0	235	886	-		
1990			490.1	0	490	158.0	0	158	0	158	648	-		
1991			444.1	0	444	168.0	0	168	0	168	612	-		
1992			423.2	0	423	134.0	0	134	0	134	557	-		
1993			505.7	0	506	166.0	0	166	0	166	672	-		
1994		123.0	577.8	0	578	247.0	0	247	0	247	825	-		
1995		101.0	556.9	0	557	257.0	0	257	0	257	814	-		
1996		226.9	584.1	0	584	228.0	0	228	0	228	812	-		
1997		275.0	653.1	0	653	241.0	0	241	0	241	894	-		
1998		329.6	661.4	0	661	201.0	0	201	0	201	862	-		
1999		95.1	409.6	0	410	163.0	0	163	0	163	573	-		
2000		128.9	418.0	0	418	235.0	0	235	0	235	653	-		
2001	52.0	69.1	121.1	0	121	173.0	0	173	5	178	299	-		
2002	68.0	147.7	215.7	0	216	327.0	0	327	43	370	585	-		
2003	123.0	361.4	484.4	0	484	211.0	0	211	5	216	701	-		
2004	232.0	481.1	713.1	0	713	182.0	0	182	0	182	895	-		
2005	358.5	545.0	903.5	0	903	228.0	0	228	0	228	1131	-		
2006	146.9	135.4	282.4	0	282	142.0	0	142	0	142	424	471	317.9	153.1
2007	260.1	268.6	528.7	0	529	228.0	0	228	0	228	757	842	568.4	273.7
2008	184.9	100.4	285.4	0	285	221.0	0	221	0	221	506	751	506.9	244.1
2009	143.9	91.1	234.9	0	235	161.4	0	161.4	0	161	396	450	303.8	146.3
2010	141.2	282.6	423.8	0	424	292.8	0	292.8	0	293	717	853	575.8	277.2
2011	201.2	503.5	704.7	0	705	165.0	0	165.0	0	165	870	803	542.0	261.0
2012	136.4	370.5	506.9	0	507	173.7	0	173.7	0	174	681	964	650.7	313.3
2013	146.1	361.7	507.8	0	508	108.3	0	108.3	0	108	616	871	587.9	283.1
2014	204.6	273.2	477.8	0	478	151.4	0	151.4	110	261	739	616	415.8	200.2
2015	196.2	152.7	348.9	0	349	235.7	0	235.7	0	236	585	769	519.1	249.9
2016	266.1	243.7	509.8	0	510	248.0	0	248.0	0	248	758	796	537.3	258.7
2017	106.4	149.0	255.4	0	255	113	0	113.0	0	113	368	495	334.1	160.9
2018	-	-	70.4	0	-	-	-	-	-	-	-	299	201.8	97.2

*2018 reported AUS DIVERS catch based on CDR returns from 1 December 2017 to 8 March 2018.

*299 tonne provisional RBC for 2018 fishing season

*2017 PNG catch data needs to be verified

ATTACHMENT B

Table 2. Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Torres Strait Tropical Rock Lobster Fishery from the period 1 December 2017 to 8 March 2018. Source: catch records from the Torres Strait Tropical Rock Lobster Catch Disposal Record (TDB02).

Dates	TIB (kg's)	TVH (kg's)	Combined catch (kg's)	Number of records
01/12/2017 to 31/12/2017	8,302.8	31.3	8,334.1	402
01/01/2018 to 31/01/2018	9,732.7	0.0	9,732.7	487
01/02/2018 to 28/02/2018	21,454.6	27,307.8	48,762.4	747
1/03/2018 to 08/03/2018	961.8	2,638.6	3,600.4	58
Total	40,451.9	29,977.8	70,429.6	1,694

*Please note that there may be some outstanding catch disposal records (TDB02) for the period 1 to 8 March. Therefore the landed catch reported for the March period may be under-reported.



Australian Government

Australian Fisheries Management Authority

Contents

Contents	2
Figures	2
Tables	2
1 Purpose	3
1.1 Information overview	3
2 Summary of presentation	3
2.1 Recommended biological catch	3
2.2 Why is the preliminary RBC low?	4
2.3 Finalising RBC and TAC advice	4
2.4 Current and historical fishery catches	5
2.5 Upcoming meetings	6
3 Summary of industry comments	6

Figures

Figure 1. Torres Strait Tropical Rock Lobster Fishery global catch and global TAC from 2004 to 2018. .	6
---	---

Tables

Table 1. Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Fishery from the period 1 December 2017 to 22 February 2018. Catch records from the Torres Strait Tropical Rock Lobster Catch Disposal Record (TDB02)	5
Table 2. AFMA meeting schedule for the TRLRAG and TRLWG.	6

1 Purpose

AFMA convened a public meeting on 27 February 2018 at Thursday Island with industry members and stakeholders from the Torres Strait Tropical Rock Lobster Fishery (the Fishery) to provide information about:

- the preliminary recommended biological catch (RBC) and catches for the 2017-18 fishing season;
- the stock assessment process;
- the RAG and Working Group meetings scheduled for 27-29 March 2018;
- the low preliminary RBC and to notify that additional management measures may be needed to regulate catches; and
- to gather general views from industry about the Fishery.

1.1 Information overview

Information provided to meeting participants was:

- letter to stakeholders dated 22 February 2018 about the preliminary stock assessment and preliminary recommended biological catch (RBC) for the Torres Strait Tropical Rock Lobster Fishery (**Attachment A**);
- historical catches and total allowable catch (TAC) for the Torres Strait Tropical Rock Lobster Fishery (**Attachment B**);
- landed catch (kilograms whole weight) of tropical rock lobster by sector for the Torres Strait Tropical Rock Lobster Fishery from the period 1 December 2017 to 22 February 2018 (**Attachment C**);
- table of historical cumulative catch by month for the Torres Strait Tropical Rock Lobster Fishery from 2004 to 2018 (**Attachment D**);
- TRL Fishery industry information meeting for Tuesday 27 February 2018 at Thursday Island (**Attachment E**).

2 Summary of presentation

2.1 Recommended biological catch

The recommended biological catch (RBC) is the estimated total annual catch that can be taken by fishing, while achieving the management objectives for the Fishery. The RBC is used to:

- agree to catch sharing arrangements with Papua New Guinea (PNG) under the Torres Strait Treaty;
- to monitor the sustainability of fishing activities on the stock;
- to support the implementation of a total allowable catch (TAC) under a quota management system.

The TAC is the overall catch limit set as an output control on catches. The term 'global TAC' is applied to TACs that cover fishing mortality from all fleets, for the TRL Fishery that is Australia and PNG inclusive.

The preliminary RBC for the Torres Strait Protected Zone (TSPZ) is 299 tonnes. The RBC figure is low compared to the long-term average, this is due to low numbers of one year old lobsters counted in the fishery independent pre-season survey that was conducted in November 2017. Based on the preliminary RBC of 299 tonnes, the global TAC would be set at 299 t, the catch shares would be split approximately 200 tonnes for Australia and 99 tonnes for PNG.

The RBC is calculated using the fishery integrated stock assessment model and by applying the interim harvest strategy for the Fishery. The integrated assessment incorporates information including the catch and effort data for the traditional inhabitant boat (TIB) and transferrable vessel holder (TVH) sectors, results of the fishery independent dive surveys, environmental conditions and biological information of the stock such as sex-ratio and length frequency data.

The interim harvest strategy applies a target biomass (B_{TARG}) of 65 per cent of the unfished biomass (B_0). That is the desired biomass of the stock, chosen to be the management target within the interim harvest strategy. The interim harvest strategy applies a biomass limit reference point (B_{LIM}) of 40 per cent of the unfished biomass. At B_{LIM} the stock biomass is below a level which the risk to the stock is regarded as unacceptably high.

2.2 Why is the preliminary RBC low?

There are a range of potential factors that have resulted in a low preliminary RBC for the Fishery including:

- natural fluctuations of the TRL population based on environmental conditions and density dependence of the lobster stock;
- environmental anomaly relating to the strong El Nino event in 2015 and 2016 that led to highest ever recorded sea surface temperatures. High sea surface temperatures are known to influence growth and survival of lobsters and changes to oceanic currents may have impacted the dispersal of larvae;
- the reported loss of habitat recently with sand incursions and coral bleaching that may have reduced the productivity of the ecosystem and had a negative impact on lobster abundance; and
- The high reported PNG trawl catch of 110 tonnes in 2014 may have reduced the abundance of 1+ lobster in 2016.

2.3 Finalising RBC and TAC advice

The preliminary advice on the RBC was provided at the Torres Strait Tropical Rock Lobster Fishery Resource Assessment Group (TRLRAG) meeting number 21 held in Cairns on 12-13 December 2017.

The final RBC advice will be provided by the resource assessment group (RAG) at its 22nd meeting on 27-28 March 2018 at Thursday Island. The TRL Working Group (TRLWG) will then consider the RBC advice provided by the RAG and recommend a TAC at its 7th meeting on 28-29 March at Thursday Island (immediately after the TRLRAG meeting). The Working Group will also consider whether the current controls are adequate or whether additional management arrangements may be needed to regulate catch to a low TAC.

Prior to presenting the final RBC advice at the RAG meeting the Commonwealth Scientific and Industrial Research Organisation (CSIRO) will be examining all available information for the current season, including:

- The reported catch landings and effort data from the Torres Strait Catch Disposal Record (TDB02);
- The reported catch and effort data for the TVH sector from the Torres Strait Tropical Rock Lobster Fishery Daily Fishing Log (TRL04); and
- tropical rock lobster sex-ratio and length frequency information.

2.4 Current and historical fishery catches

The records for landed catch for the 2017-18 fishing season (**Table 1**) were presented to meeting participants.

Table 1. Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Fishery from the period 1 December 2017 to 22 February 2018. Catch records from the Torres Strait Tropical Rock Lobster Catch Disposal Record (TDB02).

Dates	TIB (kgs)	TVH (kgs)	Combined catch (kgs)	Number of records
01/12/2017 to 31/12/2017	11333.7	33.2	11366.9	322
01/01/2018 to 31/01/2018	9874.5	0.0	9874.5	354
01/02/2018 to 22/02/2018	10906.3	18866.4	29772.7	258
Total	32114.5	18899.6	51014.1	934

*Note that there may be some outstanding catch disposal records (TDB02) for the month of February. Therefore the landed catch reported for February may be under-reported.

The Fishery historical catch and TACs (**Figure 1**) were presented to meeting participants. It was noted that the preliminary RBC of 299 tonnes is low, however it is within the historical range of catch for the Fishery.

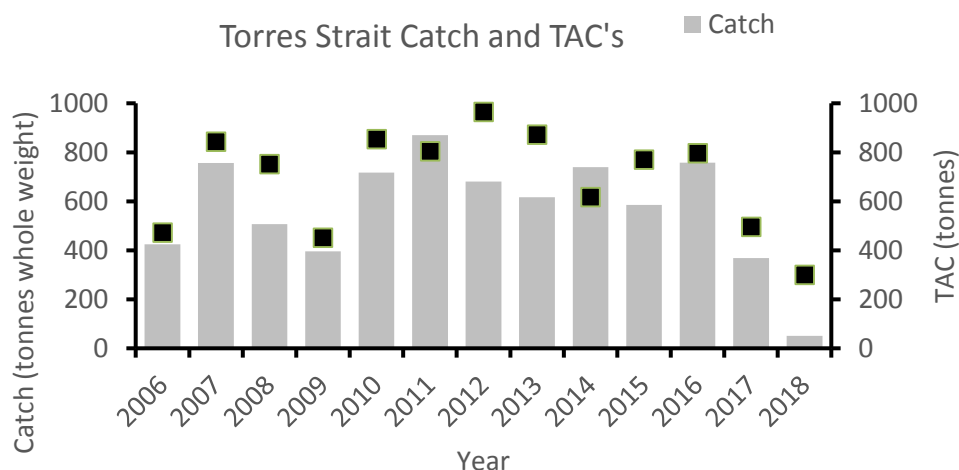


Figure 1. Torres Strait Tropical Rock Lobster Fishery global catch and global TAC from 2004 to 2018.

2.5 Upcoming meetings

The upcoming meeting schedule was presented to meeting participants (**Table 2**).

Table 2. AFMA meeting schedule for the TRLRAG and TRLWG.

Meeting	Date	Time	Venue
TRLRAG	27/03/18	1300 to 1700	TSRA Board Room
TRLRAG	28/03/18	0830 to 1200	TSRA Board Room
TRLWG	28/03/18	1300 to 1700	TSRA Board Room
TRLWG	29/03/18	0830 to 1200	TSRA Board Room

3 Summary of industry comments

Following the presentation meeting participants provided comments on a range of topics including quota management system, sectoral allocations, input controls to manage catch to the TAC, data collection and compliance.

Quota management system

Some industry members stated that:

1. The TIB sector does not support a quota management system until the sector owns 100 per cent of the quota units in the Fishery. Under this arrangement the existing TVH sector operators would be permitted to lease TIB quota units to access the Fishery.

Sectoral allocation

Some industry members stated that:

2. The TVH sector needs to be capped to its provisional allocation. If the sectors were capped to their provisional allocation shares, the 200 tonnes of catch available to Australian operators would be split approximately 132 tonnes to the TIB sector and 68 tonnes to the TVH sector. The catch allocation figures refer to a sectoral catch split of 66.18 per cent TIB sector and 33.82 per cent TVH sector.
3. The TVH sector should stop fishing when the TAC for a fishing season is low or below an agreed tonnage amount.
4. Industry members from both sectors could come together and agree on limiting the total catch from each sector to the provisional allocation figures.
5. The Government is not currently in a position to implement a quota management system and catch shares for the current fishing season, however industry members can get together and agree to voluntarily implement the provisional allocations.

Input controls

Some industry members recommended the following management measures:

6. Another hookah closure should be implemented for the Fishery (in addition to the current seven day closure during the months of February to September) to slow down catch rates and allow operators to fish throughout the entire season.
7. A 10 nautical mile closure for the TVH sector around inhabited islands.
8. 30 per cent tender boat reduction for primary licences, which is consistent with the 2007 interim tender boat reduction.
9. Primary vessels should not be permitted to leave Thursday Island harbour limits prior to the opening of hookah fishing (generally this occurs on 1 February).

Data collection

Some industry members stated that:

10. Fishing effort has been increasing over the years and there is concern that the Fishery is overfished because it is becoming harder to maintain catch rates. The increase in effort is not captured in the daily fishing log (TRL04), the docket book (TDB01) or the catch disposal record (TDB02).

Compliance

Some meeting participants stated that:

11. They are concerned that there is not enough of a compliance presence on the water in the region.
12. The fines for breaching management arrangements are not high enough and they may not deter some people from illegally fishing.
13. There should be training offered to indigenous people from the region to enable them to work as fishery compliance officers. The revenue raised by the TSRA from leasing of finfish catch shares could be used to provide this training.

Other

14. A meeting participant questioned how the Queensland East Coast Tropical Rock Lobster Fishery managed. The AFMA member noted that East Coast Fishery is managed sustainably by a number of controls including a total allowable catch that is

set at a precautionary limit of 195 tonnes each season, quota management system and mandatory daily fishing logs.

15. A meeting participant stated that the Australian Fisheries Management Authority (AFMA) is unable to manage the fishery adequately.
16. Some meeting participants stated that the TVH sector licences purchased by the TSRA should not have been leased to traditional inhabitants. Some participants stated that the TSRA did not adequately consult with industry members prior to leasing the TVH licences.

DRAFT



WHY ARE WE MEETING?

- To provide information about the current Recommended Biological Catch (RBC) and catches
- To explain the stock assessment process
- To explain the purpose of the upcoming RAG and WG meetings
- To flag that depending on the RBC, additional measures may be needed to regulate catches.
- Get industry views

RBC: What is it?

- Total recommended catch for the stock.
- The RBC is used to:
 - agree catch sharing with PNG;
 - monitor the sustainability of catches; and
 - support implementation of a TAC under quota management.
- The **PRELIMINARY** RBC for the Protected Zone is **299 tonnes**.
(very low numbers of 1+ lobsters seen in November survey)
- The shares would be ~200t for Australia and ~99t for PNG.

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

RBC: How was is calculated?

STOCK ASSESSEMENT

- uses catch and fishing effort information, dive survey information, environmental and biological information.
- Estimates size of the stock.

INTERIM HARVEST STRATEGY

- **target** $B_{0.65}$. Keep the stock at 65 per cent of the unfished biomass (B_0).
- **limit** $B_{0.4}$. Don't let the stock get smaller than 40 per cent of the unfished biomass (B_0).

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

RBC: When will it be finalised?

- December RAG meeting:
 - Preliminary RBC advice
- 27-28 March RAG Meeting:
 - Final RBC advice
- 28-29 March WG Meeting:
 - Consider RBC advice and recommend any additional management measures to regulate catch.

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

RBC: Why is it low?

There are a range of potential factors

- Natural fluctuations
- Environment - strong El nino event in 2015 and 2016.
- Loss of habitat - sand incursions, coral bleaching. Change productivity of ecosystem.
- High reported prawn trawl catch in 2014 (110t)

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

MANAGEMENT PROCESS

INFORMATION and ANALYSIS

- CSIRO are checking all available information.
- Catch landings and logbook data being processed and sent to CSIRO.

ARE CURRENT FISHING RULES GOOD ENOUGH?

- Subject to final RBC and catch rates, evaluate whether or not current controls will protect the sustainability of the fishery.

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

TRL Fishery Catches

- Landed catch (kilograms whole weight) of tropical rock lobster by sector for the Torres Strait Tropical Rock Lobster Fishery from the period 1 December 2017 to 22 February 2018. Catch data from the Torres Strait Tropical Rock Lobster Catch Disposal Record (TDB02).

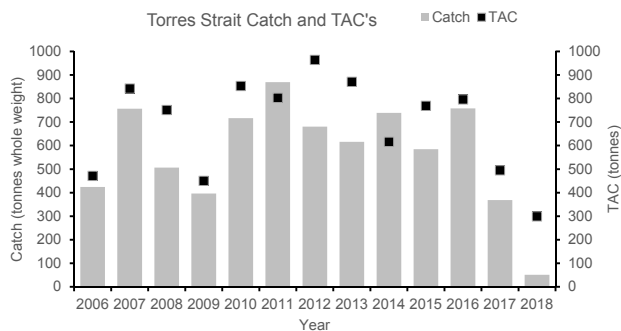
Dates	TIB (kgs)	TVH (kgs)	Combined catch (kgs)	Number of records
01/12/2017 to 31/12/2017	11,333.7	33.2	11,366.9	322
01/01/2018 to 31/01/2018	9,874.5	0.0	9,874.5	354
01/02/2018 to 22/02/2018	10,906.3	18,866.4	29,772.7	258
Total	32,114.5	18,899.6	51,014.1	934

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

HISTORICAL CATCHES

- The 299 tonne RBC is low however it is within the historical range of catches for the Fishery.
- Refer to hand-out for historical catches and TAC's



*Please note that there may be some outstanding catch disposal records (TDB02) for the month of February. Therefore the landed catch reported for February may be under-reported.

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

Your views?

- AFMA is available to explain information and get your views anytime
- RAG and WG members are here
- Industry solutions
- Good data – provide catch and effort data

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

UPCOMING MEETINGS

Meeting	Date	Time	Venue
TRLRAG	27/03/18	1300 to 1700	TSRA Board Room
TRLRAG	28/03/18	0830 to 1200	TSRA Board Room
TRLWG	28/03/18	1300 to 1700	TSRA Board Room
TRLWG	29/03/18	0830 to 1200	TSRA Board Room

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

QUESTIONS?

Efficient & sustainable management of Commonwealth fish resources

afma.gov.au

ATTACHMENT B

Table 1. Torres Strait Tropical Rock Lobster Fishery management measures.

Management measures	Traditional Inhabitant Sector (TIB)	Non-traditional inhabitant Sector (TVH)	What instrument is used to impose the measure	Will the arrangement continue immediately after the Management Plan (MP) ¹	Will the arrangement be in the MP ²
Requirement to hold a licence	Yes	Yes	<i>Torres Strait Fisheries Act 1984 and Community Fishing Notice 1.</i>	Yes	MP
Tender/dinghy number restrictions	No ³	Yes (maximum 7)	TVH sector: result of limited entry policy.	Yes	No, other instrument.
Catch reporting	No	Yes	Licence conditions	Yes	No, other instrument.
Moon-tide hookah closures	Yes	Yes	Licence conditions	Yes	No, other instrument.
Fishery closure (1 Oct – 30 Nov)	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes, to be reviewed.	No, other instrument.
Hookah closure (1 Dec – 31 Jan)	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes, to be reviewed.	No, other instrument.
Size restrictions, minimum tail size of 115 mm or minimum carapace length of 90 mm.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
Prohibition on using SCUBA or any kind of equipment used for breathing underwater other than hookah gear.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.

