

**Meeting Papers
for
15th MEETING OF THE PZJA
TORRES STRAIT
HAND COLLECTABLES WORKING
GROUP**

1-2 August 2019

8:30 am – 5:00 pm

TSRA Boardroom, Thursday Island

15th MEETING OF THE PZJA TORRES STRAIT HAND COLLECTABLES WORKING GROUP

1 – 2 August 2019 (8:30 am – 5:00 pm)

TSRA Boardroom, Thursday Island

DRAFT AGENDA v2

The meeting will open at 8.30am on Thursday 1 August 2019.

AGENDA ITEM 1 PRELIMINARIES

1.1 Acknowledgement of Traditional Owners, welcome and apologies

The Chair will welcome HCWG members, permanent observers, and casual observers to the 15th Torres Strait Hand Collectables Working Group.

1.2 Adoption of agenda

The working group is invited to consider and adopt the draft agenda.

1.3 Declarations of interest

Working group members are invited to declare any real or potential conflicts of interests to the group and determine whether a member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict.

1.4 Action items from previous meetings

The working group will note the status of action items arising from previous HCWG meetings.

1.5 Out of session correspondence

The working group will note any out of session correspondence on HCWG matters since the previous meeting.

AGENDA ITEM 2 WORKING GROUP UPDATES

2.1 Industry and Scientific members

This agenda item is an opportunity for the Working Group to develop a common understanding of Hand Collectable fisheries including recent fishing, economic, biological and ecological trends. Industry and scientific members are asked to provide a brief verbal update on any recent developments relevant to Hand Collectable fisheries. The Working Group will note the updates from industry and scientific members and observers.

2.2 Government

2.2.1 Australian Fisheries Management Authority (AFMA)

2.2.2 Torres Strait Regional Authority (TSRA)

2.2.3 Queensland Department of Agriculture and Fisheries (QDAF)

The Working Group will note updates from each of the PZJA government agency members on the latest developments relevant to Hand Collectable fisheries.

2.3 Native Title

The Working Group will note a verbal update from the Malu Lamar representative if in attendance.

2.4 PNG National Fisheries Authority

The Working Group will note an update from the PNG NFA member if in attendance.

AGENDA ITEM 3 HARVEST STRATEGY

3.1 Outcomes of the draft Beche-de-mer Harvest Strategy consultation

AFMA will provide an overview of the outcomes from the recent draft Beche-de-mer Harvest Strategy consultation period.

Expected Outcome: The Working Group will **consider** the comments made on the draft Harvest Strategy during the recent consultation period and **provide advice to the PZJA** on a final harvest strategy for PZJA endorsement.

3.2 Implementation of the Harvest Strategy

AFMA will outline a plan for harvest strategy implementation by the 2020 season including the remaking of *Torres Strait Fisheries Management Instrument No. 15* (the Instrument).

Expected Outcome: The Working Group will consider the plan for implementation on the draft Harvest Strategy and **provide advice to AFMA and the PZJA** on the proposed remaking of the draft Instrument and associated Explanatory Statement.

3.3 Beche-de-mer Species ID Guide and Weight Conversion Ratio research

CSIRO will provide a brief update on the new version of the Beche-de-mer species ID guide as part of the Harvest Strategy Project.

Expected Outcome: The Working Group will **provide comments to CSIRO** on the draft Beche-de-mer species ID guide.

AGENDA ITEM 4 MANAGEMENT

4.1 Catch Data Summary

AFMA will provide an overview of reported beche-de-mer catch and effort data from the 2018 fishing season, and the 2019 season to date.

Expected Outcome: The Working Group will **discuss** the data summaries and **advise AFMA** on the likely accuracy of the catch reports, and **provide advice** on the Fish Receiver System more broadly.

4.2 Compliance in the Beche-de-mer Fishery

The Working Group will note an update from the AFMA Compliance Manager will provide an update on the domestic compliance program and compliance risks in the Beche-de-mer Fishery.

4.3 Black Teatfish

In consideration of an updated stock survey of Torres Strait beche-de-mer species and the implementation of the Beche-de-mer Harvest Strategy, the Working Group will consider a future black teatfish opening and provide advice on the management arrangements and timing and management arrangements of a possible opening.

Expected Outcome: The Working Group will **provide advice to the PZJA** on a suitable time and appropriate management arrangements required to conduct a black teatfish opening in the context of an updated beche-de-mer stock survey and guidance within the draft harvest strategy for re-opening a closed species.

4.4 Prohibition on hookah

The use of hookah is currently prohibited within the Beche-de-mer Fishery. At HCWG13, the TSRA offered to draft a proposal on behalf of Traditional Inhabitants to remove the prohibition. The TSRA will provide an update on the proposal to remove the prohibition on hookah in the Torres Strait beche-de-mer fishery.

Expected Outcome: The Working Group will discuss and **provide advice to the TSRA** on the draft proposal to remove the prohibition on the use of hookah.

4.5 Future Management Priorities

Having agreed management priorities and a work plan for Hand Collectable Fisheries aims to achieve a more efficient management process. At each HCWG meeting, the Working Group should review any standing management priorities and consider any future management priorities for Hand Collectable Fisheries.

Expected Outcome: The Working Group will **discuss and provide advice** on management priorities for Torres Strait Hand Collectable Fisheries.

AGENDA ITEM 5 RESEARCH

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

The Working Group will note an update on the outcomes of the recent TSSAC meeting which endorsed the full proposal for CSIRO to undertake a stock survey of Torres Strait beche-de-mer species.

5.2 Torres Strait Beche-de-mer Stock Survey

The Working Group will note an update from CSIRO on the upcoming stock survey for the Torres Strait Beche-de-me Fishery. AFMA will also provide an overview of the impact of the survey on the HCWG work plan.

5.3 Research Update

The Working Group will note an update from industry observers, Simon Naawi and Rocky Stephen regarding the beche-de-mer research projects they are involved in.

5.4 Five Year Fishery Research Plan

A five-year rolling research plan for Hand Collectable Fisheries is used to inform the Torres Strait Scientific Advisory Committee's (TSSAC) annual call for research funding proposals.

Expected Outcome: The Working Group will discuss and **provide advice** to the TSSAC on research priorities for the beche-de-mer, trochus, mud crab and pearl shell fisheries under the Five-Year Rolling Research Plan 2020/21 – 2023/24.

AGENDA ITEM 6 OTHER BUSINESS

6.1 Budget Update

The Working Group will note a summary provided by AFMA regarding the Hand Collectables fishery budget and expenditure for the 2018-19 financial year, and a brief update for 2019-20 financial year.

6.2 Other Business

The Working Group is invited to nominate any other business for discussion.

6.3 Date and venue for next meeting

The Working Group will consider a date and venue for HCWG16.

CLOSE OF MEETING

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
PRELIMINARIES Acknowledgement of Traditional Owners, welcome and apologies	Agenda Item 1.1 For INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE**:
 - a. an acknowledgement of Traditional Owners;
 - b. the Chairperson's welcome address;
 - c. any apologies received from members unable to attend; and
 - d. an overview of PZJA FMP 1 requirements.

2. As of 19 July 2019 apologies were received from:
 - a. Danielle Stewart, QDAF member; and
 - b. Tony Salam, Traditional Inhabitant member for Kaiwalagal.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
PRELIMINARIES Adoption of agenda	Agenda Item 1.2 For DECISION

RECOMMENDATION

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

BACKGROUND

2. A draft annotated agenda was circulated to members and other participants on 28 June 2019.
3. Some suggestions for additional agenda items were requested by members and are now included in version two (**Attachment 1.2a**). These include:
 - a. an update from the TSRA regarding the proposal to remove the prohibition on hookah in the beche-de-mer fishery;
 - b. an update from CSIRO on a stock survey for Torres Strait Beche-de-mer species; and
 - c. an update from industry members on current research projects.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
PRELIMINARIES Declarations of interest	Agenda Item 1.3 For DECISION

RECOMMENDATIONS

1. That the Working Group members:
 - a. **DECLARE** all real or potential conflicts of interest in Torres Strait hand collectable fisheries at the commencement of the meeting (**Table 1**).
 - b. **DETERMINE** whether the member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict;
 - c. **ABIDE** by decisions of the Working Group regarding the management of conflicts of interest.
 - d. **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 may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict.

BACKGROUND

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

Table 1. HCWG Declarations of Interest from most recent meetings.

Name	Position	Declaration of interest
Members		
Anne Clarke	Chair	Board member of the Wet Tropics Management Authority Previously contracted with Regional Development Australia Far North Queensland and Torres Strait No pecuniary interests or otherwise.
Tim Skewes	Scientific Member	CSIRO/Independent Consultant. Current co-investigator on TSSAC project 'measuring non-commercial fishing in the Torres Strait'. Current co-investigator on TSRA funded project 'Stock survey of Torres Strait Beche-de-mer species'. Previous principal scientist for Torres Strait Scientific Advisory Committee (TSSAC) project to develop a harvest strategy for the TSBDMF. Previous CSIRO researcher for TSSAC project investigating traditional take of finfish in Torres Strait.
Michael Passi	Traditional Inhabitant Member Kemer Kemer Meriam	TIB licence holder
Tony Salam	Traditional Inhabitant Member Kaiwalagal	TIB licence holder
Patrick Bonner	Traditional Inhabitant Member Kulkagal	TIB licence holder; Chair of Mura Porumagal Fisheries Corporation
Frank Loban	Traditional Inhabitant Member Maluialgal	TIB licence holder; Traditional Inhabitant Member on TSSAC and Finfish Working Group.
Maluwap Nona	Traditional Inhabitant Member, Gudumalulgal	TIB licence holder; Chairperson of Malu Lamar; Director of MDW Fisheries Association on Mer; Traditional Inhabitant Member on TSSAC.
Stephen Botlon	AFMA Member	Employed by AFMA, no pecuniary interests or otherwise
Alison Runck	Torres Strait Regional Authority (TSRA) Member	Employed by TSRA, no pecuniary interests or otherwise.
Danielle Stewart	QDAF Member	Employed by Queensland Government, no pecuniary interests or otherwise.
Georgia Langdon	Executive Officer, AFMA	Employed by AFMA, no pecuniary interests or otherwise

Permanent Observers		
Yen Loban	TSRA Fisheries Portfolio Member	TIB licence holder; TSRA Board Member for Ngurupai
Ian Liviko	PNG National Fisheries Authority	To be advised.
Casual Observers		
Simon Naawi	Industry, Masig	TIB licence holder.
Rocky Stephen	Industry, Ugar	Chair of Kos and Abob Fisheries Association
Dr Eva Plaganyi	CSIRO	Employed by CSIRO. Current Principle Investigator for TSSAC project 'Torres Strait TRL survey stock assessment and harvest strategy'. Previous Principle Investigator for TSSAC project 'Developing a harvest strategy for the TSBDMF'.
Nicole Murphy	CSIRO	Employed by CSIRO. Current Principle Investigator on TSRA funded project 'Stock survey of Torres Strait Beche-de-mer species'.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
PRELIMINARIES Action items from HCWG14 and previous meetings	Agenda Item 1.4 FOR INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE**:

- a. the progress against actions arising from previous meetings, including the 14th meeting of the Hand Collectable Working Group (HCWG14) held on 24 October 2018 (**Table 1**).
- b. the final meeting record for HCWG14, which was finalised out of session (**Attachment 1.4a**).

BACKGROUND

Actions arising

2. Updates are provided on the status of actions arising from the HCWG14 and previous meetings.
3. AFMA proposes that action item 3 in Table 1 below be removed from the list of action items. AFMA remains committed to consulting with all stakeholders in relation to the proposed legislative amendments to the *Torres Strait Fisheries Act 1984*, and *Torres Strait Fisheries Regulations 1985*. An update on the proposed amendments is provided under Agenda item 2.2.2 (AFMA update).

Minutes of the previous meeting

4. A draft meeting record was circulated to all HCWG members on 13 December 2018 with comments closing on 20 December 2018.
5. After receiving only minor comments back from HCWG members the meeting record was finalised out of session, emailed to Working Group members and posted on the PZJA website on 21 December 2018.

Table 1. Status of actions arising from previous HCWG meetings.

#	Meeting	Action item	Responsibility	Status
1	9 (20-21 June 2016)	AFMA to review the size limits set for the Torres Strait Beche-de-mer Fishery taking into consideration the size limits in place in Queensland and the Commonwealth Coral Sea Fishery.	AFMA	Ongoing. Proposed changes to size limits were agreed to at HCWG14 and the corresponding Harvest Strategy Workshop (23 October 2018) as part of the Beche-de-mer Harvest Strategy development. If agreed to by the PZJA, changes to minimum size limits will be made through the remaking of <i>Fisheries Management Instrument No. 15</i> .
2	11 (27 June 2017)	Consideration on whether or not changes should be made to the current size limit for Prickly Redfish be undertaken during the Harvest Strategy Workshop noting relevant data will be presented.	AFMA	Ongoing. Proposed changes to size limits were agreed to at HCWG14 and the corresponding Harvest Strategy Workshop (23 October 2018) as part of the Beche-de-mer Harvest Strategy development. If agreed to by the PZJA, changes to minimum size limits will be made through the remaking of <i>Fisheries Management Instrument No. 15</i> .
3	13 (24 July 2018)	AFMA to ensure Malu Lamar is included in all aspects of consultation regarding the proposed legislative amendments to the Act and the Regulations.	AFMA	To be removed. AFMA remains committed to consulting with all stakeholders regarding legislative amendments.
4	Out of Session	The TSRA to assist TIB licence holders to develop a proposal to lift the hookah ban when fishing for white teatfish, to be put up to the PZJA for consideration.	TSRA	Ongoing. The TSRA Fisheries Program is progressing this action and will provide an update under Agenda Item 4.4
5	14 (24 October 2018)	The QDAF member to provide information regarding an East Coast Indigenous Fishing Permit (FIP) to TIB fishers out of session, to be circulated by AFMA.	QDAF AFMA	Complete. Information on a Queensland Indigenous Fishing Permit is provided at Attachment 1.4b . This information was circulated to HCWG members on 11 July 2019.

#	Meeting	Action item	Responsibility	Status
6	14 (24 October 2018)	Malu Lamar, AFMA and TSRA to meet and discuss a way forward in terms of an MOU/combined strategy to assist in improved data collection and proposed management arrangements in support of a black teatfish opening.	Malu Lamar AFMA TSRA	<p>Not completed.</p> <p>AFMA will continue to work with all stakeholders and the HCWG on a strategy to improve data collection and develop management arrangements in support of a black teatfish opening. This action item was developed in response to industry observers advocating for the development of an industry based MOU that outlines the standards of data needed to demonstrate improved reporting.</p> <p>AFMA recommends that this proposed action be further discussed under Agenda item 4.3, Black Teatfish.</p>
7	14 (24 October 2018)	AFMA to draft a letter on behalf of the HCWG expressing the support the re-seeding research being pursued by industry members in Ugar.	AFMA	<p>Not for actioning.</p> <p>AFMA is supportive in principle, of research that may benefit industry development and is able to offer specific expertise and advice as needed. The HCWG is an advisory body to the PZJA. Although well intended, it is beyond the Working Groups terms of reference to provide letters of support to third parties.</p>



Australian Government

Australian Fisheries Management Authority

14th Meeting of the Torres Strait Hand Collectables Working Group

24 October 2018, Erub Island

Meeting Record

Note all meeting papers and minutes
are available on the PZJA webpage:

www.pzja.gov.au

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1 Preliminaries

1.1 Opening prayer, acknowledgement of Traditional Owners, welcome and apologies

1. Rocky Stephen opened the meeting in prayer at 08:57 am.
2. The Chair welcomed attendees to the 14th meeting of the Torres Strait Hand Collectables Working Group (HCWG 14) at Aunty Norah's Ark on Erub (Darnley) Island. The Chair acknowledged the Traditional Owners of the land on which the meeting was held and paid respect to Elders past, present and future. The Chair further acknowledged the value of the knowledge and experience attendees would impart at the meeting and thanked them for taking the time to attend.
3. Attendees at the Working Group are detailed in Table 1 below.

Table 1. List of attendees at the HCWG14.

Members	
Anne Clarke	Chair
Andrew Trappett	Australian Fisheries Management Authority (AFMA) Member
Allison Runck	Torres Strait Regional Authority (TSRA) Member
Tim Skewes	Scientific Member
Danielle Stewart	Queensland Department of Agriculture and Fisheries (QDAF)
Maluwap Nona	Traditional Inhabitant member for Gudumalulgal and Maluialgal
Michael Passi	Traditional Inhabitant member for Kemer Kemer Meriam
Patrick Mills	Traditional Inhabitant member for Kaiwalagal
Georgia Langdon	Executive Officer, AFMA
Observers	
Jimmy Gela	Malu Lamar representative
Jerry Stephen	TSRA Board Member for Ugar and Portfolio Member for Fisheries
Patrick Bonner	Traditional Inhabitant fisher – Poruma (Coconut) Island
Simon Naawi	Traditional Inhabitant fisher – Masig (Yorke) Island
Patterson Mosby	Traditional Inhabitant fisher – Masig (Yorke) Island
Paul Lowatta	Traditional Inhabitant fisher – Masig (Yorke) Island
Dennis Passi	Traditional Inhabitant fisher – Mer (Murray) Island
Tony Salam	Traditional Inhabitant fisher – Thursday Island
Kapua Gutchen	Traditional Inhabitant fisher – Erub (Darnley) Island
Rocky Stephen	Traditional Inhabitant fisher – Ugar (Stephen) Island
Ritia Gutchen	Traditional Inhabitant industry – Erub (Darnley) Island
Eva Plaganyi	Commonwealth Scientific and Industrial Research Organisation (CSIRO)
Nicole Murphy	CSIRO
Nick Boucher	TSRA

4. Apologies received are detailed in the Table 2 below.

Table 2. List of apologies for HCWG14.

Apologies	
Francis Pearson	Industry – Traditional Inhabitant member for Kulkaigal
Ian Liviko	PNG National Fisheries Authority (NFA) Invited Participant
Mark David	Invited Traditional Inhabitant fisher – Iama (Yam) Island

1.2 Adoption of agenda

5. The Working Group agreed that the key priority for the meeting was to progress the draft Beche-de-mer Harvest Strategy. The Working Group also agreed that Agenda Item 2.3 Native Title Update be postponed until the Malu Lamar Representative was available.
6. Various items from the 'parking bay' identified during the Harvest Strategy Workshop the day earlier were agreed to be discussed under the relevant agenda items of the day. This included black teatfish under Agenda Item 3.3, the open access policy under Agenda Item 3.5 – Future Management Priorities and a discussion on white teatfish and the use of hookah, the reporting of discards and a TIB licensing review, under Agenda Item 4 - Other Business.
7. The Working Group adopted the draft agenda (Attachment A).

1.3 Declarations of interest

8. As outlined in PZJA Fisheries Management Paper No. 1, all members of the Working Group must declare all real or potential conflicts of interest in Torres Strait hand collectable fisheries at the commencement of the meeting (see Table 3 below).

Table 3. Declared interests from each participant.

Name	Position	Declaration of interest
Anne Clarke	Chair	Nil.
Andrew Trappett	AFMA Member	Employed by AFMA, no pecuniary interests or otherwise
Allison Runck	TSRA Member	Employed by TSRA, no pecuniary interests or otherwise
Tim Skewes	Research Member	CSIRO/Independent Consultant. Previous principal scientist for Torres Strait Scientific Advisory Committee (TSSAC) project to develop a harvest strategy for the TSBDMF. Previous CSIRO researcher for TSSAC project investigating traditional take of finfish in Torres Strait.
Maluwap Nona	Industry Member	TIB licence holder, Traditional Inhabitant Gudumalulgal and Maluialgal; Chairperson of Malu Lamar; Director of MDW Fisheries Association on Mer.

Name	Position	Declaration of interest
Michael Passi	Industry Member	TIB licence holder, Traditional Inhabitant Kemer Kemer Meriam
Patrick Mills	Industry Member	TIB licence holder; Chairperson of the Torres Strait Fisheries Association, Traditional Inhabitant Kaiwalagal
Jimmy Gela	Malu Lamar rep	Deputy Chair of Malu Lamar , Erubam Le PBC Chair
Georgia Langdon	Executive Officer, AFMA	Employed by AFMA, no pecuniary interests or otherwise
Jerry Stephen	Observer	TSRA Board Member for Ugar and Portfolio Member for Fisheries
Patrick Bonner	Observer	Traditional Inhabitant fisher – Poruma (Coconut) Island
Simon Naawi	Observer	Traditional Inhabitant fisher – Masig (Yorke) Island
Patterson Mosby	Observer	Traditional Inhabitant fisher – Masig (Yorke) Island
Paul Lowatta	Observer	Traditional Inhabitant fisher – Masig (Yorke) Island
Dennis Passi	Observer	Traditional Inhabitant fisher – Mer (Murray) Island
Tony Salam	Observer	Traditional Inhabitant fisher – Thursday Island
Kapua Gutchen	Observer	Traditional Inhabitant fisher – Erub (Darnley) Island
Rocky Stephen	Observer	Traditional Inhabitant fisher – Ugar (Stephen) Island; Chair of Brother Bear Fisheries
Ritia Gutchen	Observer	Traditional Inhabitant industry – Erub (Darnley) Island
Eva Plaganyi	Observer	Project staff for PZJA funded research projects
Nicole Murphy	Observer	Project staff for PZJA funded research projects
Nick Boucher	Observer	Employed by TSRA, no pecuniary interests or otherwise

9. Other local observers from Erub were present during various agenda items throughout the meeting however their names were not captured for the meeting record.

1.4 Action items from HCWG13 and previous meetings

10. The Working Group acknowledged that only minor comments were received on the draft meeting record which was finalised out of session and circulated to members on 10 October 2018.

11. The Working Group noted the report provided by the Executive Officer advising of the status of actions arising from previous HCWG meetings (see Table 4 below).

Table 4. Status of action items arising from previous HCWG meetings.

#	Meeting #	Action item	Responsibility	Status
1	9 (20-21 June 2016)	AFMA to review the size limits set for the Torres Strait Beche-de-mer Fishery taking into consideration the size limits in place in Queensland and the Commonwealth Coral Sea Fishery.	AFMA	In progress To be addressed as part of the Beche-de-mer Harvest Strategy Project
2	11 (27 June 2017)	Consideration on whether or not changes should be made to the current size limit for Prickly Redfish be undertaken during the Harvest Strategy Workshop noting relevant data will be presented.	AFMA	In progress Information on size limits was presented at the preceding Harvest Strategy Workshop in June 2017. The Workshop agreed that first consideration should be at first maturity and next consideration could be to better align with the size limits used for the East Coast BDM Fishery which are generally more conservative. (Source: CSIRO HSW Milestone Report 2, June 2017) <ul style="list-style-type: none"> • Current Torres Strait size limit: 30cm • Current East Coast size limit: 50cm. • New proposed size limit for Torres Strait: 40cm As per action item 1, size limits will be reviewed as part of the Harvest strategy project.
3	11 (27 June 2017)	Industry members and observers to submit any outstanding catch reports to AFMA as a matter of priority.	Industry	Completed AFMA received some catch records following the meeting. The voluntary docket book system has not been replaced with a Mandatory Fish receiver System (starting 1 December 2017). Industry however are still encouraged to submitted any historic docket book data they may still hold.

#	Meeting #	Action item	Responsibility	Status
1	13 (24 July 2018)	AFMA to ensure Malu Lamar is included in all aspects of consultation regarding the proposed legislative amendments to the Act and the Regulations.	AFMA	Ongoing There has been no additional consultation on the proposed legislative amendments since the last HCWG13.
2	13 (24 July 2018)	AFMA to clarify the information in paragraphs 7 and 11 of Agenda Item paper 2.3 from HCWG13	AFMA	Complete Text from this paper was sourced directly from documents produced by the Native Title Office and the TSRA regarding the Akiba Decision. See Meeting Papers 1.4c & d.
3	13 (24 July 2018)	AFMA to clarify answers and report back to industry regarding the rules about licencing and the fish receiver system.	AFMA	Complete An information sheet with answers to each of the questions raised at HCWG13 can be found at Meeting Paper 1.4e.
4	Out of Session	The TSRA to assist TIB licence holders to develop a proposal to lift the hookah ban when fishing for white teatfish, to be put up to the PZJA for consideration.	TSRA	Ongoing The TSRA are currently reviewing historic information on previous decisions and concerns regarding the use of hookah in the beche-de-mer fishery and earlier developmental permits that were granted. A discussion paper summarising this information with an action plan moving forward is to be developed and circulated to members and AFMA out of session from the HCWG for industry comment. This is intended to contribute to a full draft proposal to be presented at the next HCWG meeting in early 2019.

Action Item 1 – Malu Lamar Consultation on Legislative Amendments

12. An industry member expressed concern over the Observer status of Malu Lamar within PZJA forums and as such not being able to engage at the same level as PZJA Members. The Working Group was reminded by AFMA that the HCWG is an advisory body only, not a decision making body, however AFMA is supportive of the request for Malu Lamar to seek membership status on the PZJA and in the interim, the Working Group remains very committed to continued engagement with Malu Lamar across all PZJA forums, particularly on legislative amendments.

Action Item 4 – Hookah ban

13. Some industry members expressed frustration over the length of time taken for the TSRA to progress the hookah proposal and advocated for consideration of the draft proposal to occur out of session of the HCWG rather than waiting until the next meeting. The TSRA member advised that out of session work was not the best method for seeking advice on such an important topic as the use of hookah in the fishery. Some industry members expressed support for Malu Lamar to develop their own proposal and fast track the issue to the PZJA, separate to the work of the TSRA. These members agreed such a proposal required final advice from the Malu Lamar representative who was absent from the meeting during this discussion.

1.5 Out of session correspondence

14. The Working Group noted the correspondence circulated out of session since HCWG 13 held on 24 July 2018.

2 Working Group Updates

2.1 Industry update

15. The Working Group noted updates provided by Traditional Inhabitant members and observers regarding the recent performance of hand collectable fisheries and strategic issues, including economic trends, affecting the management and development of these fisheries.
16. Traditional Inhabitant industry members and observers raised the following strategic issues and concerns:
 - a) the status of sandfish stocks needs to be reviewed noting that industry members from Kaiwalagal and elsewhere are supportive of the sandfish TAC and reopening other closed species (including surf redfish and black teatfish) to alleviate fishing pressure on other beche-de-mer species;
 - b) industry requested more information be provided by the TSRA in regards to fisheries management issues and small business operators accessing fisheries development funding. Industry members requested that TSRA specifically visit the Kemer Kemer Meriam cluster and provide an update on what assistance is available for small business operators;
 - c) Gudumalugal nation is looking to work closely in partnership with Kemer Kemer Meriam nation with regards to fishing access in Kemer Kemer Meriam waters with the support of Malu Lamar;
 - d) Strong industry support for a standalone TAC for curryfish species given recent increases in targeting;
 - e) requests for support to attract outside professional assistance in upskilling TIB operators within the finfish fishery and to seek greater input from Traditional Inhabitants on the types of training required and that can be made available;

- f) TIB concern regarding the “property right” value of a Traditional Inhabitant Boat licence in regard to seeking financial assistance from banking institutions. This was considered a significant block to small business development in the TIB industry. Industry members were advised that the TIB licence has no legal “property right” value as the licences currently operate under an open access policy;
- g) requests from industry to review the process of verification and authorisation of Traditional Inhabitant identification forms. Some observed the process is considered too time consuming due to the requirement of having the relevant community Mayor sign, when the Mayor often does not have a good understanding on who is in the community. Suggestions were made for the PBC Chair to be a signatory instead of the Mayor; and
- h) concerns about the Australian Maritime Safety Authority (AMSA) national requirement for all commercial operators to hold a Coxswain’s ticket and the understanding that industry members not being able to apply for prior learning recognition.

17. With regards to catch rates and on-water observations, industry members and observers noted the following points:

- a) fishing effort on Poruma has shifted more towards beche-de-mer since the crayfish season closed in July 2018;
- b) beche-de-mer fishing effort (mostly curryfish species) on Ugar has slowed down as there has been greater focus on finfish species with reports of 15-20 mackerel per day per fisher;
- c) prickly redfish catches around Mer are starting to decline. There are, however some reports of good recovery rates on certain reefs; while other reefs have not shown signs of recovery in over six months;
- d) no evidence of beche-de-mer stocks depleting around Masig however fishers are reported to be travelling further to deeper waters when the tides suit.

2.2 Government updates

2.2.1 AFMA update

18. The Working Group noted an updated provided by the AFMA member regarding management issues relevant to Torres Strait hand collectable fisheries including:

- a) legislative amendments to the *Torres Strait Fisheries Act 1984* and the *Torres Strait Fisheries Regulations 1985*;
- b) the Australian National Audit Office audit on the coordination arrangements of Australian Government agencies operating in the Torres Strait;
- c) the new Assistant Minister for Agriculture and Water Resources;
- d) the AFMA domestic compliance program;
- e) and the latest Fishery Status Reports from the Australian Bureau of Agriculture and Resource Economics (ABARES), most notably that:
 - i. In 2017, the status of fishing mortality and biomass for the beche-de-mer basket (18 species) changed from *not subject to overfishing*, and *not overfished* (green) to uncertain (yellow). This is largely due to the recent increase in targeting of curryfish species.
 - ii. Industry members noted that the biomass status for sandfish is still considered to be overfished (red) which was based the most recent independent survey information from 2009. Industry expressed a keen

interest in undertaking updated surveys to better understand the biomass status of sandfish in the Torres Strait.

2.2.2 TSRA Update

19. The Working Group noted an update provided by the TSRA member regarding TSRA Fisheries Program activities:

- a) The Fisheries Summit was held in August 2018 to discuss a number of priority issues for fishery development in the Torres Strait, including progressing the development of a TRL management plan. A resolution was passed in support of a 66.17 per cent catch share allocation for the TIB sector. Two community representatives and Malu Lamar were elected to the TSRA Board Fisheries Steering committee that oversees the development of an independent body responsible for holding fisheries assets currently held by the TSRA. Cluster groups also nominated new members for Traditional Inhabitant representation on all PZJA forums effective as of 1 January 2019.
- b) The current project looking at a common branding strategy for Torres Strait seafood products is due to be finalised early 2019. A key output of the project will be a handbook for fishers with advice on how to export products and access supply chains.
- c) TSRA are investing in fisheries infrastructure which includes an upgrade to the Erub Community freezer and other processing facilities in other communities to assist fishers.
- d) TSRA through the Torres Strait Maritime Pathways program are providing exclusive Coxswains training over the coming months to help support TIB fishers meet the AMSA Coxswains ticket requirement before implementation in June 2020. All training course, travel and accommodation costs will be funded by TSRA. All TIB fishers were encouraged to register for the course as places are limited.

20. Industry members and observers were advised that although the coxswains' ticket is a national requirement through AMSA, it does not preclude a Traditional Inhabitant from applying for a TIB licence.

21. Other industry members requested that under TSRA's seafood branding project and the infrastructure project, the TSRA provides training to assist fishers in processing and exporting their product. It was also noted that improved drying facilities for beche-de-mer are required to supply improved export quality product to the market as salted product prices are declining.

2.2.3 QDAF Update

22. The Working Group noted an update provided by the QDAF member, most notably that:

- a) QDAF implemented a Sustainable Fisheries Strategy in June 2017. A key action under the Strategy was to establish working groups for all harvest fisheries including sea cucumber.
- b) The Sea Cucumber Fishery Working Group's 3rd meeting is scheduled for November 2018 and a harvest strategy for the East Coast Sea Cucumber Fishery is currently being drafted and scheduled for operationalisation by 1 July 2019.
- c) All East Coast primary and tender vessels are required to carry a Vessel Monitoring System by 2020.
- d) The East Coast Sea Cucumber Fishery has a Total Allowable Catch of 361 tonnes which is almost always fully caught using hookah.

- e) The Fishery has been operating under industry proposed standard operating procedures and a rotational harvest strategy which has adequately supported their Wildlife Trade Operation Export Approvals until a formal harvest strategy is implemented.
- 23. In response to questions about Torres Strait/East Coast dual endorsement, industry members and observers noted that QDAF have considered this previously but it has never been fully developed.
- 24. An annually renewable Indigenous Fishing Permit (IFP) is available, for Indigenous fishers to access the East Coast fishery. The QDAF member agreed to provide additional information to TIB fishers out of session regarding the criteria for an IFP.

ACTION ITEM #1 – The QDAF member to provide information regarding an East Coast Indigenous Fishing Permit (IFP) to TIB fishers out of session, to be circulated by AFMA.

2.3 Native Title update

- 25. The Traditional Inhabitant representative for Gudumalulgal and Maluialgal, who is also the Chairperson of the Malu Lamar (Torres Strait Islanders) Corporation RNTBC provided an update to the Working Group on behalf of the Malu Lamar representative.
- 26. The Working Group noted the following key points:
 - a) Consultation is to commence shortly with Kemer Kemer Meriam nation regarding the mapping of Native Title sea country spatial boundaries.
 - b) Consultation on selecting plaintiffs for the Part B Sea Claim is ongoing, although slightly delayed.
 - c) A court hearing for the Part B sea claim is scheduled for 5 November 2018.
 - d) There is an upcoming Annual General Meeting for the Malu Lamar Corporation.

2.4 PNG National Fisheries Authority update

- 27. This agenda item was not discussed as the PNG NFA Invited Participant was not in attendance.

3 Management

3.1 Draft Beche-de-mer Harvest Strategy

Working Group members recommended that the draft Harvest Strategy be put forward to the PZJA to seek agreement to release the Strategy for public consultation in early 2019. This was also strongly supported by industry observers.

- 28. CSIRO presented the draft final Harvest Strategy to the Working Group. The Working Group acknowledged that the information formulated in the Harvest Strategy had been collated from the various stakeholder workshops held over the past two years.
- 29. The draft Harvest Strategy provides clear and practical guidance for future sustainable fishing, including the data requirements and conditions for potential fishery expansion. The framework also includes static management controls such as size limits and spatial closures to complement fishery management measures and other traditional community management initiatives.
- 30. Following the fourth and final Harvest Strategy Workshop held the day earlier on Tuesday 23 October 2018, the Working Group discussed the draft Harvest Strategy

document section by section and made tracked changes to the document live during the discussion.

31. Given the extensive consultation and input provided to the Harvest Strategy Framework by stakeholders over time, changes to the draft final version in the discussion were relatively minor. A summary of the key discussion points and changes to the document include:

- a) Agreement that references in the text regarding catch per species per day should be considered as 'gutted weights' (rather than 'landed weights') to better reflect the legislation and the calculation of Total Allowable Catches.
- b) The Working Group noted that in earlier Harvest Strategy Workshops, stakeholders discussed an overarching objective to acknowledge, empower and operationalise Native Title Rights and interests including customary and traditional laws of individual nation groups, which also includes acknowledging and incorporating local knowledge and the ability to locally manage resources.
- c) Working Group members and observers also noted that native title rights are recognised and regulated under the *Native Title Act 1993* and not the *Torres Strait Fisheries Act 1984*. To ensure clarity to stakeholders on the scope and objectives of the Harvest Strategy, the Working Group agreed to include the following statement:

The HS has been designed to have regard to traditional knowledge and the ability for communities to manage fishery resources locally (e.g. voluntary spatial closures), through acknowledging and incorporating customary and traditional laws. It is recognised that there are differing cultural laws for individual nation groups which may be applied by communities to supplement fishery management measures. These include and are not limited to Malo ra GELAR (Malo's Law) of Kemer Kemer Meriam Nation, Saabi law of Maluilgal Nation, Saabi law of Gudumalulgal Nation, Kulkalgal Nation and Saabi law of Kaurareg Nation.

- d) Further acknowledgement that Papua New Guinean Traditional Inhabitants are included in the scope and objectives of the Harvest Strategy by way of reference to the definition of Traditional Inhabitant under the *Torres Strait Treaty*.

**** two Traditional Inhabitant members left the discussion ****

- e) Agreement to change references of 'voluntary management' (e.g. spatial closures) to 'community management' in acknowledgement that community management of fishery resources will be need to be enforced through traditional protocols specific to each community (e.g. community by-laws) but will not be specified directly within the Harvest Strategy. It was also noted that penalties for any breaches of cultural protocol must be considered.
- f) The Working Group recommended that community management measures such as spatial or temporal closures (e.g. during spawning periods) will require increased communication and awareness among communities and that details of this information be provided in an attachment to the Harvest Strategy.
- g) Industry members and observers advocated that the support of Island Councils, Prescribed Body Corporate Chairs and Traditional Owners is important to implement any community management measures.
- h) The Working Group noted that if agreed to, some community management measures may be formally integrated in to the Harvest Strategy framework in time.

- i) Agreement that under certain circumstances, it may be necessary to amend the Harvest Strategy. If the Harvest Strategy framework is required to be changed or reviewed, any changes will be consulted on through the Hand Collectables Working Group.

32. The Working Group noted the benefits of how a scientifically robust Harvest Strategy accompanied by good data collection can be used as a demonstrable tool in showcasing the sustainability of the Torres Strait Beche-de-mer fishery on a national and international scale. As the Harvest Strategy provides a clear and transparent pathway for future sustainable fishing, agreed on by stakeholders, changes to fisheries management can be undertaken more efficiently. It can also be used to support funding applications for research projects.

Total Allowable Catch

33. The Harvest Strategy recognises that the Torres Strait Beche-de-mer fishery is a multispecies fishery comprising species with different life histories, economic value, distributions and fishing pressures. As such, all species are now categorised into one of five different categories with revised recommended TACs for individual species and combined species baskets with respective trigger limits.
34. Proposed TACs and trigger limits were formulated using historic survey estimates of biomass, with conservative estimates of sustainable catch, or where available, historic catch data and industry stakeholder information. The Working Group noted that trigger limits are simply a reference point, used to initiate a closer examination of the species and trends in available catch data.
35. Based on the new categorisation of species, the Working Group discussed and agreed to the following changes to Total Allowable Catches under the Harvest Strategy:
- a) That surf redfish and sandfish remain closed, with a TAC of 0 tonnes;
 - b) That black teatfish remains closed acknowledging that the Harvest Strategy outlines a pathway for a trial opening and a recommended TAC of 15 tonnes;
 - c) That white teatfish remains the same (15 tonnes);
 - d) That prickly redfish remains at 15 tonnes, noting that this was reduced down from 20 tonnes in early 2017;
 - e) That hairy blackfish, now considered a highly targeted species, and removed from the 80 tonne basket limit, now has a standalone starting value TAC of 5 tonnes;
 - f) That curryfish species (*Stichopus herrmanni*, *Stichopus vastus* and *Stichopus ocelatus*) be removed from the 80 tonne basket limit, and now have a standalone TAC of 60 tonnes. The Working Group also agreed that *S. vastus* should have a trigger limit of 15 tonnes within the 60 tonne TAC;
 - g) That deepwater redfish be removed from the original 80 tonne basket limit and assigned a standalone TAC of 5 tonnes. A low TAC was agreed to in recognition that deepwater redfish is an important species but that data on the species is currently very poor;
 - h) That greenfish, also now considered a highly targeted species, be removed from the 80 tonne basket limit, have a standalone TAC of 40 tonnes;
 - i) That all other species (burrowing blackfish, elephant trunkfish, lollyfish, deepwater blackfish, golden sandfish, brown sandfish, leopardfish and stonefish) remain as a combined basket with a new TAC limit of 50 tonnes and individual species trigger limits (See **Attachment B** for species specific TACs and triggers).

36. The Working Group noted that should a species within the 50 tonne basket limit become of greater commercial interest and warrant its own standalone TAC, the remaining basket limit would be adjusted accordingly.
37. AFMA acknowledged that the TDB02 Catch Disposal Record books currently do not include specific codes for each species however, AFMA is looking to update this list. In the interim, industry is strongly encouraged to report all catches to species level. The Working Group supported the need to continue to separate the identification of blackfish species (Burrowing, Deepwater and Hairy) and Curryfish species in particular, where possible.

Reference Points

38. The Working Group noted that reference points are an important component of any Harvest Strategy, however the application of reference points in the Torres Strait Beche-de-mer fishery is difficult due to its current data poor nature. In order to demonstrate that the Harvest Strategy is consistent with the principles of the Commonwealth Fisheries Harvest Strategy Policy and Guidelines, the Harvest Strategy uses proxies for reference points where possible.
39. The Working Group noted that the Harvest Strategy uses a more conservative value (0.4*K) for the limit biomass level due to the biology and density dependent recruitment of sea cucumbers, in acknowledgement of an increased risk to overfishing sea cucumber stocks if the density of reproducing animals becomes too low.
40. For some species, biomass estimates using available historic survey data can be used to understand where a population biomass is relative to where it used to be, in consideration of a target biomass estimate. It is acknowledged that as more data become available it may become easier to derive sensible reference points over time.

Decision Rules

41. The Working Group noted that a range of decision rules within the Harvest Strategy tiered framework have been developed for the following scenarios:
 - a) monitoring and adjusting catches annually, with agreement that a fishery will be closed if no data are provided;
 - b) managing mixed species/basket catches;
 - c) re-opening a fishery that has been closed, or overfished;
 - d) how to increase Total Allowable Catches if good quality fishery data are available, and;
 - e) how to further increase Total Allowable Catches if high quality survey data are available.
42. It was acknowledged that iterative changes to the decision rules have been made throughout the Harvest Strategy workshops. The Working Group did not make any substantial changes to the decision rules during this discussion.

Size Limits & Conversion Ratios

43. The Working Group noted that the Harvest Strategy incorporates static management controls such as minimum size limits that may be implemented to complement and strengthen other management measures.
44. Minimum size limits are set to protect at least the first age-at-maturity, by allowing for sea cucumbers to spawn before being fished.
45. CSIRO presented a summary of current versus proposed size limits under the Harvest Strategy and sought feedback from the Working Group on the recommended changes.

46. The Working Group discussed and recommended the following changes to the proposed minimum size limits in the beche-de-mer fishery:
- a) that curryfish vastus be increased from 15cm to 20cm to be slightly more precautionary and consistent with the size limits from the Queensland East Coast sea cucumber fishery, noting that further information on size at maturity is required.
 - b) That due to the contracting nature of Hairy blackfish during handling, a more appropriate minimum size limit of 15cm be applied which ensures that the animals can still reach size-at-maturity (12cm) and have time to breed. This recommendation was strongly supported by observers to the HCWG14 who are actively fishing these two species.
47. To assist fishers with voluntarily complying with minimum size limits under the Harvest Strategy, CSIRO is aiming to provide fishers with support tools (e.g. length stickers).
48. The Working Group also discussed the difficulty in identifying male versus female animals unless they are gutted and suggested that where possible, this information should also be recorded during processing.
49. A complete summary of the agreed size limits is tabled in **Attachment C**.
50. The Working Group also noted a brief presentation on beche-de-mer conversion ratios from CSIRO. Conversion ratios are used to calculate original sea cucumber weights from different processing stages (e.g. salted, dried). They are important for management as they are used to track total catches against total allowable catches. The more accurate the conversion ratio is, the less likely catches are over or underestimated.
51. Significant work has been undertaken on understanding conversion ratios for some species however some information gaps remain, particularly for new processing methods (boiled and salted) for newly targeted species such as curryfish.
52. To support the collection of data to better understand gaps in size limits and conversion ratios, CSIRO presented interested fishers with morphometric sampling kits that can be used to measure and record the lengths and weights of individual animals from the point of capture through each stage of processing. Fishers are encouraged to tag, measure and weight 3-5 animals per batch and record this information on the data sheets provided. In the margins of the meeting, fishers from Erub, Poruma, Murray, Masig and Ugar were each provided with sampling kits and trained on how to use them correctly.

3.2 Catch data summary

53. An overview of catch data reported in the beche-de-mer fishery under the Fish Receiver System was presented by AFMA out of session (Tuesday 23 October 2018), during the Harvest Strategy Workshop.
54. The Working Group noted the following key points:
- a) A total of 34.3 tonnes has been reported in the beche-de-mer fishery this season (as of 26 September 2018).
 - b) The highest reported catch is 24.1 tonnes of curryfish species, followed by 8.2 tonnes of prickly redfish.
 - c) Approximately 80% of all Catch Disposal Records (CDRs) returned to AFMA contained voluntary information on the Area Fished. These reported areas were Warraber (Area 12), Darnley (Area 16), Cumberland (Area 17) and Don Cay (Area 19).
 - d) Of the total reported catch, almost half (45%) was reportedly taken from within Area 16, 6% from Area 17, and 2% reported from Areas 12 and 19.

- e) Curryfish is the only species reported consistently each month this season, with peak catches reported in January, February and April.
 - f) In total, 25 of 126 TIB licence holders have reportedly landed catches of beche-de-mer to 9 different fish receivers.
 - g) Since the introduction of the mandatory Fish Receiver System on 1 December 2017 overall levels of catch reporting have improved. A total of 144 CDRs were received this season.
 - h) Only 49% of CDRs completed and returned to AFMA were received within 24 days. 24 days accounts for the maximum 3 day limit to send the white copy CDR to AFMA after the product is weighed, plus a conservative estimate of time (21 days) needed for CDRs to reach AFMA in the post.
55. Industry participants were asked to review the available data and catch trends and provide advice on its likely accuracy in reflecting true catch and effort in the fishery.
56. Industry members reported that fishers on Mer had been consistently catching Prickly redfish throughout the season and suggested that some catch data may still need to be submitted.
57. Industry participants were encouraged to continue to submit catch records in a timely manner and to provide voluntary information on fishing effort and area on the CDRs. A suggestion was made to allow for the electronic submission of data using tablets or smartphones. AFMA advised that this may be possible in the future but the priority is ensuring at least the paper catch records can be filled in accurately first.
58. Industry members and observers advocated strongly for AFMA to conduct another round of education and awareness programs for the fish receiver system to help fishers and receivers improve their catch records. AFMA acknowledged that there is budget available to support this in the 2018/19 financial year.

3.3 Black Teatfish

Industry members and observers agreed to the following performance targets to demonstrate improved catch reporting to the PZJA;

- a) 75 per cent of CDRs being submitted on time, by April 2019 (HCWG15); and**
- b) 100 per cent of CDRs being submitted on time by July 2019**

59. AFMA provided a brief summary of the current situation on black teatfish, noting that the PZJA has previously agreed that fishing for black teatfish will remain closed until the risk of exceeding the TAC is substantially reduced. At the July 2018 meeting, HCWG13 acknowledged that another black teatfish opening is largely contingent on demonstrated improved catch reporting by industry under the fish receiver system.
60. As a suggested way forward, AFMA proposed that the working group agree to some performance targets for improved catch reporting (on other species) for industry to meet in order to demonstrate a commitment to the PZJA of providing timely and accurate data.
61. Noting that currently only 49 per cent of CDRs are received by AFMA on time, industry observers agreed to aim for 75 per cent of CDRs being submitted on time, by April 2019 (HCWG15) and a 100 per cent of CDRs being submitted on time by July 2019. This indicative timeline allows for an out of session decision by the PZJA, Native Title Notifications and adequate industry notification prior to any opening, previously suggested to be December 2019.

62. The Working Group was asked to discuss and advise on preferred management arrangements that would support a successful re-opening.
63. An industry observer suggested that the TAC (of 15 tonnes) be divided up across each quarter in a season. This would mean every three months, industry would have access to 3.5 tonnes of black teatfish. If the 3.5 tonnes was over caught in any one quarter that extra catch would be deducted from the next quarter's allocation. This would require AFMA notifying industry with catch watch alerts to advise of catches against the TAC. This proposal was supported by both industry members and observers. The Working Group acknowledged that the proposed 15 tonne TAC would apply to the whole of the Torres Strait.
64. Other industry participants suggested that a 10 or 12 tonne trigger limit be applied (if fishing opens over one month) so that fishing effort can be slowed or paused while total catches are tallied. The Working Group was reminded that the previous TAC of 15 tonnes was already considered a conservative level, with up to 25 tonnes recommended as a sustainable take. AFMA also noted that monitoring catches against triggers still remains an issue if there is a lag in catch reporting.
65. Improved reporting needs to be supported by another round of community visits of education and awareness, for licenced fish receivers in particular and authorised agents, on the fish receiver system early in 2019.
66. An industry observer from Erub suggested that all fish receivers have the ability to submit data from Catch Disposal Records via text or phone call to AFMA daily. Industry members and observers were supportive of this suggestion, noting that while feasible, the conditions of a fish receiver licence maintains the requirement to submit the original white copy CDR will still apply. The Working Group also requested that daily texts be sent out from AFMA advising of overall catches against the TAC, as well as ensuring the public licence register is kept up to date.
67. To help address the issue of reporting time lags, the QDAF member suggested that AFMA implement a temporary trial of daily catch reporting via electronic means (texting, email or fax) for other beche-de-mer species for one month, with the requirement to still submit original paper copy CDRs. This would provide industry the opportunity to confidently demonstrate to the PZJA that timely and accurate catch reporting can be achieved under a black teatfish opening as well. The Working Group noted that suggestion.
68. Industry members and observers advocated for the development of an industry Memorandum of Understanding (MOU) that outlines what standards of data need to be provided over the coming months, as well as the details of the quarterly management arrangements as previously suggested, and a daily reporting trial to then be considered by the PZJA after consultation with AFMA.
69. The Working Group was supportive of Malu Lamar, AFMA and TSRA meeting to develop a combined strategy/MOU of education and awareness to improve catch reporting across the beche-de-mer fishing industry in support of a black teatfish opening.

ACTION ITEM #2 – Malu Lamar, AFMA and TSRA to meet and discuss a way forward in terms of an MOU/combined strategy to assist in improved data collection and proposed management arrangements in support of a black teatfish opening.

3.4 Research

3.4.1 Research update

70. Due to time constraints, there was no research updated provided by the Scientific member.

3.4.2 Five Year Fishery Research Plan

The HCWG recommended that the key research priority for Torres Strait hand collectable fisheries was to undertake an experimental fishing survey to understand the stock status of sandfish on Warrior Reef.

71. AFMA provided a brief overview of the newly developed rolling five-year research plan that is designed to align with the new Torres Strait Scientific Advisory Committee (TSSAC) Strategic Research Plan and inform the TSSAC's annual call for research funding priorities.

72. To date, the key focus of research investment and management resources has been to develop a harvest strategy for the beche-de-mer fishery and improve catch and effort data. Whilst the beche-de-mer Harvest Strategy is likely to inform much of the future research needs in the BDM Fishery, the Working Group was asked to provide advice on the key research priorities identified for hand collectables fisheries to be considered by the TSSAC in 2018/19.

73. The scientific member summarised a suite of current and potential research priorities that have been previously identified for the beche-de-mer fishery as outlined below:

- a) Harvest Strategy Development
- b) Stock assessments
 - i. Surveys
 - ii. Analysis of fishery data (all fishery species)
- c) Conversion ratios
 - i. Curryfish boiled and salted to gutted weight
- d) Biology and ecology
 - i. Habitat, reproduction, growth, recruitment to inform size limits; spatial and temporal management
 - ii. Taxonomy
 - iii. Ecological Risk Assessments
- e) Value adding
 - i. Product handling, processing with training and reference material
 - ii. Alternative products (konowata and marine adhesives)
- f) Climate change impacts/opportunities
- g) Enhancement/reseeding depleted populations
- h) CITES (non-detriment findings), Marine Stewardship Council Certification
- i) Economic analysis, marketing, value chain analysis, fishery capitalisation

74. The Traditional Inhabitant industry member for Gudumalulgal and Maluialgal expressed a keen interest in obtaining a developmental permit to use a larger vessel with hookah to collect data and fish the 15 tonne TAC of white teatfish. While some industry members and observers were supportive, others questioned the research objective of this proposal. The Scientific Member noted that the data collected could be used to

demonstrate that the use of hookah was not going to result in overfishing the TAC; a previous concern of the PZJA. The Scientific Member added, the data collected is unlikely to be useful in understanding stock status of white teatfish without detailed scientific advice and support to ensure the right methodology was used.

75. The Working Group noted that without a clearly defined research question, the proposal was unlikely to be supported by the TSSAC in a bid for research funding; reminding the group that previous scientific advice indicated that
 - a) there are no concerns with the biomass of white teatfish; and
 - b) earlier experimental fishing trials from 2011 clearly demonstrated that deeper caught species can be taken using hookah apparatus.
76. Some HCWG members and observers acknowledged that the investigation of the use of hookah in the beche-de-mer fishery is an important issue in terms of fishery access but that the use of hookah may qualify more as a management priority rather than research priority requiring funding.
77. Noting that sandfish is currently a closed species and the last research survey on sandfish stocks was undertaken in 2010, with an experimental survey conducted in 2012, the Working Group was very supportive of undertaking an experimental survey to understand the biomass of sandfish stocks on Warrior Reef and recommended this as a key research priority for the TSSAC's consideration.
78. The Working Group also acknowledged that some work is currently underway with industry members from Ugar, working closely with CSIRO to investigate the feasibility of a small scale sea cucumber re-seeding program. Members and observers to the meeting expressed unanimous support for this work and requested that a letter be drafted from the HCWG to support any funding applications for the re-seeding research.

ACTION ITEM #3 – AFMA to draft a letter on behalf of the HCWG expressing the support the re-seeding research being pursued by industry members in Ugar.

3.5 Future Management Priorities

The Working Group proposed that the TSRA, working closely with AFMA continue to develop a proposal to lift the hookah ban as a key management priority for the beche-de-mer fishery.

79. As agreed by some Working Group members, and observers, the issue of using hookah to fish for white teatfish was identified as a very important management priority for the beche-de-mer fishery. The Working Group also acknowledged that as an action item from HCWG13, the TSRA is currently developing a proposal to address the issue of lifting the current hookah ban. The following key points regarding this proposal were discussed:
 - a) There are current difficulties in accessing white teatfish by freediving as they occupy deeper habitats;
 - b) There are long standing concerns of the HCWG and PZJA that the use of hookah while fishing for white teatfish poses too great a risk to other beche-de-mer species under the current fishery management arrangements;
 - c) The above concerns need to be adequately addressed and the risk demonstrably reduced to provide confidence to the PZJA that fishing with hookah can be done sustainably;

80. Some industry members and observers reassured the Working Group that the use of hookah would be only to access white teatfish and no other species. Other industry observers, however, expressed strong concerns around how the taking of one species while hookah was being used would be monitored and enforced, to ensure that species other than white teatfish were not being collected using hookah.
81. The Working Group noted that the East Coast sea cucumber fishery, while allowing all catch on hookah, has very stringent rules and management arrangements in place to monitor the fishery including VMS on all vessels, mandatory daily logbook reporting and a requirement to report where, when and how much product is to be unloaded. The QDAF member stated that Queensland Fisheries and Boating Patrol was unlikely to permit the use of hookah for only one species due to the difficulties of monitoring and enforcement.
82. CSIRO suggested that as a management issue, a small trial could be undertaken to test the catch monitoring system using a different fishing method (hookah) with increased data collection (i.e. high resolution spatial data), strong scientific oversight over the types of data being collected and stringent management controls in place. If successful, a trial could serve as a demonstrated case study to support a longer term policy change to allow the use of hookah.
83. To strengthen the trial, the QDAF member proposed closing all other fishery species while the use of hookah was permitted to fish for white teatfish. This would help monitoring and enforcement of the trial management arrangements.
84. AFMA also noted that for hookah to be allowed, the TAC and access to the species would be restricted to a small section of the beche-de-mer industry as not all fishers have access to hookah apparatus.
85. Noting the suggestions of management arrangements and monitoring options put to the meeting, the Working Group proposed that the TSRA, working closely with AFMA, continue to develop a proposal to lift the hookah ban as a key management priority for the beche-de-mer fishery. This was not a formal Working Group recommendation due to meeting quorum requirements, as no HCWG Traditional Inhabitant members were present when this course of action was proposed.

3.6 2018/19 Hand Collectables Budget

86. Due to time restrictions, the agenda paper on the 2018/19 Hand Collectables Budget was taken as read, and not explicitly discussed.

4 Other business

87. Due to time restrictions, the issue of reporting discards and the TIB licence review was deferred to the next meeting.

5 Date & Venue for Next Meeting

88. The Working Group agreed that the next meeting of the HCWG be tentatively scheduled for April 2019.
89. The Chair thanked everyone for their commitment and contributions throughout the meeting which was closed in prayer at 6:30pm by Mr Simon Naawi.

Attachment A – Adopted Agenda

14th MEETING OF THE TORRES STRAIT HAND COLLECTABLES WORKING GROUP

Wednesday 24 October 2018 (8:30 am – 5:00 pm)

Venue: Norah's Ark

Erub (Darnley) Island

ADOPTED AGENDA

The meeting will open at 8.30am on Wednesday 24 October 2018

AGENDA ITEM 1 PRELIMINARIES

1.1 Opening Prayer, acknowledgement of Traditional Owners, welcome and apologies

The Chair will welcome HCWG members, permanent observers, invited participants and observers to the 14th Torres Strait Hand Collectables Working Group.

1.2 Adoption of agenda

The working group is invited to adopt the draft agenda.

1.3 Declarations of interest

Working group members are invited to declare any real or potential conflicts of interests to the group and determine whether a member may or may not be present during discussion of or decisions made on the matter which is the subject of the conflict.

1.4 Action items from previous meetings

The working group is invited to note and discuss the status of action items arising from previous HCWG meetings.

1.5 Out of session correspondence

The working group will note any out of session correspondence on HCWG matters since the previous meeting.

AGENDA ITEM 2 WORKING GROUP UPDATES

2.1 Industry

Industry members and invited participants are invited to provide a brief verbal update on the fishery.

2.2 Government

2.2.1 Australian Fisheries Management Authority (AFMA)

2.2.2 Torres Strait Regional Authority (TSRA)

2.2.3 Queensland Department of Agriculture and Fisheries (QDAF)

The working group will note updates from each of the government agencies.

2.3 Native Title

The working group will note a verbal update from the Malu Lamar representative.

2.4 PNG National Fisheries Authority

The working group will note an update from the PNG NFA member, if present.

AGENDA ITEM 3 MANAGEMENT

3.1 Draft Beche-de-mer Harvest Strategy

CSIRO will present the draft Beche-de-mer Harvest Strategy. The Working Group is invited to provide advice on the final draft in consideration of putting the final document to the PZJA.

3.2 Catch Reporting & Fish Receiver System Update

The working group will note an update on the mandatory fish receiver system and a summary of catch reporting in the Torres Strait beche-de-mer fishery. The working group is also invited to discuss and provide advice on the likely accuracy of data in reflecting true catch and effort data for the BDM fishery.

3.3 Black Teatfish

The working group will consider and recommend catch reporting targets/benchmarks, management arrangements and monitoring mechanisms required to support a black teatfish opening in 2019, to be put forward for PZJA consideration.

3.4 Research

3.4.1 Research Update

The working group will note a verbal update from the HCWG Scientific member.

3.4.2 Five Year Fishery Research Plan

The working group will also discuss and provide advice on research priorities for the beche-de-mer, trochus and pearl shell fisheries under the Torres Strait for the Five-Year Rolling Research Plan 2019/20 – 2022/23.

3.5 Future Management Priorities

3.6 Budget update

AGENDA ITEM 4 OTHER BUSINESS

AGENDA ITEM 5 DATE AND VENUE FOR NEXT MEETING

CLOSE OF MEETING

Attachment B – Harvest Strategy TAC Recommendations

Common name	Scientific name	Commercial value	TAC (t)	Proposed changes/ TAC (t)	Trigger basket TACs	Note re trigger	Max increase (indicators) before needing survey	Max recorded historical catch and year
Sandfish	<i>Holothuria scabra</i>	High	Closed	Closed			5	200t (1994)
Surf redfish	<i>Actinopyga mauritiana</i>	Medium	Closed	Closed			5	60.2t (1998)*
Black teatfish	<i>Holothuria whitmaei</i>	High	Closed	Trial 15t			25	52.7t (1996)
White teatfish	<i>Holothuria fuscogilva</i>	High	15	15			20	16.3t (2014)
Prickly redfish	<i>Thelenota ananas</i>	High	15 (reduced from 20)	15			20	28.1t (2015)
Deepwater redfish	<i>Actinopyga echinites</i>	Medium	Part of 80t limit	5 [#]			40t based on surveys	5.5t (2015)*
Hairy blackfish	<i>Actinopyga miliaris</i>	Medium	Part of 80t limit	5			10 (lower CI survey as uncertain)	28.5t (2001)
Greenfish	<i>Stichopus chloronotus</i>	Medium	Part of 80t limit	40t			40	1.2t (2002)
Curryfish common	<i>Stichopus herrmanni</i>	Medium	Part of 80t limit	60t curryfish			60 (herrmanni)	6.1t (2015); 15t (mid-2018)
Curryfish vastus	<i>Stichopus vastus</i>	Medium	Part of 80t limit	60t curryfish	15	new curryfish trigger	20 (vastus)	see curryfish
Elephant trunkfish	<i>Holothuria fuscopunctata</i>	Low	Part of 80t limit	Part of 50t limit	15	existing value	15	0.4t (2004)
Lollyfish	<i>Holothuria atra</i>	Low	Part of 80t limit	Part of 50t limit	40	half existing	80	0?
Burrowing blackfish	<i>Actinopyga spinea</i>	Medium	Part of 80t limit	Part of 50t limit	5	trial new species	10 (survey eg high around Warrior)	0
Deepwater blackfish	<i>Actinopyga palauensis</i>	Medium	Part of 80t limit	Part of 50t limit	0.5	previous catch	10	0.5t (2001)*
Golden sandfish	<i>Holothuria lessoni</i>	High	Part of 80t limit	Part of 50t limit	0.5	previous catch	5	0.35t (2014)
Brown sandfish	<i>Bohadschia vitiensis</i>	Medium	Part of 80t limit	Part of 50t limit	3	previous catch	5	3.4t (2002)
Leopardfish	<i>Bohadschia argus</i>	Medium	Part of 80t limit	Part of 50t limit	40	existing value	40	9.6t (2003)
Stonefish	<i>Actinopyga lecanora</i>	Medium	Part of 80t limit	Part of 50t limit	5	existing value	5	0.5t (2010)
TOTAL			110t	205t [§]				

[§]including trail opening for black teatfish

catches over 2013-15 approx 5.5t/yr; * possible misidentification

Attachment C – Agreed Size Limits

Common name	Species	Maximum length cm (guide)	Size at maturity cm ²	Size limit TS	Proposed size limit TS*	Size limit EC ¹	Age at maturity TS yrs (size, cm) (model) ³	TAC TS ^t
Sandfish	<i>Holothuria scabra</i>	32	20 (13-25)	18	20 ^{1,2}	20	2 (16.5)	No take
Surf Redfish	<i>Actinopyga mauritiana</i>	38	22-23	22	Leave	25	3 (13.8)	Part of 80t limit
Black Teatfish	<i>Holothuria whitmaei</i>	30	22-26	25	Leave	30	4 (24)	No take
White Teatfish	<i>Holothuria fuscogilva</i>	55	32	32	Leave	40	4 (30.4)	15
Prickly Redfish	<i>Thelenota ananas</i>	70	30-35	30	35 ²	50	4 (30.4)	20
Hairy Blackfish	<i>Actinopyga miliaris</i>	35	12	22	15	20	3 (19.2)	Part of 80t limit
Curryfish (common)	<i>Stichopus herrmanni</i>	55	27-31	27	31 ²	35	-	Part of 80t limit
Elephants Trunkfish	<i>Holothuria fuscopunctata</i>	66	35	24	35 ²	40	-	Part of 80t limit
Lollyfish	<i>Holothuria atra</i>	65	12-19	15	20 ¹	20	-	Part of 80t limit
Deepwater Redfish	<i>Actinopyga echinites</i>	35	9-12	12	20 ¹³	20	3 (19.5)	Part of 80t limit
Curryfish (vastus)	<i>Stichopus vastus</i>	35	-	nil	20	15	-	Part of 80t limit
Burrowing blackfish	<i>Actinopyga spinea</i>	40	-	22	Leave	20	-	Part of 80t limit
Deepwater blackfish	<i>Actinopyga palauensis</i>	35	-	22	Leave	20	-	Part of 80t limit
Golden sandfish	<i>Holothuria lessoni</i>	46	22	18	22 ²	15	-	Part of 80t limit
Brown sandfish	<i>Bohadschia vitiensis</i>	40	15-26	nil	25 ¹²	25	-	Part of 80t limit
Leopardfish	<i>Bohadschia argus</i>	60	30	nil	30 ²	35	3	Part of 80t limit
Greenfish	<i>Stichopus chloronatus</i>	38	14	nil	20 ¹	20	-	Part of 80t limit
Stonefish	<i>Actinopyga lecanora</i>	24	-	nil	15 ¹	15	-	Part of 80t limit

Summary of Actions Arising

#	Meeting #	Action item	Responsibility
1	14 (24 October 2018)	The QDAF member to provide information regarding an East Coast Indigenous Fishing Permit (FIP) to TIB fishers out of session, to be circulated by AFMA.	QDAF AFMA
2	14 (24 October 2018)	Malu Lamar, AFMA and TSRA to meet and discuss a way forward in terms of an MOU/combined strategy to assist in improved data collection and proposed management arrangements in support of a black teatfish opening.	AFMA TSRA Malu Lamar
3	14 (24 October 2018)	AFMA to draft a letter on behalf of the HCWG expressing the support the re-seeding research being pursued by industry members in Ugar.	AFMA

Summary of HCWG14 Meeting Recommendations

#	Recommendation
1	Working Group members recommended that the draft Harvest Strategy be put forward to the PZJA to seek agreement to release the Strategy for public consultation in early 2019. This was also strongly supported by industry observers.
2	The HCWG recommended that the key research priority for Torres Strait hand collectable fisheries was to undertake an experimental fishing survey to understand the stock status of sandfish on Warrior Reef.
3	The Working Group proposed that the TSRA, working closely with AFMA, continue to develop a proposal to lift the hookah ban as a key management priority for the beche-de-mer fishery.