¹ All management arrangements are subject to periodic review² Details will be set out in other instruments or licence conditions.³ Policy removed in 2014. Tender numbers are now constrained by vessel survey standards

Management measures	Traditional Inhabitant Sector (TIB)	Non-Indigenous Sector (TVH)	What instrument is used to impose the measure	Will the arrangement continue immediately after the Management Plan (MP)	Will the arrangement be in the MP or operational detail be in the actual MP
Collection by hand, spear and scoop net only.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
Prohibition on carrying meat removed from lobster.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
Prohibition on carrying diving equipment at night.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument.
A Master Fisherman's licence must be held by person in charge of the boat.	Yes	Yes	Policy	Yes	MP
A processor/carrier licence is required to carry or process TRL at sea.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	MP
A bag limit of three lobsters per person or six lobsters per boat applies to traditional fishing (Islander or visiting PNG Traditional Inhabitants) and recreational fishing.	Yes	Yes	<i>Torres Strait Fisheries Management Instrument No.9</i>	Yes	No, other instrument
Vessel Monitoring System (VMS) for primary and carrier vessels	Yes	Yes	Licence conditions	Yes	No, other instrument

Management measures	Traditional Inhabitant Sector (TIB)	Non-Indigenous Sector (TVH)	What instrument is used to impose the measure	Will the arrangement continue immediately after the Management Plan (MP)	Will the arrangement be in the MP or operational detail be in the actual MP
Crewing restrictions	Yes The boat can only be crewed and operated by traditional inhabitants	No	Licence conditions	Yes	No, other instrument
Boat length restrictions and boat replacement policy ⁴	Yes (maximum 20m)	Yes (maximum 18m)	Licence conditions and <i>Fisheries Management Notice No.47</i> (maximum 20m)	Yes	No, other instrument

- ⁴ • boats up to six metres may be replaced by another boat up to six metres;
- boats greater than six metres and less than or equal to ten metres may be replaced by a boat up to and including 10 metres;
 - boats greater than ten metres and less than or equal to 14 metres may be replaced by a boat up to and including 14 metres; and
 - boats greater than 14 metres may be replaced by another boat of equal length. The maximum size for fishing boats is 20 metres.

YEAR	TIB	TVH	AUS DIVERS TOTAL	AUS TRAWL	AUS TOTAL	PNG DIVERS	YULE DIVERS	PNG DIVERS TOTAL	PNG TRAWL	PNG TOTAL	TORRES STRAIT TOTAL	TORRES STRAIT TAC	AUS SHARE	PNG SHARE
2006	146.9	135.4	282.4	0	282	142.0	0	142	0	142	424	471	317.9	153.1
2007	260.1	268.6	528.7	0	529	228.0	0	228	0	228	757	842	568.4	273.7
2008	184.9	100.4	285.4	0	285	221.0	0	221	0	221	506	751	506.9	244.1
2009	143.9	91.1	234.9	0	235	161.4	0	161.4	0	161	396	450	303.8	146.3
2010	141.2	282.6	423.8	0	424	292.8	0	292.8	0	293	717	853	575.8	277.2
2011	201.2	503.5	704.7	0	705	165.0	0	165.0	0	165	870	803	542.0	261.0
2012	136.4	370.5	506.9	0	507	173.7	0	173.7	0	174	681	964	650.7	313.3
2013	146.1	361.7	507.8	0	508	108.3	0	108.3	0	108	616	871	587.9	283.1
2014	204.6	273.2	477.8	0	478	151.4	0	151.4	110	261	739	616	415.8	200.2
2015	196.2	152.7	348.9	0	349	235.7	0	235.7	0	236	585	769	519.1	249.9
2016	266.1	243.7	509.8	0	510	248.0	0	248.0	0	248	758	796	537.3	258.7
2017	106.4	149.0	255.4	0	255	113	0	113.0	0	113	368	495	334.1	160.9
2018	-	-	70.4	0	-	-	-	-	-	-	-	299	201.8	97.2

*2018 reported AUS DIVERS catch based on CDR returns from 1 December 2017 to 8 March 2018.

*299 tonne provisional RBC for 2018 fishing season

*2017 PNG catch data needs to be verified

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2018
Progress on developing a TRL Fishery management plan	Agenda Item 4 FOR INFORMATION & DISCUSSION

RECOMMENDATION

1. The Working Group **NOTE** it met on 25-26 July 2017 to consider the outcomes of the public consultation process for the *Torres Strait Fishery (Quotas for Tropical Rock Lobster (Kaiar)) Management Plan* (the draft Plan).
2. The Working Group **NOTE** that:
 - a. the Working Group did not provide any advice on specific comments received on the draft plan; and
 - b. industry members (TVH included) supported setting aside further development of the draft Plan until the TIB sector has developed preferred options for managing their quota allocation.
3. The Working Group **NOTE** that the TSRA has commenced consultation on the development of a community management framework for fisheries assets for the Torres Strait region. The aim of the initial round of community visits was to:
 - a. explain how the Maori people of New Zealand have developed their economy by using the fisheries assets they received as part of the settlement from the Treaty of Waitangi; and
 - b. seek stakeholder views on establishing an independent commercial fisheries entity in the Torres Strait to hold and manage fisheries assets that are currently held by the TSRA on your behalf.
4. The Working Group **NOTE** that TSRA will provide an update on their Community Management Framework project at the meeting; and
5. The Working Group **NOTE** that the Protected Zone Joint Authority (PZJA) will be provided public consultation outcomes on the draft plan and TRLWG advice soon.

KEY ISSUES

6. While other issues have been raised on the draft plan through the public consultation process, the allocation and management of TIB quota was the key concern raised at the TRLWG meeting in July 2017. The allocation of quota units is fundamental to establishing a quota management system and implementing a management plan.
7. At the TRLWG meeting, the TSRA Fisheries Portfolio Member and Malu Lamar Chairperson advised that the New Zealand study tour provided attendees with greater insight to the benefits and opportunities of quota management and how Maori manage their quota entitlements.

8. In light of what was learnt from meetings with the Maori and concerns raised about the draft plan through the public consultation, the TSRA Fisheries Portfolio Member and Malu Lamar Chairperson did not support any further discussion on the draft Plan until the TIB sector and native holders more broadly, first meet to consider how their quota entitlements might be managed in order to meet their aspirations from the fishery.
9. The TSRA Fisheries Portfolio Member advised the that TSRA Board will be considering the outcomes of the NZ study tour at its meeting in September and that a work plan will be devised for leading the further consultation with the TIB sector and Malu Lamar. The Fisheries Portfolio Member further advised that the additional consultation may be a two year process with the first TIB meeting possibly occurring in beginning in October to coincide with the TRL Fishery closure. The aim of the TIB sector meeting will be for the sector to gather an understanding of the benefits of the Maori model and to agree on a preferred TRL Fishery management approach for the TIB sector
10. The TSRA has commenced a project called the Community management Framework. As part of the project TSRA has visited communities to discuss the formation of an independent company or a co-operative to hold and manage fisheries assets for the Torres Strait region.
11. Other issues that were raised on the draft plan through public consultation relate to moving to quota generally, quota trading, the granting of new TVH licences and placing restrictions on foreign ownership. There is support from both TVH and TIB sectors for the TSRA's proposal to insert 'first right of refusal' provisions (see summary at **Attachment A**).
12. The PZJA first agreed to develop quota management plan for the Fishery in 2006. AFMA notes that it is unlikely that there will ever be a high level of stakeholder agreement on all aspects of the quota management plan. At the same time it is becoming increasingly urgent to take action to improve the performance of management arrangements for the Fishery.
13. The current fishing season demonstrates the limitations of having fixed input controls, unlimited catches and no pre-agreed strategy for making adjustments to regulate overall catch (refer to issues discussed under Agenda Item 4). These arrangements do not perform well in terms of supporting industry investment and stewardship. Instead they undermine certainty, security of access and drive up administrative costs.
14. Outcomes of the public consultation on the draft plan and TRLWG advice will be provided to the PZJA soon.

ATTACHMENT

- A. Table of submissions about the draft Plan.

Agenda 4.3 Attachment A Summary of publically available written submissions received on the draft plan

Part 1: Comments on the proposed quota management plan

Overarching management approach – Moving to quota management under a plan of management	
Mabuiag Traditional Owners	<ul style="list-style-type: none"> • General concern that under the TRL management plan commercial fishers will be allowed to focus more on catching their share at the least cost which can encourage excessive hookah and tender use on home reefs which can be detrimental to the local 'dinner plate' and local free divers, forcing them to go further afield. • In light of concerns over equity issues in the sectors and other issues, Traditional Owner groups should have the right to submit community TRL Management plans. Community plans would protect a community's right to practice Indigenous traditional sustainability and provide a platform for community level-decision making ownership. • A community management plan could be another input control in the fishery outlining controls for localised areas (traditional boundaries), these may include spatial and temporal closures, hookah restrictions, move-on provisions and community engagement protocols. • Support 100% move to TIB sector and a phasing out of the TVH sector in stages to reduce economic shock to the industry and allow time for capacity building, as long as there is no cost shifting to the TIB sector. • A move to 100% control TIB sector would need to include grass roots input and one way is through local area community management plans.
Kenneth McKenzie	<ul style="list-style-type: none"> • The introduction of quota will allow partial buyback of quota allocated. For example if an operator is allocated 3% of the fishery then they will have the option of selling 1% or 2%. TSRA would have the first right of refusal for such a transaction.

Phil Hughes	<ul style="list-style-type: none"> • In considering moving to a quota management system, the choice must be made between input controlled fishery where the resource is owned by the community and managed on behalf of that community by a PZJA that is responsive to the needs of community OR an output controlled fishery where the quota is held by the highest bidder; a fishery that is principally driven by market forces above any respect for social or community impact.
Torres Strait Seafood	<ul style="list-style-type: none"> • Under a quota management system one company will likely hold the monopoly of quota which could lead to that entity dictating lease arrangements and lower beach price of TRL for fishers. Do not believe the implementation of the quota system as it is will at all benefit the community.
Torres Strait Fisher's Association Inc	<ul style="list-style-type: none"> • Do not agree with the proposed plan on the grounds that some of its clauses may be contrary to the intent of the Torres Strait Treaty and the <i>Torres Strait Fisheries Act 1984</i> and therefore detrimental to the long-term interests of Traditional Inhabitants. Position informed by the report "a fair share of the catch". • The plan takes away the TIB's sector's capacity for future growth by granting quota to the TVH sector and then requiring the TIB sector to buy it back. This can only happen if the TVH sector wishes to sell. By allowing this the Minister may make decisions that over-rule the <i>prima-facie</i> priority ranking of community fishing ahead of commercial fishing (refer to <i>Fair Share of the Catch</i> report). • The plan gives entitlements to TVH licences not allowed under the Act. The PZJA should use its power to not renew TVH licenses as the TIB sector grows (refer to <i>Fair Share of the Catch</i> report). • Implying that a TVH license will be renewed annually creates a legal liability for the Commonwealth to the detriment of the TIB sector which is against the intention of the Act (refer to <i>Fair Share of the Catch</i> report).

Assessing objectives of the Plan (section 6)		
Raymond Moore		<ul style="list-style-type: none"> The allocation of quota units to the traditional inhabitant sector, deals with commercial fishing, not traditional fishing. The report “<i>A fair share of the catch</i>’ (Skehill and Young 2002) gives a legal interpretation that ‘livelihood’ refers to livelihood as derived from traditional activity.
Setting a Total Allowable Catch		
Mabuiag community		<ul style="list-style-type: none"> Support the idea of quota management system and capping catches to protect sustainability.
Quota unit allocation – TIB sector		
Mabuiag community		<ul style="list-style-type: none"> Support TSRA to hold quota in the interim as an entity on behalf of the TIB sector.
Kenneth McKenzie		<ul style="list-style-type: none"> Support TIB sector operating under an Olympic pool at the start as a quota system would be difficult to implement and police for the sector. As the quota system evolves this could be changed.
Torres Strait Seafood		<ul style="list-style-type: none"> Concerns regarding how and by whom the TIB quota could be managed. In the interests of transparency, fairness to TIB licence holders, recipients of any economic benefit and the ongoing viability of the fishery.
Leasing of Quota Units		
TVH sector	Kenneth McKenzie Raymond Moore	<ul style="list-style-type: none"> The TVH sector should be permitted to lease quota to any licence holder or the TSRA.

TIB sector	Kenneth McKenzie	<ul style="list-style-type: none">TIB sector catch could be assessed at the mid-point of the season (May) and with consultation quota that is likely to be uncaught can be leased to the TVH sector. Another assessment could be made at the end of July and leased quota amounts adjusted to suit.
	Raymond Moore	<ul style="list-style-type: none">Do not support leasing of TIB quota because it increases competition for the TIB sector. Whilst there is financial gain it comes at the expense of more competition for the TIB sector.
	Kenneth McKenzie	<ul style="list-style-type: none">Money raised by leasing could be held in trust for future buybacks or economic development.
Transferring (selling) Quota Units		
Kenneth McKenzie Raymond Moore	<ul style="list-style-type: none">TVH sector should be permitted to sell or lease only part of their quota to an existing licence holder or TSRA.	
Granting of new TVH licences (the number of quota units are fixed however number of Fishing Licences is uncapped)		
Raymond Moore	<ul style="list-style-type: none">Although the proportion of catch that the TVH sector could take would not increase (due to the limit on quota units), allowing new TVH licences to be created would increase the TVH effort. Existing TVH effort is one of the major factors limiting the expansion of the TIB sector.The granting of TVH sunset licences to lease unused TIB quota as done in the Finfish Fishery would add competition which would be detrimental to the TIB sector.	
Foreign Ownership of Quota Units and Fishing Licences		
Raymond Moore	<ul style="list-style-type: none">Quota units should only be able to be sold to Australian citizens. Foreign ownership of quota units would make it impossible to achieve 100% ownership.	

	<ul style="list-style-type: none"> Quota units should only be held by a person who also holds a Fishing Licence. Under this arrangement quota could only be held by a traditional inhabitant or one of the existing 12 TVH licences. Allowing investors to hold quota units will make it more difficult to achieve 100% ownership.
--	---

Part 2: Comments on the TSRA additional elements as detailed in the paper titled TSRA's comments TRL (Kaiar) management plan – exposure draft

Submission	Summary of issue raised
Economic Development Contribution	
Torres Strait Fisher's Association Inc.	<ul style="list-style-type: none"> Introducing an economic development contribution from the TVH sector is not necessarily a good thing if it ends up as just more revenue to be managed by the TSRA. Rather than a financial contribution, the TVH operators should be required to contribute by helping train Torres Strait Islander divers or by a partnership arrangement helpful to that cause.
Kenneth McKenzie	<ul style="list-style-type: none"> Do not support the TVH sector contributing anymore in the way of annual fees or similar, for the economic wellbeing of Torres Strait Islanders.
Torres Strait Seafood	<ul style="list-style-type: none"> Do not support. Introducing an economic development contribution would be an impost to make the fishery economically unviable. Introducing a 'contribution' after the fact.
Raymond Moore	<ul style="list-style-type: none"> There is confusion over the meaning of an economic development contribution. If this means a financial contribution then it is unrealistic considering there are only 8 TVH licence holders compared with about 300 TIB licence holders.
	<ul style="list-style-type: none"> TVH could work with TSRA in promoting economic development, the main value of the TVH being its expertise in the fishery. TVH are willing to increase employment and training of traditional inhabitants

	<p>to improve employment and training opportunities for traditional inhabitants, the limiting factor in the past has always been trying to source willing applicants.</p> <ul style="list-style-type: none"> • Very difficult to include such factors into a management plan, there needs to be discussion on what exactly the TSRA is trying to include.
	<ul style="list-style-type: none"> • TSRA should be more active in promoting development in the TRL Fishery. For example, including the development of infrastructure to support trade in live TRL rather than tailed product at outer islands.
Mabuiag Traditional Owners	<ul style="list-style-type: none"> • Support.
First Right Refusal	
Kenneth McKenzie	<ul style="list-style-type: none"> • Support TIB sector to have first right of refusal on TVH licence sales, but if a third party offered a higher price, the licence should be permitted to be sold to the third party.
Raymond Moore	<ul style="list-style-type: none"> • Support, assuming first right of refusal means, the purchaser meets the value of other offers, their offer takes priority. There is general support for the traditional inhabitant aspiration to gain 100% ownership provided this is achieved in a fair and equitable manner. That is, it has to be voluntary and with fair compensation.
Mabuiag Traditional Owners	<ul style="list-style-type: none"> • Support.
Torres Strait Seafood	<ul style="list-style-type: none"> • Concerns with how this may be enforced.

Trading between existing licence holders only	
Raymond Moore	<ul style="list-style-type: none"> Some clarification is needed on this proposal however it infers that the sale of licences can only be between existing licence holders. Restricting the purchase of licences to existing licence holders is likely to result in a monopoly making it difficult for the TIB sector to achieve 100 per cent ownership. At present TVH licences can be purchased by anyone. TVH licence holders could not be expected to give up their right to a freely transferable licence.
Mabuiag Traditional Owners	<ul style="list-style-type: none"> Support.
Kenneth McKenzie	<ul style="list-style-type: none"> Subject to the first right of refusal proposal, TVH should be able to sell to persons other than existing licence holders.
Torres Strait Seafood	<ul style="list-style-type: none"> This statement needs clarification.
Other aspects of the draft management plan	
Powers	The Plan would be made by the Commonwealth Minister. This gives the Minister the power to set the Total Allowable Catch (TAC) and the length of the season. The TSRA is seeking clarification as this is different from the Finfish and Prawn fisheries management plans in which the PZJA has the authority to make the Plans.
Cancellation of quota	Currently the Plan will cancel quota if a licence is cancelled. The TSRA is seeking that the quota from a cancelled licence be transferred to the TIB sector.
Unused PNG catch allocation	The Plan is silent on the annual PNG allocation. The TSRA would like the Plan to state that any unutilised PNG allocation, should be allocated to the TIB sector.

Allocations under the plan	The TSRA is seeking it be made clearer that the current ownership of the fishery; 43.8% TVH and 56.2% TIB, are the initial allocations only.
Review	Following the two year review point after the allocation of quota to the TIB, the Plan presents only three options to the PZJA: the allocation of quota to individuals, allocation of quota to a non-government organisation or a combination of those two options. The TSRA believes that in the event there is no agreement from the TIB sector on a preferred quota holding model, it would be prudent to allow the PZJA the option of asking the TSRA to continue to hold the TIB quota until such time as the TIB sector has agreed on a preferred ownership model

Part 3: Comments on other management arrangements and issues

Submission	Summary of issue raised
Input controls generally	
Kenneth McKenzie	<ul style="list-style-type: none"> The introduction of quota could allow current input controls to be relaxed. The 10m boat length restriction for example, has become very inefficient due to changing rules and regulations by other government departments such as AMSA and Queensland Transport.
Torres Strait Seafood	<ul style="list-style-type: none"> Additional controls (input controls) should not be required should quota be introduced. Alternatively why would quota be enforced if the fishery is operating successfully under the current controls?
Luke Dillion	<ul style="list-style-type: none"> Input controls and standards have to be applied equally to the industry, all sectors, so that the impact is the same on each of the operators.
Season Start Date	
Kenneth McKenzie	<ul style="list-style-type: none"> Season should start a fortnight earlier each year to capitalise on the Chinese New Year market. For example around 16 January however the exact date to be determined annually depending on tidal conditions.
	<ul style="list-style-type: none"> Queensland East Coast TRL Fishery should start mid-January (eg 16 January as proposed for the Torres Strait).
Torres Strait Seafood	<ul style="list-style-type: none"> Torres Strait season start date should be consistent with the East Coast TRL Fishery opening on 1 January so that the Torres Strait industry can also benefit in being able to access the high market demand period leading up to Chinese New Year. Alternatively the East Coast season should be changed to be consistent with Torres Strait hookah fishery opening of 1 February.
Temporal Closures	

Kenneth McKenzie	<ul style="list-style-type: none"> Upon introduction of the quota system the tidal closures (moon-tide closures) could be removed as quota catch becomes the new limitation (on effort).
	<ul style="list-style-type: none"> Total fishery closure be put in place for three weeks starting around 18 August (dependent on tidal movement) to allow the completion of the annual moulting process where live lobster are subject to higher mortality rates.
	<ul style="list-style-type: none"> Total fishery closure 1 October to 16 January be maintained (after adjusting for a recommended earlier hookah season start date) to protect juveniles stocks. This must apply to PNG cross endorsed vessels.
Kenneth McKenzie	<ul style="list-style-type: none"> Annual moulting season for the East Coast is mid-September so maybe the season could be bought back two weeks to allow for the higher mortality.
Spatial Closures	
Kenneth McKenzie	<ul style="list-style-type: none"> Recommend investigating areas for no-take zones on the East Coast to protect TRL spawning. For example in deeper drop-off zones.
Fishery Research	
Kenneth McKenzie	<ul style="list-style-type: none"> Recommend more research on the connectivity between Queensland east coast TRL spawning and recruitment for the Torres Strait TRL Fishery.
	<ul style="list-style-type: none"> Support current assessment process to recommend a total allowable catch annually.
Compliance	
Phil Hughes	<ul style="list-style-type: none"> There is inadequate monitoring, control and surveillance (MCS) to support a quota management system.

	<ul style="list-style-type: none"> Because a single company owns a significant proportion of the TVH sector licences and an even greater share of the product, there is a conflict of interest and potential for manipulating any TAC on paper.
Free Dive and Lamp Fishing	
Kenneth McKenzie	<ul style="list-style-type: none"> TIB and TVH sector should be allowed to night spear and free dive from December to 16 January since only large lobsters come to the shallows in this period. An effort to police this period is required (ie no use of hookah).
Ownership of TIB licences	
Torres Strait Seafood	<ul style="list-style-type: none"> There should be more transparency and a more rigorous test for owning a TIB licenced carrier/processing vessels, to prevent loophole entry in to the fishery.
Finfish leasing revenue	
Torres Strait Fisher's Association Inc	<ul style="list-style-type: none"> Many fishermen do not agree with the way money received from the lease of finfish quota has been spent in the past. TSRA's needs to improve its accountability by directly the funds towards a vision and strategies agreed to by the whole TIB sector, not just finfish representatives.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2018
TRL Harvest Strategy	Agenda Item 3 For discussion and advice

RECOMMENDATION

1. That the Working Group **DISCUSS** and **PROVIDE ADVICE** on the revised draft harvest strategy noting that:
 - a) the Torres Strait Tropical Rock Lobster Working Group (TRLWG) considered the draft TRL Harvest Strategy at its meeting on 25 & 26 July 2017 (meeting number 6);
 - b) the TRLWG recommended that further work be undertaken by the TRLWG and TRLRAG to examine possible options for 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;
 - c) advice is being sought from the TRLRAG at its meeting on 27-28 march 2018 on the likely monitoring and assessment requirements to support a management trigger under the harvest strategy as the stock approaches the limit reference point. This advice should include as far as possible, the likely costs of any additional monitoring and/or assessment work;
 - d) this item was tabled with the TRLRAG at meeting no. 21 on 12-13 December 2017 however the TRLRAG agreed to defer discussion to the next RAG meeting scheduled for March 2018 due to a lack of time to present and discuss the agenda item; and
 - e) if agreed the next steps for finalising the harvest strategy are: 1) to take any proposed changes into consideration and amend the draft final report, 2) send the draft final report to the RAG and Working Group to be endorsed out-of-session; and 3) send the draft final report to the PZJA for consideration.

KEY ISSUES

2. At its meeting on 25 & 26 July 2017 the Working Group recommended that further work be undertaken by the Working Group 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.

3. Some TRLWG members recommended that the reduction of catch under the draft harvest strategy as the stock biomass moves towards the limit reference point should not be uniform across the TIB and TVH sectors. Rather, a trigger point should be included in the draft HS before the limit reference point, at which point priority is given for fishing to the TIB sector over the TVH sector.
4. The Working Group Fisheries Economist noted another option might be to restrict the Fishery to free dive only if a certain trigger point was reached.
5. To assist the TRLWG further examine the cost and benefits of such an approach against objectives of the *Torres Strait Fisheries Act 1984*, RAG advice is being sought at its meeting on 27-28 March 2018 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.
6. Having regard for further TRLRAG advice on how an additional management trigger may be supported the Working Group will need to evaluate possible options in line with the objectives of the *Torres Strait Fisheries Act 1984*. These are listed below in the Background Section.
7. Noting the likely delays in introducing a quota management plan for the Fishery it will also be relevant for the Working Group to consider the appropriateness of any proposed triggers under both the current input based management system and a future quota management system.
8. Finalising a revised harvest strategy for the TRL Fishery is a high management priority. The revised harvest strategy will provide greater management certainty for stakeholders and enable more timely RBC advice. More timely advice is necessary to support more timely and effective business planning.
9. A copy of the draft harvest strategy is at **Attachment A**.

BACKGROUND

10. Having regard for the comments by members the TRL Working Group:
 - **Recognised** that the draft harvest strategy is:
 - designed to inform management decisions for the Torres Strait TRL Fishery;
 - is based on robust fishery independent survey data and stock assessment process;
 - treats the TRL Fishery as a single stock;
 - does not take into account recreational catches on the basis of TRLRAG advice that catches are likely low; and
 - has been subject to rigorous performance testing by the TRLRAG.

- **Recognised** that whilst there may be uncertainty in the level of connectivity between the east coast and Torres Strait TRL stocks, the draft TRL harvest strategy uses the best available data including annual fishery independent survey data, to recommend annual total allowable catches. Future work such as the recently funded larval advection modelling project is likely to improve our understanding of stock connectivity overtime.
 - **Requested (Action Item 4)** the following be presented at the next TRLWG meeting: a) an overview of the current understanding of stock connectivity between the east coast and the Torres Strait TRL Fishery; and b) the basis for the Queensland east coast TAC.
 - **Recommends** that work should continue to examine whether there are cost-effective options for improving estimates of recreational catches in the region;
 - **Recommends** that the PZJA work closely with both the Queensland and PNG Governments to ensure complementary management arrangements are adopted in the event that the TRL stock biomass falls below the limit reference point.
 - **Recommends** that further work be undertaken by the TRLWG and TRLRAG 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.
11. The draft TRL Harvest Strategy has been developed in consultation with the TRLRAG over its last three meetings (meeting no. 18 on 2 3 August 2016; meeting no. 19 on 13 December 2016 and meeting no. 20 on 4 5 April 2017).
 12. The RAG have recommended reference points, a preferred empirical harvest control rule (eHCR) and decision rules to be applied if the limit reference point is reached.
 13. The draft TRL Harvest Strategy was developed to take into account key fishery specific attributes including:
 - a. there is potential for large, unpredictable inter-annual variations in availability and abundance of tropical rock lobster (TRL);
 - b. TRL is a shared resource important for the traditional way of life and livelihood of traditional inhabitants, commercial and recreational sectors (RAG, 4-5 April 2017); and
 - c. advice from the RAG industry members to maintain stock abundance at recent levels (2005-2015) (RAG, 31 March 2016).
 14. The RAG recommended harvest strategy objectives that place greater emphasis on the on the importance of the Fishery for traditional way of life and livelihood of traditional inhabitants.
 15. The operational objectives of the Harvest Strategy are to:
 - a. Maintain the stock at (on average), or return to, a target biomass point BTARG equal to recent levels (2005-2015) that take account of the

fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable.

- i. The agreed BTARG is more precautionary than the default proxy BMEY (biomass at maximum economic yield) level as outlined in the Commonwealth Harvest Strategy Policy and Guidelines 2007 (HSP).
 - b. Maintain the stock above the limit biomass level (BLIM), or an appropriate proxy, at least 90 per cent of the time.
 - i. The agreed BLIM is more precautionary than the default proxy HSP BLIM.
 - c. Implement rebuilding strategies, if the spawning stock biomass is assessed to fall below BLIM in two successive years.
16. The eHCR uses a regression of the 5 last year's data for the pre-season survey index of abundance of juvenile 1+ TRL (weighting 70%); newly recruited 0+ TRL (weighting 10%); the catch per unit effort (CPUE) indices for the TIB sector (weighting 10%) and CPUE indices for the TVH sector (weighting 10%).
17. The draft HS decision rules are:
- a. **Maximum catch limit** - The eHCR includes a maximum catch limit of 1000 t. Once the HS is implemented the cap will be reviewed after three years using MSE testing with the updated stock assessment model.
 - b. **Pre-season survey trigger** - If in **any** year the pre-season survey +1 indices is 1.25 or lower (average number of +1 age lobsters per survey transect) it triggers a stock assessment.
 - c. **Biomass limit reference point triggered** - If the eHCR limit reference point is triggered in the first year, a stock assessment update must be conducted in March.
 - i. If after the first year the stock is assessed below the biomass limit reference point, it is optional to conduct a mid-season survey, the pre-season survey must continue annually.
 - ii. If the eHCR limit reference point is triggered two years in a row, a stock assessment must be conducted in December (of the second year).
 - d. **Fishery closure rules** - If the stock assessment determines the stock to be below the biomass limit reference point in two successive years, the Fishery will be closed to commercial fishing.
 - i. Management strategy evaluation (MSE) testing of the eHCR has shown that it is extremely unlikely (<1%) for the Fishery to be closed based on its current performance.
 - e. **Re-opening the Fishery** - Following closure of the Fishery, fishery-independent mid-season and pre-season surveys are mandatory. The

Fishery can only be re-opened when a stock assessment determines the Fishery to be above the biomass limit reference point.

- f. Based on the decision rules, there are four alternative possible scenarios that may occur under the application of the eHCR. Graphic representations of the four scenarios were presented to the Working Group.

18. The Fishery is currently operating under an interim Harvest Strategy. The key differences between the interim and draft final Harvest strategy are the use of an eHCR to estimate a recommended biological catch (RBC) annually and the stock assessment model is conducted every three years (rather than annually) to assess the resource status and evaluate the performance of the eHCR. The draft final Harvest Strategy has a number of pre-agreed decision point rules that are designed to maintain the stock at the agreed target reference point.

19. The key changes of the draft TRL Harvest Strategy compared to the interim Harvest Strategy as provided in **Attachment B**.

20. The objectives of the *Torres Strait Fisheries Act 1984* are:

Number	Objective
a)	to acknowledge and protect the traditional way of life and livelihood of traditional inhabitants, including their rights in relation to traditional fishing
b)	to protect and preserve the marine environment and indigenous fauna and flora in and in the vicinity of the Protected Zone
c)	to adopt conservation measures necessary for the conservation of a species in such a way as to minimise any restrictive effects of the measures on traditional fishing
d)	to administer the provisions of Part 5 of the Torres Strait Treaty (relating to commercial fisheries) so as not to prejudice the achievement of the purposes of Part 4 of the Torres Strait Treaty in regard to traditional fishing
e)	to manage commercial fisheries for optimum utilisation
f)	to share the allowable catch of relevant Protected Zone commercial fisheries with Papua New Guinea in accordance with the Torres Strait Treaty
g)	to have regard, in developing and implementing licensing policy, to the desirability of promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants

FINANCIAL IMPLICATIONS

21. The revised harvest strategy is likely reduce research costs by reducing the frequency of stock assessments. AFMA's available research funding has reduced overtime and is used to meet research priorities across all Torres Strait Fisheries.

ATTACHMENTS

- A. Torres Strait Tropical Rock Lobster Fishery - Working Draft Harvest Strategy.
 - a. Appendix A - Torres Strait Tropical Rock Lobster Fishery alternative annual Harvest Control Rule application scenarios.
- B. Summary of the key changes of the draft TRL Harvest Strategy.



Australian Government

Australian Fisheries Management Authority

Working Draft

CONTENTS

CONTENTS	2
GLOSSARY	3
OVERVIEW	4
1 BACKGROUND	5
1.1 COMMONWEALTH FISHERIES HARVEST STRATEGY POLICY	5
1.2 DEVELOPMENT OF THE TRL HARVEST STRATEGY	6
2 TRL FISHERY HARVEST STRATEGY	6
2.1 SCOPE	6
2.2 OBJECTIVES	6
2.3 RECOMMENDING TACs FROM RBCs	7
2.4 MONITORING	7
2.5 INTEGRATED STOCK ASSESSMENT MODEL	8
2.6 EMPIRICAL HARVEST CONTROL RULE	9
2.7 REFERENCE POINTS	10
2.8 eHCR AND STOCK ASSESSMENT CYCLE	12
2.9 DATA SUMMARY	12
2.10 DECISION RULES	13
2.11 DECISION RULE SCENARIOS	14
2.12 GOVERNANCE	15
2.13 REVIEW	15
3 REFERENCES	16

GLOSSARY

Types of reference points:

Reference Point	Description
Metarule	A rule that describes how the RBCs obtained from an assessment should be adjusted in calculating a recommended TAC
Target	Relates to a target reference point as per the HSP. Expressed in terms of biomass
Limit	Relates to a limit reference point as per the HSP. Fishing stops if this reference point is exceeded a specified number of times. Expressed in terms of biomass
MEY	Maximum economic yield occurs when the total profit from the Fishery is maximised
MSY	Maximum sustainable yield is the maximum that can be taken from a stock in perpetuity

Notation:

Notation	Description
B	Spawning biomass level
B ₀	The unfished spawning biomass (determined from an appropriate reference point)
F	Fishing mortality rate

Other acronyms:

Acronym	Description
CPUE	Catch per unit effort
HSP	Commonwealth Harvest Strategy Policy and Guidelines 2007
HS	Harvest Strategy
HSF	Harvest Strategy Framework
HCR	Harvest Control Rule
RBC	Recommended Biological Catch
TRLRAG	Tropical Rock Lobster Resource Assessment Group
TRLWG	Tropical Rock Lobster Working Group
TAC	Total Allowable Catch
Tiered approach	A framework that uses different control rules to cater for different levels of uncertainty about a stock
TIB	Traditional inhabitant boat
TVH	Transferrable vessel holder

OVERVIEW

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

The HS uses a single tier approach with an empirical harvest control rule (eHCR) that is used to determine a recommended biological catch (RBC). The eHCR uses the pre-season survey to estimate an index of abundance of juvenile (1+) and newly recruited (0+) TRL and the catch per unit effort (CPUE) indices for the traditional inhabitant boat (TIB) and transferrable vessel holder (TVH) fishing sectors. The RBC is the best available scientific advice on what the total fishing mortality (landings from all sectors and discards) should be for the stock. The RBC is currently used to monitor the performance of the fishery, in future years it will be used to recommend Total Allowable Catches (an enforced limit on total catches).

The HS meets the requirements of the *Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2007* (HSP) by applying a precautionary approach to the reference points and measures to be implemented in accordance with the reference points. This is reflected in the use of proxy reference points that are more precautionary than those specified in the HSP. The eHCR is designed to decrease exploitation rate as the stock size decreases below the target reference point. The HS uses a biomass target reference point equal to recent levels (2005-2015) that take account of the fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable. The HS proxies are B_{LIM} is 32% of B_0 , B_{TARG} is 65% of B_0 .

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

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

1 BACKGROUND

This Torres Strait Tropical Rock Lobster Fishery (the Fishery) Harvest Strategy (HS) has been developed in accordance with the *Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2007* (HSP) and consistent with objectives of the *Torres Strait Fisheries Act 1984* (the Act).

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

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

1.1 COMMONWEALTH FISHERIES HARVEST STRATEGY POLICY

The objective of the HSP is the sustainable and profitable use of Australia's Commonwealth fisheries in perpetuity through the implementation of harvest strategies that maintain key commercial stocks at ecologically sustainable levels, and within this context, maximise the economic returns to the Australian community.

To meet the HSP objective, harvest strategies are designed to pursue an exploitation rate that keeps fish stocks at a level required to produce maximum economic yield (MEY) and ensure stocks remain above a limit biomass level (B_{LIM}) at least 90 per cent of the time. Alternative reference points may be adopted for some stocks to better pursue the objective of maximising economic returns across the Fishery as a whole or other fishery specific objectives.

The HSP provides for the use of proxy settings for reference points to cater for different levels of information available and unique fishery circumstances. This balance between prescription and flexibility encourages the development of innovative and cost effective strategies to meet key policy objectives. Proxies must ensure stock conservation and economic performance as envisaged by the HSP. Such proxies, including those that exceed these minimum standards, must be clearly justified.

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

1.2 DEVELOPMENT OF THE TRL HARVEST STRATEGY

The HS has been developed in consultation with the RAG (meeting no. 18 on 2-3 August 2016; meeting no. 19 on 13 December 2016 and meeting no. 20 on 4-5 April; 2017). The HS has been endorsed by the Working Group meeting no. X on 25-26 July 2017. This HS replaces the interim HS developed for the Fishery in 2008 ~~.(Attachment A).~~

NOTE: TRLWG advice to be provided once TRLRAG advice finalised – this statement is to be updated as required.

2 TRL FISHERY HARVEST STRATEGY

2.1 SCOPE

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

The HS outlines the control rules used to develop advice on the recommended biological catch (RBC) and in future years it will be used to recommend Total Allowable Catches (an enforced limit on total catches)¹. The HS sets the criteria that pre-agreed management decisions will be based on in order to achieve the Fishery objectives.

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

2.2 OBJECTIVES

The operational objectives of the Harvest Strategy are to:

- a) Maintain the stock at (on average), or return to, a target biomass point B_{TARG} equal to recent levels (2005-2015) that take account of the fact that the resource is shared and important for the traditional way of life and livelihood of traditional inhabitants and is biologically and economically acceptable.
 - The agreed B_{TARG} is more precautionary than the default proxy B_{MEY} (biomass at maximum economic yield) level as outlined in the Commonwealth Harvest Strategy Policy and Guidelines 2007 (HSP).
- b) Maintain the stock above the limit biomass level (B_{LIM}), or an appropriate proxy, at least 90 per cent of the time.
 - The agreed B_{LIM} is more precautionary than the default proxy HSP B_{LIM} .

¹ The total allowable catch (TAC) for the Fishery is currently notional and is not used to control harvest. It is used to inform catch sharing arrangements with Papua New Guinea and to inform the status of the stock.

- c) Implement rebuilding strategies, if the spawning stock biomass is assessed to fall below B_{LIM} in two successive years.

2.3 RECOMMENDING TACs FROM RBCs

The Recommended Biological Catch (RBC) is the recommended total catch of TRL (both retained and discarded) that should be taken by all sectors of the Fishery. The HSP states that when setting the TAC for the next fishing season the HS should take into account all sources of fishing mortality.

The HS does not include catches taken by non-commercial fishing sectors, for example traditional, recreational or research catches. The RAG recommended at Meeting No.18 on 2-3 August 2016 that non-commercial catches should not be accounted for, because the overall catches are likely to be relatively low and there would be limited impact on the stock assessment. The HS may be updated in the future to account for changing circumstances in the Fishery, the review provisions are described in **Section 2.13**.

The total allowable catch (TAC) for the Fishery is currently notional (not enforced) and is not used to control harvest. It is used to inform catch sharing arrangements with Papua New Guinea and to inform the status of the stock.

2.4 MONITORING

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

Fishery independent surveys

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

Catch and effort information

Fishers in the transferrable vessel holder (TVH) sector are required to record catch and effort information in the Torres Strait Tropical Rock Lobster Daily Fishing Log (TRL04). The following data are recorded for each TVH fishing operation: the port and date of departure and return, fishing area, fishing method, hours fished and the weight (whole or tails) of TRL retained. Fishers in the traditional inhabitant boat (TIB) sector voluntarily report catch and effort information to buyers and processors who record the information in the Torres Strait Seafood Buyers and Processors Docket Book (TDB01). Some processors previously (2014-2016) reported aggregate TIB catch information directly to AFMA, these processors are currently reporting with the TDB01 docket book.

2.5 INTEGRATED STOCK ASSESSMENT MODEL

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

The model integrates all available information into a single framework to assess resource status and provide a RBC. The model addresses all of the concerns highlighted in a review of the previous stock assessment approach (Bentley 2006, Ye *et al.* 2006, 2007). The model is fitted to the mid-season and pre-season survey data and TIB and TVH CPUE data. The growth relationships used in the model were revised from the previous stock assessment model (Ye *et al.* 2006) to ensure that the modelled individual mass at age more closely resembled field measurements. The model is compatible as an Operating Model in a Management Strategy Evaluation (MSE) framework to support the management of the Fishery.