Queensland Indigenous Fishing Permit (IFP)

A Queensland Indigenous fishing permit (or IFP) allows an Aboriginal or Torres Strait Islander person or community to trial a commercial fishing activity without having to initially acquire commercial fishing authorities.

An IFP is generally granted for 1 to 3 years. If you want to continue to operate after this period, you'll need to buy or lease the necessary authorities on the open market, and operate as a standard commercial fisher.

Information on the Indigenous fishing permit (IFP) is available online here:

<https://ablis.business.gov.au/service/qld/indigenous-fishing-permit/4192>

Eligibility Requirements:

What you need to apply for an IFP

You need to fill out an IFP Application Form, and provide:

A business plan that sets out the main elements of your proposed fishing operation, for example:

- area in which you intend to fish
- species of fish you intend to harvest (contact Fisheries Queensland at 13 25 23 before you submit an application to find out what species is unlikely to receive an IFP, or if any IFP quota is available)
- your arrangements for marketing the catch
- size of the boat you'll be using
- how you'll obtain the necessary finance, equipment and training
- what plans you have for acquiring a commercial fishing licence (expected to be within 1 to 3 years).

Proof that you are an Aboriginal or Torres Strait Islander person, for example a certificate of Aboriginality, or a statement from an Aboriginal land council or community organisation that you:

- are of Aboriginal or Torres Strait Islander descent;
- identify as an Aboriginal or Torres Strait Islander person;
- are accepted by the Aboriginal or Torres Strait Island community in which you live.

How your application will be assessed

The factors we consider when making a decision about an IFP include:

- the species you proposed to harvest, their stock status and any sustainability concerns
- existing management arrangements for the species or fishery (e.g. quota species)
- other IFPs issued for a particular fishery or area
- the merit of the applicant, including the business case and previous fishing experience.
- Our first consideration is to ensure the sustainability of fisheries resources.

How long does an application take?

We aim to assess applications within 3 months. However this will depend on the complexity of the application and how much information you have provided. An IFP is considered a future act under the *Native Title Act 1993*. The future act notification process takes a minimum of 35 days, which will start after all required information is provided.

Other requirements for operating under an IFP

Existing rules that apply to commercial fishing, also apply under an IFP. These may include catch logbooks, telephone reporting, vessel tracking, gear restrictions, seasonal closures, area closures and size limits. Great Barrier Reef Marine Park zoning restrictions and commercial vessel registration regulations also apply.

The process for issuing IFPs is currently under review

The management of Queensland's fisheries are being reviewed as part of the Government's 10-year Sustainable fisheries strategy. Actions under this strategy include setting sustainable catch limits for key fish stocks and harvest strategies for all fisheries by 2020.

The strategy also commits to develop an Indigenous commercial fishing development policy to support Indigenous economic development in a way that supports sustainable fishing.

The current IFP process will be reviewed as part of this initiative and will consider the fisheries-related economic development aspirations of Indigenous communities.

Native Title rights and interests

An IFP doesn't affect your existing native title rights and interests. However, you can't sell product that was taken under native title rights, and the product is not part of the IFP. Often, there are further restrictions on an IFP to prevent traditional fishing and commercial fishing taking place at the same time under an IFP.

What if the proposed fishing activity is not currently a commercial fishery?

IFP applications relate to existing commercial fisheries only. If your application relates to a new fishing activity this will need to be assessed under the Developmental Fishing Policy. Contact Fisheries Queensland at **13 25 23** if you are unsure whether your application is a valid IFP.

The commitment under the Sustainable Fisheries Strategy (SFS) to develop an Indigenous commercial fishing development policy is progressing based on feedback on the existing Qld IFP process as well as watching approaches around the country.

If any HCWG members have feedback on QLD's process to date please get in touch with Michelle Winning – michelle.winning@daf.qld.gov.au

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
PRELIMINARIES Out of session correspondence	Agenda Item 1.5 For INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE** the correspondence circulated out of session since the last meeting held on 24 October 2018.

BACKGROUND

2. The following correspondence was circulated out of session since HCWG14 held on 24 October 2018.

Date	Item
13 December 2018	Email to members seeking comment on the draft HCWG14 meeting record. Comments closed on Thursday 20 December 2018.
21 December 2018	Email to members circulating final meeting record from HCWG14.
09 April 2019	Email to members providing an update on recent PZJA meeting outcomes.
10 April 2019	Email to members circulating the final report of the Fisheries Committee PNG Bilateral Meeting held in March 2019.
24 April 2019	Email to members seeking coming on full TSSAC project proposals.
29 April 2019	Email to members seeking availability for HCWG15 (then scheduled for June 2019).
14 May 2019	Email to members circulating first BDM Catch Watch Report for 2019
21 June 2019	Email to members confirming dates for HCWG15
28 June 2019	Email to members seeking comment on the draft agenda for HCWG15 and confirming a two-day meeting.
11 July 2019	Email to members circulating information on Queensland Indigenous Fishing Permits as per an action item arising from HCWG14.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
WORKING GROUP UPDATES Industry and Scientific member update	Agenda Item 2.1 For INFORMATION

RECOMMENDATIONS

1. That the Working Group:
 - a. **NOTE** any updates provided by traditional inhabitant and scientific members;
 - b. **DISCUSS** any strategic issues, including economic trends, affecting the management and development of Torres Strait Hand Collectable fisheries.

BACKGROUND

2. Verbal reports will be sought from traditional inhabitant and scientific members under this item.
3. 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 fisheries. Such understanding will ensure proceedings of the Working Group are focused and may more effectively address each issue.
4. Working group members are asked to provide any updates on trends and opportunities in global markets, processing and value adding. Industry is also asked to contribute advice on economic and market trends where possible. Scientific members are asked to contribute advice on any broader strategic research projects or issues that may be of interest to the Torres Strait in future.
5. At the previous meetings of the Working Group, members discussed a range of strategic issues affecting the management and development of Torres Strait fisheries.
6. HCWG14 noted the following on-water industry updates:
 - a. Fishing effort on Poruma shifted more towards beche-de-mer as a result of the early TRL fishery closure;
 - b. Beche-de-mer fishing effort on Ugar had slowed down with more focus on finfish species and reports of between 15 and 20 mackerel being landed per day per fisher;
 - c. Prickly redfish catches around Mer are in decline; and
 - d. There has been no evidence of beche-de-mer stocks in decline around Masig, however fishers are reported to be travelling further to deeper waters when the tides are favourable.
7. Further, Traditional Inhabitant members and observers raised the following strategic concerns:
 - a. the status of sandfish stocks needs to be reviewed noting that some industry members are supportive of the sandfish TAC and reopening other closed species (including surf redfish and black teatfish) to alleviate fishing pressure on other beche-de-mer species;
 - b. industry requested more information be provided by the TSRA in regards to fisheries management issues and small business operators accessing fisheries development funding. Industry members requested that TSRA specifically visit the Kemer Kemer Meriam cluster and provide an update on what assistance is available for small business operators;

- c. Gudumalugal nation is looking to work closely in partnership with Kemer Kemer Meriam nation with regards to fishing access in Kemer Kemer Meriam waters with the support of Malu Lamar;
- d. strong industry support for a standalone TAC for curryfish species given recent increases in targeting;
- e. requests for support to attract outside professional assistance in upskilling TIB operators within the finfish fishery and to seek greater input from Traditional Inhabitants on the types of training required and that can be made available;
- f. TIB concern regarding the “property right” value of a Traditional Inhabitant Boat licence in regard to seeking financial assistance from banking institutions. This was considered a significant block to small business development in the TIB industry. Industry members were advised that the TIB licence has no legal “property right” value as the licences currently operate under an open access policy;
- g. requests from industry to review the process of verification and authorisation of Traditional Inhabitant identification forms. Some observed the process is considered too time consuming due to the requirement of having the relevant community Mayor sign, when the Mayor often does not have a good understanding on who is in the community. Suggestions were made for the PBC Chair to be a signatory instead of the Mayor; and
- h. concerns about the Australian Maritime Safety Authority (AMSA) national requirement for all commercial operators to hold a Coxswain’s ticket and the understanding that industry members not being able to apply for prior learning recognition.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
GOVERNMENT UPDATES AFMA Update	Agenda Item 2.2.1 FOR INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE** the updates provided by the AFMA member, in particular:
 - a. The implications for listing commercially fished beche-de-mer species on Appendix II of CITES; and
 - b. The update on Wildlife Trade Organisation (WTO) approval and conditions for the Torres Strait Beche-de-mer Fishery.

KEY UPDATES

Beche-de-mer species proposed for CITES Appendix II listing

2. The Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) is an international agreement between national governments. Its aim is to ensure that international trade in specimens of wild animals and plants does not threaten survival.
3. The Convention works by subjecting international trade in specimens of selected species to certain controls. This includes all import, export, re-export and introduction from the sea of species covered by the Convention has to be authorised through a licensing system.
4. Species may be listed within one of two categories:
 - a. Appendix I – includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.
 - b. Appendix II – includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilisation incompatible with their survival.
 - c. Appendix III – contains species that are protected in at least one country, which has requested other CITES parties for assistance in controlling the trade.
5. Each year, the countries party to the Convention convene to agree on a set of biological and trade criteria to help determine whether a species should be included in Appendices I or II. Parties can propose to list certain species based on such criteria.
6. In 2019, a proposal to list beche-de-mer species of the subgenus *Holothuria* was submitted. This includes the Torres Strait commercial beche-de-mer species black teatfish (*Holothuria whitmaei*) and white teatfish (*Holothuria fuscogilva*).
7. Due to past and current exploitation aiming to satisfy international demand, these species match with criteria for inclusion in Appendix II. Data relating to the decline of *H. whitmaei* meets the CITES listing criteria however *H. fuscogilva* does not. In considering whether to list these species, an Expert Panel has recommended that CITES Parties take note of the widespread difficulties countries are experiencing in managing sea cucumber fisheries, given that the high value of the dried commodity drives overfishing in many jurisdictions.

8. CITES parties are scheduled to meet between 17- 28 August in Switzerland, where the proposal to list black and white teatfish species will be further considered.
9. Should the species be successfully listed, there are a range of implications for the beche-de-mer fishery in the Torres Strait. Species listed on Appendix II of CITES may still be traded internationally provided the trade, or a specified level of trade, has been determined to be non-detrimental to the survival of the species in the wild.
10. The Department of Environment and Energy (DoEE) is responsible for assessing the sustainability of international trade in Australian species listed on Appendix II and undertakes this assessment based on the information provided to it by the exporting proponent.
11. In the case of government managed fisheries, the species-specific information is provided by the relevant managing agency (AFMA), usually within the information provided by the agency for the assessment of sustainability as an approved Wildlife Trade Operation (WTO) under the *Environment Protection and Biodiversity Conservation Act 1999*.
12. Where an approved Wildlife Trade Operation (WTO) is already in place for the relevant fishery, the DoEE recommends that arrangements to renew the WTO, or provide an addition to the WTO could be considered.
13. Alternatively, information on the sustainability of the species' harvest for international trade throughout its Australian range could be provided for assessment.
14. Once the take for trade is considered to be sustainable, trade is generally regulated through permits authorising export of the specimen.
15. AFMA is awaiting further advice from the Department of Energy and Environment and will report back to the HCWG out of session once an outcome of the listing proposals is known.

Wildlife Trade Operation (WTO) Approval under the EPBC Act 1999

16. As of 20 December 2017, the Torres Strait Beche-de-mer and Trochus Fisheries were declared by the then Assistant Minister for Agriculture and Water Resources, Senator the Hon Anne Ruston as approved WTO under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) until 18 December 2020 and 9 October 2026 respectively.
17. Approval under the EPBC Act is:
 - a. necessary to legally export commercially wild caught seafood from Australia; and
 - b. subject to conditions which require ongoing work by the PZJA.
18. At the time of the last the approval, two new conditions were applied to the Beche-de-mer fishery. A summary of these conditions and an update on the relevant management actions is outlined in **Table 1**.
19. No conditions were imposed on the Torres Strait Trochus Fishery on the basis that the fishery is inactive. Any activity within the Trochus Fishery will need to be reported to the Department of the Environment and Energy (DoEE).

Australian National Audit Office (ANAO) update







20. The ANAO recently tabled its report on the performance audit of the coordination arrangements of Australian Government agencies operating in the Torres Strait. The audit examined whether Australian Government agencies operating in the Torres Strait have appropriate governance arrangements to support the coordination of their activities; and the coordination arrangements are effective in supporting Australian Government activities in the Torres Strait.
21. Australian Government agencies subject to the audit included AFMA, the Department of Agriculture and Water Resources, the Department of Foreign Affairs and Trade, the Department of Home Affairs and the Torres Strait Regional Authority.
22. Overall, the report concludes that *“the coordination arrangements of key Australian Government entities operating in the Torres Strait are largely effective in supporting Australian Government activities”*.
23. Two AFMA recommendations were made, specifying that AFMA work with the TSRA and QDAF to;
 - a. finalise the Protected Zone Join Authority annual reports for the 2015-16, 2016-17 and 2017-18 financial years and implement a process to ensure that future annual reports are published in a timely manner; and
 - b. keep the PZJA website up to date.
24. A more detailed summary of the ANAO outcomes relevant for AFMA is provided at **Attachment 2.2.1a**.
25. The full audit report can be found at: https://www.anao.gov.au/sites/default/files/Auditor-General_Report_2018-2019_41a.pdf

Australian Bureau of Agricultural and Resource Economics (ABARES) Fishery Status Reports

26. Each year, the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) compiles fishery status reports which provide an independent assessment of the biological status of fish stocks and the economic status of fisheries managed, or jointly managed, by the Australian Government (Commonwealth fisheries).
27. Since the last HCWG meeting in October 2018 there have been no new updates to the ABARES status reports. The 2019 ABARES fishery status report (covering the performance of fisheries in 2018) is due for release in September 2019.
28. The most recent ABARES Fishery Status Reports 2018 were released on 28 September 2018 and summarise the performance of these fisheries in 2017 and over time, against the requirements of fisheries legislation and policy. The reports assess all key commercial species from Australian Government managed fisheries and examines the broader impact of fisheries on the environment, including on non-target species.
29. In summary, the most recent biological status for the Torres Strait Beche-de-mer Fishery has been assessed for the 2017 period as follows:

Status	2016		2017		Comments
Biological status	Fishing mortality	Biomass	Fishing mortality	Biomass	
Black teatfish (<i>Holothuria whitmaei</i>)					No catch in 2017. Recent survey indicates a recovering stock.
Prickly redfish (<i>Thelenota ananas</i>)					Catch is below TAC. Survey indicates relatively stable densities.
Sandfish (<i>Holothuria scabra</i>)					No catch in 2017. Most recent full survey (2009) indicated that stock was overfished.
White teatfish (<i>Holothuria fuscogilva</i>)					Catch is below TAC. Survey indicates relatively stable densities.
Other sea cucumbers (up to 18 species)					Uncertain biomass and fishing mortality status for at least one species taken in 2017.
Trochus (<i>Trochus niloticus</i>)					Minimal catch in 2017. Uncertain biomass status.
Economic status	Estimates of NER are not available. NER are uncertain in the 2017 fishing season. The catch of valuable species such as prickly redfish decreased significantly; however, there was a significant increase in the catch of other sea cucumber species.				

Notes: NER Net economic returns. TAC Total allowable catch.

Fishing mortality	 Not subject to overfishing	 Subject to overfishing	 Uncertain
Biomass	 Not overfished	 Overfished	 Uncertain

30. ABARES fishery status reports can be accessed on the ABARES website at: [http://www.agriculture.gov.au/abares/publications/display?url=http://143.188.17.20/anrdl/D](http://www.agriculture.gov.au/abares/publications/display?url=http://143.188.17.20/anrdl/DAFFService/display.php?fid=pb_fsr18d9abm_20180928.xml)
[AFFService/display.php?fid=pb_fsr18d9abm_20180928.xml](http://www.agriculture.gov.au/abares/publications/display?url=http://143.188.17.20/anrdl/DAFFService/display.php?fid=pb_fsr18d9abm_20180928.xml)

Legislative Amendments

31. As per previous updates, AFMA is continuing to progress draft amendments to the *Torres Strait Fisheries Act 1984* and *Torres Strait Fisheries Regulations 1985* as resources and priorities permit. The purpose of the amendments is to provide improvements to the efficiency and effectiveness of fisheries administration in the Torres Strait. In the past 6 months, AFMA have experienced delays to the project due to the Federal Election, competing Australian Government legislative priorities and limited internal resources.
32. Details of the proposed amendments have been provided in previous meeting papers.

New Assistant Minister

33. On 29 May 2019, Senator the Honorable Jonathon Dunium was sworn in as the Assistant Minister for Forestry and Fisheries. In his position, Senator Colbeck will serve as the Chair of the Protected Zone Joint Authority. The previous Assistant Minister, Richard Colbeck is now the Minister for Aged Care and Senior Australians and Minister for Youth and Sport.

Table 1. Status of Wildlife Trade Operation conditions applied to the Torres Strait Beche-de-mer Fishery.

Condition		Progress on management action
1	Operation of the Torres Strait Beche-de-Mer Fishery will be carried out in accordance with the management regime in force under the <i>Torres Strait Fisheries Act 1984</i> .	Ongoing – 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 Beche-de-Mer Fishery management arrangements that may affect the assessment against which <i>Environment Protection and Biodiversity Conservation Act 1999</i> decisions are made.	Amendments to management arrangements are reported to DoEE through 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 <i>Guideline for the Ecologically Sustainable Management of Fisheries – 2nd Edition</i> .	AFMA is due to submit the first annual report on any changes to the Beche-de-mer WTO since approval was declared in December 2017.
4	The Torres Strait Protected Zone Joint Authority to implement a strategy to manage the risks of overfishing and localised depletion for all species harvest 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.	A draft Harvest Strategy for the Beche-de-mer Fishery has been developed for consideration by the PZJA. The harvest strategy accounts for the understanding that more data and information reduces the risk to a fishery and therefore reduces the need for precautionary management. The framework guides the requirements for data and information collection, what happens to a species if the TAC is over caught, how much a TAC could be adjusted depending on the level of data available. It also provides guidance on how to re-open a closed species. AFMA aims to implement the Harvest Strategy by the start of the 2020 fishing season.
5	The 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.	As two commercially fished species of beche-de-mer are being considered for listing under CITES Appendix II, the Torres Strait Scientific Advisory Committee (TSSAC) at their most recent meeting (May 2019) agreed that the Torres Strait Beche-de-mer Fishery undergo an Ecological Risk Assessment (ERA) as a high priority in 2019-20. This is being sourced under an existing contract with CSIRO.
6	The 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 <i>Environmental Protection and Biodiversity Act 1999</i> .	There is a section in the voluntary HC01 logbook for fishers to report interactions with threatened, endangered and protected species. AFMA continues to promote the use of daily fishing logbooks.



Coordination Arrangements of Australian Government Entities Operating in Torres Strait

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Auditor-General Report No. 41 2018-19
Performance Audit

<https://www.anao.gov.au/work/performance-audit/coordination-arrangements-australian-government-entities-operating-torres-strait>

Summary of ANAO outcomes for AFMA

Background

In 2018, the Australian National Audit Office (ANAO) conducted a performance audit on the coordination arrangements of Australian Government Entities Operating in the Torres Strait. The audit examined whether Australian Government agencies operating in the Torres Strait have appropriate governance arrangements to support the coordination of their activities, and that the coordination arrangements are effective in supporting Australian Government activities in the Torres Strait.

The audit examined the coordination arrangements of five Australian Government entities operating in the Torres Strait including the Torres Strait Regional Authority (TSRA), the Department of Foreign Affairs and Trade (DFAT), the Department of Agriculture and Water Resources (DAWR), the Department of Home Affairs, represented by the Australian Border Force (ABF) and the Australian Fisheries Management Authority (AFMA). This document provides a brief summary of key ANAO outcomes relevant for AFMA.

Rationale for undertaking the audit

Australia recognises the Torres Strait region as a sensitive and important zone because:

- the scattered islands represent stepping stones between PNG and Australia and is often referred to as 'the closest thing Australia has to a land border'. The close distance of PNG has immigration, customs and biosecurity implications;
- the region supports critical fisheries habitats and ecosystem resources; and
- the region is an international shipping route with difficult waters.

In 2010, a Senate Inquiry into Torres Strait by the Foreign Affairs, Defence and Trade Reference Committee documented key issues associated with health, biosecurity, law and order and border protection, relating primarily to the shared border with PNG and the operation of the Treaty. The committee's report stressed the importance of achieving effective whole-of-government cooperation and coordination between government entities.

Overall Audit Conclusions

1. The report concludes that the coordination arrangements of key Australian Government entities operating in Torres Strait are largely effective in supporting Australian Government activities.
2. The business rules are effective for the implementation of biosecurity and fisheries legislation, and support the application of the Treaty provisions and the coordination of activities in Torres Strait. The business rules are not fully effective for the implementation of immigration and customs legislation in

the context of the Treaty. This impacts on the capacity of entities to coordinate their activities and to develop a shared understanding of immigration and customs rules applicable in the region.

3. The governance structures and joint activities are largely effective to support cross-entity coordination. However, key policy decisions made by the Torres Strait Joint Advisory Council (JAC) are not adequately documented, and the risks associated with the impacts of a changing strategic and operational environment on the Treaty operation have not been analysed. The Protected Zone Joint Authority (PZJA) annual reports and website are not up-to-date.
4. The key systems and assets support the coordination of Australian Government entities' operations in Torres Strait. An important project to improve telecommunications in Torres Strait is progressing.

AFMA Specific Conclusions

Business Rules

The business rules, combined with the legislation, applying to fisheries in Torres Strait are comprehensive and fit-for-purpose, but some key governance documents are not up-to-date.

Governance Structures and Joint Activities

Through the PZJA, the consultative framework is largely effective to support and coordinate the decision making process of the range of entities involved in Torres Strait fisheries. Some of the actions agreed following the 2009 review of the PZJA's administrative arrangements are still to be completed, and the PZJA's annual reports and website are not up-to-date.

System and assets

No specific comments relating to the management of fisheries in the Torres Strait.

Recommendations for AFMA

The audit recommends the Australian Fisheries Management Authority work with the Protected Zone Joint Authority's other member entities, the Torres Strait Regional Authority and Queensland Department of Agriculture and Fisheries, to:

- a) finalise the Protected Zone Joint Authority annual reports for the 2015–16, 2016–17 and 2017–18 financial years and implement a process to ensure that future annual reports are published in a timely manner; and
- b) keep the Authority's website up-to-date.

Additionally, the audit recommended that DFAT establish and maintain a central register of policy decisions made by the Torres Strait Joint Advisory Council (JAC) and ensure that the register is accessible to stakeholders, including Australian Government entities, operating in Torres Strait.

As a member of the JAC, the AFMA Executive has agreed to the publication of JAC outcomes on the DFAT website.

Summary audit response from AFMA

On 11 April 2019, the AFMA CEO provided the following response to the Auditor-General for Australia:

AFMA has extensive responsibilities in managing Commonwealth fisheries resources in the Torres Strait and works to deliver on these in cooperation with a number of Commonwealth and other agencies.

AFMA has considered the proposed audit report and accepts that timely finalisation of Protected Zone Joint Authority annual reports and regular updating of the Authority's website will enable stakeholders to be better informed about fisheries management issues and actions. Together with other PZJA member agencies, AFMA will also continue to work towards further integration and coordination of fisheries in the Torres Strait.

Audit Findings relevant for AFMA

Table 1. Summary of audit findings under each area examined relevant for AFMA.

Area Examined	Summary Conclusion	Audit Findings
Business Rules	The business rules, combined with the legislation, applying to fisheries in Torres Strait are comprehensive and fit-for-purpose, but some key governance documents are not up-to-date.	<p>While a range of business rules exist, some of them were developed a number of years ago (in one instance, 2004), and it is difficult to establish whether the documents are up-to-date, due to the absence of a version history and date of next review. For example, a number of changes to the consultative structure of the PZJA have occurred since <i>Fisheries Management Paper No. 1</i>, which plays a key role in the administration of the Torres Strait fisheries, was endorsed in 2008. The Standing Committee, which has been presiding over and providing recommendations to the PZJA since 2010, is not included in prescribed arrangements set out in <i>Fisheries Management Paper No 1</i>. A revised Paper was developed by AFMA in 2015, but was not endorsed by the PZJA.</p> <p>AFMA should review its guidance documents to verify that they are up-to-date, and include the document version history and date of next review.</p> <p>The large body of documents that supports the regulation of fisheries, in particular fisheries management instruments and notices, also guides the work of entities involved in Torres Strait fisheries, including fishers. Over the years, a large number of these documents have been issued, with, in most cases, the most recent revoking a previous one. The PZJA website includes a list of the notices and instruments, however the list available as at March 2019 had not been updated since October 2013, and included legislative instruments that are no longer current.</p> <p>For example, <i>Fisheries Management Instrument No. 15</i> dated March 2017 revokes <i>Fisheries Management Notice No. 64</i> dated December 2002 and prohibits the taking, processing or carrying of sea cucumber in the area of the Torres Strait Sea Cucumber Fishery. However <i>Fisheries Management Notice No. 64</i> is still accessible from the PZJA website and marked as 'current'.</p> <p>AFMA, as the Commonwealth entity responsible for the day-to-day administration of the PZJA, should ensure that the list of the current fisheries management notices and instruments effective in Torres Strait on the PZJA website is up-to-date. Up-to-date information would assist stakeholders, such as fishers and communities, to operate more effectively in Torres Strait.</p>
Governance Structures and Joint Activities	Through the PZJA, the consultative framework is largely effective to support and coordinate the decision making process of the range	In 2008 the PZJA participating entities commissioned a review of the PZJA administrative arrangements. The <i>Review of Torres Strait Protected Zone Joint Authority Fisheries Administration Arrangements</i> was completed in 2009 and concluded that the PZJA was unnecessarily process driven,

Area Examined	Summary Conclusion	Audit Findings
	<p>of entities involved in Torres Strait fisheries. Some of the actions agreed following the 2009 review of the PZJA's administrative arrangements are still to be completed, and the PZJA's annual reports and website are not up-to-date.</p>	<p>with an insufficient focus on achieving outcomes. The review made 17 recommendations, from which the PZJA developed seven actions to be implemented (see appendix A).</p> <p>The 2009 review noted that achieving 'an integrated and coordinated approach to the management of fisheries in Torres Strait is quite a challenge'. While the majority of actions have been completed, several items were still in progress as at March 2019:</p> <ul style="list-style-type: none"> • The TSRA to be responsible for managing the sustainable take of turtle and dugong by traditional inhabitants (Action 1a): AFMA advised that this action was in progress, and legislative change, subject to cross-jurisdictional agreement, was required. • AFMA to be delegated with day-to-day operational decisions consistent with the <i>Torres Strait Fisheries Act 1984</i> (Action 3b): while delegations to the AFMA CEO are in place, AFMA advised it has chosen not to exercise these delegations in all instances, to ensure decisions are supported by the PZJA. For example, the setting of total allowable catch limits under licence conditions is still approved by the PZJA. • Terms of reference were drafted in 2015 but not endorsed as at March 2019 (Action 4). As documented at paragraph 2.38, the PZJA Standing Committee is not included in prescribed arrangements set out in <i>Fisheries Management Paper No 1</i>. AFMA advised it will continue to seek Standing Committee agreement to Terms of Reference during 2019. • Action 5, which aimed at achieving improved administrative processes and communication between PZJA committees and working groups, is still in progress. While meetings (face to face or via teleconference) are conducted regularly, improvements are still needed to the PZJA decision-making process and to provide longer lead times for consideration of meeting documents. • AFMA to progress legislative amendments to the Torres Strait Fisheries Act that further streamline management arrangements (Action 7): AFMA advised that a suite of legislative amendments had been agreed by the PZJA in May 2017 but had yet to be approved by the Minister for Agriculture and Water Resources before introduction to Parliament. Given this parliamentary delay, AFMA advised that the Standing Committee had developed a further tranche of proposed legislative amendments for consideration by the PZJA soon after the Federal election in 2019.

Area Examined	Summary Conclusion	Audit Findings
		<p>Timely publication of the PZJA annual reports and updating of the PZJA website</p> <p>Under the Torres Strait Fisheries Act, the PZJA is required to present an annual report to the Australian Parliament as soon as practicable after 30 June each year. The annual report must document the activities of the PZJA and on the condition of the fisheries.</p> <p>In 2014 and 2015, the Senate Rural and Regional Affairs and Transport Legislation Committee noted the time taken between the end of the financial year and the date that the PZJA provided its report to Parliament. On both occasions the Committee encouraged the PZJA to provide reports in a more timely fashion.</p>
Systems and assets	No AFMA specific comments	

Appendix A

Table 2. Agreed actions by the PZJA following the 2009 review.

Action	Description
1. One management agency	<ul style="list-style-type: none"> a) The TSRA to be responsible for managing the sustainable take of turtle and dugong by traditional inhabitants. b) One agency responsible for the day-to-day administration of Torres Strait commercial fisheries. AFMA to undertake this role in consultation with PZJA agencies. c) AFMA and Fisheries Queensland to work out the timing and resources for the transfer of licensing and compliance functions to AFMA.
2. Consultation	A revised consultation model to be employed that improves the level of consultation with Torres Strait Islanders at the community level.
3. Decision making and delegations	<ul style="list-style-type: none"> a) The PZJA to retain (not delegate) the decision making capacity for strategic matters such as new legislation or legislative amendments (including management plans), resource allocation decisions, determining harvest strategies and significant policy amendments. b) AFMA to be delegated with day to day operational decisions consistent with the Torres Strait Fisheries Act 1984. c) AFMA to report annually to the PZJA on delegated responsibilities.
4. Standing Committee	Terms of reference to be developed for the PZJA Standing Committee.
5. PZJA	<ul style="list-style-type: none"> a) AFMA to provide secretarial services to PZJA. b) The PZJA to meet a minimum of twice every three years.
6. Bi-lateral arrangements with PNG	<ul style="list-style-type: none"> a) AFMA to be responsible for maintaining bi-lateral relationships with PNG National Fisheries Authority and for organising the annual catch sharing and formal bi-lateral meeting. b) PNG to be invited to attend the annual PZJA meeting as an observer.
7. Long-term	<ul style="list-style-type: none"> c) Review whether Queensland retains a role in the PZJA including the implications of any withdrawal. d) AFMA to progress legislative amendments to the Torres Strait Fisheries Act that further streamline management arrangements.

Source: Richard Stevens, *Review of Torres Strait Protected Zone Joint Authority Fisheries Administration Arrangements*, Discussion Paper, 22 June 2009.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
GOVERNMENT UPDATES TSRA Update	Agenda Item 2.2.2 FOR INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE** the verbal update provided by the TSRA member on matters relating to Torres Strait Hand Collectable fisheries.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
WORKING GROUP UPDATES Native Title update	Agenda Item 2.3 FOR INFORMATION

RECOMMENDATION

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

BACKGROUND

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

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
WORKING GROUP UPDATES PNG National Fisheries Authority update	Agenda Item 2.4 For INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE** the update provided by the PNG National Fisheries Authority if an officer is in attendance.

KEY ISSUES

2. AFMA has a standing invite for officials from the PNG National Fisheries Authority (NFA) to attend all PZJA consultative forums. If in attendance, NFA officials will provide an update on the PNG hand collectable fisheries at the meeting.

BACKGROUND

3. Since the moratorium on fishing for beche-de-mer was lifted on 1 July 2017, the PNG beche-de-mer fishery has been opened twice.
4. Although the season open date usually falls on 1 July, local PNG media has reported that selected marine provinces are not to harvest BDM until all stock assessment surveys are submitted for analysis and a final decision is made by the PNG NFA Board (Source: The Post Courier, 25 June 2019, www.postcourier.com.pg).
5. More recently, *the National* (11 July 2019, www.thenational.com.pg) reported that “due to concerns about the current state of the industry and early indications from resource assessment surveys indicating significant localised depletion of stocks in certain areas, the beche-de-mer fishery season is deferred until further notice with no total allowable catch limit in place and the PNG NFA have a better understanding of the stock estimates at the completion of the stock assessments.
6. The report also states that in 2018, beche-de-mer exports from PNG had an estimated value of around K100 million (~\$42 million AUD).