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

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

2.6 EMPIRICAL HARVEST CONTROL RULE

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

The basic formula is:

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

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

Where:

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

$s_y^{presurv,1}$ is the slope of the logarithms of the preseason survey 1+ abundance index, based on the 5 most recent values;

$s_y^{presurv,0}$ is the slope of the logarithms of the preseason survey 0+ abundance index, based on the 5 most recent values;

$s_y^{CPUE,TVH}, s_y^{CPUE,TIB}$ is the slope of the logarithms of the TVH and TIB CPUE abundance index, based on the 5 most recent values;

$wt_s1, wt_s2, wt_c1, wt_c2$ are tuning parameters that assign relative weight to the preseason 1+ (wt_s1) and 0+ (wt_s2) survey trends compared with the CPUE TVH (wt_c1) and TIB (wt_c2) trends.

2.7 REFERENCE POINTS

The HS reference points are:

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

Rational for reference points

The HSP recognises that each stock/species/fishery will require an approach tailored to the fishery circumstances, including species characteristics. The HSP identifies that for highly variable stocks that may naturally (in the absence of fishing) breach B_{LIM} , the default reference point proxies may not be appropriate. The HSP states 'with highly variable species it is important to develop a harvest strategy that meets the intent of the HSP.' Further, 'stocks that fall below B_{LIM} due to natural variability will still be subject to the recovery measures stipulated in the HSP.' A number of adaptive management approaches may be used to deal with this, such as pre-season surveys to provide estimates of abundance to which the eHCR is applied.

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

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

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

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

Recent MSE testing identified that a limit reference point of 40 per cent unfished biomass is too conservative, it would result in the limit reference point being breached more frequently and add unnecessary precautionary to the HS. The RAG agreed to set the limit reference point at 32 per cent of unfished biomass with the condition that if the stock falls below the limit reference point in two successive years it triggers a Fishery closure. The eHCR is more precautionary than the HSP criterion to 'ensure that the stock stays above the limit biomass level at least 90 per cent of the time.' The HSP states that for highly variable species the risk criterion can be amended to increase the frequency the limit reference point may be breached or by altering the reference point value.

2.8 eHCR AND STOCK ASSESSMENT CYCLE

The eHCR and stock assessment cycle is as follows:

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

2.9 DATA SUMMARY

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

2.10 DECISION RULES

The decision rules for the Fishery Harvest Strategy are:

Maximum catch limit

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

Pre-season survey trigger

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

Biomass limit reference point triggered

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

Fishery closure rules

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

Re-opening the Fishery

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

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

2.11 DECISION RULE SCENARIOS

Scenario 1 – eHCR limit not breached and the eHCR does not require revision

- The eHCR assesses the Fishery to be above the biomass limit reference point.
- The eHCR RBCs appear to remain within ranges tested by management strategy evaluation (MSE).
- The updated stock assessment does not indicate any need for revision of the HCR.
- Application of the eHCR continues unchanged.
- A graphic representation of Scenario 1 is provided in **Attachment A, Figure 1**.

Scenario 2 – eHCR limit not breached, eHCR and stock assessment require revision

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

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

Scenario 3– limit is breached, eHCR is reviewed by stock assessment and the limit is not breached

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

Scenario 4 – limit is breached, stock assessment confirms the limit is breached

- The eHCR assesses the Fishery to be below the biomass limit reference point in two successive years.

- A stock assessment update (March) is required to confirm if the limit has been breached. This assessment update determines that the limit has been breached.
- The eHCR assesses the Fishery to be below the biomass limit reference point for a second successive year.
- A second stock assessment update (December) is required to confirm whether the trigger has been breached a second time. This assessment update determines that the limit has been breached a second time.
- The commercial fishery is closed until an assessment update confirms that the stock has recovered to above the limit.
 - If the Fishery is closed to commercial fishing, discussions are held on future management arrangements.
 - Fishery independent mid-season and pre-season surveys are mandatory and conducted on an annual basis. The Fishery will only re-open when the Fishery is assessed to be above the biomass limit reference point by the stock assessment.
 - The eHCR must be revised before being re-implemented to reduce the risk of the Fishery breaching the biomass limit reference point and for the eHCR to incorporate rebuilding requirements.
- A graphic representation of Scenario 4 is provided in **Attachment A, Figure 4**.

2.12 GOVERNANCE

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

2.13 REVIEW

Under certain circumstances, it may be necessary to amend the harvest strategy. For example if:

- there is new information that substantially changes the status of a fishery, leading to improved estimates of indicators relative to reference points; or
- drivers external to management of the fishery increase the risk to fish stock/s; or
- it is clear the strategy is not working effectively and the intent of the HSP is not being met; or
- alternative techniques are developed (or a more expensive but potentially more cost-effective harvest strategy that includes mid-year surveys and annual assessments is agreed) for assessing the Fishery. The HSF may be amended to incorporate decision rules appropriate for those assessments.

3 REFERENCES

- Bentley, N. 2006. Review of chapter 5 of Ye et al (2006) "Sustainability Assessment of the Torres Strait Rock Lobster Fishery". Report submitted to AFMA.
- Beverton, R.; Holt, S. On the dynamics of exploited fish populations. UK Ministry of Agriculture and Fisheries Investigations (Ser 2). 19; 1957.
- Fournier, D.A.; Skaug, H.J.; Ancheta, J.; Ianelli, J.; Magnusson, A.; Maunder, M.N.; Nielsen, A.; Sibert, J. AD Model Builder: using automatic differentiation for statistical inference of highly parameterized complex nonlinear models. *Optimization Methods and Software*. 27:233-249; 2012.
- MacFarlane, J.; Moore, R. Reproduction of the ornate rock lobster, *Panulirus ornatus* (Fabricius), in Papua New Guinea. *Mar Freshwater Res.* 37:55-65; 1986.
- Moore, R.; Macfarlane, J.W. Migration of the Ornate Rock Lobster, *Panulirus-Ornatus* (Fabricius), in Papua-New-Guinea. *Aust J Mar Fresh Res.* 35:197-212; 1984.
- Pikitch, E., Boersma, P.D., Boyd, I.L., Conover, D.O., Cury, P., Essington, T., Heppell, S.S., Houde, E.D., Mangel, M., Pauly, D. Plagányi, É.E., Sainsbury, K., and R.S. Steneck. 2012. Little Fish, Big Impact: Managing a crucial link in ocean food webs. Lenfest Ocean Program. Washington, DC. 108 pp.
- Plagányi, É.E., Darren Dennis, Marco Kienzie, Yimin Ye, Michael Haywood, Ian Mcleod, Ted Wassenberg, Richard Pillans, Quinton Dell, Greg Coman, Mark Tonks, Nicole Murphy (2009). TAC estimation & relative lobster abundance surveys 2008/09. AFMA Project Number: 2008/837. CSIRO Final Report, October 2009. 80 pp.
- Plagányi, É.E., Kienzie, M., Dennis, D., Venables, W. Tonks, M., Murphy, N. and T. Wassenberg, 2010. Refined stock assessment and TAC estimation for the Torres Strait rock lobster (TRL) fishery. Australian Fisheries Management Authority Torres Strait Research program Final Report. AFMA Project number: 2009/845. 84 pp.
- Plagányi, É.; Deng, R.; Dennis, D.; Hutton, T.; Pascoe, S.; van Putten, I.; Skewes, T. An integrated Management Strategy Evaluation (MSE) for the Torres Strait Tropical Rock Lobster *Panulirus ornatus* fishery. CSIRO/AFMA Final Project Report; 2012.
- Plaganyi, E.E.; van Putten, I.; Hutton, T.; Deng, R.A.; Dennis, D.; Pascoe, S.; Skewes, T.; Campbell, R.A. Integrating indigenous livelihood and lifestyle objectives in managing a natural resource. *P Natl Acad Sci USA*. 110:3639-3644; 2013.
- Ye, Y., Dennis, D., Skewes, T. (2008). Estimating the sustainable lobster (*Panulirus ornatus*) catch in Torres Strait, Australia, using an age-structured stock assessment model. *Continental Shelf Research*. **28**: 2160-67.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 6 25-26 July 2017
Attachment B – Key changes of the draft TRL Harvest Strategy	Agenda Item 3 FOR DISCUSSION

Category	Interim Arrangement	Proposed Changes
Pre-season survey	Fishery independent pre-season survey conducted annually during the month of November to provide an index of abundance of 0+ (recently settled) and 1+ (recruiting juvenile) TRL.	The fishery independent pre-season survey will continue annually during the month of November.
Annual data summary	The annual data summary reviews the nominal and standardised catch per unit effort (CPUE) from the TIB and TVH sectors, as well as total catch from all sectors, the size frequency information provided from a sub-sample of commercially caught TRL and the fishery-independent survey indices of +0 and +1 age TRL.	Data summaries will continue annually with the same information.
Stock assessment	The stock assessment update is run annually to assess resource status and provide a recommended biological catch (RBC).	A stock assessment update to be run on a three year cycle is run on a three year cycle in March, unless the stock assessment is triggered by a decision rule. The stock assessment is used to assess the resource status and to review and evaluate performance of the eHCR and identifies if any revisions to the eHCR are necessary.

Empirical harvest control rule (eHCR)	N/A	<p>The eHCR is run annually to provide a recommended biological catch (RBC) and to determine a notional total allowable catch (TAC). The TAC will become binding if the PZJA agree to a quota management system for the TRL Fishery.</p> <p>The eHCR fits a regression line to the logarithm of last five years of fishery indicator data to determine if the stock size is trending up or down. The indicators used are the pre-season survey 1+ indices (70% weighting), 0+ indices (10% weighting), TIB standardised CPUE (10% weighting) and TVH standardised CPUE (10% weighting). The logarithm is used to reduce the variability in the data and as a result there is also a reduction in the inter-annual variability in the RBC</p>
Fishery reference points	<ul style="list-style-type: none"> • B_0 = varied between 0.65 and 0.80 of unfished biomass • $B_{TARG} = 0.65 B_0$ • B_{THRES} is the RAG-agreed threshold biomass level below which more stringent rules for calculating the TAC apply, $B_{THRES} = 0.48$. • $B_{LIM} = 0.4 B_0$ • $F_{TARG} = 0.15 \text{ year}^{-1}$ • $F_{LIM} = F_{TARG}$ 	<ul style="list-style-type: none"> • B_0 is the model-estimate of spawning stock biomass in 1973 (start of the fishery). • B_{TARG} is the spawning biomass level equal to recent levels (2005-2015) and takes into account fishery specific objectives. $B_{TARG} = 0.65$. • B_{LIM} is agreed to be half of B_{TARG}, $B_{LIM} = 0.32$. The agreed B_{LIM} is more precautionary than the default proxy HSP B_{LIM}. • If the limit reference point (B_{LIM}) is triggered in two successive years then the Fishery is closed. • F_{TARG} is the model-estimated level of fishing mortality that keeps the stock around B_{TARG}, $F_{TARG} = 0.15$. The F_{TARG} corresponds to an optimal level in terms of economic, biological and social considerations (RAG meeting no. 18).

Decision rules	<p>No pre-agreed decision rules were implemented for management of the Fishery.</p> <p>Insert hockey stick rule description from CSIRO.</p>	<p>The decision rules will be used to control harvest in the Fishery when the Fishery transitions to a quota management system. The decision rules are:</p> <p>Maximum catch limit</p> <ul style="list-style-type: none"> The eHCR includes a maximum catch limit of 1000 t. Once the HS is implemented the cap will be reviewed after three years using MSE testing with the updated stock assessment model. <p>Pre-season survey trigger</p> <ul style="list-style-type: none"> If in any year the pre-season survey +1 indices is 1.25 or lower (average number of +1 age lobsters per survey transect) it triggers a stock assessment. <p>Biomass limit reference point triggered</p> <ul style="list-style-type: none"> If the eHCR limit reference point is triggered in the first year, a stock assessment update must be conducted in March. If after the first year the stock is assessed below the biomass limit reference point, it is optional to conduct a mid-season survey, the pre-season survey must continue annually. If the eHCR limit reference point is triggered two years in a row, a stock assessment must be conducted in December (of the second year). <p>Fishery closure rules</p> <ul style="list-style-type: none"> If the stock assessment determines the stock to be below the biomass limit reference point in two successive years, the Fishery will be closed to commercial fishing.
----------------	---	--

		<ul style="list-style-type: none">• Management strategy evaluation (MSE) testing of the eHCR has shown that it is extremely unlikely (<1%) for the Fishery to be closed based on its current performance. <p>Re-opening the Fishery</p> <ul style="list-style-type: none">• Following closure of the Fishery, fishery-independent mid-season and pre-season surveys are mandatory. The Fishery can only be re-opened when a stock assessment determines the Fishery to be above the biomass limit reference point
--	--	--

Torres Strait Tropical Rock Lobster Working Group	Meeting 7 28-29 March 2018
TRL Fishery budget report for 2018/19	Agenda Item No. 7 FOR NOTING

RECOMMENDATIONS

1. That the Working Group **NOTE** AFMA's draft TRL Fishery budget for 2018/19.

KEY ISSUES

2. Each year, AFMA's annual operating budget is determined by the Australian Government. AFMA uses part of its budget to provide management services to the Protected Zone Joint Authority. AFMA's Torres Strait budget is apportioned across a range of activities and fisheries.
3. AFMA consults on its budget with all Commonwealth managed fisheries. Consultation with industry provides accountability and assists with driving management efficiency and priority setting. While Torres Strait fisheries management costs are not currently cost recovered, industry and management are likely to benefit in the same way from understanding and discussing AFMA's budgeting arrangements.
4. AFMA's DRAFT direct budget for the TRL Fishery, excluding staff costs (direct costs only), is \$170,742.00.
5. The budget covers:
 - a) the convening of two TRL Working Group meetings (two day meetings);
 - b) two TRL Resource Assessment Group meetings (two day meetings); and
 - c) administrative costs associated with progressing the drafting management plan..
6. A detailed breakdown of the budget is provided in **Attachment A**.
7. Meeting costs for TRLRAG and TRLWG members who are Traditional Inhabitants is funded by the TSRA. These funds are administered by AFMA through a funding agreement between agencies. A new funding agreement is to be negotiated.

ATTACHMENTS

- A. Draft AFMA 2018/19 budget for the Torres Strait TRL Fishery.

Table 1. Draft TRL Working Group budget for sitting fee's for the 2018-19 financial year.

Names	Sandy Morison	Sevaly Sen	Mark Dean, Luke Dillon	Darren Dennis	Maluwap Nona
Position	Chair	Independent Economist	Industry	Scientific Member	Malu Lamar RNTBC
Number of positions	1	1	2	1	1
Number of days	8	8	4	8	4
Salary	\$ 5,976.00	\$ 4,488.00	\$ 4,488.00	\$ 4,488.00	\$ 2,184.00

Cost of 1 meeting	Cost of two meetings
\$ 9,720.00	\$ 19,440.00

Table 2. Draft TRL Working Group budget for travel and accommodation for the 2018-19 financial year.

Origin	Plane Fare	Accommodation	Taxi/ferry/parking	TA	Member cost/meeting	Venue cost	Official Function
Melbourne	1300	1200	300	636	3436	1200	1000
Brisbane	1000	1200	300	636	3136		
Cairns	700	900	53	636	2289		
Cairns	700	900	53	636	2289		
Sub-total	\$ 3,700.00	\$ 4,200.00	\$ 706.00	\$2,544.00	\$11,150.00	\$1,200.00	\$ 1,000.00

Cost for one meeting	Cost for two meetings
\$ 13,350.00	\$ 26,700.00

TRLWG total \$46,140.00

Table 3. Draft TRL RAG budget for sitting fee's for the 2018-19 financial year.

Names	Ian Knuckey	Andrew Penney	Brett Arlidge, Ray Moore	Maluwap Nona
Position	Chair	Independent Scientific Member	Industry	Malu Lamar RNTBC
Number of positions	1	1	2	1
Number of days	8	10	4	4
Salary	\$ 14,400.00	\$ 15,000.00	\$ 3,344.00	\$ 1,932.00

Cost of 1 meeting	Cost of two meetings
\$ 16,372.00	\$ 32,744.00

Table 4. Draft TRL RAG budget for travel and accommodation for the 2018-19 financial year.

Member	Origin	Plane Fare	Accommodation	Taxi/ferry/ parking	TA	Member cost/meeting	Venue cost	Official Function
TRLRAG Chair	Melbourne	1300	1200	300	636	3436	1200	1000
Independent Scientific Member	Canberra	1300	1200	300	636	3436		
Industry Member	Cairns	700	900	150	636	2386		
Industry Member	TI	0	0	0	636	636		
	Sub-total	\$3,300.00	\$3,300.00	\$750.00	\$2,554.00	\$9,894.00	\$1,200.00	\$1,000.00

Cost for one meeting	Cost for two meetings
\$12,094	\$24,188

TRLRAG total \$56,932.00

Table 5. Draft TRL administration and contractors budget structure for the 2018-19 financial year.

Account	Item	Quantity	Unit cost	Total
Advertising	Torres News advert	4	\$380.00	\$ 1,520.00
Contractors	Draft plan – drafting and advice			\$70,000.00
Printing	TRL mgt arrangement book	350	\$ 9.00	\$ 3,150.00
			Total	\$74,670.00

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 28-29 March 2018
OTHER BUSINESS	Agenda Item 8 For Discussion

RECOMMENDATIONS

1. That the Working Group **NOMINATE** any further business for discussion.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG)	MEETING No. 7 28-29 March 2018
DATE AND VENUE FOR NEXT MEETING	Agenda Item 9 For DISCUSSION

RECOMMENDATIONS

1. That the Working Group **NOMINATE** a date and a venue for the next meeting.
2. That the Working Group **NOTE** that agenda items for discussion at the next meeting will likely include items that were tabled at the TRLWG meeting number 21 in July 2017 but were not considered:
 - a) Crewing of traditional inhabitant boats
 - b) Season start date for setting the TAC
 - c) Twelve month season free dive and lamp fishing
 - d) Method for setting moon tide hookah closures
 - e) Operation of primary and tender boat licences
 - f) TVH moving tenders between primary licences held by one entity
 - g) Grant of carrier licences to non-traditional inhabitants
3. That the Working Group **NOTE** draft agenda papers for the items 1(a to g) are attached for your information. Papers will be updated as required prior to the meeting.

The Hon. Senator Richard Colbeck

Senator for Tasmania

Parliamentary Secretary to the Minister for Agriculture

Parliament of Australia

CANBERRA ACT 2600



Re: Skilled workers for Torres Strait fishery

Dear Sir,

I am writing to you as an Indigenous fisherman and the Chair of the Torres Strait Fishers Association, a non-profit organisation established to develop our industry. It has become increasingly obvious to myself and our members that there are some discrepancies and inequalities inherent in our Traditional Inhabitant Boat (TIB) licensing legislation that need to be addressed. The TIB licence allows the employment of Indigenous only fishermen, in contrast with the commercial licence (TVH) who can employ whomever they choose. Therefore, we see this as discriminative nature of our licence. Although we realise this has probably been put in place to protect employment opportunities for Indigenous people, it has had a negative effect on Indigenous fishing businesses. The Torres Strait population is a relatively small one and so we are limited by numbers alone. Add to this, the fact that many Indigenous people are choosing to remain close to home and rely on a mixture of government benefits and self-employment in the fishing industry via an individual ABN, it makes it increasingly difficult to find skilled workers to fish off a primary vessel in Torres Strait.

Torres Strait fishing industries have a rich history of development by foreign workers, for example the Japanese and Malays with the pearling and trochus industries, and Papua New Guineans who later came in the 1970s to bolster our crayfish industry.

Against this background, we are requesting serious consideration to amending the TIB license to allow the employment of a limited number of non-Indigenous fishermen for the sake of the industry and economic development. This is essential to the successful continuance of the TIB primary vessel. We envision that a TIB vessel would be owned and operated by an Indigenous skipper and would be allowed up to 4 non-Indigenous fishermen to supplement their Indigenous workforce. As we, as Torres Strait Islanders are moving towards 100% ownership and management of our fishery, we must move with the times and allow economic development to full potential.

Yours in fishing,

Patrick Mills

Chair – TSFA Inc

Hon Bill Byrne MP

Minister for Agriculture and Fisheries

GPO Box 46

Brisbane QLD 4001

28/07/2015

Dear Minister,

Thank you for your letter of 23rd June, 2015 in response to my concerns, as Chair of the Torres Strait Fishers Association, regarding conditions imposed on Traditional Inhabitant Boat Licences (TIB).