Fisheries Bilateral Meeting

7. On 4 March 2019, a Fisheries Committee Bilateral meeting was held on Thursday Island between Australia and Papua New Guinea.
8. The Fisheries Committee noted that:
 - a. AFMA requested that complimentary management strategies be developed by Parties for shared beche-de-mer stocks, specifically sandfish;
 - b. PNG-NFA advice that the South-Fly beche-de-mer fishery remains closed until further notice and that PNG-NFA regard stocks in the South-Fly region as overfished. As a result, PNG-NFA are taking a precautionary approach in assessing possible future TACs. PNG-NFA are committed to undertaking research to determine the status of stocks prior to any future openings in the region. Stock surveys are planned for Warrior Reef and fishing areas around Parama Island.

PNG-NFA welcomed the opportunity to collaborate and share the results of any beche-de-mer surveys conducted by each Party.

- c. Challenges faced by PNG-NFA in managing beche-de-mer fishing activities around Treaty Villages with Indonesian buyers providing high market demand through illegal trade. PNG-NFA advised that centralised management approaches are less effective when the fishery operates at the village level and driven by external high value markets.
9. The Fisheries Committee recognised and welcomed efforts made by PNG-NFA to provide alternative market options over illegal fishing through the Value Chains project coupled with a focus on education and awareness.
10. The Committee reiterated the importance of complimentary management arrangements, shared science and strong communication between Parties given beche-de-mer stocks are vulnerable to overfishing and some species are shared stocks, in particular sandfish.
11. The full Fisheries Committee Bilateral meeting record is provided at **Attachment 2.4a** and was also circulated to Working Group members on 10 April 2019.
12. Following the Fisheries Committee meeting, the Joint Advisory Committee (JAC) considered the Fisheries Committee meeting record and welcomed the reports of collaboration occurring in the Torres Strait Protected Zone.
13. The full Joint Advisory Committee report is provided at **Attachment 2.4b**.

Report of the Fisheries Committee Bilateral Meeting

4 March 2019

Torres Strait Regional Authority

Thursday Island, Australia

1. Welcome

- 1.1. The Fisheries Committee Bilateral Meeting was held on 4 March 2019, at the Torres Strait Regional Authority, Thursday Island, Australia to discuss items under Articles 20-28 of the Torres Strait Treaty (the Treaty).
- 1.2. The meeting was opened at 1345 hrs and co-chaired by Mr Noan Pakop, Deputy Managing Director, Papua New Guinea National Fisheries Authority (PNG-NFA) and Mr Peter Venslovas, General Manager, Fisheries Operations 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 opportunities to discuss fisheries matters, particularly in relation to shared common resources which are of great importance to both countries for cultural, community and commercial purposes.
- 1.4. The meeting **WELCOMED** ongoing collaborative work occurring in Protected Zone Joint Authority fishery working groups with assistance being provided by PNG-NFA officers contributing valuable advice as invited participants.

2. Review of actions items: Fisheries Bilateral Meeting 2016

- 2.1. The meeting **NOTED** the progress on actions arising items from the 2018 Fisheries Bilateral Meeting.
- 2.2. In relation to the action for AFMA and PNG-NFA to work collaboratively to investigate how treaty villagers may effectively engage in commercial fisheries under the Treaty (item 2018-1), the meeting **NOTED** advice from PNG-NFA that NFA is focused on the Tropical Rock Lobster Fishery and is aiming to take a holistic and step-wise approach comprising:
 - a) As an immediate priority, implementing measures to improve the accuracy and timeliness of catch reporting;
 - b) Reviewing and where necessary, developing amendments for the PNG Tropical Rock Lobster management plan; and
 - c) Towards the end of 2019, undertaking consultation with local resource owners to seek their views on how they want to be involved in commercial fishing.
- 2.3. The meeting **RECOGNISED** the strong concern still held by PNG Traditional Inhabitants Representatives that they have not been able to realise any of the benefits envisaged under the Treaty as it relates to commercial fishing. In particular PNG Traditional Inhabitants have not been able to utilise catch sharing arrangements provided under the Treaty.
- 2.4. The meeting **NOTED** that the work plan outlined by PNG-NFA above (paragraph 2.2) will go some way to addressing PNG Traditional Inhabitant concerns. The meeting also **NOTED** that a presentation on economic development within Western Province was scheduled for the 2019 Joint Advisory Council meeting.

3. Compliance

- 3.1. The meeting **NOTED** ongoing co-operation between Australian and Papuan New Guinean compliance teams to deliver compliance services under the Treaty including a number of successful prosecutions of foreign illegal fishing boats that were apprehended as detailed in the agenda paper.
- 3.2. The meeting **WELCOMED** advice that Papua New Guinea would be ratifying the Nue Treaty Subsidiary Agreement in 2019.
- 3.3. The PNG-NFA **THANKED** the Australian government for the supply of the first of four *Guardian Class* patrol boats intended primarily *Nlue Treaty Subsidiary Agreement* related operations inclusive of the extended support of regional aerial surveillance capacity.
- 3.4. The meeting **NOTED** that due to co-operative compliance efforts between PNG, Australia and other pacific island nations, and the direct representations and Public Information Campaigns in Vietnam by Papua New Guinea and Australia, no illegal Vietnamese boats targeting bech-de-mer have been sighted in Australia and PNG in the past twelve months. Both countries encourage the ongoing sharing of information and continued monitoring and surveillance programs.

4. Prawn Fishery

- 4.1. The meeting **NOTED** prawn fishing activity in the Australian zone remains low and management arrangements have remain unchanged since the last Fisheries Bilateral meeting.
- 4.2. The meeting **NOTED** advice that AFMA is working to update the tiger prawn stock assessment and the Australian scientific observer program is ongoing in the fishery (at 2.6 percent coverage). The meeting further noted that AFMA's observer report summaries are made public and routinely considered by the Protected Zone Joint Authority Torres Strait Prawn Management Advisory Committee (TSPMAC). PNG-NFA have a standing invitation to attend TSPMAC and all other PZJA advisory forums. AFMA is grateful for NFA's participation in these forums.
- 4.3. The meeting **NOTED** that an update on Australia's prawn-white spot disease management strategy would be sent to meeting attendee's out-of-session by the Australian Government Department of Agriculture and Water Resources.
- 4.4. PNG-NFA **ADVISED** that there is little interest in prawn fishing in PNG waters of the TSPZ with prawn trawling mainly centred in the Gulf of Papua.
- 4.5. Australia and Papua New Guinea both graciously **DECLINED** to enter into catch sharing arrangements for the 2019-20 fishing season.

5. Tropical Rock Lobster Fishery

2018 pre-season survey and fishery stock assessment

- 5.1. The meeting **NOTED** AFMA advice that the fishery independent pre-season survey was conducted from 11-23 November 2018. Divers observed good numbers of tropical rock lobster (TRL) across all surveyed age classes. The final recommended biological catch (RBC) and final global total allowable catch (TAC) Torres Strait Protected Zone (TSPZ) including outside but near areas, for the 2018-19 fishing season was calculated to be 641 tonnes.

- 5.2. The meeting **NOTED** AFMA advice that the stock assessment indicates current spawning stock biomass is 46 per cent of estimated virgin biomass (pre-commercial fishing) and is estimated to rise to 92 per cent in the 2019-20 fishing season.
- 5.3. The meeting **RECOGNISED** that the best available science shows that Australian and Papua New Guinea tropical rock lobster fisheries are based on a single stock.

Catch sharing for 2018-19 fishing season

- 5.4. The meeting **NOTED** that catch sharing arrangements, including cross-endorsement, for the TSPZ TRL Fishery for the 2018-19 fishing season are being finalised out-of-session. To date Parties had agreed to the following:
- a) A global TAC of 641 tonnes.
 - b) The global TAC be apportioned between jurisdictions as follows: 15 % apportioned to PNG waters and 85 % apportioned to Australian waters. This apportionment reflects a long standing subsidiary agreement between Parties and is based on scientific evidence on the relative distribution of TRL stocks throughout the Protected Zone.
 - c) To finalise cross endorsement arrangements as soon as practical out of session noting PNG-NFA is currently consulting with the PNG fishing industry. Until cross endorsement arrangements are finalised Parties have agreed to limit catches to their 75 per cent catch entitlement within their jurisdictions.
- 5.5. The meeting **NOTED** that AFMA is collating the scientific reports underpinning the 85:15 percent subsidiary agreement and will provide them to PNG-NFA.
- 5.6. The meeting **NOTED** that Parties agreed to not seek cross-endorsement in the 2017-18 fishing season.

Catches against TAC shares

- 5.7. The meeting **NOTED** the 2017-18 global TAC for the TSPZ TRL Fishery was 299 t. The agreed PNG and Australian shares were 44.85 t and 254.15 t respectively.
- 5.8. The meeting **NOTED** Australia caught 261.139 t or 104 per cent of the Australian share over the period 1 December 2017 to 30 July 2018 in the area of the TSPZ TRL Fishery. This includes Australia's 'outside but near' area, defined under Australian legislation to be a part of the Australian TRL Fishery consistent with the Treaty definition for Protected Zone commercial fisheries.
- 5.9. The meeting **NOTED** PNG caught 85.552 t over the period 1 January to 31 December 2018 in the area of the TSPZ TRL Fishery. In addition, PNG caught 70.881 t outside of the TSPZ.
- 5.10. The meeting **NOTED** AFMA seeks confirmation from PNG-NFA on the location of catches taken outside of the TSPZ, noting catches may be relevant to PNG's outside but near area.
- 5.11. The meeting **RECOGNISED** that over catching can undermine management performance as actual fishing mortality rates are higher than expected (meaning expected depletion of the stock from fishing is higher than expected). While the TRL stock assessment is designed to be conservative it is not robust to persistent high levels of over catching.
- 5.12. The meeting **AGREED** Parties must continue to implement measures to ensure catches do not exceed agreed catch shares.
- 5.13. The meeting **WELCOMED** the commitment from both Parties to provide more regular, accurate and timely reporting of all sources of mortality. The meeting **NOTED** AFMA will be providing monthly catch reports and that it is a management priority for PNG-NFA to review and revise as necessary, catch reporting arrangements in the PNG TRL Fishery to improving

reporting. In time PNG-NFA will be able to provide more regular reports. At a minimum PNG-NFA will provide accurate catch reports in time for PZJA TRL Resource Assessment Group (TRLRAG) meetings and the stock assessment process.

Harvest strategy

- 5.14. The meeting **NOTED** that a new harvest strategy is being finalised for the TRL stock which is shared by Australia and Papua New Guinea. The harvest strategy outlines a management procedure for developing advice on annual RBCs and TACs.
- 5.15. The meeting **NOTED** AFMA will seek formal comment from the PNG NFA on the new harvest strategy, subject to public release by the PZJA.
- 5.16. The meeting **NOTED** that the new harvest strategy has been developed in consultation with the PZJA's TRLRAG and TRL Working Group (TRLWG) at meetings held since 2016, which the PNG NFA have regularly attended. The strategy's objectives place emphasis on the importance of the TRL Fishery for traditional way of life and livelihood of Traditional Inhabitants.

PNG prawn trawlers interactions with tropical rock lobster stock

- 5.17. The meeting **NOTED** PNG-NFA advice that the PNG prawn trawl industry have not had any interest in recent seasons in retaining TRL.
- 5.18. The meeting further **NOTED** that following advice from the CSIRO on the possible impacts of trawling on TRL, PNG-NFA is taking a precautionary approach and has no plans to provide exemptions to the current ban on trawlers retaining TRL.
- 5.19. The meeting **WELCOMED** advice from PNG-NFA on the range of measures in place to monitor compliance with ban on trawlers retaining trawlers, including mandatory VMS, observer coverage, in-port unload inspections and controls on seafood export permits. PNG-NFA further advised that a trawl closure is implemented to coincide with the hookah closure in the TRL dive fishery.
- 5.20. The meeting **NOTED** PNG-NFA advice that fishers in the trawl fishery have extensive experience fishing in the Fishery and know where the TRL migration occurs. PNG-NFA observed that when the ban was reinforced (following 2014 where exemptions to the ban had been provided), fishers moved away from areas likely to overlap with the TRL migration.
- 5.21. The meeting **RECOGNISED** that the PNG-NFA are reviewing both the TRL and Prawn management plans and that careful consideration will be given to interaction between the two fisheries. PNG-NFA advised that TRL caught by trawlers are dead when bought on board. As a result, compelling fishers to discard valuable bycatch raises important challenges for management.
- 5.22. The meeting **NOTED** a complimentary ban on trawlers retaining TRL is in place for Australian operators. The ban together with spatial closures reduces the incentive for fishers to target TRL, a species which can be found in aggregations.
- 5.23. The meeting **NOTED** the strong request from Traditional Inhabitant members that Parties do not become complacent and ensure monitoring is ongoing and remains effective in detecting and quantifying TRL catches taken by trawlers.
- 5.24. Noting the concerns from Traditional Inhabitant members, the meeting **AGREED** to provide an update on TRL trawl catches and management arrangements as a standing item for future Fishery Bilateral meetings.

6. Traditional Fisheries

- 6.1. The meeting **NOTED** the update from TSRA on turtle and dugong management in Australian waters.
- 6.2. The meeting **NOTED** TSRA had received a five year funding extension from the Australian Government to continue to support the implementation of turtle and dugong community based plans.
- 6.3. The meeting **NOTED** advice from the PNG Department of Environment that the formal process of the *Moro Momoro Gamo* management plan has been completed and is now being adapted prior to implementation to develop community specific plans. Community based plans are being pursued to empower communities to take back responsibility for managing traditional fishing for turtle and dugong in their waters, particularly within home reefs.
- 6.4. Work is in progress to develop individual plans to suit each community noting they will apply to Turtle and Dugong and also to other fisheries.
- 6.5. The meeting **NOTED** advice that the issue of illegal netting of dugong and turtle is occurring. The meeting encouraged community members to submit timely data on illegal activity to the authorities to support compliance and enforcement on this issue.

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 is under development for the Torres Strait Finfish Fishery (which will apply to key commercial species of Spanish mackerel and coral trout) which would guide future management decisions for fishery.
- 7.3. Australia and Papua New Guinea both graciously **DECLINED** to enter into catch sharing arrangements for the 2019-20 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 that fishing activity for pearl shell remains negligible in both jurisdictions.
- 8.3. Australia and Papua New Guinea both graciously **DECLINED** to enter into catch sharing arrangements for 2019.

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. In particular the meeting **NOTED** AFMA advice that:
 - a) a harvest strategy for beche-de-mer is in development which will guide future management decisions and support the sustainable development of the fishery.
 - b) no further black teatfish openings have occurred since November 2015. As a matter of priority, and as a necessary prerequisite for any further opening, AFMA has been working to implement measures to improve catch reporting and monitoring.
 - c) subject to consideration of final research funding proposals, a beche-de-mer stock assessment may be undertaken in Australian waters over the next two years;

- 9.2. The meeting further **NOTED** AFMA's request that complimentary management strategies be developed by Parties for shared beche-de-mer stocks, specifically sandfish.
- 9.3. The meeting **NOTED** PNG-NFA advice that the South-Fly beche-de-mer fishery remains closed until further notice and that PNG-NFA regard stocks in the South-Fly region as overfished. As a result, PNG-NFA are taking a precautionary approach in assessing possible future TACs. PNG-NFA are committed to undertaking research to determine the status of stocks prior to any future openings in the region. Stock surveys are planned for Warrior Reef and fishing areas around Parama Island. PNG-NFA welcomed the opportunity to collaborate and share the results of any beche-de-mer surveys conducted by each Party.
- 9.4. The meeting **NOTED** challenges faced by PNG-NFA in managing beche-de-mer fishing activities around Treaty Villages with Indonesian buyers providing high market demand through illegal trade. PNG-NFA advised that centralised management approaches are less effective when the fishery operates at the village level and driven by external high value markets.
- 9.5. The meeting **RECOGNISED** and **WELCOMED** efforts made by PNG-NFA to provide alternative market options over illegal fishing through the Value Chains project coupled with a focus on education and awareness.
- 9.6. The meeting **REITERATED** the importance of complimentary management arrangements, shared science and strong communication between Parties given beche-de-mer stocks are vulnerable to overfishing and some species are shared stocks, in particular sandfish.

Barramundi

- 9.7. The meeting **NOTED** advice from PNG-NFA that PNG fishers are concerned that barramundi stocks have declined. PNG-NFA are planning to assess both the commercial and artisanal fisheries for barramundi. PNG-NFA are seeking to change their management arrangements to ensure data collection strategies capture changing fishing trends as artisanal fisheries develop into larger commercial fisheries.
- 9.8. The meeting further **NOTED** PNG-NFA plans to undertake a full stock assessment for barramundi during August 2019 to January 2020.

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

- 9.9. The meeting **NOTED** the update on finfish activity in Australian waters was detailed in the agenda paper.
- 9.10. The meeting **NOTED** that a harvest strategy is under development for the Torres Strait Finfish Fishery (Spanish mackerel and coral trout) which will guide future management decisions for the Fishery.
- 9.11. The meeting **NOTED** that an initial stock assessment for coral trout is being 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 for 2019-20 as detailed in the agenda paper.
- 10.2. The meeting **NOTED** PNG-NFA advice that NFA has developed a range of management priorities for Western Province fisheries comprising:
 - a) a review of the TRL management plan;

- b) the undertaking of TRL stock surveys. A preliminary survey was undertaken earlier this year. The results of the preliminary survey will be shared with AFMA;
- c) the undertaking of a barramundi stock assessment; and
- d) undertaking beche-de-mer stock surveys on Warrior Reef and areas around Parama noting PNG-NFA assessments are focused on areas fished.

10.3. The meeting **NOTED** the strong need and commitment from PNG-NFA and AFMA to collaborate in fisheries research, with a focus on identifying priorities and sharing information including both fisheries dependent and independent data.

10.4. The meeting **NOTED** that close collaboration in TRL and beche-de-mer research is the highest management priority at this time. The meeting **NOTED** PNG-NFA's request for AFMA to encourage research funding applicants to explore opportunities to collaborate with PNG-NFA.

10.5.

Next meeting

10.6. The meeting **NOTED** that the 2020 bilateral meeting is to be held in Papua New Guinea and delegates will be advised by the Papuan New Guinean government on the arrangements for the meeting.

11. Closing Prayer

11.1. The meeting closed at 1720hrs with a closing prayer from Councillor Getano Lui Jr.

Table of actions arising from the 2019 Fisheries Bilateral Meeting (5 Feb 2019)

Item Number	Agenda #	Action	Responsible Agency
1	4	DAWR to send an out-of-session update to attendees on prawn white-spot outbreaks in Australia.	DAWR
2	5	AFMA to collate the scientific reports underpinning the subsidiary agreement on the 85:15 catch apportionment of Tropical Rock Lobster between the Australian and PNG waters.	AFMA

Attachment A
Bilateral Fisheries Committee Meeting 2019
Delegation List

Australian Delegation (Host Nation)

Australian Traditional Inhabitant Representatives

Cr Getano Lui (Jr), Traditional Inhabitant Representative (Traditional Inhabitant Meeting Co-chair),
 Iama
 Cr Bob Kalgey, Traditional Inhabitant Representative, Mer
 Cr Keri Akiba, Traditional Inhabitant Representative, Saibai
 Cr Francis Pearson, Traditional Inhabitant Representative, Poruma

Australian Government Representatives

Mr Peter Venslovas, 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
 Ms Mary Bani, A/g Chief Executive Officer, Torres Strait Regional Authority
 Mr Mark Anderson, Fisheries Program Manager, Torres Strait Regional Authority
 Mr John Jones, Manager Torres Strait Compliance Operations, Australian Fisheries Management
 Authority
 Ms Desley Darby, Director of Community Engagement and Community Operations, Department of
 Agriculture and Water Resources.
 Ms Selina Stoute, Manager Torres Strait Fisheries, Australian Fisheries Management Authority
 Ms Sharon Lane, Department of the Environment and Energy.
 Ms Tammy Stefani, Regional Engagement and Business Support Section, Department of the
 Environment and Energy.
 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 Murray Dimia, Councillor for Sui
 Cr Peter Papua, Councillor for Mabudauan

Papua New Guinea Government Representatives

Mr Noan Pakop, Deputy Managing Director, Papua New Guinea National Fisheries Authority – Papua
 New Guinea Co-Chair
 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 Hendrick Naimo, Acting Border Liaison Officer, PNG Immigration and Citizenship Authority
 Mr Warea Orapa, National Agriculture Quarantine and Inspection Authority

Mr Gregory Hombuahin, Department of Foreign Affairs, Papua New Guinea
Mr Wilfred Gaso, Western Province Administration, Papua New Guinea
Mr Nazila Yalambing, PNG Customs Service.

Co-signed:



Mr Peter Venslovas
General Manager
Fisheries Operation Branch
Australian Fisheries Management Authority

18-3-19

Co-signed



Mr Noan Pakop
Deputy Managing Director, National Fisheries
Authority

05/04/2019

Report of the 27th Meeting of the Torres Strait Treaty Joint Advisory Council (JAC)

7 March 2019

Thursday Island, Australia

1. The Joint Advisory Council (JAC) met on 7 March 2019 on Thursday Island, Australia, in accordance with Article 19 of the Torres Strait Treaty.
2. The meeting was co-chaired by Mr Peter Lindenmayer, Acting Assistant Secretary of the Papua New Guinea Branch of the Australian Department of Foreign Affairs and Trade, and Dr John Balavu, Director-General, Border Management and Security Cooperation Division of the Papua New Guinea Department of Foreign Affairs.
3. In accordance with Article 19 of the Torres Strait Treaty, Council members comprised national, state and provincial representatives, and Traditional Inhabitant representatives. The delegation list is at Attachment A.
4. The functions of the JAC set out in Article 19 are:
 - a. to seek solutions to problems arising at the local level and not resolved pursuant to Article 18 of the Treaty;
 - b. to consider and to make recommendations to the Parties on any developments or proposals which might affect the protection of the traditional way of life and livelihood of the traditional inhabitants, their free movement, performance of traditional activities and exercise of traditional customary rights as provided for in the Treaty; and
 - c. to review from time to time as necessary, and to report and to make recommendations to the Parties on, any matters relevant to the effective implementation of the Treaty, including the provisions relating to the protection and preservation of the marine environment, and fauna and flora, in and in the vicinity of the Protected Zone.
5. This document will be transmitted to the Foreign Ministers of Papua New Guinea (PNG) and Australia.

Treaty Implementation

6. The JAC welcomed the reports from the co-chairs of the Traditional Inhabitants Meeting (TIM) held on 4 March 2019 (TIM report attached).
7. The JAC acknowledged the importance of the views of Traditional Inhabitants
8. The JAC noted TIM concerns about the continued non-compliance and ongoing misuse of the free movement provisions of the Treaty including, cross border relationships, illegal fishing, illegal movement of prohibited goods, visit overstayers, unauthorised visitors and illegitimate issuing of permits.
9. The JAC noted the observations by TIMs regarding the return travel of PNG nationals from medical treatment in Australia. These observations included clarity on agency responsibility.
10. The JAC noted the current visit restrictions in place and support to maintain joint cross border Treaty compliance activities. The TIM called for a regular compliance presence on PNG's Treaty coastal villages.

11. The JAC noted further discussions amongst Traditional Inhabitants to resolve specific localised traditional visit processes including overstayers and that this will be undertaken out of session.

Management of Traditional Visits

12. The Treaty Liaison Officer from Australia and the PNG Immigration and Citizenship Authority provided their respective reports to the JAC. The JAC acknowledged the ongoing work of the Australian Treaty Liaison Officer on Thursday Island and PNG Immigration and Citizenship Authority and the Royal PNG Constabulary officers in Daru, for their continued efforts in maintaining the integrity of the Treaty.
13. The JAC noted concerns from Traditional Inhabitants of the continued absence of the PNG Border Liaison Officer in Daru and requested the reinstatement of the position in accordance with Article 18, Section 4 of the Treaty. The JAC acknowledged that the PNG Immigration and Citizenship Authority had covered some of these duties and noted the advice that additional resources and officers will be deployed to Daru once ICA undergoes their restructure.
14. The JAC welcomed advice from PNG Immigration and Citizenship Authority that machine readable identity cards would be issued to PNG Treaty villagers and looked forward to its implementation. The JAC encouraged close consultation between PNG and Australian agencies as the initiative is progressed.
15. The JAC noted the PNG Government will progress development of its PNG Immigration and Citizenship Authority database and engagement with PNG Treaty village councillors on PNG treaty villagers' eligibility for traditional travel. The border functions performed by PNG's Department of Provincial Affairs are envisaged to be transferred to ICA upon the National Executive Council's approval.
16. The JAC noted the importance of education and community awareness programs and the value of strengthened bilateral coordination to improve understanding of the Treaty provisions. The JAC recommended bilateral Treaty Awareness Visits to be conducted and welcomed participating members from all relevant agencies and Traditional Inhabitants.
17. The JAC also noted the advice on the Joint Cross Border Multi-agency compliance activities conducted in 2018 and welcomed further joint activities in 2019.
18. The JAC noted that there were 26,678 arrival movements from PNG into the Protected Zone recorded in 2017-18 under the free movement provisions of the Treaty. The top western islands of Saibai, Boigu and Dauan continue to receive the majority of visits (98 per cent). The JAC noted a small decrease in the numbers of traditional visits from the previous year due to restrictions in place on a number of islands, as a result of infrastructure and water pressures, and a decrease in a number of cultural events.
19. The JAC noted efforts made by Australia to inform Traditional Inhabitants of legal immigration pathways for visits outside of Treaty provisions.

Local Level Governance Arrangements

20. The JAC noted the report from PNG Department of Foreign Affairs on the 2019 Local Level Government elections.
21. The JAC noted advice from PNG Department of Foreign Affairs on the division of Mabadauan into two wards. The JAC noted any additional traditional visit permit signatories will need TIM and JAC endorsement.

Border Post Development

22. The JAC welcomed the report from PNG Department of Foreign Affairs on border post developments in PNG including at Wutung (PNG) noting operational issues (water and power supply) are yet to be addressed.
23. The JAC noted the plans for a border post at Bula. This border post is considered a priority for PNG, with primary responsibility to monitor the movements of Traditional Inhabitants between PNG and Indonesia. Arrangements are currently being finalised to operationalise this post and the JAC welcomed the ongoing collaboration between PNG national agencies and provincial government authorities to progress this development.

Environment and Fisheries

24. The JAC welcomed the report of the Environmental Management Committee (EMC) on 5 March 2019.
25. The JAC noted concerns about the effects of climate change on coastal protection and infrastructure, water supplies, mangrove forests and turtle stocks in the Torres Strait. The JAC noted the need for ongoing knowledge sharing and investment in monitoring, adaptation planning and technical solutions to mitigate the impacts in the region.
26. The JAC discussed the confusion over the intent of the Building Resilience in Treaty Villages Program and acknowledged a lack of awareness about the extent to which the current PNG RRRC rangers program is aligned with PNG national, provincial and local government arrangements. The Australian Department of Foreign Affairs and Trade will engage with relevant stakeholders to consider the focus of the ranger program and ensure it remains fit for purpose.
27. The JAC noted the EMC's concerns about the spread of climbing perch which has been detected from Port Moresby in PNG to Saibai Island in Australia and encouraged agencies to work together to increase public awareness and prevent further spread in the Torres Strait.
28. The JAC noted the CSIRO's recent research findings on the impacts of mine-derived pollution on the Torres Strait confirming that while there are elevated copper concentrations in the water and sediment around Saibai and Boigu Islands they do not exceed Australian water quality guidelines and therefore do not pose a threat to human health or marine species. The JAC noted that CSIRO was unable to link these higher concentrations of copper to outflows from the Fly River.
29. The JAC also noted that Ok Tedi Mining Ltd and the Ok Tedi Development Foundation have agreed to attend the 2020 EMC meeting to provide an overview of their environmental safeguards and community development projects in Western Province.
30. The JAC noted concerns that El Nino weather patterns continue to impact on the health and well-being of Traditional Inhabitants including water supply issues. The JAC encouraged parties to consult regularly to determine early intervention and implement practical solutions where possible.
31. The JAC noted the Fisheries Committee Bilateral Meeting report that was held on 4 March 2019 (Fisheries report attached).
32. The JAC welcomed reports of ongoing collaboration occurring in the Torres Strait Protected Zone and adjacent areas between AFMA and NFA to support evidence-based decision making and improved compliance and monitoring.
33. The JAC welcomed the commitment by both Parties to improve the accuracy and timeliness of catch reporting in the Tropical Rock Lobster Fishery (TRL) and strengthen management arrangements to ensure catches do not exceed agreed catch shares. The JAC recognised that over catching can put at risk the performance of fisheries management and therefore the

intended benefits for Traditional Inhabitants. The JAC noted Parties are working to collaborate, where possible, in Tropical Rock Lobster and Bech De Mer research proposed over the next two years.

34. The JAC noted concerns are still held by PNG Traditional Inhabitants that they have not been able to realise the benefits envisaged under the Treaty as it relates to commercial fishing. In particular, PNG Traditional Inhabitants advise they have not been able to utilise catch sharing arrangements provided under the Treaty. The JAC welcomed advice that PNG National Fisheries Authority (PNG-NFA) have a work plan that will go some way to addressing PNG Traditional Inhabitants' concerns.
35. The JAC welcomed advice that consistent with a precautionary approach PNG-NFA have no plans to provide exemptions to the current ban on trawlers retaining TRL and has a range of measures in place to monitor fishing activities. The JAC noted the TIMs concerns about the impact of trawling on TRL migratory patterns.
36. The JAC noted that Parties had graciously declined to enter into catch sharing arrangements for prawn, Spanish mackerel and pearl shell. For TRL, the JAC noted that catch sharing arrangements were being finalised out of session with final agreement on cross endorsement pending.
37. The JAC noted the ongoing collaboration of Australia and PNG to address illegal, unreported and unregulated fishing and noted a number of successful prosecutions of foreign illegal fishing boats as a result of enhanced maritime surveillance and enforcement actions. The JAC recognised the delivery of the first Guardian Class patrol boat to PNG. JAC acknowledged the ratification of the *Niue Treaty Subsidiary Agreement* by PNG will provide opportunity for further cooperative enforcement, surveillance and data-sharing measures.

Health and Development Assistance

38. The JAC welcomed a report from the HIC meeting on 6 March 2019.
39. The JAC noted the good progress in addressing tuberculosis in Daru, including the Systematic Screening Initiative which has received global acknowledgement. The JAC welcomed the update on the works at Daru General Hospital to progress the hospital to the appropriate level 5 status as per the National Health Service Standards. The JAC acknowledged the collaboration and partnership that has been the mainstay of this good progress.
40. The JAC welcomed the vaccination initiatives underway in both PNG and Queensland in response to the polio outbreak in PNG.
41. The JAC welcomed the update on the Mabudawan Health Centre and look forward to its completion in September 2019.
42. The JAC acknowledged ongoing challenges in health delivery in the Western Province including, patient transportation, aid post funding, human resourcing and supply of medicines. The JAC noted the proposal to establish a high-level PNG Project Steering Committee with participation from all central agencies and key partners at the subnational levels, to take forward a package of measures and infrastructure to address these challenges.
43. The JAC recognised the establishment of the Provincial Health Authority in 2019. The intent of which is to align health services and to enable better service delivery in the Western Province.
44. The JAC acknowledged the update on the communicable disease surveillance and expressed concerns regarding the increase in sexually transmitted infections.

45. The JAC noted Australia's ongoing investment in development initiatives in Western Province including the tuberculosis response, infrastructure upgrades at the Daru General Hospital, Mabudawan Health Centre development, roads and transport sector, law and justice program and the support provided to Reef and Rainforest Research Centre rangers through the Building Resilience in Treaty Villages program.

Customs and Cross-Border Law Enforcement

46. The JAC welcomed the reports from customs and border protection agencies in PNG and Australia and the ongoing partnerships on strong relationships on cross border customs and law enforcement activities. The JAC acknowledged the whole of government approach required for effective border management and recognised the value of Parties working in close collaboration, as well as with Traditional Inhabitants, to address cross-border law enforcement issues.
47. The JAC acknowledged the continued roll out of the jointly funded Torres Strait Digital Foundation project and recognised the improved connectivity this will provide across the region.
48. The JAC noted the Joint Cross Border Patrols continue to provide value to all agencies through collaborative bilateral law enforcement engagement. The JAC acknowledged the continued support of the Australian Border Force in providing an effective platform for enabling the conduct of Joint Cross Border Patrols. The JAC welcomed the continuation of the patrols and the planning underway to conduct six patrols in 2019.
49. The JAC agreed that relevant PNG and Australian agencies are to further collaborate and report back to the 28th JAC with guidance on goods able to be imported and exported through Treaty provisions.
50. The JAC noted the efforts of the Royal PNG Constabulary Team Leader, Transnational Crime Unit from Daru in supporting border management. The JAC recommended the attendance of the Royal PNG Constabulary Team Leader, Transnational Crime Unit from Daru as part of the PNG delegation for future JAC meetings.

Biosecurity

51. The JAC welcomed reports from the Australian Department of Agriculture and Water Resources and the PNG National Agriculture Quarantine and Inspection Authority and the collaborative work to manage biosecurity risks for the mutual benefit of both countries including surveillance activities, capacity building and laboratory upgrades.
52. The JAC welcomed the joint work program and were informed that there have been no significant biosecurity breaches within the region during the reporting period, reflecting the high levels of community awareness and compliance in the region.
53. The JAC noted Australia's investment in its biosecurity surveillance and inspection in northern Australia and Torres Strait, including the development of the Torres Strait and Northern Peninsula Area Biosecurity Strategy to help protect the unique environment of the area. The JAC noted the PNG National Aquatic Biosecurity Strategy is currently under consideration by the PNG Government with implementation to follow.
54. The JAC noted the high biosecurity risk posed from Indonesia into PNG, and welcomed the work of PNG National Agriculture Quarantine and Inspection Authority to enhance collaboration with Indonesian counterparts to address this issue.

Maritime Safety

55. The JAC welcomed the updates from the Australian Maritime Safety Authority (AMSA) and PNG National Maritime Safety Authority (NMSA) on maritime safety activities, incidents of piracy, marine pollution prevention and response, and search and rescue in the region.
56. The JAC noted the ongoing cooperation between all agencies through the Torres Strait Maritime Safety Program which continues to deliver strong safety outcomes and has seen a positive reduction in the number of maritime incidents in the region. This includes the awareness and sea safety information provided to Treaty villages through joint patrol activities. Of note, NMSA will progress the development and future trialling of personal buoyancy devices.
57. The JAC noted the PNG *Small Craft Act 2011* which regulates small craft vessels and vessel operators including, vessel registration, passenger numbers and licensing requirements. Once arrangements are finalised with Western Provincial Administration, regulation of this sector will occur. An update on the progress of this item will be provided at the 28th JAC and other relevant meetings.
58. The JAC welcomed the ongoing technical cooperation and capacity building between AMSA and NMSA, which is delivered under the *Australia-Papua New Guinea Memorandum of Understanding on Transport Cooperation*.

Other Business

59. The JAC noted the report from the Queensland Police Service on the progress of the Community Safety and Security Facility, on Saibai. The Facility will provide enhanced inter-agency collaboration and law enforcement service delivery and is expected to be completed in early 2020.

Date and Venue of Next Meeting

60. It was agreed that the 28th meeting of the JAC will be held in Papua New Guinea in early 2020.
61. Agencies agreed to progress matters out of session, in accordance with the outcomes of the JAC meeting, and report on progress at the next JAC meeting in 2020.

Signed on 7 March 2019, Thursday Island, Australia



Mr Peter Lindenmayer

**Co-Chair and Leader of the Australian
Delegation**



Dr John Balavu

**Co-Chair and Leader of the Papua New Guinea
Delegation**

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
HARVEST STRATEGY Outcomes of draft Beche-de-mer Harvest Strategy consultation	Agenda Item 3.1 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Working Group:
 - a. **NOTE** and **DISCUSS** the outcomes of the draft Beche-de-mer (BDM) Harvest Strategy consultation and public comment period; and
 - b. **PROVIDE ADVICE** on a final Beche-de-mer Harvest Strategy to be considered by the PZJA for approval.

KEY ISSUES

2. At their April 2019 meeting, the PZJA agreed to release the draft harvest strategy for the Torres Strait Beche-de-mer Fishery (BDM HS) (**Attachment 3.1a**) for public consultation for a period of eight weeks.
3. To facilitate consultation on the draft harvest strategy, AFMA undertook a round of visits to communities across the Torres Strait and Northern Peninsula Area. In addition a package of information was mailed to all licence holders, Native Title bodies, Papua New Guinea National Fisheries Authority and the Australian and Papua New Guinea Co-chairs of the Traditional Inhabitants Meeting under the Torres Strait Treaty formally seeking comment on the draft BDM HS.
4. The consultation package also included the draft Tropical Rock Lobster harvest strategy and the proposal to remove the Western Line Closure from the Finfish Fishery.
5. All information included in the mail-out was also made publicly available on the PZJA website, and distributed to attendees at each community visit. TIB licence holders were advised about community meetings via community notices and SMS. Native Title Bodies were offered the opportunity to meet with AFMA on request and limited financial support was provided to Malu Lamar to further consult with stakeholders on the draft BDM HS.
6. The information package relevant to the BDM HS included:
 - a. Harvest Strategies – Frequently Asked Questions (**Attachment 3.1b**);
 - b. a complete copy of the draft Beche-de-mer Harvest Strategy (**Attachment 3.1a**); and
 - c. an overview of the draft Beche-de-mer Harvest Strategy (**Attachment 3.1c**);
7. Submissions on the BDM HS were able to be made by either writing to AFMA, providing views at community meetings or over the phone directly to AFMA. The period for public comment closed on 30 May 2019. During the community visits, most communities expressed general support for the BDM harvest strategy with no significant concerns or comments. Badu was the only community that expressed strong concerns about the BDM harvest strategy, highlighting that the current management arrangements in the BDM

Fishery do not necessarily support growth of the fishery/industry the way the draft HS intends.

8. A summary table of community views and comments captured during the community visits is provided at **Attachment 3.1d**. A comprehensive report of all community visits is provided at **Attachment 3.1e**. This report was also circulated to meeting attendees that AFMA had contact details for, as well as Torres Strait Island Regional Council (TSIRC) Divisional Managers and PBC Chairs for comment. Comments are due on 29 July 2019. Any comments received on the draft record will be tabled with the Working Group
9. One written submission was received in relation to the draft BDM HS from the Councillor Getano Lui in his capacity as the Australian Co-Chair of the Traditional Inhabitants Meeting (TIM) under the Torres Strait Treaty expressing support. A copy of the submission is provided at **Attachment 3.1f**.
10. The Cape York Land Council (CYLC) also provided a written submission to AFMA on 7 June 2019 regarding Torres Strait Protected Zone fisheries management issues however the submission did not address the draft BDM HS specifically. A copy of the CYLC submission is provided at **Attachment 3.1g**.
11. Having regard to all comments and submissions received on the draft BDM HS, the final HS and consultation submissions will be provided to the PZJA together with advice from the Hand Collectables Working Group for consideration. The final BDM HS will be considered in conjunction with a plan for implementing the harvest strategy for the start of the 2020 beche-de-mer fishing season (1 January), to be discussed under agenda item 3.2.

BACKGROUND

12. Community visits and meetings were convened across the Torres Strait and Northern Peninsula Area to provide information to stakeholders on the draft BDM HS including how to make a submission to the Protected Zone Joint Authority on the draft.
13. Meetings were convened at 13 different communities between 8 April and 22 May 2019. Due to unavailability, Iama, St Paul's community, Kubin village and Dauan communities were not visited during the consultation period. However, licence holders in these communities received the mailed out package of information.
14. Information delivered to stakeholders included an overview of harvest strategies more broadly, as well as a specific overview of the BDM HS, and a summary of the key elements being objectives, data and information; limits and reference points and decision rules.
15. Stakeholders were provided with a range of ways in which to provide comments on the draft HS; including in person at community meetings, in writing, or via the phone with AFMA staff.

ATTACHMENTS

- A. Draft Beche-de-mer Harvest Strategy
- B. Harvest Strategies – Frequently Asked Questions
- C. An overview of the draft Beche-de-mer Harvest Strategy
- D. Summary table of community views on the draft BDM HS
- E. Draft Report from Torres Strait Community Visits Report April – May 2019
- F. Written submission from Cr. Getani Lui, Australian Co-Chair of the TIM
- G. Written submission from Cape York Land Council



Australian Government
Australian Fisheries Management Authority

Torres Strait Beche-de-mer Fishery Harvest Strategy

March 2019

Developed as part of the AFMA funded project,
*Harvest Strategies for the Torres Strait
Beche-de-mer Fishery*

Prepared by CSIRO

Project no. 2016/0823

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Working Draft

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Glossary

Types of reference points:

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

Notation:

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

Other acronyms:

Acronym	Description
AFMA	Australian Fisheries Management Authority
BDM	Beche-de-mer
CPUE	Catch per unit effort
CSIRO	Commonwealth Scientific and Industrial Research Organisation
HCR	Harvest Control Rule - pre-determined rules that control fishing activity according to the biological and economic conditions of the fishery (as defined by monitoring or assessment). Also called 'decision rules'. HCR are a key element of a harvest strategy ¹
HCWG	Hand Collectables Collectables Working Group
HS	Torres Strait Beche-de-mer Fishery Harvest Strategy
HSF	Harvest Strategy Framework
HSP	Commonwealth Harvest Strategy Policy and Guidelines 2018

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

Acronym	Description
MSE	Management Strategy Evaluation - a procedure whereby alternative management strategies are tested and compared using simulations of stock and fishery dynamics ¹
PZJA	Protected Zone Joint Authority
RBC	Recommended Biological Catch
RNTBC	Registered Native Title Body Corporate
TAC	Total Allowable Catch
Tiered approach	A framework that uses different control rules to cater for different levels of uncertainty about a stock
TSRA	Torres Strait Regional Authority
QDAF	Queensland Department of Fisheries and Agriculture

Working Draft

Overview

The Torres Strait Sea Cucumber or Beche-de-mer Fishery (the Fishery) Harvest Strategy (HS) sets out the management actions needed to achieve the agreed Fishery objectives. The HS describes the performance indicators used for monitoring the condition of the stock, the analytical procedures and the rules applied to determine the recommended biological catch each fishing season.

The need to formalise a harvest strategy for the Torres Strait Beche-de-mer (sea cucumber) fishery has been discussed at management forums (e.g. Hand Collectables Working Group HCWG) for some time. In consultation with the HCWG, AFMA, TSRA, QDAF, Malu Lamar (Torres Strait Islander) Corporation RNTBC and other stakeholders, CSIRO have led drafting a scientifically-sound harvest strategy.

The HS describes a clear and transparent protocol, agreed on by stakeholders, for monitoring, information gathering, assessment and management into the foreseeable future. It applies to all Torres Strait BDM species, with these classified into groups; closed species, target species, curryfish species and basket species.

The HS depends critically on fishery data provided through the Torres Strait Fish Receiver System that was implemented on 1 December 2017. It specifies the data that are needed to effectively manage the fishery and how these data will be used to adjust catch limits and manage the fishery to meet the biological, social and economic objectives.

The HS framework is a tier system which accounts for understanding that more data and more information reduce the risk to a resource and reduces the need for precautionary management. This means higher catch limits are possible if there is more, better quality data available.

It uses data from fishers and surveys (where available). Primary Indicators (in order of importance) from fisher data are:

- a) Catch per species per day (including discards) converted to gutted weight (using revised conversion ratios compiled as part of the HS)
- b) Catch Per Unit Effort (CPUE) – requires Effort (e.g. hours fished) to be recorded
- c) Proportional composition of different species in catch if individual species mass not recorded
- d) Size composition (per species) of representative catch sample
- e) Area (and depth) each species caught (preferably fine-scale information)

The harvest strategy includes different rules for the following cases:

1. Monitoring and adjusting TACs annually, with agreement that a fishery will be closed if no catch-reported data are provided.
2. Rules for managing mixed species/basket catch limits. Species specific monitoring is necessary to support future growth of the fishery. This requires as many target species as possible to be monitored as individual species. Species specific data collection will help support future development of selected species in response to growing market demands.
3. Rules for how to re-open a fishery that has been closed. This includes fisheries that have been closed due to overfishing (e.g. sandfish), concerns about underreporting (e.g. black

teatfish), or due to TACs being overcaught. There are guidelines for supporting species recovery and improved catch reporting as well as how surveys (either full scale scientific surveys or smaller experimental surveys with fisher participation) can be used to inform whether the fishery could be re-opened.

4. Rules for how to increase TACs if high quality fishery data are available and indicate an increase is possible
5. Rules for how to further increase TACs if high quality survey data become available.

The framework also includes some static controls such as size limits and spatial closures to complement fishery management measures and other traditional community management initiatives (e.g. a proposed 10 nautical mile voluntary ban on fishing for prickly redfish around home reefs).

The HS meets the requirements of the *Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2018* (HSP) by applying a precautionary approach as well as a tiered approach that applies different 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 HS development is an ongoing process, with the immediate requirement for some basic primary indicators which can be used in setting rules to inform first order decisions. Simultaneously the framework maps a pathway for ongoing improvements and refinements, through further data collection and a clear role for community-level data and local knowledge.

The HS has been developed in close consultation with stakeholders, incorporates local knowledge and has been designed to have regard to traditional knowledge and the ability for communities to manage fishery resources locally (e.g. voluntary spatial closures), through acknowledging and incorporating customary and traditional laws.

1 Background

This Harvest Strategy has been developed in accordance with the *Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2018* (HSP) and consistent with objectives of the *Torres Strait Fisheries Act 1984* (the Act).

The Protected Zone Joint Authority (PZJA) is responsible for management of commercial and traditional fishing in the Australian waters of the Torres Strait Protected Zone. The PZJA objectives adopted for the Torres Strait Beche-de-mer Fishery are:

- to provide for the sustainable use of all Beche-de-mer stocks in Torres Strait;
- to develop Beche-de-mer stocks for the benefit of Australian Traditional Inhabitants (as defined by the Torres Strait Treaty); and
- to develop an appropriate long term management strategy for sandfish.

The HS has been designed to have regard to traditional knowledge and the ability for communities to manage fishery resources locally (e.g. voluntary spatial closures), through acknowledging and incorporating customary and traditional laws. It is recognised that there are differing cultural laws for individual nation groups which may be applied by communities to supplement fishery management measures. These include Malo ra GELAR (Malo's Law) of Kemer Kemer Meriam Nation, Saabi law of Maluilgal Nation, Saabi law of Gudumalulgal Nation, Kulkalgal Nation and Saabi law of Kaurareg Nation.

The HS uses a tiered approach to cater for different amounts of data available and different species groups and types of assessments (for example target species with species-specific Catch-Per-Unit-Effort (CPUE) and surveys). 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 an RBC.

1.1 Commonwealth Fisheries Harvest Strategy Policy

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

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

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

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

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

With a harvest strategy in place, fishery managers and stakeholders are able to operate with pre-defined rules, management decisions are more transparent, and there are likely fewer unanticipated outcomes necessitating hasty management responses.

1.2 Development of the BDM Harvest Strategy

The HS has been developed in close consultation with the HCWG (and as part of HS development workshops led by CSIRO and involving a broader group of stakeholders (3 November 2016; 27-29 June 2017; 25-26 October 2017; 24-26 July 2018; and 23-24 October 2018)).

2 BDM Fishery Harvest Strategy

2.1 Scope

This HS applies to the whole Torres Strait Beche-de-mer fishery comprised of 18 commercial species (Table 1).

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

Overtime, the HS will be subject to periodic reviews and updates with ongoing opportunities to refine and improve the HS in future. Summaries of local knowledge, observations, preferences, outcomes of local management practices such as community-specific closures and spatial rotations as to where fishing takes place could be used in an iterative manner to continually improve the HS and ensure customary practices receive appropriate acknowledgement.

The HS will be subject to periodic reviews and updates, and hence there will be ongoing opportunities to refine and improve the HS in future. Summaries of local knowledge, observations, preferences, outcomes of local management practices such as community-specific closures and spatial rotations as to where fishing takes place should all be recorded (e.g. via the HCWG) and could be used in an iterative manner to continually improve the HS and ensure customary practices receive appropriate acknowledgement.

Table 1. Summary of key Beche-de-mer species in Torres Strait.

Common name	Scientific name	Common name	Scientific name
Sandfish	<i>Holothuria scabra</i>	Deepwater redfish	<i>Actinopyga echinites</i>
Surf redfish	<i>Actinopyga mauritiana</i>	Curryfish vastus	<i>Stichopus vastus</i>
Black teatfish	<i>Holothuria whitmaei</i>	Burrowing blackfish	<i>Actinopyga spinea</i>
White teatfish	<i>Holothuria fuscogilva</i>	Deepwater blackfish	<i>Actinopyga palauensis</i>
Prickly redfish	<i>Thelenota ananas</i>	Golden sandfish	<i>Holothuria lessoni</i>
Hairy blackfish	<i>Actinopyga miliaris</i>	Brown sandfish	<i>Bohadschia vitiensis</i>
Curryfish common	<i>Stichopus herrmanni</i>	Leopardfish	<i>Bohadschia argus</i>
Elephant trunkfish	<i>Holothuria fuscopunctata</i>	Greenfish	<i>Stichopus chloronotus</i>
Lollyfish	<i>Holothuria atra</i>	Stonefish	<i>Actinopyga lecanora</i>

2.2 Objectives

The objectives of the Harvest Strategy are:

- to provide for the sustainable use of all Beche-de-mer in Torres Strait to take account of long-term sustainability for future generations;
- to develop Beche-de-mer populations for the benefit of Australian Traditional Inhabitants (as defined by the Torres Strait Treaty) and accommodating commercial considerations;
- to acknowledge area-specific issues;
- where possible, to consider an ecosystem approach to management that reduces impacts on, or optimises interactions with, other harvested and dependent species; and
- to develop long-term recovery strategies for species, where appropriate.

2.3 Recommending TACs From RBCs

The Recommended Biological Catch (RBC) is the recommended total catch of BDM (both retained and discarded) that can be taken from throughout the Torres Strait Protected Zone in a fishing calendar year. The HSP states that when setting the TAC for the next fishing season the HS should take into account all sources of fishing mortality.

2.4 Monitoring

The Fishery is monitored by a range of methods listed below. Currently there is no ongoing monitoring strategy in place to collect economic information. In addition, very limited historical fishery-dependent monitoring data are available because catch reporting was only made compulsory in December 2017, and it is anticipated that there will be a time lag before reliable catch and effort data are available for analysis.

The HS therefore outlines a starting point in terms of data collection, analysis and use to inform decision making, however this may need to be revised as more data and data needs arise. It is acknowledged that development of a harvest strategy is an ongoing process, with the immediate requirement for some basic primary indicators which can be used in setting rules to inform first order decisions. Simultaneously the framework will clearly map a

pathway for ongoing improvements and refinements, including further data collection as well as a clear role for community-level data and local knowledge.

2.4.1 Fishery independent surveys

There are a considerable number of surveys and other biological studies (Long et al. 1996; Skewes et al. 2000; Skewes et al. 2002; Skewes et al. 2010) conducted in Torres Strait which have been used to inform aspects of harvest strategy development. Fishery-independent surveys are highly recommended where appropriate to inform decisions related to whether increases or decreases in TACs may be warranted. Considering the costs of surveys relative to the value of the fishery, its multispecies nature and spatial heterogeneity, there are a range of different survey types that could be used as inputs to the HS. These include:

- a) Small-scale experimental fishing surveys with local fisher participation and possible cost-recovery via fishers being permitted to sell animals surveyed;
- b) Species-specific dedicated surveys (which could be conducted by fishers and/or scientists) and are tailored to effectively survey stocks that are not otherwise easily included in more general surveys, e.g. white teatfish (due to depth), black teatfish (due to high value and sensitivity to overexploitation), deepwater redfish (restricted distribution)
- c) Full-scale scientific surveys conducted over a large representative area and surveying multiple species.

There are a number of existing protocols for survey design based on previous surveys and it is recommended that these be adhered to in designing future surveys for use as inputs to the HS). This is also to ensure that new data are consistent with and comparable to historical information and can therefore be used as an index of relative abundance (see Decision Rules). Most surveys will yield an index of relative stock abundance, however some of the above survey designs could also be used to estimate total standing stock biomass. To be useful for management, surveys need to demonstrate that they are conducted in an adequately representative manner and underpinned by scientific principles, and therefore all references to survey data in the HS assume that the survey design and execution have been approved by qualified scientific expertise.

2.4.2 Catch and effort information

Fishers are required to record catch information on Torres Strait Catch Disposal Records (TDB02) as part of the mandatory Fish Receiver System. This includes reporting the total mass of each species landed, as well as the processing method so that conversion ratios (see Table 4) can be used to convert all reported catch to landed (gutted) weight. It is important that these records also include an accurate estimate of the total discards (which includes product lost in the processing phase). Accurate total catch per species, including discards needs to be provided in a timely manner. While catch disposal records do not require reporting of discards, changes to reporting requirements may be needed to facilitate this.

The provision of effort information under the TDB02 is voluntary, but is strongly encouraged to support scientific assessments of the fishery. Detailed logbook information including areas and depth supplied on HC01 Daily Fishing Log fished can be submitted confidentially.

Catch records per day and per spatial location are needed to support scientific assessments of the fishery (lumped and stockpiled data are less useful). It is important to record discards also as these need to be included in the total catch record (with product type also specified). Other very useful data to support scientific assessment include fishing effort (e.g. hours fished) and size of animals caught.

It is important to separate total catch into the different species and record species names as accurately as possible. Where there is uncertainty regarding accurate species identification, it is recommended that a couple of representative photos of the catch be taken for later identification (e.g. with the assistance of scientists or experienced industry persons) and the catch record reference needs to be stored with the photos. For species such as curryfish with a mixed bag of similar species (and in instances where it isn't practical to separate the species due to handling and processing constraints), the proportion of each individual species (in particular *Stichopus hermanni* and *S. vastus*) should be estimated (noting that several fishers have indicated they are able to distinguish these species in a variety of product forms – alternatively, representative photos of the catch should be provided).

Information about the area where the sea cucumbers were caught is extremely valuable and needs to be recorded as accurately as possible. If high quality area-specific and depth information are recorded, these data could be used as inputs to the decision rules described below.

Fishing effort is a key measure that is used to calculate the Catch-Per-Unit-Effort (CPUE) which can serve as an index of abundance and inform on stock status and trends. The default unit of effort is assumed to be one day, but data quality can be improved by recording the total number of hours per trip (corresponding to the catch landed), and number of fishers in the vessel. High quality CPUE data are needed as inputs to decision rules that can be used to adjust TACs upwards or downwards. If no regular fishery-independent (survey) data are available, high quality CPUE provide a valuable input that can be used to support decision making.

For some high value target species or species with a restricted distribution, the CPUE data are expected to index a single species only, and this should be obvious from the data entries submitted. For catches comprised of mixed species, the total catch and effort information are still useful provided an accurate breakdown of the component species is provided. If a fishing trip involved targeting different species or areas, data would be most useful for analyses if an estimate is provided of the total time spent on different activities.

Note also that in some instances, (e.g. when re-opening a fishery) additional constraints may imposed on the recording of catch information.

2.4.3 Catch sub-sampling information

Estimates of the size distribution of individual species are additional data required as inputs to the middle tier decision rule for use in adjusting TACs. It isn't necessary to measure every animal caught, however accurate measures of the length and mass of a representative (by area and species) sub-sample is an important data input. Size frequency sub-sample information could be collected by volunteers, nominated fishers or trained fish receivers.

These data could also be completed by additional detailed information such as the proportion of each species comprising a mixed bag catch.

2.4.4 Environmental Indicators

Data on environmental indicators are not currently collected in the BDM fishery. However, as a stretch objective for the fishery, some fishers indicated as part of the HS workshops that they were eager to undertake local reporting and to take responsibility for local management. As such, a draft framework was developed to operationalise these indicators in a decision framework to provide a defensible basis on which to make recommendations for cluster catch allocations and for other local management measures. The draft hierarchical decision tree framework considered two groups of local indicators: “primary” local indicators (those felt to be most reliable/important, and thus invoking the greatest change in management), and “secondary” local indicators (used to make further, more minor adjustments to management recommendations). Examples of indicators include condition of feeding grounds (algae etc.), density estimated from diver camera surveys, surveys of dead individuals on the beach and perceived extent of illegal fishing. This framework is described in Supporting Information as no such data are currently available for evaluation, but if these data are collected on a regular basis in future, then it might be possible to more formally incorporate them in the HS given that it is anticipated the HS will regularly be revised and updated in future years.

2.4.5 Information based on local knowledge and the ability to locally manage resources

The stated objective of acknowledging and incorporating local knowledge and the ability to locally manage resources has been achieved to some extent as all elements of the HS, developed in close consultation with Traditional Owners, have been informed by local indigenous knowledge. For example:

- Species targeted, processing challenges, discard rates, areas fished, species distribution
- Local knowledge has informed which strategies are likely to be successful and implementable
- Local knowledge being used to propose additional management measures, such as voluntary spatial closures for sensitive species

In addition, customary practices are being acknowledged and included as “voluntary” (i.e. self-managed) components of the HS.

2.5 Static Management Controls

The harvest strategy framework (Figure 1) identifies a number of static controls that can be implemented to complement and strengthen other management actions. The key static controls used to strengthen the HS are as described below, with dynamic (i.e. changing over time) controls outlined in later sections of this document.

2.5.1 Size limits²

Recent research on Australia's sea cucumber fisheries recommended that for data-poor species in regions where more sophisticated management controls are difficult to implement (Plagányi et al. 2015) a minimum legal size (MLS) limit enhances benefits. Where data are available to inform as to the choice of this, it should be selected to protect at least the first age-at-maturity. Table 6 summarises recommended HS size limits

2.5.2 Spatial and temporal closures

Beche-de-mer temporal/seasonal closures are not currently implemented as a compulsory component of this HS but could be used as an additional management measure by local communities and may be more formally incorporated in future versions depending on level of support and need. An example of industry proposed spatial closures discussed during HS workshops can be found at Figure 7.

2.6 Species Classification

The HS recognises that the TS BDM fishery is a multispecies fishery comprising species with different life histories, economic value, distributions and fishing pressure. All species have therefore been assigned to one of 4 species categories as described in Table 2. Species may change categories over time depending on available information and the associated management decisions made.

Table 2. TS BDM species category definitions as at March 2019.

Category	Examples of species in category as at March 2019	Category definition
Closed	sandfish surf redfish black teatfish	Species closed to fishing due to concerns of overfishing or stock depletion, underreporting, or significant overcatch of the TAC
Target species	white teatfish prickly redfish hairy blackfish deepwater redfish greenfish	Target species with own individual TAC
Curryfish	3 curryfish species	Increasingly targeted curryfish species
Basket species	all other species	Remaining species basket with trigger to identify species of growing commercial interest

² This HS includes recommended changes in some current size limits to bring them in line with updated information on the age-at-first-maturity as well as to better align them with comparable size limits from other fisheries such as the East Coast Beche-de-mer Fishery.

2.7 Total Allowable Catch (TAC)

Changes to the TACs (pre-Harvest Strategy implementation) (see Table 3) are recommended to reflect the revised classification of the component fishery species into categories. Starting TACs and trigger limits are based on a series of stock surveys carried out between 1995 and 2011 (Skewes et al., 2010; Murphy et al., 2014), and estimates of fishery harvests up to 2018. TACs have been set at less than 10% of population biomass and are designed to be sustainable medium-term annual limits that result in low risk to overexploitation. The trigger limits are even more conservative and include species with a high uncertainty in population estimates and/or biological parameters, allowing for potential increase if more information on species stock status is forthcoming. Changes in market value and demand mean that several additional species were identified as target species needing to have specific TACs or triggers (with associated actions). These include curryfish, greenfish, hairy blackfish and deepwater redfish (Table 3).

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Table 3. TAC Recommendations

Common name	Scientific name	Commercial value	TAC (t) ³	Recommended Starting TAC (t)	Basket triggers	Notes	Max middle tier TAC increase (based on indicators) before needing survey	Max recorded historical catch and year (not necessarily sustainable catch)
Sandfish	<i>Holothuria scabra</i>	High	Closed	Closed			5	1200t (1995)
Surf redfish	<i>Actinopyga mauritiana</i>	Medium	Closed	Closed			5	60.2t (1998)*
Black teatfish	<i>Holothuria whitmaei</i>	High	Closed	Trial 15t			25	52.7t (1996)
White teatfish	<i>Holothuria fuscogilva</i>	High	15	15			20	16.3t (2014)
Prickly redfish	<i>Thelenota ananas</i>	High	15 (↓ from 20)	15			20	28.1t (2015)
Deepwater redfish	<i>Actinopyga echinites</i>	Medium	Part of 80t basket	5 [#]			40t based on surveys	5.5t (2015)*
Hairy blackfish	<i>Actinopyga miliaris</i>	Medium	Part of 80t basket	5			10 (lower CI survey as uncertain)	28.5t (2001)
Greenfish	<i>Stichopus chloronotus</i>	Medium	Part of 80t basket	40t			40	1.2t (2002)
Curryfish common	<i>Stichopus herrmanni</i>	Medium	Part of 80t basket	60t curryfish			60 (herrmanni)	6.1t (2015); 15t (mid-2018)
Curryfish vastus	<i>Stichopus vastus</i>	Medium	Part of 80t basket	60t curryfish	15	new trigger	20 (vastus)	see curryfish
Elephant trunkfish	<i>Holothuria fuscopunctata</i>	Low	Part of 80t basket	Part of 50t basket	15	existing value	15	0.4t (2004)
Lollyfish	<i>Holothuria atra</i>	Low	Part of 80t basket	Part of 50t basket	40	half existing	80	0?
Burrowing blackfish	<i>Actinopyga spinea</i>	Medium	Part of 80t basket	Part of 50t basket	5	trial new species	10 (survey eg high around Warrior)	0
Deepwater blackfish	<i>Actinopyga palauensis</i>	Medium	Part of 80t basket	Part of 50t basket	0.5	previous catch	10	0.5t (2001)*
Golden sandfish	<i>Holothuria lessoni</i>	High	Part of 80t basket	Part of 50t basket	0.5	previous catch	5	0.35t (2014)
Brown sandfish	<i>Bohadschia vitiensis</i>	Medium	Part of 80t basket	Part of 50t basket	3	previous catch	5	3.4t (2002)
Leopardfish	<i>Bohadschia argus</i>	Medium	Part of 80t basket	Part of 50t basket	40	existing value	40	9.6t (2003)
Stonefish	<i>Actinopyga lecanora</i>	Medium	Part of 80t basket	Part of 50t basket	5	existing value	5	0.5t (2010)
TOTAL			110t	205t [§]				
§ including trial openings for black teatfish			# catches over 2013-15 approx 5.5t/yr			* possible misidentification		

³ Prior to Harvest Strategy implementation, the TACs for most species were set based on a conservative estimate of biomass from historical surveys.

2.8 Reference Points

There are no adopted proxies consistent with the CHSP for the Torres Strait BDM fishery, and it isn't necessarily sensible to derive these because of the highly variable nature of the fishery as well as the cost-benefit relationship when considering the large spatial area that would need to be reliably assessed for relatively small catches of some species. However, the current TACs are set conservatively and in that respect reflect an intention to meet the HSP. Moreover, some of the proxies used in the HS are fairly conservative and consistent with the HSP.

Nonetheless, where required, proxies for reference points were based on Plaganyi et al. (2015) as follows:

The unfished biomass B_0 – defined as the pristine or survey-based spawning biomass estimate, noting however that with large recruitment variability, it is possible for populations to exceed B_0 in some years, or conversely appear severely depleted in other years, even in the absence of fishing.

The limit biomass B_{LIM} – a more conservative value (than the default harvest strategy limit reference point) of $0.4 \cdot K$ is used. Where available, survey data are used to select a lower limit reference level below which stock density is considered unacceptably low and the fishery should be closed – see example in Figure 5. A threshold limit can also be specified as the level above which the fishery is allowed to re-open.

The target biomass B_{TARG} – it's difficult to define a proxy for the HSP target because of the large natural variability (both in time and space) and insufficient data. For some species such as sandfish an estimate can be obtained based on historical survey data and/or comparison with densities in less fished areas (see Figure 8).

F_{TARG} F_{LIM} and F_{MSY} – as above, it is difficult to derive sensible estimates of these quantities, and none currently exist. It is also difficult to estimate fishing mortality in practice because accurate catch records are needed, as well as regular assessments of resource status. Some of the TAC estimates are based on applying default fishing mortalities to conservative biomass estimates).

The HS is tailored to the specific data available for this fishery, and a range of indicators are used to inform on the status of each species. The status of each stock depends on comparison with agreed Reference Points as specified below. For example, if total catch exceeds a pre-specified limit or CPUE is below a pre-specified limit reference level then it may indicate that species is being fished too heavily. An assessment process is therefore needed to assess the current status and trends in the biomass of each species. A decision rule is then used to describe what action is needed to adjust catch limits to achieve desired targets and satisfy the overall fishery objectives.

2.9 Stock Assessment Cycle

The HCWG meets at least once annually to review all available catch data as well as primary indicators data, and decides on analyses needed as well as any future monitoring needs and revisions to the HS.

2.10 Data Summary

The annual data summary reviews the catch and catch per unit effort (CPUE) from the fishery as well as all other information, including the size-frequency information provided from sub-samples of commercially caught BDM. The data summary is used as an indicator to identify if catches correspond to the RBC, and to monitor CPUE.

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2.11 Decision Rules

In order to manage the TS BDM stocks to meet the operational objectives of the HS and the BDM Fishery more broadly, the HS includes a mix of approaches as described above:

- a) Effort controls and temporal closures;
- b) Spatial management;
- c) Total Allowable Catches to limit total amount caught; and
- d) complementary minimum size limit to allow animals a chance to breed before being caught.