I would like to further respond to your letter. Of paramount importance, we were given Native Title commercial rights over our waters by the High Court on 7th August, 2013,, therefore, we feel that this overrides everything else. Maybe this commercial interest restricted to traditional owners by virtue of their Native Title can be expanded to external interest as labour or lessee to make the industry viable for Traditional Inhabitant License holders under Native Title.

In your letter, you raise the issue of sustainability of the fishery. As we are the custodians of our sea country given by the High Court, surely if there is to be a reduction of effort, it should be taken from the commercial TVH sector by reducing their tenders, rather than from the Indigenous sector. This is also in accordance with the Torres Strait Treaty which you quote as stating that licencing policy should "promote economic development in the Torres Strait ... and employment opportunities for traditional inhabitants". By restricting Indigenous boat owners in whom they may employ, has the very opposite effect. While it sounds good in principle to restrict these employment opportunities to Indigenous inhabitants, In reality, it is impossible to find Indigenous individuals in the volume needed to make a business economically viable. Many of the potential divers in Torres Strait prefer to work for themselves using their own ABN to subsidise their government payments, for example through the My Pathway or CDEP type programs. Indigenous masters are finding it increasingly difficult to staff their vessels to maintain their economic viability. Allowing a capped number of non-Indigenous divers to participate on TIB vessels, would not corrupt the intentions of the Torres Strait Treaty as long as the master/owner is Indigenous and the majority of the crew are Indigenous. Without adequate staffing of crew, the TIB sector is disadvantaged and there is not a level playing field for our businesses to compete commercially with the TVH sector. There is also little incentive for Indigenous fishers to pursue purchasing and running a vessel and create employment in our region.

To date, you are the only Minister who has replied to my concerns and I thank you for that. I thank you too, for forwarding my request to the PJJA secretariat.

Yours in fishing,

Patrick Mills

Chair – Torres Strait Fishers Association

Reference: CTS 11455/15

Level 8
80 Ann Street Brisbane 4000
GPO Box 46 Brisbane
Queensland 4001 Australia
Telephone +61 7 3719 7560
Email agriculture@ministerial.qld.gov.au

23 JUN 2015

Mr Patrick Mills
Chair
Torres Strait Fishers Association Inc
kwemyss@bigpond.com

Dear Mr Mills

Thank you for your letter of 25 May 2015 outlining the concerns the Torres Strait Fishers Association has about conditions imposed on Traditional Inhabitant Boat Licences (TIB).

I am advised that conditions on both TIB and non-traditional inhabitants (TVH) licences are in place to deliver a primary objective of the Torres Strait Treaty; *"to have regard, in developing and implementing licensing policy, to the desirability of promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants"*.

I note your concerns that TIB licence conditions only allow for the employment of indigenous fishers however these conditions, in addition to those restricting the issuing of new TVH licences, are all designed to ensure traditional inhabitants face minimal barriers in gaining entry to commercial fisheries. These conditions facilitate economic development opportunities for traditional inhabitants.

The employment of non-indigenous people on TIB vessels creates the risk whereby non-traditional inhabitants limit these opportunities. I am also advised that in the absence of a management plan such changes could result in sustainability concerns for the region's fisheries including the Torres Strait Tropical Rock Lobster Fishery.

Notwithstanding these concerns, to change these conditions would require a decision by the Protected Zone Joint Authority (PZJA). To this end, I will forward your request to the PZJA Secretariat seeking further advice on your proposal prior to consideration by the PZJA.

If you require any further information regarding this matter, please contact Mr Tom Roberts Senior Policy Officer of the Department of Agriculture and Fisheries on telephone 07 3087 8071 or email tom.roberts@daf.qld.gov.au.

Yours sincerely



The Honourable Bill Byrne MP
Minister for Agriculture and Fisheries and
Minister for Sport and Racing
Member for Rockhampton

Cc: Senator the Honourable Richard Colbeck
Parliamentary Secretary to the Minister for Agriculture
PZJA Secretariat
Box 7051
CANBERRA BC ACT 2610



SENATOR THE HON. RICHARD COLBECK

Parliamentary Secretary to the Minister for Agriculture
Liberal Senator for Tasmania

Ref: MC15-006687

27 AUG 2015

Mr Patrick Mills
Chair
Torres Strait Fishers Association
Warraber Island
TORRES STRAIT QLD 4875

Dear Mr ~~Mills~~ Patrick,

Thank you for your letter regarding potential inequalities in licensing for Traditional Inhabitant (TIB) fishers, received by my office on 7 August 2015. I note there has also been correspondence on this matter with my Protected Zone Joint Authority (PZJA) colleague, the Hon. Bill Byrne MP, Queensland Minister for Agriculture and Fisheries and Minister for Sport and Racing.

I acknowledge the points you raise about employment constraints on TIB licences and the impact this might have on TIB fishing businesses. You correctly note that the existing constraint is related to fostering employment for indigenous Torres Strait people, which as you know is an important issue for government. The PZJA, under the Torres Strait Treaty, is to have regard to promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants. The Australian Government made this Treaty responsibility an objective under the *Torres Strait Fisheries Act 1984*.

Economic development is a critical factor in the future of the Torres Strait people and I support reviewing any policy that might hinder such development. I note however that the policies of the PZJA must also complement each other if the overall best outcome is to be achieved. I also note, as Minister Byrne alluded to in his response, having a management plan for the Tropical Rock Lobster Fishery in place would provide more certainty under which to consider further development of licensing policy.

While it is critical that the PZJA consider the impacts of policy changes on its legislated objectives, there is value in giving due consideration to when a licensing policy designed to foster employment may in fact place limitations on economic development. It is also appropriate for the PZJA to consider, if a change to the licensing policy was prudent, exactly what that change would look like and whether or not changing the policy would result in unintended consequences.

I believe it is therefore worthwhile that this issue be subject to broader consultation within the Torres Strait fishery working groups over the next several months and for the PZJA Standing Committee to consider the outcomes of that consultation before making a recommendation for the PZJA to consider.

I will ask the Australian Fisheries Management Authority to ensure this issue is placed on the agendas of coming Torres Strait working group meetings. I will also ask for Torres Strait Fisheries Manager, Ms Selina Stoute, to discuss with you possibly using your letter as the basis for the working groups to consider the issue.

Thank you again for raising this important aspect of our licensing policy and how we might be able to improve the way we pursue economic development in the Torres Strait region through that policy.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'Richard Colbeck', with a stylized flourish underneath.

Richard Colbeck

cc: the Hon. Bill Byrne MP, Queensland Minister for Agriculture and Fisheries

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
Crewing of traditional inhabitant boats	Attachment A

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on the proposal from the Torres Strait Fishers Association Inc. (TSFA) to allow for more non-indigenous fishers to be employed as crew on Traditional Inhabitant Boat (TIB) licenced vessels.

KEY ISSUES

1. Mr Patrick Mills, Chair of the TSFA wrote (on 25 May 2015) to The Hon. Bill Byrne MP Minister for Agriculture and Fisheries and to the then Senator the Hon. Richard Colbeck Parliamentary Secretary to the Minister for Agriculture
Attachment A.
2. The letter outlined TSFA concerns with the current condition on TIB licences that vessel must be operated only by traditional inhabitants. The TSFA acknowledge that the restriction was probably put in place to protect employment opportunities for Traditional Inhabitants however advise it has a negative effect on indigenous fishing businesses.
3. The response from The Hon. Bill Byrne MP Minister for Agriculture and Fisheries and the then Hon. Richard Colbeck Parliamentary Secretary to the Minister for Agriculture is provided at **Attachment B** and **Attachment C** respectively.
4. AFMA is seeking comment from all PZJA Working Groups on the TSFA proposal. The **TRL Working Group** noted the proposal at its meeting on 27-28 August 2015 and advised:
 - consultation with industry, communities, Traditional Owners and Prescribed Body Corporates will be critical to support any changes; and
 - both the TIB and TVH sector have similar difficulties employing crew.
5. The Working Group should consider its advice in line with objectives of the *Torres Strait Fisheries Act 1984*, in particular to have regard to the management priority to:
 - a. manage commercial fisheries for optimum utilisation;
 - b. to have regard, in developing and implementing licensing policy, to the desirability of promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants.
6. The **Finfish Working Group** considered the proposal at its meeting on 16-17 March 2017 and minuted the following advice:

Noting that the general level of support from the industry members and in-principle support for removing impediments to traditional inhabitant participation in the fisheries, the FWG recommended consultation with the

broader industry and communities be undertaken to develop possible management options for further consideration.

7. The ***Hand Collectable Working Group*** considered the proposal at its meeting on 27 June 2017. Noting that the meeting record for the HCWG remains in draft, advice from working group was:

The HCWG and observers NOTED the potential benefit for individual businesses to have more flexibility with employing crew however noted there are several broader issues with supporting the TSFA proposal at this time. It was NOTED however that some industry observers were supportive.

The HCWG and observers identified a range of issues including:

- a) high levels of unemployment;
- b) latent effort in the TIB sector;
- c) the culture of welfare dependency is effecting the ability of the fishery to recruit and retain crew; and
- d) the difference business needs of different type of TIB operators (dingy operators compared with TIB operators running large primary vessels).

The HCWG and observers RECOMMEND that broader consultation be undertaken with Traditional Owners.

LIST OF ATTACHMENTS

Attachment A – Letter from Mr Patrick Mills to Minister Byrne

Attachment B – Response letter from Minister Byrne

Attachment C – Response letter from Parliamentary Secretary Colbeck

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
Changing the season start date for setting the TAC	Attachment B

RECOMMENDATION

That the Working Group **NOTE** progress against about changing the season start date from 1 December to 1 January to enable the recommended biological catch (RBC) and total allowable catch (TAC) to be determined before the season opening.

KEY ISSUES

1. The Working Group at meeting no.5 held on 5-6 April 2016 noted that it would be important under a quota management system to provide industry with greater time between the notification of the TAC, the value of quota units and the season start date.
2. The Working group noted that additional time would enable operators to prepare adequately for the fishing season. The AFMA member advised that the draft plan provides the Minister (to be redrafted to the PZJA) with the flexibility to determine season dates.
3. Working Group action item no. 5 (meeting 5 held on 5-6 April 2016) tasked the TRLRAG to provide advice on any findings relating to the risks or impacts of changing the season start date from 1 December to 1 January.
4. The TRLRAG has not yet considered this action item. The action will be considered at TRLRAG meeting no. 23. The RAG advice will be provide to the Working Group to assist in forming its recommendation.

BACKGROUND INFORMATION

5. The key timings for determining a RBC and TAC are as follows:
 - Fishery independent pre-season surveys are generally conducted between 5 and 20 November each year.
 - *If agreed by the PZJA* – the empirical harvest control rule (eHCR) will be run at the end of November each year to provide a RBC by early December.
 - Fishery stock assessment model updated in March the following year to provide a RBC.
 - If operating under the eHCR, the stock assessment update is run every three years unless the need for an updated stock assessment is triggered by the eHCR or another applicable decision rule.

- The PZJA meets out of session to agree to the notional total allowable catch. If operating under an eHCR the PZJA will aim to meet out of sessions and determine a TAC by mid-December.
6. Based on the key timings a revised season start date of 1 January or 1 February would provide industry members with more time between the TAC determination and the season start date.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
12 month season for free dive and lamp fishing	Attachment C

RECOMMENDATION

1. That the Working Group **DISCUSS** and **PROVIDE ADVICE** on the proposals to:
 - a. amend the existing closed season (October-November) to allow fishers for free-dive and lamp fish for 12 months of the year; and
 - b. permit lamp fishing from TIB vessels only.
2. **NOTE** that Working Group considered these proposal at meeting no. 5 on 5-6 April 2016 and concerns were raised from the TIB sector with removing the current free-dive ban (October and November) if it were to apply equally to the TIB and TVH sectors.
3. **NOTE** some TIB and TVH industry members requested more time to consult with other operators before agreeing to the option of limiting fishing to TIB tenders only.

KEY ISSUES

1. The TRL Working Group has now considered the proposal from lama community for free diving to be permitted all season (meeting No 4 on 27-28 August and meeting No 5 on 5-6 April 2016).
2. At its meeting in April 2016, the Working Group noted the following key points raised by industry members:
 - a) the TRLRAG reviewed the proposal and agreed that a 12 month open season for free-dive and lamp fishing would not pose a risk to overall stock status;
 - b) some industry members noted free-dive and lamp fishing is an important part of traditional way of life and livelihood and needs to be respected;
 - c) some industry members noted there is potential for concentrated fishing by primary vessels (TIB and TVH) with multiple tenders to have an impact on returns to dinghy fishers operating from local communities;
 - d) some industry members noted the TVH sector generally does not have any interest in free-dive and lamp fishing during the months of October and November. However, in principle the TVH sector doesn't want a different sets of rules for the TIB and TVH sectors; and
 - e) codes of practice or memorandum of understanding may help resolve the issues but there is still a concern from some industry members that it would not be effective and that regulation would be required.
3. Recommendations made by TIB industry members at that meeting were for:
 - a) the current two month closure for free-dive and lamp fishing be opened to TIB tender vessels only; and

- b) the Working Group to consider limiting lamp fishing to the TIB sector only at its next meeting.
- 4. A TIB industry observer advised they required further time to consult with other TIB primary vessel operators before agreeing to the option of limiting fishing to TIB tenders only while TVH industry members advised they also required further time to consider the recommendations.
- 5. The TRLWG agreed for the proposals (paragraph 1 (a) and (b) above) to be discussed at the next working group meeting.

BACKGROUND INFORMATION

The TRLRAG has provided advice that a 12 month open season for free diving and lamp fishing does pose no significant risk to the sustainability of the TRL Fishery (**Attachment A**) on the basis that:

- the current size limit protects that take of 0+ and 1+ lobsters; and
- the primary fishing grounds do not overlap with the likely spawning areas in the east of the Protected Zone (TRLRAG meeting 25-16 August 2015).

The TRLWG further noted that a 12 month open season will enable fishers to target peak Chinese markets and if the temporal ban (on free-diving) is to be removed the TRLRAG and TRLWG review the measure one year after its implementation.

ATTACHMENT

- A. TRLRAG paper about a proposed 12 month free diving open season.

TROPICAL ROCK LOBSTER RESOURCE ASSESSMENT GROUP (TRLRAG)	MEETING No. 14 25-26 August 2015
Background Information: Proposed 12 month free diving open season.	Agenda Item 6 FOR INFORMATION

RECOMMENDATION

That the RAG **NOTE** background information on the proposal to introduce a 12 month free diving open season; and

KEY ISSUE

1. AFMA is seeking advice from the TRL RAG and Working Group on the proposal to remove the existing closed season for free diving (October-November) to allow fishers to take lobsters by free diving at all times; noting the remaining input controls, including minimum size 90 mm CL & 115 mm TL will continue.

BACKGROUND

Scientific basis for supporting the proposal

The current size limit (90 mm CL ~ 115 mm TL) introduced in 2003 effectively conserves the majority of the recruiting (1+) year-class through October-November (Figure 1). Hence, allowing free diving in these months will not significantly impact the recruiting lobster population. Further, the shallow reef-edge areas targeted by free divers generally house larger lobsters, as smaller lobsters are excluded from the coral reef habitats due to their requirement for tight fitting shelters (Dennis et al. 1997). In addition most of the legal size lobsters remaining in the fishery during October-November are non-migratory males, and taking these lobsters will not impact on breeding success.

The seasonal closure in October-November does not protect the breeding population throughout the vast majority of the fishery as no reproductive activity occurs west of Warrior Reef. However, spawning populations do occur in eastern Torres Strait (Darnley, Cumberland, Don Cay and Barrier logbook zones) but currently catches from these zones are relatively small (~1% of total) and hence opening the season to free diving will have little impact on breeding success.

The main economic reason to open the fishery to free diving in October-November is to allow the fishery to better access the Chinese New Year market. Lobsters taken live during October – November will fetch a higher beach price (Figure 2), increasing the economic returns for free divers.

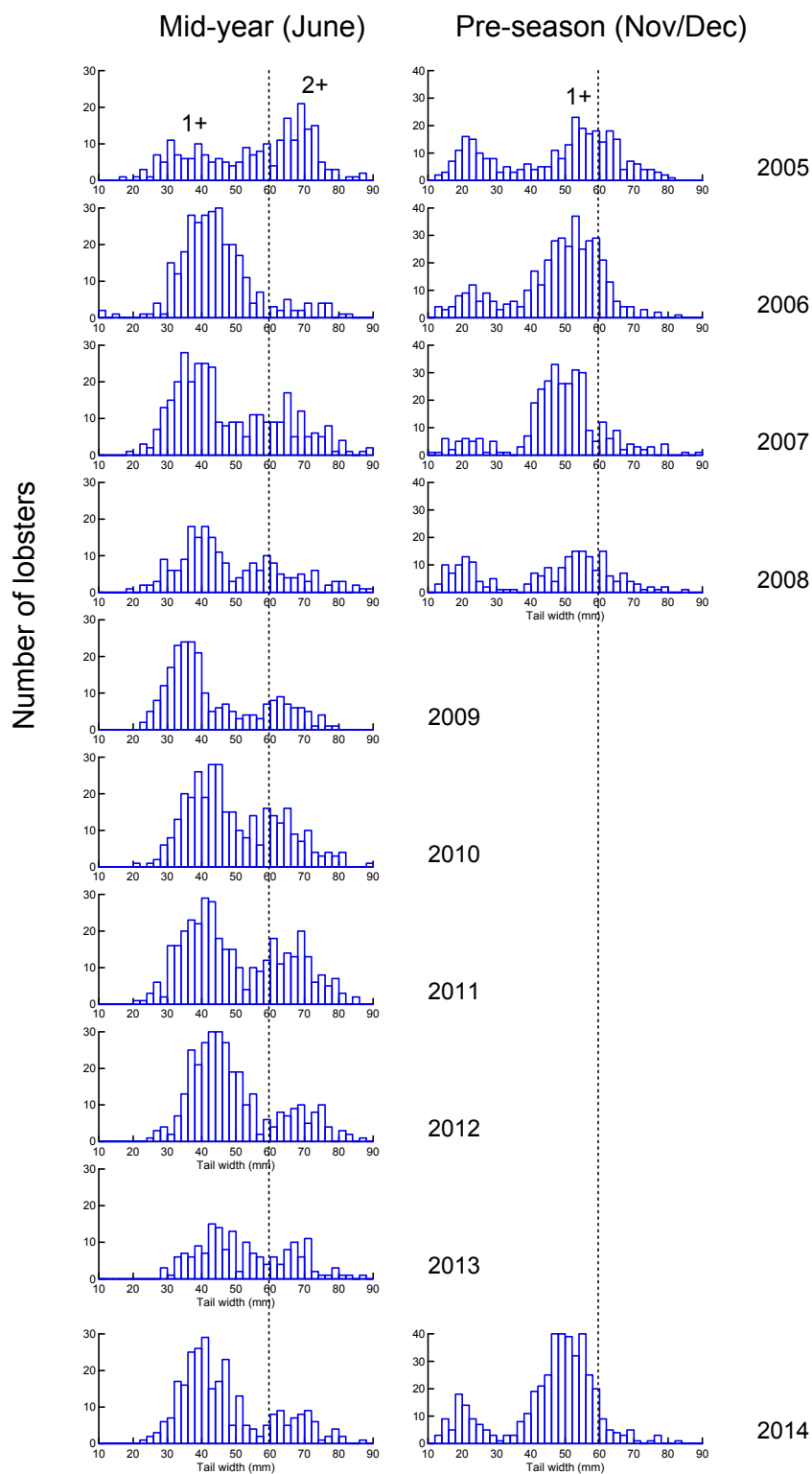


Figure 1. Size frequency distributions of *Panulirus ornatus* sampled during mid-year and pre-season fishery-independent surveys between 2005 and 2014. The current minimum size limit (90 mm CL~ 60 mm tail width) is denoted by the dotted lines.