A summary of the harvest strategy framework is provided below, and includes Decision Rules specified within each tier.

Low Tier:

- i. **Catch-based Decision Rule** – TACs are monitored and adjusted annually, with agreement that a fishery will be closed if no data are provided. Overcatch of the TAC may result in a corresponding reduction from the TAC the following year, a 1 year pause in fishing, or a closure of the species, depending on the severity of the overcatch.
- ii. **Joint TAC trigger-limit Decision Rule** – Basket species are managed under a joint TAC with species specific triggers. If the trigger limit of an individual basket species is exceeded by more than 10 per cent, all available information must be considered and changes to basket TACs or individual basket species trigger limits may be possible.

Middle tier:

- i. **Multiple Indicator Decision Rule** – TACs may be increased if high quality fishery data are available from at least two primary indicators. The potential increase to TACs may be capped at a specified level depending on the proportional change (10% or more) in the multiple indicator adjustment factor. If the proportional change in the multiple indicator adjustment factor is less than 10%, the TAC stays the same.

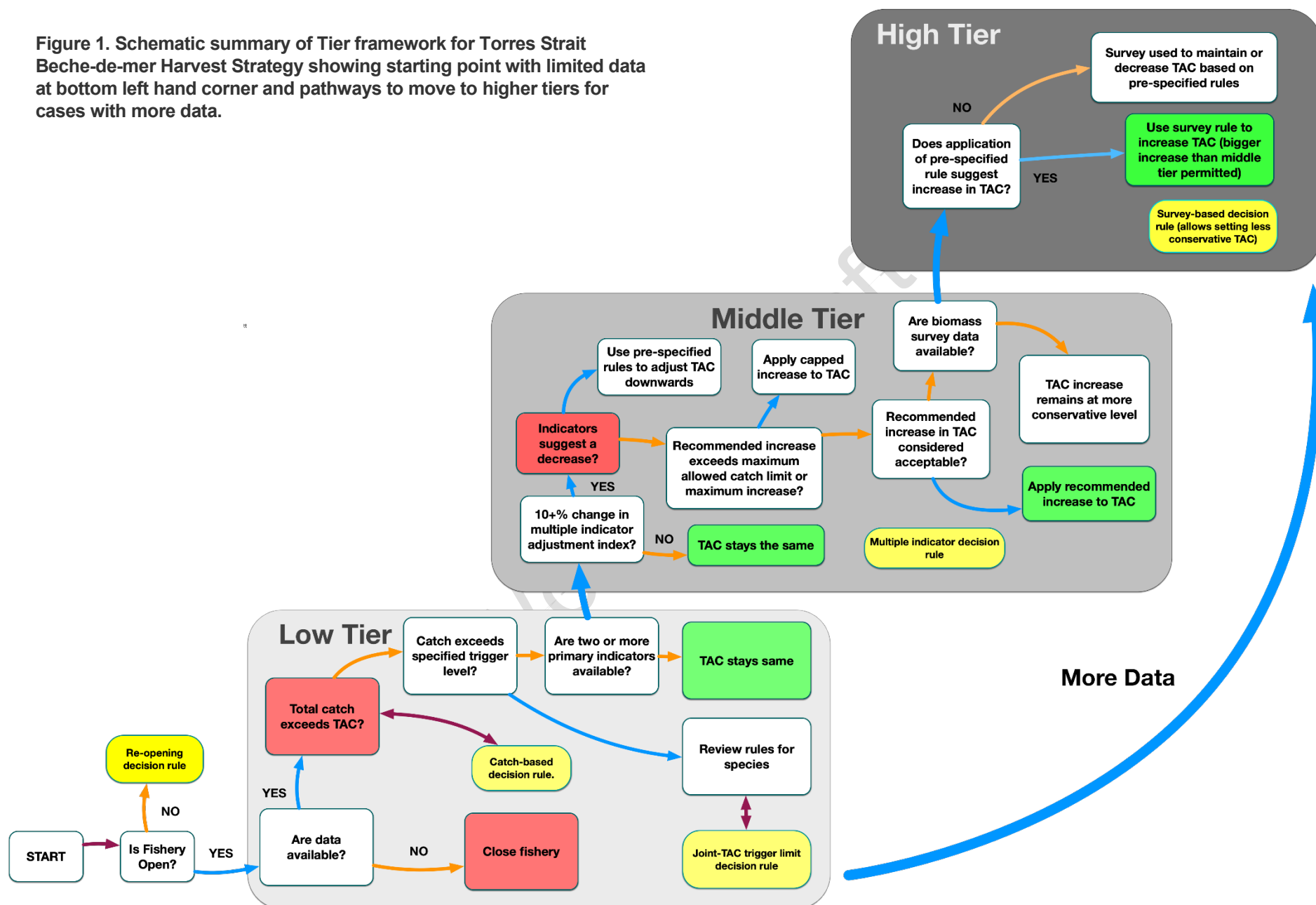
High tier:

- i. **Survey-based Decision Rule** – TACs may be increased or decreased using high quality survey data based on trends or total biomass estimates.

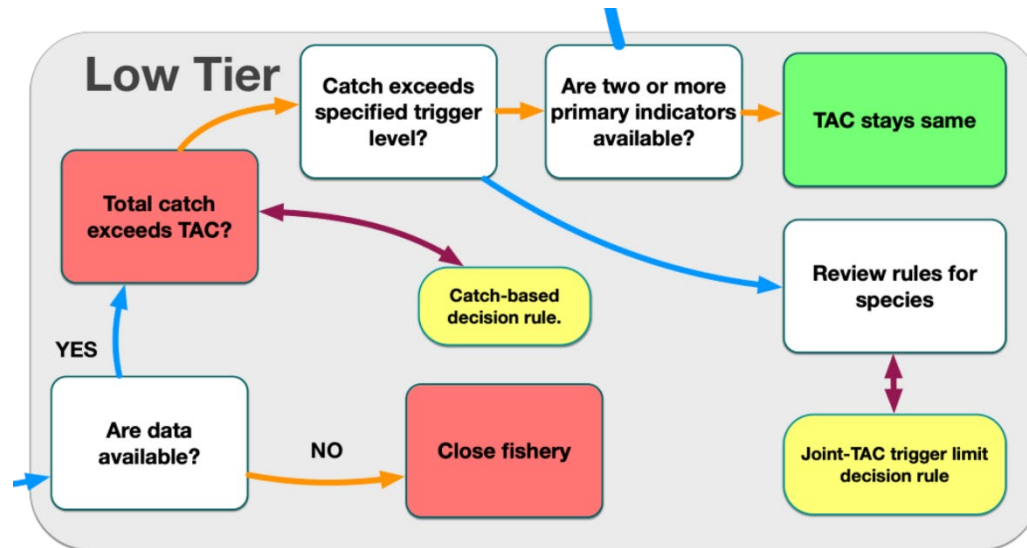
Closed Species

An additional **Re-opening Decision Rule** applies for species that have been closed to fishing due to concerns of overfishing or stock depletion, significantly exceeding catches beyond the TAC, or in the absence of reported catches.

Figure 1. Schematic summary of Tier framework for Torres Strait Beche-de-mer Harvest Strategy showing starting point with limited data at bottom left hand corner and pathways to move to higher tiers for cases with more data.



2.11.1 Low Tier Decision Rules



When is the low tier applied?

In the absence of data other than the total amount of reported catch by species or combined basket

What are the decision rules?

There are two decision rules that operate within the low tier:

- Catch based decision rule
- Joint TAC trigger limit decision rule

What do the decision rules allow?

For species with individual TACs, the low tier allows the TAC to either be maintained or reduced depending on the information available. A transition to the middle tier, and increased TACs is not possible unless two or more primary indicators are available.

For species with individual triggers, within a basket with a joint TAC, the low tier may allow changes to the joint TAC, or individual triggers, depending on the information available.

2.11.1.1 Low Tier Catch-Based Decision Rule

This is a low tier rule that is applied to all species in the absence of data other than total annual catch per species:

1. If no reliable catch-reported data then TAC = 0;
2. If reported catches exceed the TAC by <20% then carry over the exceeded catch and subtract from the following year's TAC;
3. If reported catches exceed the TAC by >20% and <100% (double), then pause fishing for one fishing season;
4. If reported catches exceed the TAC by more than double, close the fishery.

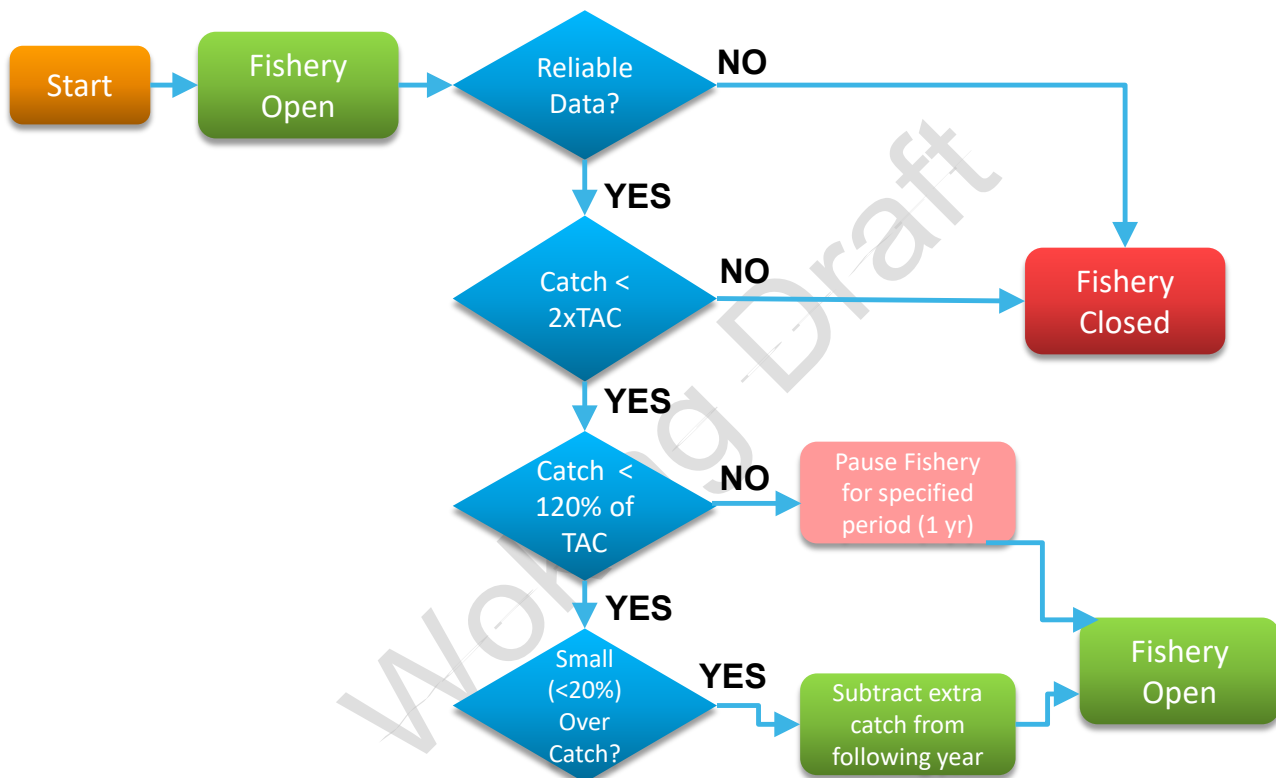


Figure 2. Flowchart summarising low tier catch-based decision rule.

2.11.1.2 Low Tier Joint TAC Trigger-Limit Decision Rule

This is a low tier rule that is applied to species with specific triggers within a basket:

1. Calculate the total catch (including discards) of all species in the group
2. Calculate the estimated total catch of each species, either from direct species-specific catch data or from (representative) catch samples used to infer proportional abundance of different species
3. If the catch of any species exceeds the species-specific trigger (Table 3) by more than 10%, then collect data and information to decide whether:
 - a) to make a change to the basket TAC, or individual species trigger, or
 - b) a species-specific TAC is justified, or
 - c) a closure is deemed necessary, or
 - d) recommend further data be collected (e.g. in the form of a survey, or indicator before any change to the joint TAC or trigger limit is allowed.

Such data and information may include but is not limited to, updated information on stock distribution, stock status or biomass estimates from nearby fisheries (e.g. Queensland East Coast BDM Fishery) of the same species, or new information on life history characteristics, biology, or market value.

The current TAC and trigger limit will remain in place unless the above (3a – d) suggests a change. For basket species groups, triggers are specified such that when the catch of a particular species reaches or exceeds a trigger, the reasons need to be established and appropriate management action implemented (Figure 3). This could include specifying the need for additional data to monitor the expansion of a fishery for a species, a good example being the recent growth in fishing effort on curryfish (*Stichopus hermanni* and *S. vastus*) due to improved processing methods and market opportunities (Purcell 2014).

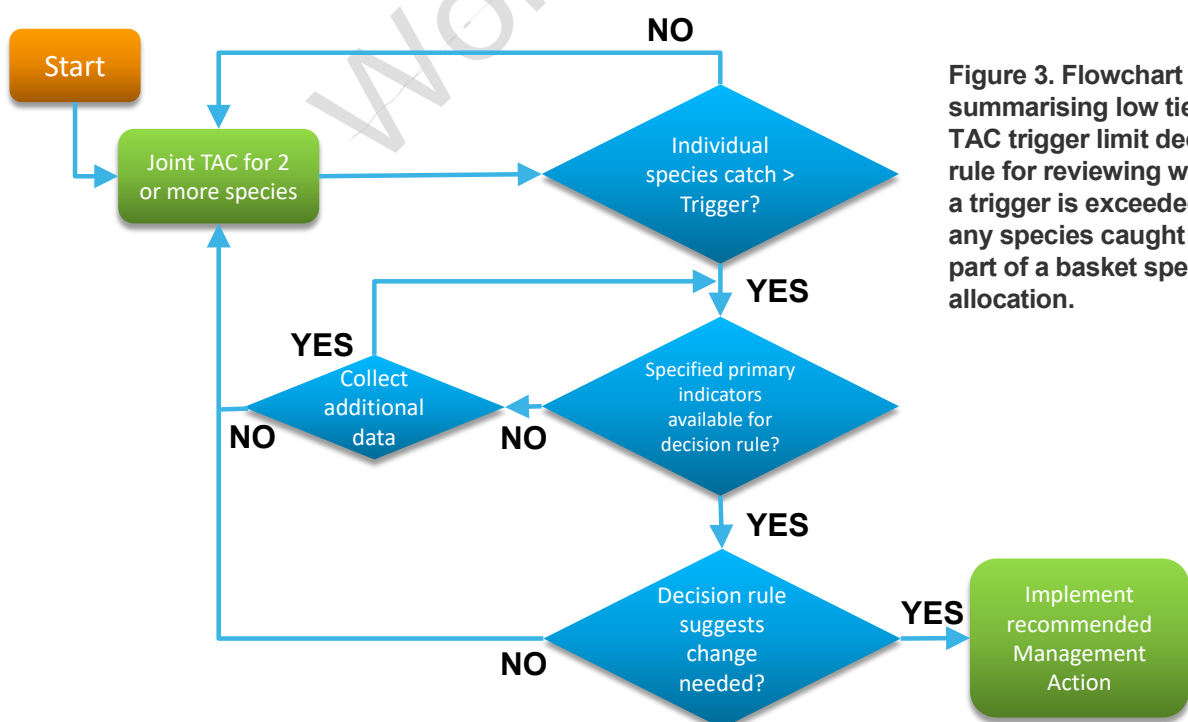
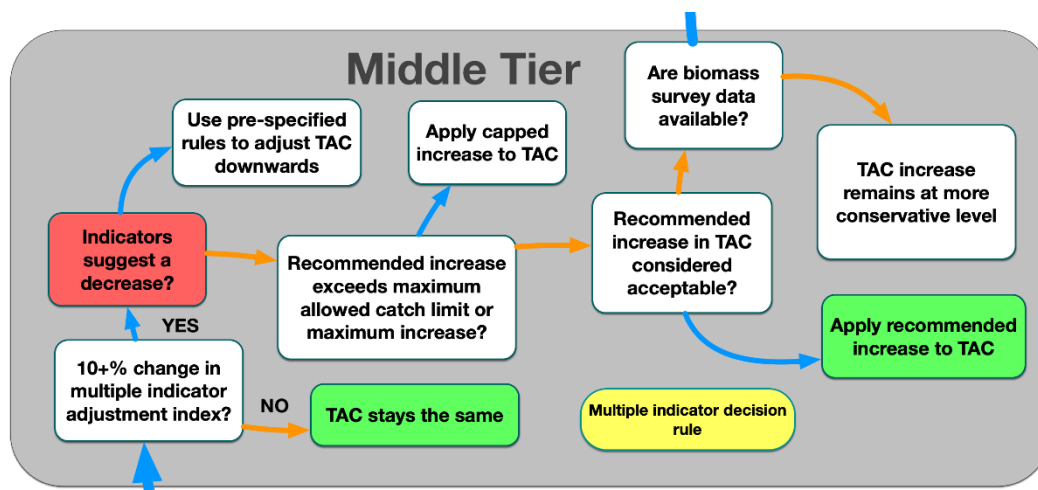


Figure 3. Flowchart summarising low tier Joint TAC trigger limit decision rule for reviewing whether a trigger is exceeded for any species caught as part of a basket species allocation.

2.11.2 Middle Tier Decision Rules



When is the Middle Tier applied?

The Middle tier applies when high quality data are available from several primary indicators in addition to total catch per species.

The Middle Tier is not immediately applicable as no detailed historical fishery data are available, but it provides a pathway for improving and growing the fishery in line with the HS objectives.

What does the Middle Tier decision rule allow?

The Middle Tier Decision Rules specify how to increase TACs if good quality fishery data are available and indicate a capped increase is possible (see Table 3, max middle tier TAC increase).

The Middle Tier uses the Multiple Indicator Decision Rule, with the condition that high quality data are required from at least two of the additional primary indicators (Figure 4).

2.11.2.1 Middle Tier Multiple Indicator Rule

Catch-Per-Unit-Effort (CPUE) has not been demonstrated to be a reliable indicator on its own, but as more data are collected, the value of CPUE data as an index of abundance will increase, especially if used in combination with other indicators such as changes in average size of animals caught, catch composition and spatial footprint. Decision rules using a combination of these indicators could be used to increase or decrease the TAC could be made based on a Recommended Biological Catch (RBC) calculated using 2 or more of the following primary indicators, where the weights assigned to each indicator are denoted w_1 , w_2 , w_3 , w_4 for respective indicators CPUE, average Size, spatial footprint (Area) and changes in catch composition (Figure 4):

$$A = w_1 \times \text{CPUE} + w_2 \times \text{Size} + w_3 \times \text{Area} + w_4 \times \text{Catch proportion}$$

The default weights are set at 0.25 (i.e. equal weighting), but renormalised if any of the indicators are missing and have associated zero weight.

The overall recommended adjustment in the RBC is computed by scaling the average of the adjustment factors by the average (3 yr) Catch, but with the constraints that the adjustment proportion not exceed the pre-specified cap A_{cap} and $A < \text{maximum increase permitted (MAX}_{sp})$:

$$\begin{aligned} RBC &= \min(A, A_{cap}) \times C_{CUR} & RBC &\leq MAX_{sp} \\ RBC &= TAC & \min(A, A_{cap}) \times C_{CUR} &> MAX_{sp} \end{aligned}$$

The **Multiple indicator rule** can be summarised as follows:

- Calculate 2 or more of the individual Indicator adjustment factors described below
- Work out the average A of these values or a weighted average if assigning different weights to different contributions
- Calculate the average recent catch (past 3 years)
- If the average A exceeds a pre-specified maximum increase proportion (default value 0.10) then use the maximum capped value rather than calculated value
- Multiply the average recent catch by the indicator average to obtain the new Recommended Biological Catch (RBC)
- Check that the RBC does not exceed a pre-specified maximum catch limit (Table 3).

The multiple indicator rule will typically be applied to species which are highly targeted and assume that available data and information are largely species-specific. Additional considerations are necessary if the target species is typically caught together with one or more other species. The middle tier also recognises that the use of CPUE is problematic as an index of abundance of sea cucumbers (noting potential for hyperstability in particular for highly aggregated species) as well as the limitations of the other primary indicators used here, and for this reason, increases based on these data are more conservative than possible if using survey data based on sound scientific methods. Individual indicator adjustment factors are calculated as described below, with a mathematical formulation first specified followed by plain English summary of the rule.

Multiple Indicator Decision Rule

- Use CPUE plus at least 1 other (out of possible 3) indicators
- Calculate average trend in these combined indicators
- If positive, then increase in TAC could be considered (& conversely if negative)
- Set upper catch limit allowed (need survey to increase beyond this)

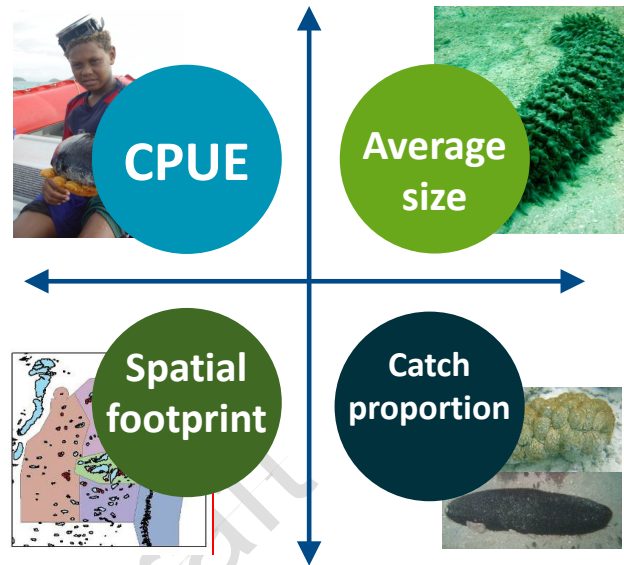


Figure 4. Schematic summary of the Middle Tier Multiple Indicator Decision Rule and its components

Calculating Middle Tier Individual Indicator Adjustment Factors

CPUE Indicator (based on recent trend in CPUE)

$$I_{CPUE} = 1 + c_1 \times slope_{CPUE}$$

- Where “slope” is the slope in the trend in (standardised if available) CPUE index over the past 3 years for which data are available
- Parameter c_1 accounts for how reliable data are, with guidance provided on default settings

Calculating the Middle Tier CPUE Indicator Adjustment Factor

- Use all available reliable data converted to consistent units (e.g. kg/hour fishing) to compute the annual average CPUE (preferably standardised to the extent possible) for a target species (and/or area)
- Use the past series of comparable CPUE data (at least 3 years' data required) and compute the slope of a regression line fitted through the data (i.e. quantify the trend in the data to determine whether CPUE is increasing, decreasing or stable over time) (e.g. a population increasing at 10% per year would have an average slope value of 0.1).
- Select a value for the scaling parameter which downweights the empirical slope estimate to take into account that the CPUE data do not provide a very reliable index of stock abundance. The default setting is 0.5 (see also comparison with survey factor below). Hence for example this downweights a perceived stock increase of 0.1 to 0.05, as a basis for recommending a 5% increase in the TAC).
- The CPUE Index contribution to the multiple indicator rule is then 1 plus the slope factor.

Average Size Indicator (based on recent average size relative to historic average)

$$I_{size} = 1 + c_2 \left(\frac{\sum_{y=2}^y s_y / 3 - \bar{s}}{\bar{s}} \right)$$

- Where s is the average annual size of animals from a catch sample, with the average computed over the past 3 years and compared with the historical average size of caught animals \bar{s}
- Parameter c_2 accounts for how reliable data are (e.g. is the size sample representative), with guidance provided on default settings

Calculating Middle Tier Average Size Indicator Adjustment Factor

- Use all available representative size data converted to consistent units (e.g. length of live animal in cm or average individual mass of boiled individual animal in kg) to compute the average size of the catch of a target species (and/or species in a particular area) over the past 3 years
- Use data from past observations (see Supporting Information and noting that these data should be reviewed and updated over time) to compute an average historical size of the fished population
- Calculate the ratio of the recent measured size compared with the base estimate to determine whether average size has been increasing or decreasing over time.
- Select a value for the scaling parameter which downweights the empirical size ratio to account for potential errors and biases in this measurement. The default setting is 0.5.
- The Size Indicator Index contribution to the multiple indicator rule is then 1 plus the scaled size ratio

Percentage of areas fished Indicator (based on recent average area fished relative to historic average)

$$I_{area} = 1 + c_3 \left(\frac{\bar{a}}{a} \right)$$

- Where a is the proportion of areas fished relative to the historical average proportion of area fished – note that an expansion of the area fished is assumed to indicate a decline in stock status (eg due to local depletion)
- Parameter c_3 accounts for how reliable data are (eg are there spatial references in the logbook used to compute the change in spatial footprint), with guidance provided on default settings

Calculating Middle Tier Area Fished Indicator Adjustment Factor

- Use all available data on the area fished for a target species, converted to consistent units (e.g. square kilometres of fished area; number of reefs fished; depth range fishing occurred), to compute the average recent fished area of a target species
- Use data from past observations to compute an average historical fishing area for the fished population
- Calculate the ratio of the recent fished area compared with the base estimate to determine whether average fished area has been increasing or decreasing over time.
- Select a value for the scaling parameter which downweights the empirical area fished ratio to account for potential errors and biases in this measurement. The default setting is 0.5.
- The Area Fished Indicator Index contribution to the multiple indicator rule is then 1 plus the scaled area ratio.

Catch proportion Indicator (based on recent average catch proportion of species being considered, relative to total catch of all TS BDM species)

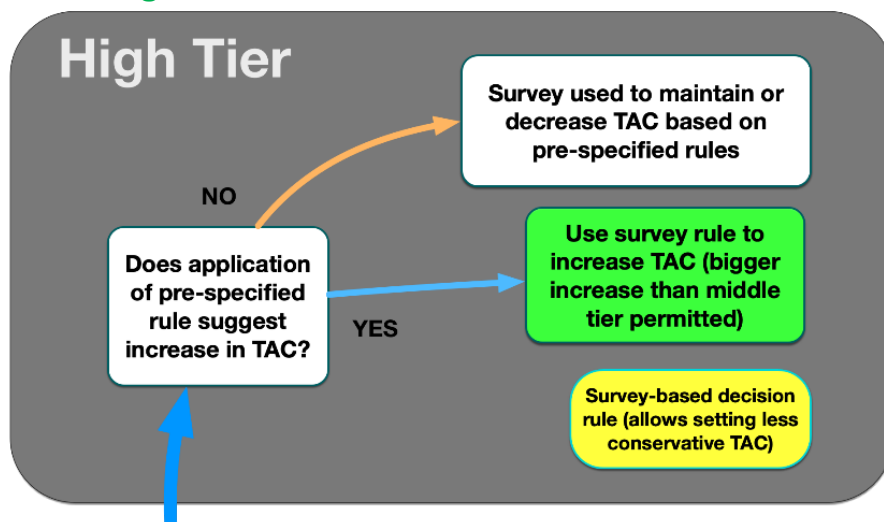
$$I_{prop} = 1 + c_4 \left(\frac{\sum_{y=2}^y p_y / 3 - \bar{p}}{\bar{p}} \right)$$

- Where p is the average annual catch proportion (of the species being considered) from a catch sample, with the average computed over the past 3 years and compared with the historical average catch proportion \bar{p}
- Parameter c_4 accounts for how reliable data are (e.g. were representative catch samples used, data from logbooks), with guidance provided on default settings

Calculating the Catch Proportion Indicator Adjustment Factor

- Use all available reliable data (but excluding data from highly targeted single-species catches such as for black teatfish) to compute the average (past 3 years) catch proportion for a target species
- Use data from past observations (including survey data) to compute the average expected catch proportion of the fished population
- Calculate the ratio of the recent measured catch proportion compared with the base estimate to determine whether the proportional representation of a species in a mixed basket catch has been increasing or decreasing over time.
- Select a value for the scaling parameter which downweights the empirical catch proportion ratio to account for potential errors and biases in this measurement. The default setting is 0.5.
- The Catch Proportion Indicator Index contribution to the multiple indicator rule is then 1 plus the scaled catch proportion ratio.
- Before using this index, information (such as from market prices and fisher local knowledge pertaining to drivers to target particular species) should be considered to determine whether the change in catch proportion is likely due to fisher targeting behaviours or reflects changes in the relative abundance of the target species relative to other species. This indicator therefore needs to be used with caution, but may be particularly useful for species such as curryfish where data on component species are required.

2.11.3 High Tier Decision Rules



When is the High Tier applied?

The high tier utilises high quality survey data (see earlier section outlining requirements for survey data to meet the criterion of being adequately high quality and representative).

What do the High Tier decision rules allow?

The high tier can be used to adjust TACs upwards (in cases where there is evidence of scope to increase TACs) or downwards (in cases where there are concerns about the status of a fished species). This is usually only necessary if total catch of a species is close to the current TAC.

2.11.3.1 Survey-based Decision Rule for adjusting TACs

This section describes first the use of survey data as relative indices of abundance and second use of surveys to estimate total standing stock. There are a number of extensive historical surveys which can be used as a baseline for comparison with future survey data to quantify trends in abundance of key species. Before comparing new and old survey data, it is critical that an evaluation is made of the extent to which the data are comparable (e.g. were they collected from comparable areas and habitats; how extensive was the survey) and where necessary, data should be reconfigured to ensure optimal comparability. In evaluating the quality of a trend based on survey data, the inter-survey interval also needs to be considered as long gaps between surveys mean that data may be less informative. As fishery-independent or dedicated surveys conducted by fishers are generally considered more reliable than CPUE data, survey trends can be used to adjust TACs upwards (in cases where there is evidence of scope to increase TACs) or downwards (in cases where there are concerns about the status of a fished species). This is usually only necessary if total catch of a species is close to the current TAC.

2.11.3.2 Survey-Based Decision Rule based on trends

- If Average (3 yr) Catch between 80% and total TAC, use index of abundance (survey) to adjust:
 - $TAC = (1+b \cdot \text{slope}) \cdot C_{CUR}$ and maximum increase pre-specified
- where C_{CUR} is average catch over the past three years, and includes landings plus discards;
- “slope” is the slope in the trend in standardised biomass survey index over the past 3 years for which data are available, noting that it isn’t necessary for past data to be available on an annual basis
- Parameter b differs based on how reliable data are (eg survey extent, intensity and standard error). Default settings are shown below.

Settings:

- If excellent survey data available, set $b = 1$
- If survey less comprehensive and lag since last survey, set $b = 0.8$
- Lower b adjusts for data being less reliable

Slope:

- If slope is positive it suggests resource is increasing and TAC can be increased
- Conversely, if slope is negative, it suggests resource is decreasing and TAC should be decreased
- If slope is large positive i.e. fast increase, a cap (limit) on the maximum permissible increase in TAC should be implemented. Default setting is 10% for fixed period of 2 years.

2.11.3.3 Survey-Based Decision Rule based on total biomass estimate

Given that the BDM Fishery includes very many species occupying different habitats, the HS recognises that the same survey design isn't appropriate for all species. The HS also recognises that technologies and hence survey techniques are developing and that innovative new survey methods may need to be included in future revisions of the HS. For species such as sandfish which is concentrated in a specific area (Warrior Reef), a dedicated survey design can be used to estimate the local density and this can then be compared with limit reference points (see Reference Points section) to determine whether or not the fishery can be re-opened (see Re-opening Decision Rules). Once open, future surveys can be pursued to obtain an estimate of relative abundance as described above. On the other hand, for species such as white teatfish which occur mostly in deeper waters, a survey with representative sites could be used to estimate the total standing stock occupying previously unsurveyed areas or depths (in this case, depths in excess of 20m). This new information informs on total stock standing biomass and can be used to make adjustments to existing TACs using the same process that was used previously to estimate conservative initial TACs for species. Similarly, for species of concern, such as prickly redfish, surveys could be used to either assess trends in abundance or to evaluate standing stock biomass for the purpose of comparing with estimates of sustainable catch. Surveys are also less straightforward for prickly redfish but it is possible to select reference sites for use in obtaining a trend from future surveys.

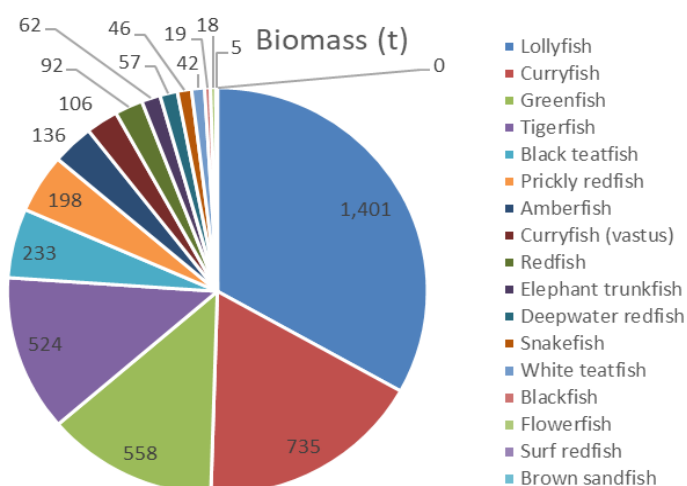
In summary:

For most species the current TAC is set based on a conservative estimate of historical biomass (Figure 5).