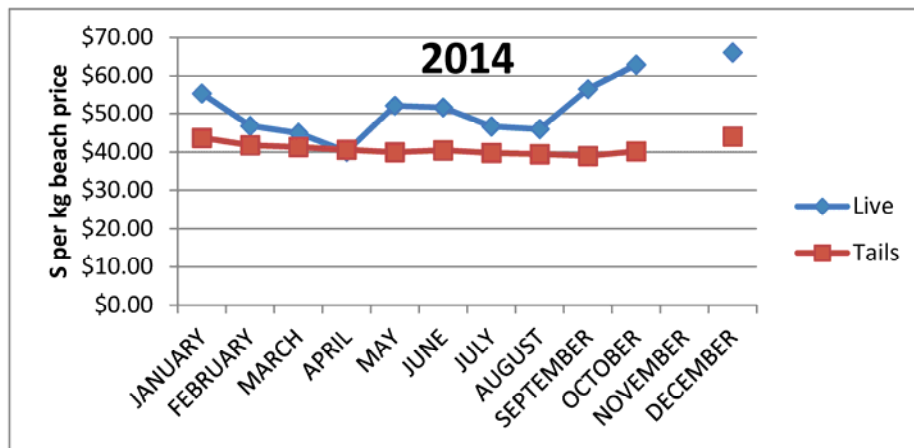


Figure 2. Monthly average beach price for *Panulirus ornatus* sold as frozen tail and live product in 2014. Source: MG Kailis.

History and prior justification for seasonal closures in the TRL fishery

Seasonal closures were introduced to the TRL fishery as early as 1973 (Chittleborough, 1974), in combination with other input controls, to serve a variety of objectives including: conserving the recruiting year-class, maximizing yield per recruit, reducing conflict between free and hookah divers and allowing time for vessel refits. The most recent introduction of seasonal closures in 2003 served specifically to allow the stock to recover after a period of over-fishing combined with a period of relatively high natural mortality, as summarised below. However, given that recent TRL catches have not exceeded the nominal TACs, and there is no evidence of anomalous high mortality, the removal of a ban on free diving during October-November will not reduce sustainability of the TRL fishery.

1973

Based on relatively scant commercial catch-rate data from 1969-1973 Chittleborough (1974) made several recommendations on interim management measures to ensure optimal utilisation of the developing TRL fishery. Management measure (f) stated "That the period from November 1 to February 28 be closed to rock lobster fishing (failing this, the closed period should be December 1 to February 28)." His justification for this recommendation was that the closure would prevent any disturbance of the very young rock lobsters present on the reefs in December, January and February, as well as aiding the recovery of the stock after each fishing season. He noted that fishers persisted fishing in these months only because their colleagues did so. It must be noted that the concurrent minimum weight at that time was only 4 oz (~113 g), equivalent to a ~45 mm carapace length lobster. Hence, the minimum size was not effective in preserving the recruiting (1+) year-class.

1988-1993

A minimum size of 100 mm tail length was implemented in 1988 to increase yield per recruit of the fishery, given the trend of increasing catch and fishing mortality seen in the fishery to that date. Catch sharing arrangements with PNG were subsequently introduced in 1990. The minimum size limit was later combined with a seasonal ban on the use of hookah gear during October/November, to provide further protection to

the recruiting (1+) year-class and also to reduce conflict between free and hookah divers (Pitcher et al. 1994). There was concern that hookah divers were over-fishing traditional reef fishing areas. CSIRO subsequently implemented the island-based monitoring program at Mabuiag and Badu Islands which ran from 1988 to 2001. The research showed that during that time although free diver catch rates were significantly lower than hookah diver catch rates, there was no widening of the difference between the catch rates of the sectors. This suggested that at least for the TiB sector free diver catch rates were not being impacted by the island based hookah divers.

2003

The current seasonal closures (October-November closed – December-January hookah ban) were implemented due to the declining stock levels in 1999-2001 (Figure 3), which suggested that the fishery was becoming unsustainable.

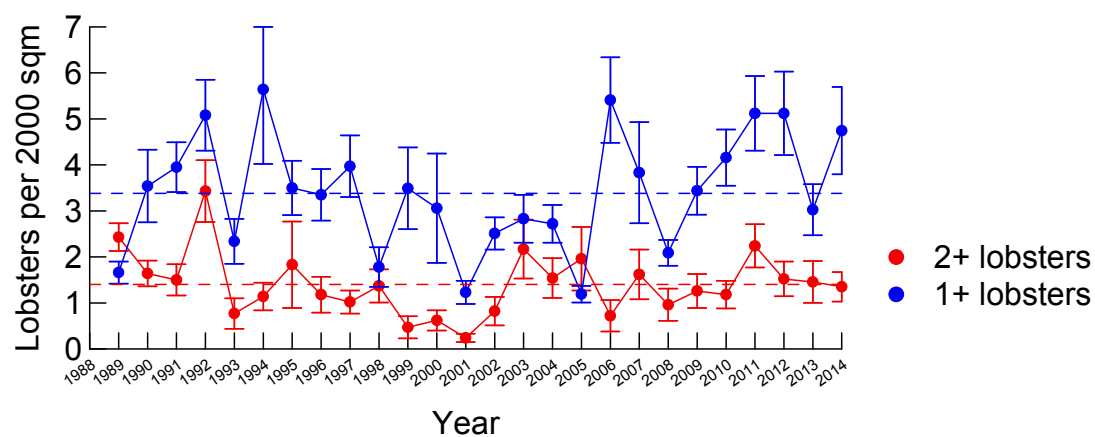


Figure 3. Relative abundance of *Panulirus ornatus* in Torres Strait during 1989-2014 from fishery-independent surveys.

The complete raft of new input controls implemented in 2003 was:

- Increase minimum size to 115 mm TL ~ 90 mm CL.
- Increase closed season from October/November to October - January.
- Cap fishing effort and particularly latent effort.
- Promote “conversion” of the fishery to a “live fishery” to value add and reduce fishing mortality

These management measures were recommended based on rigorous modelling of stock recovery scenarios, using a cohort depletion model developed for the fishery Pitcher et al. (2001); which has subsequently been superseded by the integrated age-structured model. The target reference point for the fishery was to allow 75% escapement of the breeding year class (2+) and the model outputs are shown in Figures 4 & 5 for a range of fishing mortalities. Using this model it was shown that fishing mortality had tended to increase to unsustainable levels during the decade to 1999 and natural mortality had also tended to increase likely due to seagrass diebacks and sand incursions (Figure 6).

Given that the stock has shown significant recovery since the record low recorded in 2001, and that the fishery has moved to a high percentage of live product there is a reduced need for these management measures; particularly as the fishery moves to a QMS. Hence, as stated above the move to allow free diving during October-November will have little impact on the sustainability of the fishery.

Possible concerns regarding this proposal

Holding live lobsters during warmer months can result in higher mortalities, particularly at high stocking densities. However, there have been several advances in sea cage design and handling protocols and high mortalities seen in the past would not be anticipated. Further, water temperature during October & November is generally not elevated unless anomalous calm conditions occur.

References

Chittleborough, R.G. (1974). The tropical rock lobster (*Panulirus ornatus*) as a resource in Torres Strait. CSIRO Division of Fisheries and Oceanography Report No.58.

Dennis, D.M., Skewes, T.D, Pitcher, C.R. (1997). Habitat use and growth of juvenile ornate rock lobsters, *Panulirus ornatus* (Fabricius, 1798), in Torres Strait, Australia. *Marine & Freshwater Research* **48**: 663-670.

Pitcher, C.R, Skewes, T.D., Dennis, D.M. (1994). Research for management of the ornate rock lobster (*Panulirus ornatus*) fishery in Torres Strait. Final report on CSIRO Research, 1990-1993.CSIRO Division of Fisheries. 31 pp.

Pitcher, C.R., Dennis, D.M., Skewes, T.D., Wassenberg, T., Haywood, M.D.E, Brewer, D., Jacobs, D.R., Ware, R. (2001). Research for management of the ornate tropical rock lobster, *Panulirus ornatus*, fishery in Torres Strait. Annual Report to TSFSAC #36; September 2001. CSIRO Division of Marine Research, 31 pp.

APPENDICES Fishery model outputs from TSFSAC Report #36 September 2001.

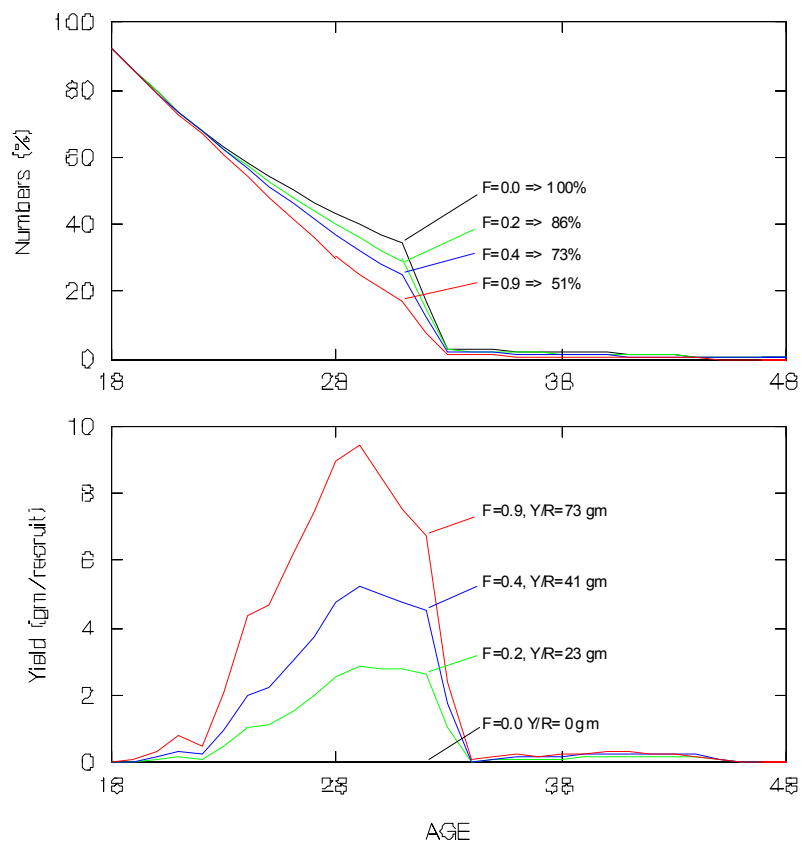


Figure 4. Modelled cohort depletion of the TRL population at four levels of fishing mortality and corresponding estimated yield per recruit.

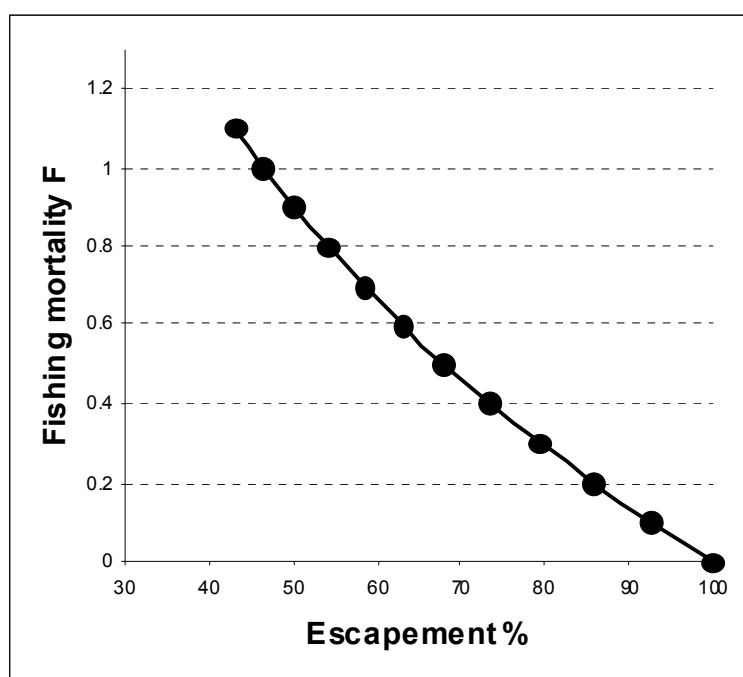


Figure 5. Modelled escapement levels for the TRL fishery at different levels of fishing mortality.

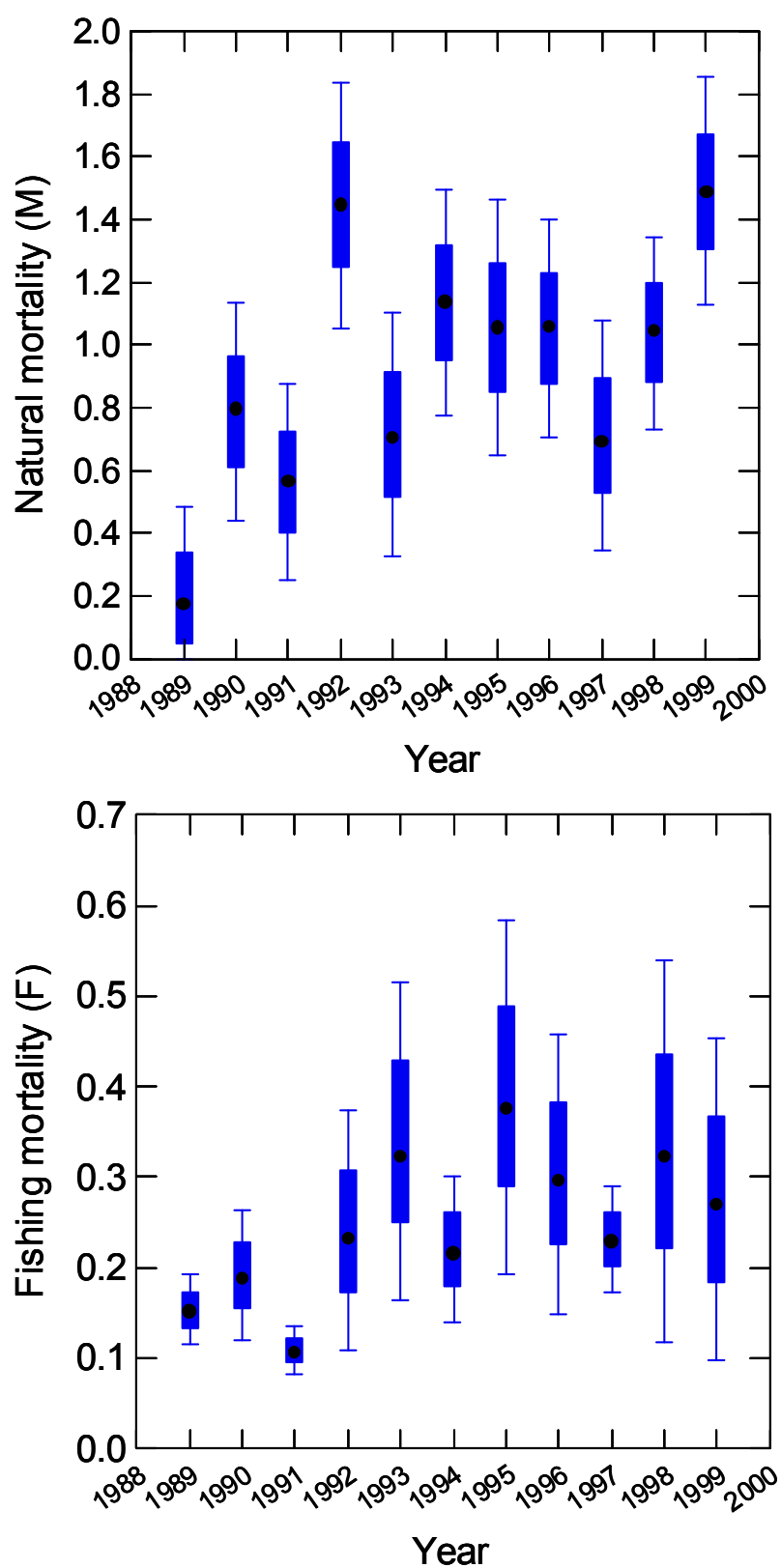


Figure 6. Modelled estimates of natural & fishing mortality for the TRL fishery during 1989 – 1999.

Conditions of Use

1) Disclaimer, Attribution and Copyright acknowledgement

- a) Any publication of Bureau tide predictions must acknowledge copyright in the Material in the Commonwealth of Australia represented by the Bureau of Meteorology and must include the following disclaimer:

“The Bureau of Meteorology gives no warranty of any kind whether express, implied, statutory or otherwise in respect to the availability, accuracy, currency, completeness, quality or reliability of the information or that the information will be fit for any particular purpose or will not infringe any third party Intellectual Property rights.

The Bureau's liability for any loss, damage, cost or expense resulting from use of, or reliance on, the information is entirely excluded.”

- b) Where a user creates new products from the Bureau tide predictions the Bureau should be acknowledged and a disclaimer displayed as follows:

“This product is based on Bureau of Meteorology information that has subsequently been modified. The Bureau does not necessarily support or endorse, or have any connection with, the product.

In respect of that part of the information which is sourced from the Bureau, and to the maximum extent permitted by law:

(i) The Bureau makes no representation and gives no warranty of any kind whether express, implied, statutory or otherwise in respect to the availability, accuracy, currency, completeness, quality or reliability of the information or that the information will be fit for any particular purpose or will not infringe any third party Intellectual Property rights; and

(ii) the Bureau's liability for any loss, damage, cost or expense resulting from use of, or reliance on, the information is entirely excluded.”

- 2) The disclaimers required will be displayed with the product or where this is not possible a clear and obvious link to these as part of the copyright or attribution notice will be required to ensure these terms are clearly and adequately brought to the attention of the user.

THURSDAY ISLAND – QUEENSLAND

LAT 10° 35' S LONG 142° 13' E

Times and Heights of High and Low Waters

2018

Local Time

JANUARY				FEBRUARY				MARCH				APRIL			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1 0617 1.20 1226 3.58 MO 1949 0.88		16 0000 1.69 0304 1.42 TU 1250 3.18 2035 1.25		1 0106 1.98 0724 1.44 TH 1335 3.69 2105 0.83		16 0035 1.92 0345 1.44 FR 1257 3.06 2041 1.44		1 0016 2.20 0643 1.35 TH 1231 3.64 1954 0.78		16 0003 2.13 0605 1.60 FR 1205 3.04 1930 1.25		1 0106 2.42 0753 1.60 SU 1306 2.76 2026 1.39		16 0033 2.55 0718 1.55 MO 1224 2.61 1939 1.38	
2 0026 1.94 0652 1.34 TU 1309 3.65 ○ 2039 0.80		17 0017 1.68 0321 1.34 WE 1307 3.11 ● 2108 1.34		2 0147 1.90 0411 1.51 FR 1415 3.49 2154 0.98		17 0059 1.93 0409 1.41 SA 1309 2.97 2110 1.54		2 0050 2.19 0719 1.44 FR 1309 3.48 ○ 2033 0.97		17 0022 2.19 0629 1.60 SA 1225 2.97 ● 1954 1.37		2 0136 2.40 0838 1.75 MO 1326 2.43 1649 1.82		17 0106 2.64 0803 1.58 TU 1255 2.42 1634 1.57	
3 0114 1.82 0725 1.49 WE 1355 3.63 2131 0.79		18 0040 1.66 0344 1.28 TH 1321 3.02 2145 1.43		3 0229 1.79 0431 1.54 SA 1455 3.19 2253 1.14		18 0128 1.93 0432 1.44 SU 1318 2.86 2149 1.63		3 0125 2.16 0756 1.59 SA 1343 3.21 2114 1.21		18 0047 2.25 0657 1.65 SU 1245 2.86 2020 1.49		3 0206 2.35 0945 1.91 TU 1330 2.09 1648 1.65		18 0144 2.67 0902 1.62 WE 1328 2.14 1642 1.49	
4 0203 1.67 0412 1.40 TH 1442 3.50 2228 0.83		19 0104 1.63 0408 1.25 FR 1321 2.93 2244 1.50		4 0851 2.13 1003 2.11 SU 1533 2.79		19 0201 1.88 0450 1.51 MO 1331 2.69		4 0200 2.10 0426 1.73 SU 1413 2.86 2159 1.45		19 0118 2.29 0435 1.68 MO 1306 2.71 2049 1.62		4 0236 2.26 0451 2.12 WE 0735 2.32 1649 1.43		19 0232 2.64 1029 1.62 TH 1400 1.79 1656 1.41	
5 0258 1.52 0431 1.40 FR 1531 3.29 2339 0.88		20 0131 1.58 0430 1.24 SA 1311 2.84		5 0024 1.25 0921 2.46 MO 1309 2.21 1951 2.40		20 0503 1.64 1310 2.46 TU 1746 1.96 1954 2.09		5 0236 2.01 0442 1.80 MO 1433 2.46 2308 1.66		20 0153 2.29 0453 1.80 TU 1328 2.47 1709 1.77		5 0820 2.51 1642 1.20 TH 2218 2.34		20 0619 2.49 1656 1.32 FR	
6 1625 2.99 SA		21 0447 1.28 1314 2.73 SU		6 0203 1.23 0950 2.77 TU 1524 1.90 2116 2.36		21 0126 1.65 0926 2.42 WE 1753 1.84 2058 2.16		6 0838 2.40 1718 1.85 TU 2032 2.19		21 0236 2.24 0507 1.97 WE 1341 2.15 1719 1.66		6 0255 2.01 0853 2.66 FR 1630 0.96 2242 2.50		21 0715 2.71 1500 1.01 SA 2211 2.34	
7 0109 0.87 0945 2.49 SU 1310 2.20 1907 2.68		22 0454 1.35 1250 2.57 MO		7 0305 1.19 1018 3.02 WE 1631 1.54 2219 2.34		22 0209 1.56 0926 2.68 TH 1732 1.67 2152 2.23		7 0144 1.70 0914 2.68 WE 1701 1.54 2144 2.31		22 0754 2.39 1725 1.53 TH 2130 2.16		7 0329 1.91 0917 2.77 SA 1629 0.76 2307 2.57		22 0200 2.00 0801 2.91 SU 1533 0.70 2232 2.46	
8 0228 0.82 1013 2.77 MO 1455 2.00 2040 2.53		23 0207 1.29 1040 2.55 TU		8 0347 1.20 1040 3.17 TH 1705 1.25 ● 2305 2.28		23 0248 1.48 0945 2.94 FR 1642 1.39 ● 2234 2.27		8 0255 1.63 0943 2.90 TH 1643 1.21 2233 2.41		23 0137 1.91 0826 2.68 FR 1630 1.32 2209 2.31		8 0354 1.85 0936 2.84 SU 1643 0.65 ● 2329 2.55		23 0258 1.84 0841 3.06 MO 1606 0.49 ● 2300 2.51	
9 0321 0.79 1042 2.99 TU 1603 1.75 ● 2145 2.39		24 0236 1.20 1021 2.71 WE 1803 2.01 2117 2.21		9 0421 1.25 1056 3.25 FR 1734 1.04 2339 2.19		24 0326 1.43 1005 3.17 SA 1649 1.08 2306 2.26		9 0337 1.58 1004 3.04 FR 1651 0.94 ● 2310 2.44		24 0231 1.80 0858 2.94 SA 1611 0.99 2239 2.41		9 0413 1.81 0953 2.88 MO 1702 0.62 2346 2.48		24 0345 1.68 0917 3.13 TU 1641 0.41 2327 2.50	
10 0401 0.83 1108 3.13 WE 1656 1.52 2233 2.23		25 0306 1.14 1028 2.89 TH 1606 1.76 ● 2159 2.19		10 0447 1.35 1108 3.29 SA 1802 0.93 2358 2.08		25 0405 1.39 1024 3.37 SU 1721 0.83 2327 2.22		10 0408 1.57 1018 3.11 SA 1711 0.78 2339 2.41		25 0317 1.69 0926 3.15 SU 1632 0.71 ● 2308 2.43		10 0430 1.77 1009 2.91 TU 1722 0.67 2357 2.38		25 0428 1.56 0951 3.14 WE 1715 0.45 2343 2.47	
11 0435 0.95 1126 3.20 TH 1741 1.34 2304 2.07		26 0338 1.12 1040 3.08 FR 1646 1.46 2225 2.14		11 0507 1.45 1124 3.31 SU 1831 0.91		26 0444 1.35 1047 3.54 MO 1757 0.67 2329 2.18		11 0432 1.59 1033 3.15 SU 1734 0.72 2358 2.32		26 0358 1.58 0951 3.31 MO 1703 0.55 2332 2.39		11 0448 1.72 1023 2.92 WE 1742 0.77 2355 2.28		26 0510 1.48 1027 3.07 TH 1750 0.58 2340 2.47	
12 0501 1.11 1136 3.24 FR 1819 1.21 2326 1.92		27 0413 1.13 1051 3.27 SA 1727 1.18 2242 2.10		12 0005 1.97 0520 1.53 MO 1143 3.30 1859 0.96		27 0524 1.33 1117 3.66 TU 1836 0.61 2346 2.19		12 0451 1.62 1050 3.17 MO 1758 0.74		27 0438 1.49 1019 3.42 TU 1738 0.49 2339 2.33		12 0509 1.67 1042 2.91 TH 1802 0.90 2342 2.26		27 0551 1.44 1103 2.94 FR 1822 0.78 2356 2.53	
13 0521 1.28 1150 3.26 SA 1855 1.14 2344 1.80		28 0450 1.16 1108 3.47 SU 1809 0.95 2310 2.08		13 0007 1.90 0524 1.57 TU 1202 3.27 1926 1.06		28 0604 1.32 1153 3.70 WE 1914 0.65		13 0006 2.21 0508 1.63 TU 1108 3.17 1822 0.84		28 0518 1.42 1051 3.45 WE 1814 0.55 2341 2.33		13 0535 1.62 1103 2.88 FR 1824 1.03 2346 2.33		28 0631 1.44 1137 2.75 SA 1852 1.01	
14 0524 1.42 1209 3.27 SU 1930 1.13 2355 1.72		29 0529 1.21 1137 3.65 MO 1852 0.78 2346 2.06		14 0006 1.88 0520 1.58 WE 1221 3.21 1951 1.19		15 0015 1.89 0323 1.52 TH 1240 3.14 2016 1.32		14 0002 2.12 0525 1.63 WE 1125 3.14 1845 0.98		29 0557 1.39 1128 3.40 TH 1849 0.69		14 0605 1.58 1128 2.82 SA 1847 1.14		29 0023 2.59 0711 1.48 SU 1208 2.51 1916 1.25	
15 0441 1.49 1230 3.24 MO 2003 1.17		30 0609 1.26 1214 3.76 TU 1936 0.71						15 1145 3.10 1907 1.12 TH		30 0004 2.37 0636 1.40 FR 1204 3.27 1923 0.90		15 0006 2.44 0640 1.55 SU 1155 2.74 1913 1.25		30 0052 2.63 0754 1.54 MO 1231 2.26 ○ 1929 1.46	
		31 0025 2.03 0647 1.33 WE 1254 3.77 ○ 2020 0.73								31 0034 2.40 0713 1.48 SA 1238 3.05 ○ 1956 1.14					

© Copyright Commonwealth of Australia 2016, Bureau of Meteorology

Datum of Predictions is Lowest Astronomical Tide

Times are in local standard time (Time Zone UTC +10:00)

Moon Phase Symbols

● New Moon

● First Quarter

○ Full Moon

● Last Quarter

THURSDAY ISLAND – QUEENSLAND

LAT 10° 35' S LONG 142° 13' E

Times and Heights of High and Low Waters

2018

Local Time

MAY				JUNE				JULY				AUGUST			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1 0119 2.64 0843 1.61 TU 1246 2.01 1610 1.44		16 0057 2.95 0815 1.28 WE 1250 2.10 1609 1.37		1 0146 2.66 1123 1.32 FR 1309 1.38 1611 1.09		16 0230 3.24 1011 0.80 SA 1435 1.51 1637 1.30		1 0144 2.62 1129 1.27 SU 1329 1.34 1628 1.08		16 0302 3.20 1047 0.74 MO 2019 1.72 2146 1.70		1 0116 2.48 1703 1.22 WE		16 0719 2.14 1305 1.15 TH 2115 2.35	
2 0143 2.60 0957 1.65 WE 1258 1.75 1618 1.31		17 0140 3.00 0914 1.23 TH 1332 1.84 1625 1.33		2 0134 2.54 1621 1.02 SA		17 0324 3.14 1120 0.78 SU		2 0106 2.52 1644 1.07 MO		17 0350 2.93 1200 0.82 TU		2 0105 2.34 1348 1.32 TH 2310 2.20		17 0224 1.71 0856 2.12 FR 1428 1.13 2150 2.64	
3 0202 2.52 1625 1.17 TH		18 0233 2.98 1028 1.16 FR 1422 1.54 1641 1.31		3 0003 2.47 1623 0.96 SU 2344 2.45		18 0424 2.98 1241 0.73 MO 2136 2.10		3 0040 2.44 1650 1.08 TU		18 0445 2.58 1332 0.84 WE 2145 2.30		3 1420 1.23 2214 2.31 FR		18 0414 1.32 1006 2.14 SA 1523 1.11 2218 2.85	
4 0201 2.40 1625 1.02 FR 2326 2.43		19 0338 2.92 1202 1.01 SA		4 1602 0.90 2324 2.44 MO		19 0007 1.96 0537 2.79 TU 1408 0.65 2204 2.33		4 0022 2.35 1443 1.07 WE 2313 2.31		19 0154 1.83 0811 2.32 TH 1446 0.81 2218 2.57		4 0615 1.67 0933 1.92 SA 1448 1.17 2213 2.49		19 0451 0.97 1057 2.13 SU 1604 1.14 2240 2.96	
5 0318 2.26 0740 2.42 SA 1616 0.88 2303 2.51		20 0459 2.87 1336 0.80 SU 2157 2.24		5 0341 2.19 0742 2.28 TU 1542 0.85 2313 2.45		20 0203 1.87 0739 2.63 WE 1510 0.58 2236 2.52		5 1457 1.00 2257 2.37 TH		20 0330 1.58 0936 2.21 FR 1537 0.81 2247 2.78		5 0551 1.53 1015 1.92 SU 1517 1.13 2223 2.67		20 0519 0.72 1136 2.06 MO 1636 1.21 2255 3.01	
6 0325 2.15 0818 2.48 SU 1606 0.76 2306 2.56		21 0101 2.04 0650 2.88 MO 1451 0.59 2220 2.41		6 0328 2.09 0811 2.31 WE 1545 0.81 2317 2.45		21 0321 1.69 0851 2.50 TH 1556 0.59 2306 2.67		6 1517 0.95 2256 2.46 FR		21 0435 1.30 1037 2.10 SA 1617 0.88 2310 2.90		6 0440 1.27 1044 1.90 MO 1550 1.12 2233 2.87		21 0548 0.59 1205 1.95 TU 1703 1.30 2310 3.03	
7 0340 2.05 0846 2.53 MO 1613 0.68 2318 2.56		22 0231 1.88 0800 2.89 TU 1539 0.46 2249 2.52		7 0334 1.97 0837 2.32 TH 1558 0.80 2326 2.46		22 0420 1.51 0943 2.33 FR 1634 0.68 2332 2.76		7 0342 1.77 0911 2.03 SA 1541 0.93 2301 2.56		22 0523 1.06 1121 1.96 SU 1651 1.01 2324 2.96		7 0510 0.99 1056 1.87 TU 1627 1.11 2247 3.08		22 0617 0.56 1213 1.83 WE 1724 1.38 2330 3.02	
8 0351 1.97 0906 2.58 TU 1627 0.67 2332 2.51		23 0330 1.71 0851 2.85 WE 1618 0.44 2318 2.58		8 0357 1.82 0905 2.32 FR 1617 0.81 2330 2.47		23 0510 1.35 1021 2.15 SA 1706 0.83 2345 2.81		8 0421 1.54 0936 2.00 SU 1610 0.94 2302 2.70		23 0602 0.89 1145 1.81 MO 1718 1.16 2338 3.00		8 0548 0.74 1103 1.86 WE 1706 1.11 2313 3.28		23 0645 0.62 1211 1.74 TH 1736 1.44 2351 2.98	
9 0404 1.89 0918 2.61 WE 1642 0.70 2344 2.45		24 0420 1.57 0933 2.74 TH 1654 0.53 2342 2.60		9 0428 1.67 0933 2.29 SA 1640 0.85 2322 2.54		24 0558 1.22 1054 1.97 SU 1734 1.02 2354 2.87		9 0505 1.30 1006 1.97 MO 1643 0.98 2306 2.90		24 0638 0.81 1154 1.69 TU 1738 1.29 2358 3.02		9 0629 0.56 1129 1.88 TH 1748 1.11 2350 3.43		24 0712 0.74 1211 1.70 FR 1729 1.45	
10 0423 1.80 0936 2.63 TH 1659 0.76 2346 2.39		25 0506 1.47 1011 2.59 FR 1727 0.69 2348 2.62		10 0508 1.51 1006 2.25 SU 1708 0.91 2319 2.70		25 0641 1.13 1122 1.81 MO 1754 1.21		10 0551 1.07 1041 1.94 TU 1719 1.03 2329 3.11		25 0711 0.79 1206 1.61 WE 1736 1.39		10 0711 0.46 1205 1.89 FR 1829 1.12		25 0012 2.92 0738 0.91 SA 1213 1.71 1517 1.38	
11 0448 1.70 1000 2.61 FR 1719 0.85 2332 2.40		26 0550 1.40 1046 2.41 SA 1756 0.90 2355 2.69		11 0551 1.34 1042 2.19 MO 1741 0.99 2339 2.90		26 0014 2.92 0723 1.07 TU 1147 1.68 1751 1.35		11 0637 0.85 1122 1.92 WE 1758 1.08		26 0020 3.00 0744 0.85 TH 1216 1.57 1504 1.35		11 0030 3.50 0753 0.46 SA 1244 1.89 1910 1.16		26 0031 2.85 0801 1.07 SU 1226 1.74 1536 1.30	
12 0520 1.60 1028 2.58 SA 1743 0.94 2331 2.51		27 0633 1.37 1118 2.21 SU 1820 1.12		12 0638 1.17 1122 2.12 TU 1814 1.09		27 0038 2.93 0803 1.07 WE 1203 1.60 1509 1.28		12 0004 3.29 0723 0.69 TH 1206 1.88 1836 1.14		27 0043 2.94 0815 0.95 FR 1221 1.56 1519 1.27		12 0111 3.47 0836 0.54 SU 1324 1.85 1950 1.25		27 0047 2.76 0822 1.22 MO 1246 1.77 1559 1.26	
13 0557 1.50 1058 2.52 SU 1810 1.03 2351 2.67		28 0019 2.76 0717 1.35 MO 1146 2.02 1833 1.31		13 0012 3.08 0727 1.02 WE 1205 2.02 1847 1.20		28 0103 2.90 0842 1.10 TH 1219 1.54 1526 1.21		13 0045 3.41 0810 0.60 FR 1251 1.82 1914 1.22		28 0104 2.86 0845 1.08 SA 1238 1.57 1542 1.20		13 0152 3.33 0921 0.70 MO 1406 1.78 1630 1.39		28 0056 2.67 0844 1.35 TU 1310 1.78 1623 1.26	
14 0639 1.41 1133 2.43 MO 1839 1.14		29 0045 2.80 0802 1.35 TU 1207 1.84 1532 1.33		14 0052 3.20 0817 0.91 TH 1250 1.88 1918 1.33		29 0125 2.83 0924 1.15 FR 1243 1.49 1547 1.15		14 0130 3.44 0858 0.59 SA 1337 1.73 1615 1.30		29 0121 2.77 0914 1.21 SU 1259 1.56 1606 1.15		14 0232 3.07 1012 0.89 TU 1449 1.67 1647 1.46		29 0057 2.57 0910 1.45 WE 1338 1.77 1643 1.33	
15 0021 2.83 0724 1.34 TU 1210 2.29 1907 1.28		30 0111 2.80 0851 1.35 WE 1225 1.69 1543 1.24		15 0139 3.26 0912 0.83 FR 1339 1.70 1616 1.29		30 0142 2.73 1015 1.22 SA 1307 1.42 1608 1.11		15 0215 3.38 0949 0.64 SU 1425 1.61 1637 1.32		30 0129 2.67 0947 1.33 MO 1322 1.54 1630 1.13		15 0309 2.69 1119 1.07 WE 2032 2.02 2312 1.86		30 0057 2.43 0948 1.56 TH 1414 1.73 1658 1.44	
		31 0132 2.75 0956 1.36 TH 1247 1.54 1557 1.16								31 0116 2.58 1034 1.41 TU 1347 1.48 1650 1.16				31 0034 2.24 0534 1.60 FR 2117 2.08	

© Copyright Commonwealth of Australia 2016, Bureau of Meteorology

Datum of Predictions is Lowest Astronomical Tide

Times are in local standard time (Time Zone UTC +10:00)