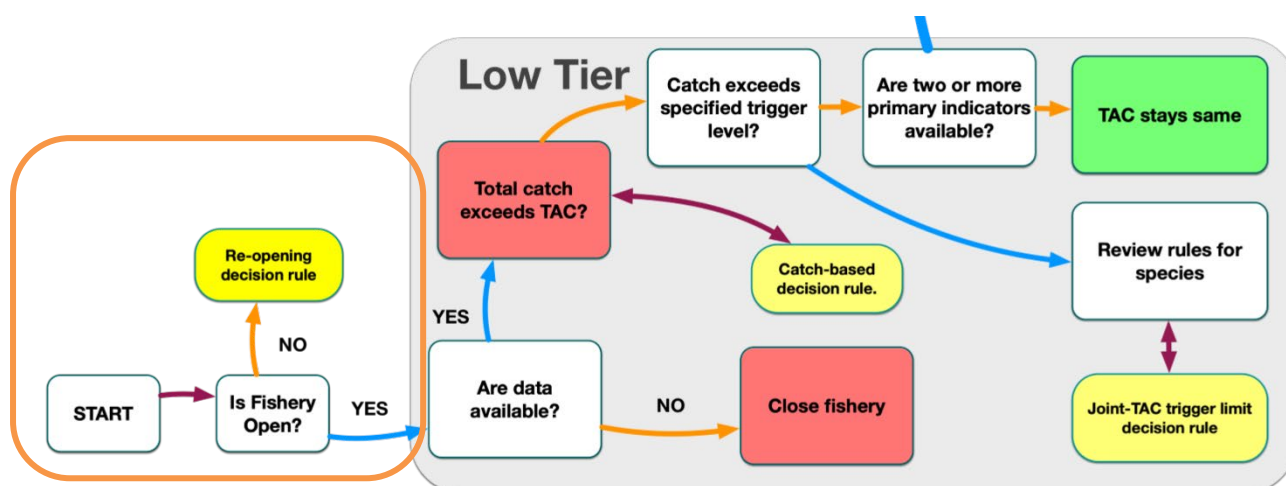
- The survey biomass estimates can be used to inform baseline target and limit densities for species such as sandfish, but challenges need to be recognised in obtaining comparable and representative estimates for species such as black teatfish. Other species such as surf redfish are also difficult to survey reliably

Density standardised by habitat type and reference sites is proposed as the reference measure because it is measurable locally rather than requiring a full survey across all spatial areas, but any density measure needs to be sufficiently representative of the broader area in which that species occurs.

Figure 5. Schematic showing average survey-based Torres Strait biomass estimates (t) for species as shown for use in comparing with future survey-based biomass estimates.



2.11.4 Re-opening Decision Rule



This rule that is applied to re-open a fishery (where the term “fishery” here refers to a specific BDM species in Torres Strait) that has been closed due to concerns around stock status and depletion, or for reasons such as needing to first ensure adequately precautionary measures are in place so that overfishing does not occur or the stock does not become overfished.

A decision that the fishery may potentially be re-opened should also take into account previous survey information as well as recent catch history (both legal and illegal) and periods over which the fishery has been closed (e.g. black teatfish). Note this also takes into account findings from testing spatial rotation strategies for Beche-de-mer (Plaganyi et al. 2015) which suggest that larger annual catches need to be followed by rest periods (with no fishing for 2-3 years) to keep risks to the fishery the same as lower, but constant annual average catches. This notion is also consistent with, and underpins, the catch-based decision rule which prescribes a pause in fishing following instances of heavy fishing (see [Low Tier Catch-Based Decision Rule](#)).

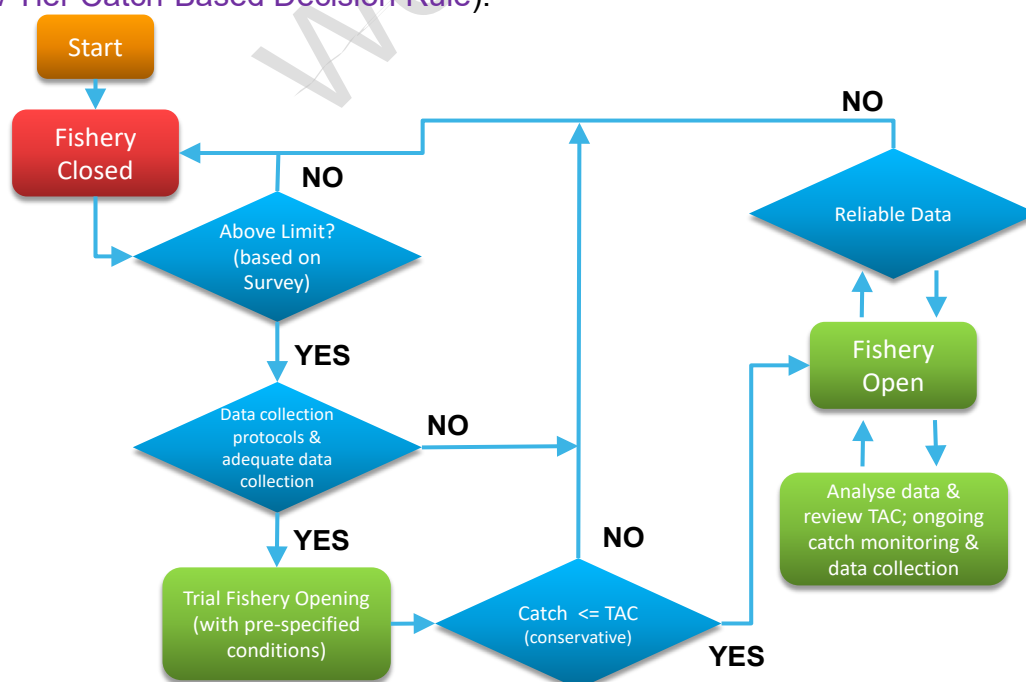


Figure 6. Flowchart summarising process for re-opening a closed fishery

If considering re-opening a closed fishery (Figure 6):

1. Using all available information, first establish that the stock is above a limit reference point level.
 - In the absence of reliable information, this may require conducting a new stock survey and comparing the biomass results with the limit reference point (see [High Tier Decision Rules](#)).
 - Only proceed to the next step in potential opening if the survey or available information suggests the stock is above a limit reference point.
2. Evaluate whether monitoring and management are adequate.
 - This involves ensuring data collection and monitoring are clearly specified and in place before proceeding to next step in potential opening.
3. If the above conditions are met, then a trial opening is possible with the following conditions attached:
 - Accurate daily catch and effort reporting is required
 - A precautionary trigger limit may be set to temporarily pause fishing while catch records are collated to ensure that overfishing does not inadvertently occur.
 - An effective warning system needs to be put in place to ensure everyone stops and waits while approaching the trial TAC to allow all catch reported data to be entered and processed.
 - Further conditions may also be considered, including limitations on which species can be harvested in conjunction with a re-opened species, or with a particular gear (e.g. hookah).
 - Trial opening dates should be considered in relation to seasonal fishing dates. For example, industry have advised that the an opening of a high value species such as black teatfish should preferably occur during the same time that the TRL fishery is open to hookah fishing to reduce pressure on the BDM resource. This may also account for equity considerations for dedicated fishers working in eastern areas where the BDM stocks are mostly located. Trial opening dates also need to take into account favourable weather and tides to ensure safe and efficient fishing can occur.
 - Consideration should also be given to cultural laws and community agreements with respect to who can fish where.
4. The Trial opening TAC needs to be set at a demonstrably conservative level with reference to values as shown in Table 3.
5. If the Trial TAC is exceeded by more than 5%, then the fishery is automatically paused (i.e. no fishing allowed) for the following year.
6. If data collection during the Trial opening was not conducted satisfactorily, then the fishery is closed again.
7. If the TAC wasn't exceeded and reliable data were collected, these data need to be analysed to review the TAC and potential for the fishery to stay open in future, or be re-opened periodically after a pre-specified interval.
8. An ongoing condition of the fishery remaining open is that reliable data collection continues, and preferably includes additional data such as CPUE, spatial footprint and size composition (see Multiple Indicator Rule).

3 Governance

The status of the Fishery and how it is tracking against the HS is reported to the Working Group and the PZJA as part of the yearly management process.

4 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 surveys and annual assessments is agreed) for assessing the Fishery. The HSF may be amended to incorporate decision rules appropriate for those assessments.

5 References

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Appendix A.1 – Conversion Ratios

Table 4. Conversion ratios

Common name	Species	Live to Guttled	Live to Salted	Live to Dried	Guttled to Salted	Guttled to Dried	Salted to Dried	Salted to Guttled	Dried to Guttled
Sandfish	<i>Holothuria scabra</i>	0.496 ⁴	0.355 ⁴	AVE=0.049 ^{a14}	0.758 ⁴	0.094 ⁴	0.125 ⁴	1.319 ^d	10.638 ^{e4}
Surf Redfish	<i>Actinopyga mauritiana</i>	0.684 ^{2*}	-	AVE=0.084 ^{a12*}	0.873 ⁴	AVE=0.187 ^{2*} ₄	0.286 ⁴	1.145 ^d	AVE=5.930 ^{2*e4g}
Black Teatfish	<i>Holothuria whitmaei</i>	AVE=0.677 ^{2*34}	0.529 ³	AVE=0.108 _{a12*3}	0.824 ^{f,4}	AVE=0.177 ^{2*f} ₃	0.220 ^f	1.213 ^{f,4}	AVE=5.663 ^{2*f3g}
White Teatfish	<i>Holothuria fuscogilva</i>	AVE=0.627 ^{2*c4}	0.593 ^c	AVE: 0.137 ^{1ab2*}	0.775 ¹	AVE=0.237 ¹² _*	0.309 ¹	1.290 ¹	AVE=4.219 ^{12*g}
Prickly Redfish	<i>Thelenota ananas</i>	AVE=0.667 ^{c4}	0.481 ^c	AVE=0.055 ^{1ab4}	AVE=0.736 ₁₄	AVE=0.088 ¹⁴	AVE=0.118 ₁₄	AVE=1.382 ^{1d} ₄	AVE=12.502 ^{1e4}
Hairy Blackfish	<i>Actinopyga miliaris</i>	0.480 ⁴	-	AVE=0.067 ^{a14}	0.964 ⁴	0.209 ⁴	0.217 ⁴	1.037 ^d	4.785 ^e
Curryfish (common)	<i>Stichopus hermanni</i>	0.651 ²	-	AVE=0.036 ^{a1}	-	0.114 ²	-	-	8.772 ^{2g}
Elephants Trunkfish	<i>Holothuria fuscopunctata</i>	0.519 ⁴	-	AVE=0.133 ^{a1b4}	0.911 ⁴	0.242 ⁴	0.263 ⁴	1.097 ^{d4}	8.772 ^{e4}
Lollyfish	<i>Holothuria atra</i>	AVE=0.436 ^{c12*}	0.236 ^{c1}	AVE=0.063 ^{a1bc} _{2*}	0.586 ¹	0.150 ^{12*}	0.256 ¹	1.706 ¹	5.917 ^{12*g}
Deepwater redfish	<i>Actinopyga echinites</i>	0.692	-	AVE=0.088 ^{a13}	-	0.152 ^{f3}	-	-	6.600 ^{f3}
Curryfish (vastus)	<i>Stichopus vastus</i>	-	-	-	-	-	-	-	-

Common name	Species	Live to Guttred	Live to Salted	Live to Dried	Guttred to Salted	Guttred to Dried	Salted to Dried	Salted to Guttred	Dried to Guttred
Burrowing blackfish	<i>Actinopyga spinea</i>	0.544 ³	0.375 ³	0.073 ^{1a}	0.689 ^{f3}	0.135 ^{f3}	0.195 ^{f3}	1.449 ^{f3}	7.424 ^{f3}
Deepwater blackfish	<i>Actinopyga palauensis</i>	AVE=0.818 ^{c13}	AVE=0.593 ^{c13}	AVE=0.175 ^{a1b}	AVE=0.728 ^{1f3}	AVE=0.190 ^{1f3}	AVE=0.262 ^{1f3}	AVE=1.374 ^{1f3}	AVE=5.335 ^{1f3}
Golden sandfish	<i>Holothuria lessoni</i>	0.645 ³	0.526 ³	0.098 ^a	0.815 ^{f3}	0.152 ^{f3}	0.186 ^{f3}	1.226 ^{f3}	6.588 ^f
Brown sandfish	<i>Bohadschia vitiensis</i>	0.735 ^{c,1}	0.612 ^{c1}	0.116 ^{c1}	0.834 ¹	0.157 ¹	0.189 ¹	1.199 ¹	6.337 ¹
Leopardfish	<i>Bohadschia argus</i>	AVE=0.665 ^{c12}	0.572 ^{c1}	AVE=0.115 ^{c12}	0.777 ¹	AVE=0.171 ¹²	0.233 ¹	1.286 ¹	AVE=5.841 ^{12g}
Greenfish	<i>Stichopus chloronatus</i>	-	-	-	-	-	-	-	-
Stonefish	<i>Actinopyga lecanora</i>	0.894 ^{c1}	0.652 ^{c1}	AVE=0.154 ^{c12*}	0.729 ¹	AVE=0.158 ^{12*}	0.253 ¹	1.372 ¹	5.418 ¹

References – Table 4

- ¹Ngaluafe, P. & Lee, J. 2013. Change in weight of sea cucumbers during processing: Ten common commercial species in Tonga. SPC Beche-de-mer Information Bulletin 33: 3-8.
- ²Prescott, J., Zhou, S. & Prasetyo, A.P. 2015. Soft bodies make estimation hard: correlations among body dimensions and weights of multiple species of sea cucumbers. Marine and Freshwater Research 66: 857-865.
- ^{2*}Calculations from raw data used in Prescott et al., 2015. (Data provided by Shijie Zhou).
- ³Purcell, S.W., Gossuin, H., Agudo, N.S. 2009. Changes in weight and length of sea cucumbers during conversion to processed beche-de-mer: Filling gaps for some exploited tropical species. SPC Beche-de-mer Information Bulletin 29: 3-6.
- ⁴Skewes, T., Smith, L., Dennis, D., Rawlinson, N., Donovan, A. & Ellis, N. 2004. Conversion ratios for commercial beche-de-mer species in Torres Strait. AFMA Final Report #R02/119. 20 pp.
- ^aNgaluafe & Lee, 2013. Table 3; percent conversion ratios, total whole/fresh weight, from wet to dry product including values from other studies.
- ^bNgaluafe & Lee, 2013. Table 1; wet-to-dry conversion ratios.
- ^cWhole fresh weights noted in Purcell et al., 2009.
- ^dDerived: Inverse gutted to salted value Skewes et al. 2004.
- ^eDerived: Inverse dried to gutted value Skewes et al. 2004.
- ^eEmpirical: Values calculated from Purcell et al. 2009.
- ^gInverse: Values calculated from Prescott et al., 2015.

Table 5. Conversion ratios for curryfish species.

Common name	Species	Live to Gutted	Live to Salted	Live to Dried	Gutted to Salted	Gutted to Dried	Salted to Gutted	Salted to Dried	Dried to Gutted Boiled	Wet to Boiled	Wet to Boiled to Salted	Wet to Boiled to Salted to Dry
Curryfish (common)	<i>Stichopus herrmanni</i>	0.651 ² 0.5 estimate	-	0.033 ^{f,3} 0.039 ^{a,1} AVE=0.036	-	0.114 ²	-	-	2.66 ^h	0.375 ^h	-	0.25 estimate
Curryfish (vastus)	<i>Stichopus vastus</i>	-	-	-	-	-	-	-	-	-	-	-

References – Table 5

¹Ngaluafe, P. & Lee, J. 2013. Change in weight of sea cucumbers during processing: Ten common commercial species in Tonga. SPC Beche-de-mer Information Bulletin 33: 3-8.

²Prescott, J., Zhou, S. & Prasetyo, A.P. 2015. Soft bodies make estimation hard: correlations among body dimensions and weights of multiple species of sea cucumbers. Marine and Freshwater Research 66: 857-865.

³Purcell, S.W., Gossuin, H., Agudo, N.S. 2009. Changes in weight and length of sea cucumbers during conversion to processed beche-de-mer: Filling gaps for some exploited tropical species. SPC Beche-de-mer Information Bulletin 29: 3-6.

Footnote

^aNgaluafe & Lee, 2013. Table 3, percent conversion ratios, total whole/fresh weight, from wet to dry product including values from other studies.

^fEmpirical: Values calculated from Purcell et al. 2009.

Data

^hData from Ugar Island: Curryfish processing example (Provided by Rocky Stephens)

Curryfish x9

Boil & then weigh 8kg (800gr each, conversion ration boiled to dry = 0.375)

Wet to dry – 2.4kg (300gr each, 0.375 conversion ration dry to boiled = 2.66)

Appendix A.2 – HS size limit information

Table 6. Size limits

Common name	Species	Maximum length cm (guide)	Size at maturity cm	Size limit TS	Proposed size limit TS*	Size limit East Coast	Age at maturity TS yrs (size, cm) (model)	TAC Torres Strait (t)
Sandfish	<i>Holothuria scabra</i>	32	13-25	18	Leave ⁴	20	2 (16.5)	No take
Surf Redfish	<i>Actinopyga mauritiana</i>	38	22-23	22	Leave	25	3 (13.8)	Part of 80t limit
Black Teatfish	<i>Holothuria whitmaei</i>	30	22-26	25	Leave	30	4 (24)	No take
White Teatfish	<i>Holothuria fuscogilva</i>	55	32	32	Leave	40	4 (30.4)	15
Prickly Redfish	<i>Thelenota ananas</i>	70	30-35	35	Leave	50	4 (30.4)	20
Hairy Blackfish	<i>Actinopyga miliaris</i>	35	12	22	Leave	20	3 (19.2)	Part of 80t limit
Curryfish (common)	<i>Stichopus herrmanni</i>	55	27-31	27	31 ²	35	-	Part of 80t limit
Elephants Trunkfish	<i>Holothuria fuscopunctata</i>	66	35	24	Leave ⁵	40	-	Part of 80t limit
Lollyfish	<i>Holothuria atra</i>	65	12-19	15	Leave ⁵	20	-	Part of 80t limit
Deepwater Redfish	<i>Actinopyga echinites</i>	35	9-12	12	20 ³	20	3 (19.5)	Part of 80t limit
Curryfish (vastus)	<i>Stichopus vastus</i>	35	-	nil	15 ¹ (5t trigger)	15	-	Part of 80t limit
Burrowing blackfish	<i>Actinopyga spinea</i>	40	-	22	Leave	20	-	Part of 80t limit
Deepwater blackfish	<i>Actinopyga palauensis</i>	35	-	22	Leave	20	-	Part of 80t limit
Golden sandfish	<i>Holothuria lessoni</i>	46	22	18	22 ²	15	-	Part of 80t limit
Brown sandfish	<i>Bohadschia vitiensis</i>	40	15-26	nil	25 ^{1,2}	25	-	Part of 80t limit
Leopardfish	<i>Bohadschia argus</i>	60	30	nil	30 ¹	35	3	Part of 80t limit
Greenfish	<i>Stichopus chloronatus</i>	38	14	nil	Leave	20	-	Part of 80t limit
Stonefish	<i>Actinopyga lecanora</i>	24	-	nil	Leave	15	-	Part of 80t limit

*Proposed size limit (Torres Strait):

1 = Better align with EC (East Coast BDM fishery)

2 = Too small relative to age at maturity

3 = Based on model simulation recommendation (TS BDM Milestone Report, Appendix/Summary)

4 = Species closed to fishing

5 = Low value species (medium and high value considered for new size limits)

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Appendix A.3 – Sea cucumber Spawning Information

Table 7. Sea cucumber spawning information

Common name	Species	Spawning time	Country
Sandfish	<i>Holothuria scabra</i>	October to January*	Australia*
		March to May, November to December	India
		December, January, August, September	New Caledonia
		November to December	Papua New Guinea
Surf Redfish	<i>Actinopyga mauritiana</i>	June to April	Guam
		December, January	New Caledonia
Black Teatfish	<i>Holothuria whitmaei</i>	June, July	New Caledonia
		April	Aldabra, Seychelles
		December*	GBR, Australia*
White Teatfish	<i>Holothuria fuscogilva</i>	Part of November, December, January	New Caledonia
Prickly Redfish	<i>Thelenota ananas</i>	January, February, March	New Caledonia
		December*	John Brewer Reef, GBR, Australia*
Hairy Blackfish	<i>Actinopyga miliaris</i>	July (new moon)	Japan
		May, November to December	New Caledonia
		November*	Orpheus Island, Australia*
Curryfish (common)	<i>Stichopus herrmanni</i>	December, January	New Caledonia
		June to July	Straits of Malacca, Malaysia
		November, December, January*	Little Broadhurst Reef, GBR, Australia*
Elephants Trunkfish	<i>Holothuria fuscopunctata</i>	December, January, part of February	New Caledonia
		December*	Lizard Island, Australia*

Common name	Species	Spawning time	Country
		December*	John Brewer, GBR, Australia*
Lollyfish	<i>Holothuria atra</i>	November	Solomon Islands
		August	Peninsular Malaysia
		October*	Davies Reef, GBR, Australia*
Deepwater Redfish	<i>Actinopyga echinites</i>	January, February	New Caledonia
Curryfish (vastus)	<i>Stichopus vastus</i>	-	-
Burrowing blackfish	<i>Actinopyga spinea</i>	-	-
Deepwater blackfish	<i>Actinopyga palauensis</i>	-	-
Golden sandfish	<i>Holothuria lessoni</i>	November, December, January, part of February	New Caledonia
		November	New Caledonia
Brown sandfish	<i>Bohadschia vitiensis</i>	November, December	New Caledonia
Leopardfish	<i>Bohadschia argus</i>	October to January*	GBR, Australia*
		October, November, December, January*	GBR, Australia*
Greenfish	<i>Stichopus chloronatus</i>	April to June, December to February	Straits of Malacca, Malaysia
		November, January*	Myrmidon Reef, Davies Reef, GBR, Australia*
Stonefish	<i>Actinopyga lecanora</i>	July	Peninsular Malaysia
		December*	GBR, Australia*

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Appendix A.4

Table 8. Average density (per ha) of sea cucumbers sampled at 122 repeated sample sites in eastern Torres Strait during the 2002 and 2005 abundance surveys (from Skewes et al. 2010)

Species	Common name	Average density (per ha)		% change
		2002	2005	
All sea cucumber		150.94	153.28	1.6
High value		18.03	14.74	-18.3
Med value		55.99	53.93	-3.7
<i>H. whitmaei</i>	Black teatfish	4.00	3.08	-22.8
<i>H. fuscogilva</i>	White teatfish	5.43	3.57	-34.1
<i>T. ananas</i>	Prickly redfish	8.61	8.09	-6.0
<i>A. miliaris</i>	Blackfish	1.64	3.79	131.3
<i>A. lecanora</i>	Stonefish	0.10	0.00	-100.0
<i>A. mauritiana</i>	Surf redfish	1.02	0.00	-100.0
<i>A. echinites</i>	Deep water redfish	1.43	0.51	-64.3
All Actinopyga		4.20	4.30	2.4
<i>H. atra</i>	Lollyfish	25.60	33.91	32.5
<i>H. fuscopunctata</i>	Elephant trunkfish	15.30	15.43	0.9
<i>H. coluber</i>	Snakefish	0.61	4.41	616.7
<i>H. edulis</i>	Pinkfish	30.79	27.97	-9.2
<i>B. graeffei</i>	Flowerfish	3.59	3.72	3.8
<i>B. argus</i>	Leopardfish	12.91	11.32	-12.3
<i>S. chloronotus</i>	Greenfish	23.16	24.71	6.7
<i>T. anax</i>	Amberfish	2.56	2.59	1.3
<i>S. hermani</i>	Curryfish	10.60	10.18	-4.0
<i>H. leucospilota</i>		1.54	2.56	66.7

Appendix A.5

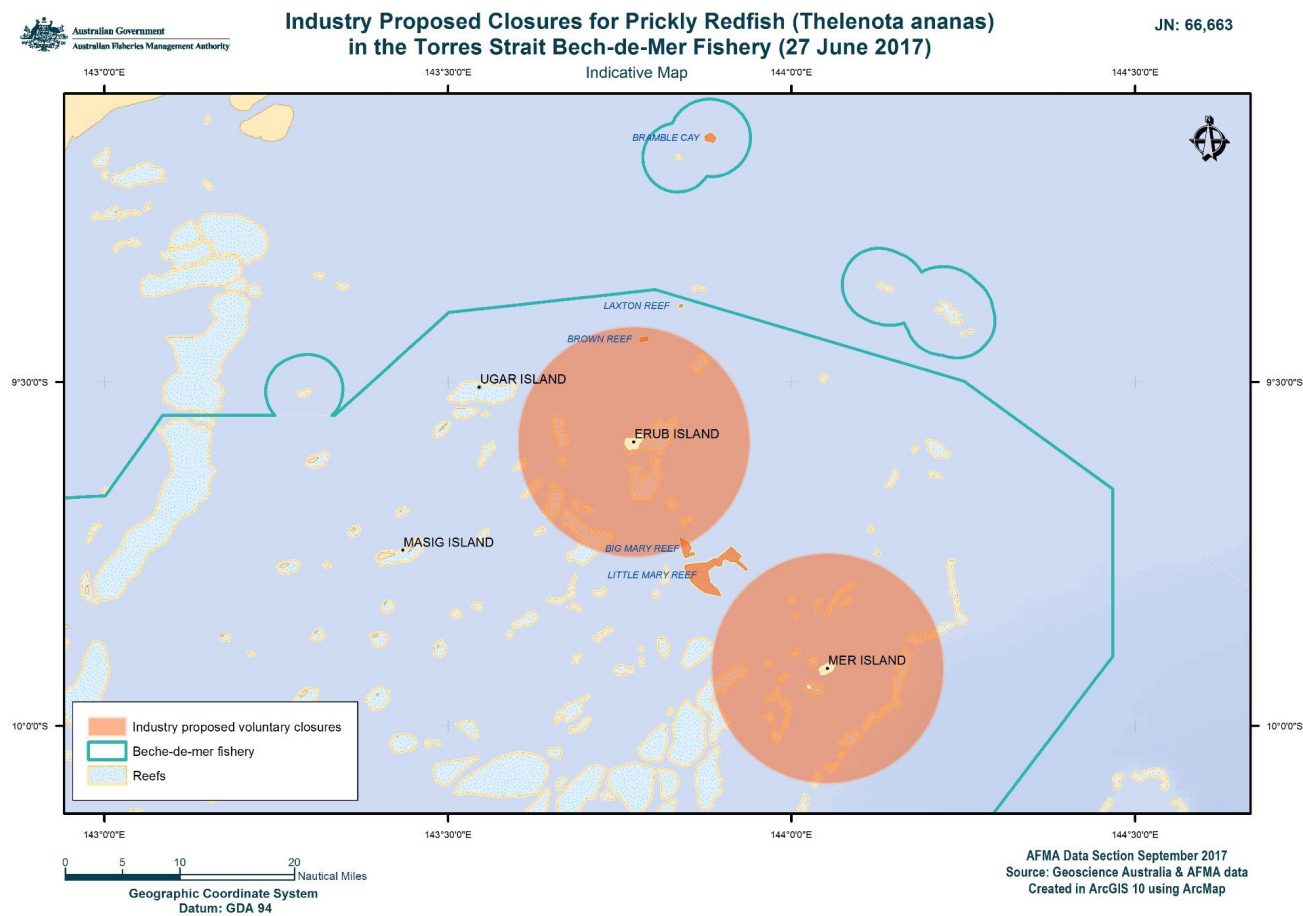


Figure 7. Industry proposed closures for Prickly Redfish (*Thelenota ananas*) in the Torres Strait Beche-de-mer Fishery (27 June 2017).

Appendix A.6

Warrior Reef sandfish example

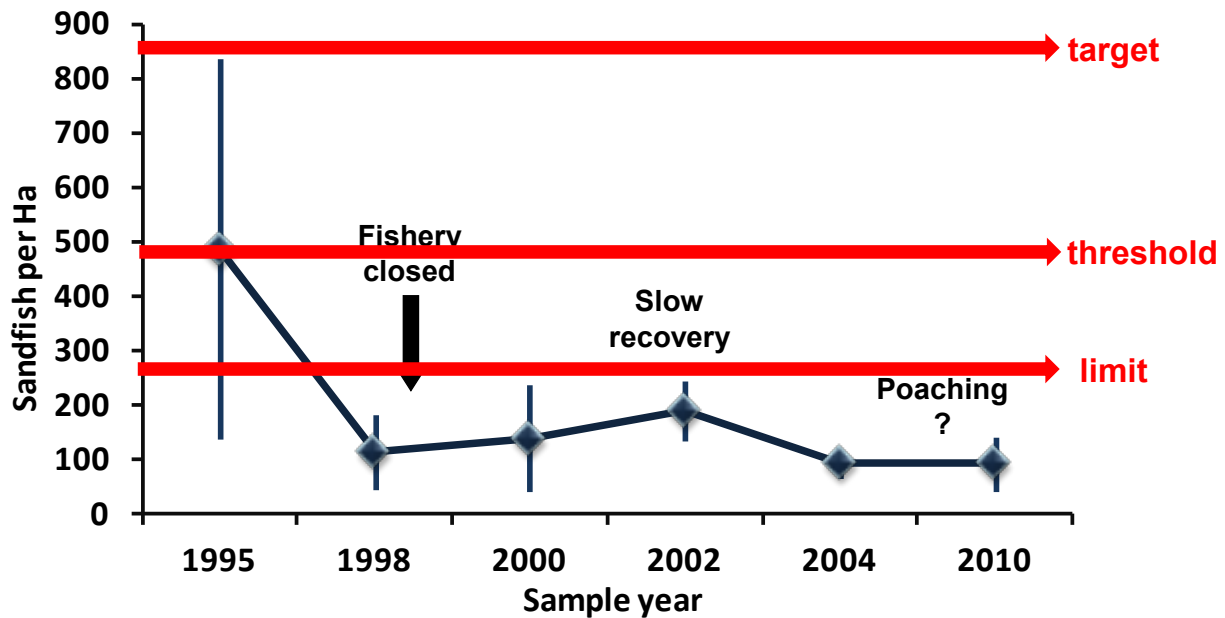


Figure 8. Example using Warrior Reef historical survey data for sandfish and comparison with sandfish density estimates from other locations, to inform choice of a limit reference point (below which the fishery should be closed), a threshold reference point (which is set higher than the limit reference point and serves as a trigger to re-open a fishery) and a target level that should ideally be aimed for.



HARVEST STRATEGIES

Frequently Asked Questions

What is a harvest strategy?

A harvest strategy is a set of pre-agreed rules that use an evidence-based, precautionary and transparent approach to controlling the amount of fish that can be caught in a fishing season. These rules are created to meet defined objectives for the fishery.

What does a harvest strategy do?

Harvest strategies set out the objectives for the fishery, how the fishery is monitored, and what data should be collected to determine how much fish can be caught in a fishing season. Having a harvest strategy in place provides transparency for stakeholders (fishers, traditional owners, communities, scientists and managers) about how the fishery will be managed into the future.

What are the key elements of a harvest strategy?

1. Objectives – what you are trying to achieve in the fishery (socially, economically and biologically)
2. Reference points – where you want, and do not want stock levels in the fishery to be
3. Indicators – signs of the health of the fishery that can be easily measured (for example the number of fish caught per day or the size of the fish being caught)
4. Performance measures – how the fishery is performing against the reference points
5. Harvest control rules (also referred to as *decision rules*) – how does management respond to changes in the performance measures

What are the benefits of a harvest strategy?

Harvest strategies provide certainty to fishers, traditional owners, communities, scientists and managers about how the fishery will be managed during a fishing season. This allows everyone to make plans for a fishing season, and reduces the likelihood of unexpected management changes within a season. It can also help with fishery accreditations, and approvals. For example approvals to send product to overseas markets (export).



Harvest strategies are designed to be responsive to changes in the fishery that may occur over time. As our knowledge and understanding of the fishery changes, the monitoring, data collection and management rules will also need to change to make sure the fishery remains sustainable into the future.

Are there any harvest strategies for Torres Strait Fisheries?

Currently there is a harvest strategy in place for the Torres Strait Prawn Fishery and an interim harvest strategy for the Torres Strait Tropical Rock Lobster (TRL) Fishery.