Moon Phase Symbols

● New Moon

◐ First Quarter

○ Full Moon

◑ Last Quarter

THURSDAY ISLAND – QUEENSLAND

LAT 10° 35' S LONG 142° 13' E

Times and Heights of High and Low Waters

2018

Local Time

SEPTEMBER				OCTOBER				NOVEMBER				DECEMBER			
Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m	Time	m
1 0544 1.48		16 0432 0.97		1 0504 1.11		16 0414 0.55		1 0345 0.42		16 0417 0.53		1 0353 0.39		16 0354 0.78	
0909 1.86		1018 2.23		1020 2.13		1054 2.50		1047 2.47		1124 2.63		1103 2.72		1121 2.75	
SA 1355 1.54		SU 1512 1.47		MO 1413 1.79		TU 1537 1.77		TH 1517 1.74		FR 1602 1.93		SA 1554 1.74		SU 1608 2.00	
2106 2.32		2143 2.82		2029 2.66		2119 2.73		2045 3.04	☉	2107 2.57	☉	2104 2.82		2058 2.34	
2 0547 1.36		17 0438 0.67		2 0411 0.86		17 0430 0.42		2 0418 0.31		17 0434 0.58		2 0430 0.45		17 0409 0.82	
0959 1.97		1058 2.30		1035 2.23		1118 2.51		1112 2.49		1137 2.58		1129 2.79		1131 2.78	
SU 1429 1.46		MO 1550 1.44		TU 1453 1.67		WE 1602 1.72		FR 1602 1.60		SA 1621 1.85		SU 1644 1.61		MO 1633 1.87	
2123 2.56		☉ 2204 2.89		☉ 2056 2.88		☉ 2138 2.75		2121 3.06		2122 2.55		2145 2.65		2124 2.27	
3 0508 1.17		18 0457 0.48		3 0417 0.59		18 0450 0.40		3 0452 0.31		18 0450 0.67		3 0503 0.59		18 0428 0.89	
1033 2.04		1129 2.28		1056 2.27		1138 2.45		1134 2.48		1147 2.53		1146 2.83		1135 2.82	
MO 1504 1.39		TU 1621 1.45		WE 1531 1.55		TH 1623 1.69		SA 1645 1.50		SU 1644 1.78		MO 1732 1.51		TU 1707 1.72	
☉ 2141 2.79		2219 2.92		2122 3.06		2155 2.76		2159 3.00		2145 2.50		2223 2.44		2152 2.19	
4 0443 0.90		19 0521 0.41		4 0443 0.40		19 0512 0.46		4 0527 0.42		19 0506 0.79		4 0535 0.80		19 0450 0.98	
1101 2.05		1153 2.20		1120 2.25		1151 2.35		1136 2.47		1146 2.52		1151 2.90		1131 2.92	
TU 1540 1.33		WE 1644 1.48		TH 1611 1.44		FR 1642 1.66		SU 1729 1.44		MO 1713 1.71		TU 1819 1.43		WE 1746 1.56	
2159 3.00		2236 2.93		2150 3.19		2210 2.75		2237 2.87		2211 2.43		2300 2.22		2224 2.11	
5 0503 0.64		20 0546 0.45		5 0515 0.31		20 0532 0.59		5 0600 0.61		20 0525 0.91		5 0602 1.04		20 0517 1.08	
1122 2.02		1205 2.08		1132 2.20		1155 2.25		1143 2.53		1137 2.57		1209 2.99		1136 3.08	
WE 1618 1.28		TH 1705 1.50		FR 1652 1.35		SA 1703 1.64		MO 1812 1.42		TU 1748 1.63		WE 1906 1.37		TH 1830 1.39	
2221 3.19		2254 2.92		2224 3.25		2226 2.71		2315 2.68		2238 2.34		2333 1.99		2301 2.03	
6 0536 0.46		21 0611 0.56		6 0551 0.34		21 0551 0.75		6 0631 0.84		21 0548 1.03		6 0619 1.27		21 0547 1.19	
1125 1.98		1203 1.97		1129 2.19		1149 2.20		1209 2.62		1145 2.70		1236 3.04		1200 3.24	
TH 1659 1.22		FR 1722 1.51		SA 1733 1.30		SU 1726 1.61		TU 1857 1.42		WE 1828 1.55		TH 1956 1.33		FR 1916 1.23	
2251 3.34		2313 2.88		2302 3.23		2247 2.65		2350 2.43		2310 2.23				2341 1.94	
7 0612 0.37		22 0634 0.73		7 0626 0.45		22 0609 0.91		7 0658 1.10		22 0612 1.16		7 0000 1.79		22 0615 1.31	
1131 1.99		1158 1.92		1147 2.23		1144 2.23		1240 2.68		1207 2.85		0314 1.34		1234 3.38	
FR 1741 1.18		SA 1738 1.51		SU 1814 1.28		MO 1754 1.58		WE 1944 1.45		TH 1913 1.47		FR 1306 3.05		SA 2005 1.10	
2327 3.42		2332 2.83		2340 3.12		2309 2.57				2345 2.10		☉ 2048 1.30			
8 0650 0.39		23 0655 0.91		8 0702 0.65		23 0628 1.05		8 0019 2.16		23 0635 1.30		8 0019 1.62		23 0026 1.84	
1157 2.02		1158 1.93		1216 2.29		1156 2.32		0716 1.34		1238 2.97		0326 1.24		0636 1.43	
SA 1821 1.16		SU 1755 1.50		MO 1857 1.32		TU 1828 1.57		TH 1312 2.71		FR 2003 1.39		SA 1336 3.00		SU 1316 3.45	
		2351 2.75				2333 2.47		☉ 2038 1.48	☉			2151 1.28	☉	2056 0.99	
9 0007 3.41		24 0714 1.08		9 0017 2.92		24 0648 1.18		9 0040 1.88		24 0024 1.94		9 0038 1.46		24 0113 1.71	
0729 0.49		1211 1.99		0735 0.89		1218 2.43		0352 1.35		0345 1.24		0343 1.16		0356 1.27	
SU 1230 2.04		MO 1816 1.50		TU 1250 2.33		WE 1906 1.56		FR 1344 2.68		SA 1317 3.04		SU 1406 2.90		MO 1405 3.45	
1902 1.20				☉ 1940 1.41		2358 2.35		2154 1.49		2100 1.30		2306 1.24		2152 0.93	
10 0046 3.30		25 0007 2.67		10 0050 2.64		25 0709 1.31		10 0052 1.60		25 0104 1.74		10 0101 1.31		25 0206 1.55	
0808 0.67		0733 1.21		0807 1.15		1246 2.53		0403 1.21		0404 1.20		0356 1.09		0420 1.28	
MO 1306 2.04		TU 1231 2.06		WE 1324 2.34		TH 1950 1.57		SA 1419 2.61		SU 1406 3.05		MO 1435 2.76		TU 1456 3.38	
☉ 1944 1.30		☉ 1844 1.54		2029 1.53		☉				2209 1.20				2254 0.88	
11 0123 3.07		26 0023 2.57		11 0116 2.30		26 0027 2.18		11 0410 1.08		26 0151 1.48		11 0404 1.02		26 1552 3.25	
0848 0.90		0754 1.33		0836 1.42		0411 1.35		1817 2.44		0423 1.18		1517 2.61			
TU 1343 2.01		WE 1257 2.11		TH 1359 2.31		FR 1321 2.58		SU		MO 1508 3.01		TU		WE	
2029 1.47		1616 1.54		2133 1.65		2045 1.59				2341 1.04					
12 0156 2.74		27 0038 2.43		12 0130 1.92		27 0058 1.95		12 0406 0.93		27 1621 2.96		12 0358 0.95		27 0010 0.82	
0930 1.16		0813 1.46		0434 1.48		0423 1.26		1122 2.43				1131 2.62		1655 3.05	
WE 1422 1.95		TH 1328 2.14		FR 1854 2.25		SA 1403 2.58		MO 1419 2.32		TU		WE		TH	
2128 1.68		1637 1.64				2204 1.56		1911 2.49							
13 0222 2.32		28 0051 2.24		13 0437 1.27		28 0128 1.66		13 0354 0.76		28 0109 0.82		13 0336 0.87		28 0134 0.73	
1023 1.41		0452 1.45		1942 2.43		0439 1.18		1049 2.54		1013 2.29		1113 2.65		1000 2.47	
TH 1948 2.12		FR 1406 2.12		SA		SU 1506 2.54		TU 1459 2.19		WE 1207 2.22		TH 1531 2.34		FR 1319 2.16	
		1654 1.79						1954 2.53		1756 2.95		1930 2.42		1852 2.85	
14 0511 1.65		29 0000 2.00		14 0429 1.02		29 0449 1.12		14 0349 0.62		29 0221 0.60		14 0335 0.80		29 0241 0.65	
0806 1.95		0503 1.34		1003 2.21		1845 2.59		1055 2.63		1016 2.46		1107 2.69		1022 2.72	
FR 1245 1.57		SA 1931 2.15		SU 1415 1.95		MO		WE 1526 2.08		TH 1357 2.08		FR 1548 2.23		SA 1452 1.98	
2035 2.41				2024 2.58				2027 2.56		1922 2.96		2008 2.41	☉	2017 2.70	
15 0456 1.33		30 0516 1.24		15 0413 0.76		30 0311 0.96		15 0400 0.54		30 0312 0.45		15 0343 0.77		30 0330 0.62	
0924 2.09		1021 1.97		1028 2.40		1023 2.27		1109 2.65		1036 2.61		1112 2.72		1049 2.93	
SA 1418 1.53		SU 1329 1.90		MO 1505 1.84		TU 1336 2.08		TH 1546 2.00		FR 1501 1.90		SA 1554 2.13		SU 1557 1.76	
2113 2.66		1959 2.41		2055 2.68		1928 2.79		2051 2.57	☉	2017 2.92	☉	☉ 2034 2.39		2119 2.52	
				31 0315 0.65										31 0410 0.69	
				1027 2.39										1116 3.08	
				WE 1431 1.90										MO 1654 1.55	
				2008 2.94										2207 2.31	

© Copyright Commonwealth of Australia 2016, Bureau of Meteorology

Datum of Predictions is Lowest Astronomical Tide

Times are in local standard time (Time Zone UTC +10:00)

Moon Phase Symbols

☉ New Moon

☾ First Quarter

☽ Full Moon

☾ Last Quarter

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
Method for setting moon tide hookah closure	Attachment D

RECOMMENDATION

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on the method used to set the moon-tide hookah closures in the Torres Strait Tropical Rock Lobster Fishery.

The Working Group **NOTE** that:

1. Moon tide closures are currently set for 7 days each month during February to September based on the largest difference between high and low water; and
2. Some industry members noted their preference would be for moon tide hookah closures to occur each year on the three days either side of the full moon to coincide with the moult cycle which results in higher post-catch mortality.

KEY ISSUES

3. Currently moon-tide closures are set each year during the months of February to September. Closures are set for three days either side of the full moon or the new moon (7 days per closure) and are based on when the largest difference between high and low water occurs (during either the new or full moon).
4. The tide times and information of heights of high and low waters is based on the Bureau of Meteorology (BOM) Thursday Island – Queensland tide chart for latitude 10° 35' S and longitude 142° 13' E. The 2018 BOM tide chart is provided at **Attachment A**.
5. Because closures are based on the greatest difference between high and low tide the closures can change between occurring on the full moon or the new moon across different years.
6. AFMA received anecdotal reports from industry members that a greater number of lobsters moult just before or during the full moon compared to the new moon. Lobsters that have just moulted have a soft carapace and are susceptible to damage during capture and by handling which results in higher mortality rates of caught lobster.
7. Some industry members noted their preference would be for moon tide hookah closures to occur each year on the three days either side of the full moon to coincide with the moult cycle. Allowing fishing to occur during the new moon (when lobsters generally have a hard carapace) would reduce the volume of caught lobsters that are damaged and subsequently tailed.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
Operation of primary and tender boat licences	Attachment E

RECOMMENDATION

- The Working Group **DISCUSS** and **PROVIDE ADVICE** on new draft conditions proposed to apply to tender boat licences to ensure tender boats operate in conjunction with a primary boat:
 - The licence holder must ensure that the boat described in this licence only takes and lands catch to the primary boat specified on this licence.*
 - If the primary specified on this licence is in port, the tender boat may land catch directly to the port in which the primary boat is located.*
- The Working Group **NOTE** that AFMA will write to all licence holders to seek comment on the new licence condition.

KEY ISSUES

- In response to concerns from industry that tender boats are not operating in conjunction with primary vessels AFMA has reviewed existing licence conditions and PZJA policy.
- Protected Zone Joint Authority's (PZJA) licensing policy as described in 'A guide to management arrangements for Torres Strait Fisheries, June 2004' (the Guide) states:
 - a tender is 'a boat measuring 6 metres or less in length, has the same licensee as the primary boat and operates in conjunction with a primary boat' (pp. 2);
 - 'Tender vessels (i.e. dinghies or dories working with a larger primary vessel as part of a licence package) are authorised only to take catch for the purpose of trans-shipping onto the primary vessel specified in the licence package, being a vessel which has the same licensee and bears the same distinguishing symbols' (pp. 18).
- Current licence conditions do not reflect policy intent for tenders to operate in conjunction with primary boats.

4. AFMA has developed new draft licence conditions to give effect to the policy (see paragraph 2 (a) & (b) above). AFMA is seeking Working Group advice on the proposed draft conditions. AFMA will seek comment from licence holder on any proposed changes.
5. The Guide is publically available on the PZJA website*. Copies will be provided at the meeting.

* The Guide is publically available on the PZJA website: <http://pzja.gov.au/wp-content/uploads/2011/06/6.pdf>

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
TVH sector moving tenders between primary licences held by one owner	Attachment F

RECOMMENDATION

1. The Working Group **DISCUSS** and **PROVIDE ADVICE** on preferred policy options for making decisions on applications to temporarily transfer licenced tender boats to operate in conjunction with a primary boat held by the same licence holder.

KEY ISSUES

1. For the second time, AFMA as the PZJA licensing delegate, approved two separate licensing applications to vary licence conditions to allow a tender from one licence primary/tender licence package to be used with another primary boat licence held by the same licence holder (see Background Section for detail).
2. The approvals:
 - a. are temporary. Applying only until 31 December 2018; and
 - b. apply only to licences held by the same licence holder.
3. For both applications one primary licence is placed into 'no-boat status' for the period of the variation.
4. In making the decision AFMA took into account relevant PZJA licensing policies noting the licence variation would not result in an increase in:
 - the number TVH fishing licences (primary boats or tenders);
 - primary boat lengths above that expected under the PZJA boat replacement policy for the Fishery; and
 - the current maximum number of tenders (seven) permitted on a TVH primary licence.
5. The decision is consistent with the objective of the *Torres Strait Fisheries Act 1984* to manage commercial fisheries for optimum utilisation by allowing the operator to structure their business according to their preferred inputs.
6. The decision is not consistent with the understanding of PZJA licensing policy relating to the transfer of primary and tender licences. The PZJA '*Guide to management arrangements for Torres Strait Fisheries, June 2004*' (the Guide) states for the TRL Fishery:

'If a licence is part of a primary vessel and tender boat package, all other licences of the primary vessel and tender boat packages should also be transferred'.

7. The Guide states that the transfer policies '*take into consideration the present need to contain effort in specific fisheries and to recognise the objective of promoting Australian traditional inhabitants participation in PZJA commercial fisheries*'.
8. Since the Guide was published, 14 TVH licences (14 primary vessel and 30 tender licences) have been surrendered through Government funded buyouts and a further 2 TVH licences (comprised of 2 primary boats and 4 tenders) have been bought by the TSRA.
9. In 2005, a draft *Licence (tender boat) trading policy for the TRL Fishery* was considered by the PZJA TRL Working Group (**Attachment A**). The Working Group was unable to recommend the policy at the time until a decision on long-term future management arrangements was made. The PZJA has since agreed to move to quota management.
10. AFMA is seeking advice from the Working Group on preferred policy options to guide decisions on any future applications from licence holders to vary primary/tender licence packages they hold.

BACKGROUND

Application one

Licences held:

- a) one primary licence (14 metres) and three tenders;
- b) one primary licence (14 metres) and two tenders;
- c) one carrier B licence (permits the carrying of catch taken by other licenced vessels).

Varied to:

'Active'

- a) one primary licence (14 metres) and five tenders; and
- b) one carrier B licence (permits the carrying of catch taken by other licenced vessels).

'Not active – placed into 'no boat status'

- b) one primary licence (14 metres).

Application two

Licences held:

- a) one primary licence (14 metres) and two tenders,
- b) one primary licence (10 metres) and two tenders.

Varied to:

'Active'

- a) one primary licence (14 metres) and four tenders;

'Not active – placed into 'no boat status'

- b) one primary licence (10 metres).

TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY WORKING GROUP MEETING	21 MAY 2005
Draft Recommendations	

Business arising - Prohibition on night diving

The TRL WG recommends that the wording (see JP – prohibition on night diving) be accepted on the basis that it is acceptable to Traditional Inhabitants (CFG meeting to be held on 23 May).

Trading of Tenders and Licence Amalgamations

The TRL WG recommends that the TSFMAC note that a complete policy could not be agreed upon and the differing views of stakeholders on licence tender trading are:

Traditional Inhabitants on the TRL WG were not able to further consider the draft policy until a decision is made on long term future management arrangements, which sets future directions for this fishery.

Industry was not in a position to comment on the draft (based on revised concepts and until a decision is made on long term future management arrangements) and would like to conduct further consultation on a policy.

Numbers of divers

Use recommendation on MAC paper.

Hookah Area Closures

Use recommendation on agenda paper.

Research for Quota Management

If a quota management system is to be introduced, then the TRL WG supports a pre-season survey but that the timing of this second survey should be reconsidered to take into concerns regarding underestimates of the TAC.

ATTACHMENT 8.1 Draft Policy.

TORRES STRAIT PROTECTED ZONE JOINT AUTHORITY

LICENCE (TENDER BOAT) TRADING POLICY FOR THE TROPICAL ROCK LOBSTER FISHERY

1. *Purpose*

This policy has been developed to deal with the trading of Torres Strait Fishing Boat Licences (tenders) with the fishery entry (endorsement) “CR”.

2. *Relevant Legislation*

- a. *Torres Strait Fisheries Act 1984* (“the Act”); and
- b. *Torres Strait Fisheries Regulations 1985*; and
- c. Management Plan under the Act.

3. *Other Licence Amalgamation Policy Requirements*

Other requirements regarding licence trading are contained in Decisions of the Protected Zone Joint Authority (PZJA) and Directions to Delegates.

4. *Interpretation*

Under this policy, a licence refers to a Torres Strait Fishing Boat Licence with the fishery entry “CR”.

“Licence package” is where the primary and each tender has the same licensee.

“Catch and effort history” means for a tender boat, the catch and effort history from a licence package divided by the number of tenders in the package.

A tender boat refers to a boat which measures six metres or less that operates in conjunction with a primary boat and has the same licensee as, and a history of operating with, that primary boat.

Trading means:

1. the merging of two or more licence packages resulting in a single licence package and distinguishing number; or
2. the merging of two or more licence packages that leaves one or more licence package(s) with more tenders and one or more licence package(s) with fewer tenders.

5. *Effective Date*

The policy is effective on the date of the signed decision by the PZJA.

6. *Objective*

The objectives of this policy are:

- a) to provide guidance to PZJA delegates as to the circumstances in which licences may be traded; and

- b) to promote economic efficiency in fishing operations, consistent with objectives of the Act, and other policies of the PZJA.

7. Trading of Licences (Tender Boats)

7.1 Licence endorsements

Both the tender boat to be traded and the primary boat licence to which it is being merged must have the “Tropical Rock Lobster” fishery entry (endorsement) in force.

On trading, any fishery entries (endorsements) existing on the traded tender boat that are not in force on the licence to which it is merged must be permanently revoked.

7.2 Maximum number of tender boats on a licence

The maximum number of tender boats on a licence package must not be greater than the current maximum of 7. However, for the tropical rock lobster fishery, the maximum number of tender boats on a licence package should not be greater than four (4) in a licence package where a tender has been added through trading.

7.3 Surrender of tender boats

The surrender of tenders is not necessary under this policy.

7.4 Surrender of primary boat

In the event of all tender boats being traded off a licence package, the primary boat licence must be surrendered.

7.5 Licence history

The catch and effort history associated with a tender boat being traded should be added to the catch/effort history of the licence package to which it is being merged.

Where the catch and effort history of one tender is transferred to the catch history of another licence package, the equivalent amount of catch and effort history will be deducted from the licence package the tender was traded from.

In determining the catch and effort history of the tender (and licence package as a whole), the period considered should be a five year period from 16 February 1997 to 14 February 2002 or other relevant period as determined by the PZJA from time to time.

7.6 Expiry date of licence

A tender boat being traded must be assigned the same expiry date as the primary vessel licence to which it is merged at the time of trading.

TROPICAL ROCK LOBSTER WORKING GROUP (TRLWG)	MEETING No. 7 2018
Grant of carrier licenses to non-traditional inhabitants	Attachment G

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on granting new carrier-only boat licenses to non-traditional inhabitants only for boats that are not licenced to fish.

KEY ISSUES

1. From time to time the PZJA receives applications from people/companies seeking authorisation to transport (carry) seafood by boat in the Torres Strait. Boats must hold a carrier licence to carry seafood taken in Torres Strait Fisheries.
2. Recognising the reliance of Torres Strait commercial fishers on having sea-freight services to transport fisheries products from and within the Torres Strait, the PZJA has granted new carrier licences and renewed others for freight vessels. This includes freight vessels owned by non-traditional inhabitant persons/owned entities e.g. sea-freight companies such as *Seaswift Pty Ltd*. These decisions have been consistent with directions from the PZJA.
3. More recently there has been interest from smaller companies to transport seafood that are owned by non-traditional inhabitants.
4. Advice is being sought from the Working Group as there is some ambiguity in the PZJA “*Guide to management arrangements for Torres Strait Fisheries, June 2004*” (the Guide) which describes the PZJA licencing policy,* and with previous directions from the PZJA.
5. Having regard for the objectives of the *Torres Strait Fisheries Act 1984*, AFMA is seeking working group advice on any concerns with the grant of new carrier-only licences to non-traditional inhabitants, subject to the conditions set out in paragraphs 6 and 7.

BACKGROUND

6. The Guide states ‘*carrier licences **may be granted** to boats which are legitimate cargo vessels*’ (carrier boat licence, pp.19). Another section of the Guide states ‘*all new fishing licences and carrier licences are **only to be granted to Traditional Inhabitants***’ (tropical rock lobster, Spanish mackerel, pearl shell, finfish, beche-de-mer, trochus and crab fisheries, pp.19).
7. Consistent with directions from the PZJA, the grant of a new carrier licence to a non-traditional inhabitant boat to carry (transport) seafood, may be considered for boats that are not also licenced to take fish in a Torres Strait Fishery (meaning the boat can’t be used to fish– it can only transport seafood) provided they are subject to the following minimum licence conditions:

* Available online <http://pzja.gov.au/resources/publications> and by request from AFMA.

The carrier boat will not change the state of the product.

- a. The carrier boat will not purchase or take on board or carry product from a boat which is not licenced.
 - b. The boat shall not be used to take tender boats or dinghies to and from the fishing grounds or be used as accommodation for fishers.
 - c. The licence is non-transferrable.
8. Consistent with the PZJA's recent decision, these licences would also be required to have an operating Vessel Monitoring System.
 9. The PZJA **Finfish Working Group** (FWG) considered this paper at its meeting on 16-17 March 2017 and minuted the following advice:

The FWG noted advice that there is interest from small non-traditional inhabitant businesses to freight seafood in the Torres Strait and that these vessels require a carrier licence. The FWG noted advice that the PZJA licencing policy, as described in the 2004 licencing guide, is ambiguous for these types of applications. AFMA sought FWG advice on any concerns with the grant of new carrier licences to non-traditional inhabitant persons/businesses subject to specific conditions.

In line with advice from industry members the FWG recommended that further industry and community consultation take place to gauge stakeholder opinions on the grant of new carrier licences to non-traditional inhabitant persons/businesses.

10. The **Hand Collectable Working Group** considered this paper at its meeting on 27 June 2017. Noting that the meeting record for the HCWG remains in draft, advice from working group was:

Recommendation: *noting the number of related issues (e.g. crewing, unemployment, c.f. agenda item 4.6) the HCWG and observers were not supportive of any additional carrier licenses being issued to non-traditional inhabitants.*

Note: the related issues referred to in the draft recommendation are those listed under the HCWG draft advice on the TSFA proposal to change current crewing restrictions on TIB licenses. See Agenda Item 5.8.