For more information on harvest strategies for Torres Strait Fisheries:

Contact the AFMA Torres Strait Office 07 4069 1990 or email FisheriesTI@afma.gov.au

Learn more about harvest strategies here:

<https://www.afma.gov.au/sustainability-environment/harvest-strategies>

The Australian Government requires harvest strategies to be developed for all Commonwealth managed fisheries. Harvest strategies in the Torres Strait have been developed in line with the *Commonwealth Fisheries Harvest Strategy Policy 2018* and *Guidelines for the Implementation of the Commonwealth Fisheries Harvest Strategy Policy 2018*. www.agriculture.gov.au/fisheries/domestic/harvest_strategy_policy



DRAFT BECHE-DE-MER HARVEST STRATEGY

An Overview

There are 18 commercial species of sea cucumber in the Fishery, however only a few species are targeted for their high market value.

Until the Fish Receiver System was introduced on 1 December 2017, the BDM Fishery did not have much catch and effort information available to sustainably grow the Fishery.

Some historic underwater dive survey information is available, however the last full fishery survey was undertaken in 2009. The lack of information plus the vulnerability of BDM species to overfishing, is why the current management of the BDM Fishery relies on a lot of precautionary management controls.

The draft BDM Harvest Strategy is designed to be responsive to changes in the BDM Fishery that may occur over time. As our knowledge and understanding of the Fishery changes, the monitoring, data collection and management rules will also change to better support the growth of the Fishery.

Objectives

The objectives of the draft BDM Harvest Strategy are:

- a. To provide for the sustainable use of all BDM in the Torres Strait to take account of long-term of sustainability for future generations;
- b. To develop BDM populations for the benefit of Australian Traditional Inhabitants (as defined by the *Torres Strait Treaty*) and accommodating commercial considerations;
- c. To acknowledge area-specific issues;
- d. Where possible, to consider an ecosystem approach to management that reduces impacts on, or optimises interactions with, other harvested and dependent species; and
- e. To develop long-term recovery strategies for species, where appropriate.

The Harvest Strategy must also have regard to traditional knowledge and the ability of communities to manage fishery resources locally, through acknowledging and incorporating customary and traditional laws.

Decision Rules (Tiers)

The draft BDM Harvest Strategy has three tiers that account for the understanding that more data and information reduces the risk to a fishery and reduces the need for precautionary management.

Low Tier

In the low tier, the minimum data needed for each species is the total catch taken each fishing season. The low tier has rules to guide:

- a. what happens to a species if the total allowable catch (TAC) is over caught or a trigger limit for a species within a joint TAC is reached; and
- b. what happens if there is no data reported for a species at all.



Depending on the information available, the low tier allows single species TACs to be maintained or reduced. For species with individual triggers, within a joint TAC, the low tier may allow changes to the joint TAC, or to individual species triggers (up or down).

Middle Tier

To move to the middle tier (and possibly increase the TAC for a single species) more data and information on a species is needed. This might include information on catches per day (called *catch per unit effort*), where BDM are being caught, the size of each BDM or how much of one species is caught compared to other species. These are called primary indicators.

The information from these primary indicators will guide how much TACs should be varied. If the primary indicators suggest an increase is possible, there are pre-agreed rules that set a maximum level that the TAC can increase by before high quality survey data is required.

High Tier

The high tier may be applied to all species if species-specific, if high quality survey data becomes available. Under this tier, TACs may be adjusted upwards (in cases where there is evidence of scope to increase TACs) or downwards (in cases where there are concerns about the status of a fished species).

Closed Species

A species may be closed to fishing if it has been overfished, the TAC has been significantly over caught, or if fishing has been occurring but there is no reported catch. The draft BDM Harvest Strategy also has rules to guide how to re-open a fishery if enough information is available.

Fishing for sandfish, black teatfish and surf redfish is currently closed.

Changes to TACs and minimum size limits

If the draft BDM Harvest Strategy is agreed to, there will be some changes made to the starting TACs for some species:

- a. The TAC for prickly redfish and white teatfish will remain at 15 tonnes;
- b. Some species that are currently counted in a 80 tonne basket with other species, will have their own TACs:
 - i. deepwater redfish (5 tonnes);
 - ii. hairy blackfish (5 tonnes);
 - iii. greenfish (40 tonnes);
 - iv. due to the recent interest in curryfish species, the three curryfish species will be removed from the 80 tonne basket and have their own combined 60 tonne TAC. This includes the common curryfish, curryfish vastus and curryfish ocellatus species;
- c. These changes mean that the 80 tonne basket of all other species will be reduced to a combined 50 tonne TAC.

Some changes to size limits are proposed (see Table 1) in response to updated information on age-at-first-maturity and to be more comparable with size limits from other BDM fisheries (i.e. Queensland East Coast BDM Fishery).



Table 1. Summary of proposed changes to minimum size limits under the draft Beche-de-mer Harvest Strategy. Changes are noted in **red text.**

Species	Current Size Limit	New Size Limit
Sandfish	18cm	18cm
Surf Redfish	22cm	22cm
Black teatfish	25cm	25cm
White teatfish	32cm	32cm
Prickly redfish	35cm	35cm
Hairy blackfish	22cm	22cm
Curryfish (common)	27cm	31cm
Elephant's Trunkfish	24cm	24cm
Lollyfish	15cm	15cm
Deepwater redfish	12cm	20cm
Curryfish (vastus)	No limit	15cm
Burrowing blackfish	22cm	22cm
Deepwater blackfish	22cm	22cm
Golden sandfish	18cm	22cm
Brown sandfish	No limit	25cm
Leopardfish	No limit	30cm
Greenfish	No limit	No limit
Stonefish	No limit	No limit

Table 1. Summary of community views on the draft Beche-de-mer harvest strategy.

Community	Date Visited	Consultation outcome
Masig	8 April	No concerns raised
Erub	8-9 April	General support
Boigu	17 April	General support, with some concern that additional restrictions (i.e. minimum size limits) may cause the BDM Fishery to be economically unviable.
Poruma	11-12 April	No concerns raised.
Badu	15-16 April	Not supported by Malu Lamar.
Ugar	12 April	No concerns raised however strong desire for traditional knowledge to be incorporated.
Saibai	1 May	Not discussed due to timing restraints and a lack of facilities to present BDM HS specific information
Warraber	11 April	No concerns raised.
Mer	18 April	Supported in recognition of how the harvest strategy will guide the re-opening of closed species (e.g. black teatfish)
New Mapoon (NPA)	9 May	No concerns raised.
Injinoo (NPA)	10 May	No concerns raised.
Thursday Island	20 May	Not discussed at the request of attendees noting that the BDM HS is not a high priority for stakeholders.
Mabuiag	21-22 May	Not discussed at the request of attendees noting that the community does not fish for beche-de-mer



Australian Government

Australian Fisheries Management Authority

Torres Strait Fisheries Community Visits Report

April - May 2019

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Glossary

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

Executive Summary

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

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

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

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

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

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

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

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

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Summary of Community Views

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

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

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

Masig (Yorke) Community

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

Fish Receiver System

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

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

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

Harvest Strategies

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

Western Line Closure

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

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

Licensing

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

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

Other Business

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

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

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

Erub (Darnley) Community

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

Fish Receiver System

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

Harvest Strategies

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

Western Line Closure

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

Licensing

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

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

Other Business

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

Boigu Community

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

Fish Receiver System

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

Harvest Strategies

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

Western Line Closure

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

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

Other Business

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

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Poruma (Coconut) Community

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

Fish Receiver System

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

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

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

Harvest Strategies

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

Western Line Closure

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

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

Licensing

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

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

Other Business

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

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

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

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

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

Badu Community

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

Fish Receiver System

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

Western Line Closure

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

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

Harvest Strategies

TRL Harvest Strategy

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

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

BDM Harvest Strategy

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

Other Business

Membership on PZJA forums

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

Consultation with Malu Lamar

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

Compliance

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

Use of hookah breathing apparatus

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

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

7m boat length restriction

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

General

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

Ugar (Stephen) Community

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

Fish Receiver System

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

Harvest Strategies

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

Western Line Closure

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

Other Business

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

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

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

Spanish mackerel

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

Saibai Community

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

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

Fish Receiver System

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

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

Harvest Strategies

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

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

Western Line Closure

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

Other Business

Community freezer

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

Biosecurity risks

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

Warraber (Sue) Community

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

Fish Receiver System

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

Harvest Strategies

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

Western Line Closure

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

Other Business

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

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

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

Development permit

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

General questions – TRL

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

Mer (Murray) Community

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

Fish Receiver System

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

Harvest Strategies

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

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

Western Line Closure

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

Other Business

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

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

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

New Mapoon Community (NPA)

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

Fish Receiver System

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

Harvest Strategies

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

Western Line Closure

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

Other Business

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

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

ACTION ITEM: AFMA to provide copies of the BDM Species ID Guide books to Michael Bond, Councillor of New Mapoon.

DRAFT

Injinoo Community (NPA)

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

Fish Receiver System

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

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

Harvest Strategies

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

Western Line Closure

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

Thursday Island (Torres Shire) Community

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

Fish Receiver System

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

Harvest Strategies

168. Harvest Strategies were not discussed at this meeting.

Western Line Closure

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

Other Business

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

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

DRAFT

Mabuiag Community

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

Fish Receiver System

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

Harvest Strategies

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

Western Line Closure

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

Licensing

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

DRAFT

Summary of Action Items

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

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

DRAFT

Attendance Lists

Table 2. Masig (Yorke) Community attendance list

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

Table 3. Erub (Darnley) Community attendance list

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

Table 4. Boigu Community attendance list

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

Table 5. Poruma (Coconut) Community attendance list

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

Table 6. Badu Community attendance list

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

Table 7. Ugar (Stephen) Community attendance list

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

Table 8. Warraber (Sue) Community attendance list

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

Table 9. Mer (Murray) Community attendance list

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

Table 10. New Mapoon Community (NPA) attendance list

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

Table 11. Injinoo Community (NPA) attendance list

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

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

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

Table 13. Mabuiag Community attendance list

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

Subject: RE: Comment sought on draft TRL and BDM harvest strategies

From: Cr. Getano Lui <Cr.Getano.Lui@tsirc.qld.gov.au>

Sent: Friday, 12 April 2019 11:57 AM

To: STOUTE, Selina <Selina.Stoute@afma.gov.au>

Subject: RE: Comment sought on draft TRL and BDM harvest strategies [SEC=UNCLASSIFIED]

Good Morning Selina,

Thank you for sending myself the draft copy of the Beche de mer Fisheries Harvest Strategy.

My only comments is that as long as we adhere to objectives as proposed, than we, as Traditional Inhabitants needs to remind ourselves of our obligations and responsibilities to help create a sustainable industry for our future generations.

I am supporting the strategy and looking forward to further consultations as the need arises.

Have a Blessed' Day.

Eso.

Cr. Getano Lui | Councillor - Iama Island

Torres Strait Island Regional Council

Add: Iama (Yam) Island, Queensland 4875

Tel: 07 4083 2659

Email: cr.getano.lui@tsirc.qld.gov.au

Web: www.tsirc.qld.gov.au

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From: STOUTE, Selina

Sent: Monday, 8 April 2019 5:41 PM

To: cr.getano.lui@tsirc.qld.gov.au

Cc: Bin-Juda, Leilani (Leilani.Bin-Juda@dfat.gov.au) <Leilani.Bin-Juda@dfat.gov.au>; TRAPPETT, Andrew <Andrew.Trappett@afma.gov.au>

Subject: Comment sought on draft TRL and BDM harvest strategies [SEC=UNCLASSIFIED]

UNCLASSIFIED

Good afternoon Cr lui,

Please find attached a letter from AFMA to you as Australian Traditional Inhabitant Co-Chair seeking your comment on the draft PZJA Tropical Rock Lobster and Beche de mer Fisheries harvest strategies. We will mail you a hard copy.

You may recall we advised the Fisheries Bilateral meeting that these were being developed. The PZJA has recently agreed to release them for public comment.

We look forward to your comments and please do not hesitate to contact me to discuss in more detail.

Kind regards

Selina Stoute
Manager
Torres Strait Fisheries

selina.stoute@afma.gov.au

Torres Strait Office, 38 Victoria Parade
PO Box 376, Thursday Island, QLD 4875, Australia
(07) 4069 1990
0428 513 635

7 June 2019

AFMA
Torres Strait Office
PO Box 376
Thursday Island QLD 4875

Email: FisheriesTI@afma.gov.au

Dear AFMA

Re: TSPZ Fisheries Management

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

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

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

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

TRL Fishery

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

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

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

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

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

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

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

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

Western line closure for finfish

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

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

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

Issues with TSPZ fisheries management plans

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

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

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

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

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

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

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

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

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

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

Yours sincerely



Richie Ah Mat
Chair
Cape York Land Council

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
HARVEST STRATEGY Implementation of the Beche-de-mer Harvest Strategy	Agenda Item 3.2 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Working Group:
 - a. **NOTE** the key changes required to the Fishery should the draft Beche-de-mer Harvest Strategy (BDM HS) be agreed to by the PZJA.
 - b. **NOTE** and **DISCUSS** the mechanism and processes for implementing the draft BDM HS;
 - c. **CONSIDER** and **PROVIDE COMMENT** on the proposed remaking of *Torres Strait Fisheries Management Instrument No. 15* (FMI 15) by the PZJA under section 16 of the *Torres Strait Fisheries Act 1984* (the Act); and
 - d. **NOTE** the expected timeline of events for BDM HS implementation (including setting TACs, closure of a fishery and remaking FMI 15 in time for the 2020 fishing season).

KEY ISSUES

2. In consideration of all comments and submissions received on the draft BDM HS (**see agenda item 3.1**), and having regard to HCWG advice, the final BDM HS will be provided to the PZJA for approval and implementation before the end of the 2019 season.
3. If agreed to by the PZJA, implementation of the BDM HS will necessitate a number of changes to the management of the Fishery, including:
 - a. changes to existing Total Allowable Catch limits for some individual species, and species baskets and the addition of new TACs for individual species and species baskets (summarised in **Table 1**);
 - b. changes to the way in which TACs are set each fishing season as guided by the decision rules within the BDM HS (summarised in **Table 2**);
 - c. creating a new mechanism for enforcing TAC limits and requiring fishing to cease once a TAC has been reached (**Table 3**);
 - d. changes to minimum size limits (**Table 4**); and
 - e. agreed methodology for applying conversion ratios to reported catches (see **Agenda Item 3.3**).
4. In order to give effect to these changes, AFMA is proposing to remake *Fisheries Management Instrument No. 15* (FMI No 15). Remaking FMI 15 will:

- a. Provide for the early closure of individual species or species basket before the end of the fishing season (31 December) to ensure the commercial catch of the species or species basket does not exceed the Total Allowable Catch limit.
 - b. Regulate the season open and closure dates for a species presently closed to fishing (e.g. black teatfish)
 - c. Give effect to the updated minimum size limits.
 - d. Align with new legislative drafting standards.
 - e. Remove any regulation in relation to Traditional Fishing to reflect that the PZJA's jurisdiction does not extend to traditional fishing.
5. A copy of the current *Torres Strait Fisheries Management Instrument No. 15* is provided at **Attachment 3.2a**.
 6. Drafting of the new Instrument is underway by the AFMA legal team. AFMA will circulate the draft Instrument and corresponding Explanatory Statement to the HCWG out of session when available.
 7. The draft Instrument and corresponding Explanatory Statement will need to be considered by the PZJA and undergo consultation with licence holders and Native Title bodies, as well as the appropriate publication requirements as stipulated in the Act.
 8. A summary of the consultation process on the draft Instrument and Explanatory statement is outlined in **Table 5**.

BACKGROUND

Remaking the BDM Instrument

9. The BDM Fishery is currently regulated by the *Torres Strait Fisheries Management Instrument No. 15*, made under section 16 of the Act, in absence of a statutory management plan. Total Allowable Catch limits are provided for through licence conditions and other input controls are provided for in policy (e.g. the 7m boat length restriction).
10. Historically, existing management arrangements for the BDM Fishery have been largely sufficient to keep reported catch levels below the sustainable, yet relatively conservative, Total Allowable Catch limits.
11. Under the BDM HS, a number of new species with conservative starting TACs (e.g. 5 tonnes) will require the ability to effectively cease fishing if it is deemed the TAC is likely to be reached before the end of the fishing season. This also applies to an opening of black teatfish (or other closed species), where previous opening periods have demonstrated high catch rates resulting in the fishery exceeding the TAC within a short time.
12. TACs are currently prescribed in licence conditions. If AFMA needs to implement a fishery closure once a TAC is reached, AFMA must vary licence conditions and amend prescribed TACs to zero which is not best practice administration.
13. In order to reduce the risk of overfishing and exceeding a TAC limit the proposed BDM Instrument will provide the mechanism for the closure of the BDM Fishery, an individual

species or species basket prior to the end of the fishing season (31 December) in circumstances where the commercial catch of BDM is likely to exceed the TAC before the end of a fishing season.

14. The fishing season will continue to operate annually from 1 January to 31 December however the season for particularly species will be able to be closed early if the CEO of AFMA determines that the TAC will be reached prior to 31 December.
15. The draft Instrument also creates provisions for determining a specific opening period for a closed species (called a “sensitive species”)
16. Any opening or closure would be given effect through a written notice issued by the AFMA CEO to licence holders specifying a date of opening and date the TAC would be reached, causing the early closure of the fishing season.
17. In remaking the Instrument, a number of other changes will be made to align with the recommendations under the HS, including updated minimum size limits and the streamlining of any legislative drafting inconsistencies.

Regulation of Traditional Fishing

18. The proposed BDM Instrument removes any regulation of Traditional Fishing and possession limits for fishers engaged in community fishing. These possession limits are being removed to reflect that the PZJA jurisdiction does not extend to traditional fishing.
19. A further advice will be provided to the PZJA on this issue for the BDM Fishery, as well as other PZJA fisheries regulated under separate legislative instruments, in due course.

Table 1. Summary of key changes required to implement the draft BDM HS.

Element	Current scenario	Changes under the draft BDM HS
TAC limits	<ul style="list-style-type: none"> • Prickly redfish – 15 tonnes • White teatfish – 15 tonnes • All other species – 80 tonne basket • Black teatfish – 0 tonnes (closed) • Surf redfish – 0 tonnes (closed) • Sandfish – 0 tonnes (closed) 	<ul style="list-style-type: none"> • Prickly redfish – no change, starting TAC remains at 15 tonnes • White teatfish – no change, starting TAC remains at 15 tonnes • Black teatfish – no change, starting TAC remains at 0 tonnes (closed) • Surf redfish – no change, starting TAC remains at 0 tonnes (closed) • Sandfish – no change, starting TAC remains at 0 tonnes (closed) • Deepwater redfish - removed from the 80 tonne basket with individual TAC of 5 tonnes. • Hairy blackfish – removed from 80 tonne basket with individual TAC of 5 tonnes. • Greenfish – removed from 80 tonne basket with individual TAC of 40 tonnes. • Curryfish species (<i>Stichopus hermanni</i>, <i>S. vastus</i> and <i>S. ocellatus</i>) - removed from 80 tonne basket with new, combined TAC of 60 tonnes. • Remaining basket species TAC is reduced from 80 tonnes down to 50 tonnes.
Enforcement of TACs	<p>TACs are prescribed in licence conditions – if AFMA needs to implement a fishery closure once a TAC is reached, AFMA must vary licence conditions and amend prescribed TACs to zero.</p> <p>This process is not best practice administration.</p>	<p>TIB licence holders will be notified of TACs for the upcoming season and will no longer be prescribed within TIB licence conditions.</p> <p>The mechanism to close a fishery once the TAC has been reached will be provided within the Instrument.</p> <p>See Table 3 below for detail.</p>
Minimum size limits	<p>Size limits are included in <i>Torres Strait Fisheries Management Instrument No. 15</i>.</p> <p>The current list of species is incomplete and incorrect for some species.</p>	<p>Refer to Table 4.</p> <p>Additional species are to be included with new size limits or changes to existing size limits.</p> <p>These changes are in response to updated information on age-at-first-maturity and to be more comparable with size limits from other BDM fisheries (i.e. Queensland East Coast BDM Fishery).</p>

Table 2. Steps for setting TACs each fishing season under the Harvest Strategy.

Step		Timeframes
1	AFMA to compile all available catch data from the current fishing season * Note at this stage, there will be some months remaining in the season	In the last quarter of the fishing season (TBC)
2	Advice provided by HCWG on TACs for coming season, pending over-catch amounts from previous season	In session at HCWG (dates TBC)
3	Paper to PZJA Standing Committee <ul style="list-style-type: none"> Setting of TAC may be set in multiple stages, pending any over-catch amounts from previous season (and applying the Catch-based decision rule). AFMA will undertake the process to give effect to TACs 	Immediately following HCWG meeting
3	PZJA decision on TACs <ul style="list-style-type: none"> as above for PZJA SC paper 	
4	AFMA CEO to inform all BDM licence holders of TACs for coming season, pending over-catch amounts from previous season	Prior to 1 January
5	Licence holders notified of TACs for coming season, pending over-catch amounts from previous season.	Prior to 1 January
6	Other internal and external stakeholders notified	Prior to 1 January
7	AFMA to finalise all available catch data from the previous fishing season	After the end of the fishing season (31 December)
8	AFMA CEO to inform all BDM licence holders of final TACs, taking into account any over-catch amounts from previous season	Once catch data from previous season is finalised
9	PZJA Standing Committee advised of final TACs, taking into account any over-catch amounts from previous season	Once catch data from previous season is finalised
10	Licence holders notified of final TACs	Once catch data from previous season is finalised
11	Other internal and external stakeholders notified	Once catch data from previous season is finalised

Table 3. Closing a fishery (individual species, or species basket) where the TAC(s) have been reached.

Step		Timeframes
1	Catch watch reports issued on a monthly basis, increasing to weekly as a TAC/s is approached	At regular intervals (monthly) throughout the fishing season increasing to weekly as a TAC/s is approached
2	Advise the PZJA Standing Committee that a TAC/s will likely be reached prior to the end of the season and that AFMA will make arrangements to close require fishing to cease for the relevant species when the TAC/s is reached.	In session at HCWG (dates TBC)
3	Recommend the AFMA CEO determine that they have a reasonable belief that a TAC/s will be reached and to issue a closure notice to all licence holders (requirement under the Instrument).	Immediately following HCWG meeting
3	Advise the PZJA Standing Committee that the AFMA CEO will be issuing a closure notice for the BDM Fishery for licence holders (requirement under the Instrument). The Instrument requires this notification needs to go out prior to the closure notice being issued to licence holders	
4	Closure notice issued to licence holders via mail (requirement under the Instrument), SMS, email, community notice, AFMA Facebook, PZJA website – in that order	At least one day before the closure date
5	Closure notice published on the PZJA website (requirement under the Instrument).	At least one day before the closure date
6	Other internal and external stakeholders notified	
7	Closure notice for licence holders comes into effect 1 day post issue of closure notice (requirement under the Instrument).	
8	Enforcement of the closure notice	
9	Final catch and effort data compiled for the relevant species for that season	

Table 4. Summary of proposed minimum size limits. Changes to existing limits are shaded in grey.

Species	Species Name	Current Size Limit	Proposed New Size Limit
Sandfish	<i>Holothuria scabra</i>	18cm	18cm
Surf Redfish	<i>Actinopyga mauritiana</i>	22cm	22cm
Black teatfish	<i>Holothuria whitmaei</i>	25cm	25cm
White teatfish	<i>Holothuria fuscogilva</i>	32cm	32cm
Prickly redfish	<i>Thelenota ananas</i>	35cm	35cm
Hairy blackfish	<i>Actinopyga miliaris</i>	22cm	22cm
Curryfish (common)	<i>Stichopus herrmanni</i>	27cm	31cm
Elephant's Trunkfish	<i>Holothuria fuscopunctata</i>	24cm	24cm
Lollyfish	<i>Holothuria atra</i>	15cm	15cm
Deepwater redfish	<i>Actinopyga echinites</i>	12cm	20cm
Curryfish (vastus)	<i>Stichopus vastus</i>	No limit	15cm
Burrowing blackfish	<i>Actinopyga spinea</i>	22cm	22cm
Deepwater blackfish	<i>Actinopyga palauensis</i>	22cm	22cm
Golden sandfish	<i>Holothuria lessoni</i>	18cm	22cm
Brown sandfish	<i>Bohadschia vitiensis</i>	No limit	25cm
Leopardfish	<i>Bohadschia argus</i>	No limit	30cm
Greenfish	<i>Stichopus chloronatus</i>	No limit	No limit
Stonefish	<i>Actinopyga lecanora</i>	No limit	No limit

Table 5. Consultation process on draft management Instrument and Explanatory Statement.

Step		Timeframes
1	Initial consultation with HCWG on proposed making/amendment of a fishery management instrument	HCWG14 (1-2 August 2019)
2	Draft instrument/amendments to an existing fishery management instrument. a. Check that a fishery management instrument, under s 16 of the Act, is the appropriate mechanism (i.e. is there provision under s 16 of the Act to do what is proposed). b. Determine appropriate delegation for the making/amendment of the fishery management instrument.	In progress
5	Advise the PZJA of intent to consult on the Instrument	Once HCWG14 meeting record is finalised (~ early September 2019)
6	Submit a preliminary assessment to the Office of Best Practice Regulations relating to whether a Regulatory Impact Statement is required	In progress
7	Public consultation: • All affected licence holders • Relevant PZJA RAGs and WGs • Relevant Native Title bodies and claimants	
8	Further consultation with relevant PZJA RAGs and WGs on proposed making/amendment of a fishery management instrument, in particular advice received through public consultation process	
9	PZJA SC endorsement of proposed making/amendment of a fishery management instrument	Prior to 1 January 2020
10	PZJA, or other appropriate delegate as required under the Act, to make/amend a fishery management instrument, including authorisation to publish and register on the Federal Register of Instruments.	
11	Content of instrument to be published in an appropriate newspaper prior to being registered (s16 (9) of Act and s3 of Regulations).	
12	Instrument and explanatory statement to be registered on the Federal Register of Instruments.	
13	AFMA CEO to inform all affected licence holders of making/amendment of a fishery management instrument	
14	Letter to licence holders issued via mail, SMS, email, community notice, AFMA Facebook, PZJA website – in that order	
15	Other internal and external stakeholders notified	

INSTRUMENT REGULATING FISHING

Torres Strait Fisheries Act 1984

Section 16

Torres Strait Sea Cucumber Fishery

TORRES STRAIT FISHERIES MANAGEMENT INSTRUMENT NO. 15

The **PROTECTED ZONE JOINT AUTHORITY** exercising jurisdiction under Commonwealth law over commercial fishing in the Protected Zone pursuant to the arrangement between the Commonwealth and the State of Queensland published on 19th March 1999 in the Commonwealth Gazette No. S125 and acting in accordance with the powers conferred on the Authority by paragraph 35(1)(a) of the *Torres Strait Fisheries Act 1984*, under section 16 of the *Torres Strait Fisheries Act 1984*, makes the following Instrument.

Dated **31st March 2017**

Senator the Hon. Anne Ruston

Parliamentary Secretary to the Deputy Prime Minister and Minister for Agriculture and Water Resources

Chair of the Torres Strait Protected Zone Joint Authority

Citation

1. This Instrument may be cited as the *Torres Strait Fisheries Management Instrument No. 15*.

Commencement

2. This Instrument commences on the day after it is registered on the Federal Register of Legislative Instruments.

Cessation

3. This Instrument is repealed on 31 December 2026 unless earlier revoked.

Interpretation

- 4.1 In this Instrument, unless the contrary intention appears “the Act” means the *Torres Strait Fisheries Act 1984*; and

- 4.2 Terms used but not defined in this Instrument have the same meaning as in the Act and

the *Torres Strait Fisheries Regulations 1985*; and

4.3 “**sea cucumber**” means fish of the families Holothuriidae and Stichopodidae; and

4.4 “**underwater breathing apparatus**” means any apparatus that delivers air or other breathing gas to a person.

Prohibitions

5. Pursuant to paragraph 16(1)(a) of the Act, the taking, processing or carrying of sea cucumber in the area of the Torres Strait Sea Cucumber Fishery is prohibited.

Size limits

6. Pursuant to paragraph 16(1)(b) of the Act, it is prohibited to take in the area of the Torres Strait Sea Cucumber Fishery species of the kind referred to in the Schedule that, when measured in their original living form at their longest point, are less than the lengths specified in respect of each species in the Schedule.

SCHEDULE

SPECIES	LENGTH IN MILLIMETRES
Sandfish (<i>Holothuria scabra</i>)	180
Lollyfish (<i>Holothuria atra</i>)	150
Black teatfish (<i>Holothuria whitmaei</i>)	250
White teatfish (<i>Holothuria fuscogilva</i>)	320
Deepwater redfish (<i>Actinopyga echinites</i>)	120
Prickly redfish (<i>Thelenota ananas</i>)	300
Elephant’s trunk fish (<i>Holothuria fuscopunctata</i>)	240
Surf redfish (<i>Actinopyga mauritiana</i>)	220
Blackfish (<i>Actinopyga miliaris</i>)	220
Curry fish (<i>Stichopus variegatus</i>)	270

Gear restrictions

7 Pursuant to paragraph 16(1)(c) of the Act, the taking of sea cucumber in the area of the Torres Strait Sea Cucumber Fishery with the use of any underwater breathing apparatus or by any method other than collection by hand, is prohibited.

Exemption from the prohibitions

8.1 Pursuant to paragraph 16(1A)(d) of the Act, a person is exempt from the prohibition in paragraph 5 if:

- where the person takes or carries sea cucumbers without the use of a boat – the number of sea cucumber in that person’s possession does not exceed three; or
- where the person takes or carries sea cucumbers with the use of a boat, or by diving from a boat, and no other person is in the boat – the number of sea cucumbers in the boat does not exceed three; or

- c) where the person takes or carries sea cucumbers with the use of a boat, or by diving from a boat, and there is at least one other person in the boat – the number of sea cucumber in the boat does not exceed six.
- 8.2. Pursuant to paragraph 16(1A)(d) of the Act, a person is exempt from the prohibition in paragraph 5 if the person holds a licence granted under subsections 19(2) or 19(3) of the Act that entitles that person to take, process or carry sea cucumber.
- 8.3 Pursuant to paragraph 16(1A)(d) of the Act, a person is exempt from the prohibition in paragraph 5 if the person takes, processes or carries sea cucumber in the course of traditional fishing.

Revocation of previous instrument

- 9.1 This Instrument revokes the *Torres Strait Fisheries Management Notice No. 64* dated 24th December 2002 from the date of commencement of this Instrument.
- 9.2 In accordance with s16(7A) , notwithstanding the revocation of the *Torres Strait Fisheries Management Notice No. 64*, any entry previously made under s21(1) of the Act in an existing licence granted under s19(2) or (3) or treaty endorsement granted for engaging in activities that were prohibited in that revoked instrument, such entry shall continue to operate as if it referred to the prohibition in this instrument.
-

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
HARVEST STRATEGY Conversion Ratios and BDM Species Identification Guide	Agenda Item 3.3 For DISCUSSION and ADVICE

RECOMMENDATIONS

1. That the Working Group:

- a. **DISCUSS** and **PROVIDE ADVICE** on recommended conversion ratios to be applied to convert processed weights of beche-de-mer reported through Catch Disposal Records to wet weight gutted weights and used to monitor reported catches against Total Allowable Catch limits in the BDM Fishery; and
- b. **NOTE** the update provided by CSIRO on the revised Beche-de-mer Species Identification Guide updated as part of the broader Beche-de-mer Harvest Strategy Project.

KEY ISSUES

Conversion Ratios

2. TACs in the BDM Fishery are measured in **wet weight gutted** form. Sea cucumber however can be landed in different processed forms ranging from wet gutted, boiled to boiled/salted. Agreeing the relationships (known as weight conversion ratios) between the weights of sea cucumbers at these various processing stages is necessary to monitor reported catches against TACs. It is also important to understand total catch to inform stock assessments.
3. In developing the draft harvest strategy, the Working Group has already endorsed weight conversion ratios for most species based on analysis and advice from CSIRO (**Tables 1 and 2**). AFMA currently applies these conversion ratios to reported catch weights from Catch Disposal Records.
4. Further Working Group advice is now being sought on the appropriate weight conversion ratios to apply to species where there is no information available for a particular species. AFMA's current approach is to apply the most conservative ratio for that same processing method available for another species (**Table 3**).
5. In addition to reviewing a suite of literature and previous work completed on sea cucumber conversion factors, CSIRO are also undertaking ongoing research to fill additional gaps in conversion ratio knowledge through industry based sampling, coupled with in-field training and equipment provided to selected fishers. CSIRO and the scientific member will be available to provide any updates on this sampling and if applicable, any new information to guide the determination of conversion ratios.
6. Having regard for any advice from the Working Group, AFMA will seek PZJA approval of the recommended conversion ratios. The weight conversion ratios will be placed into regulation (as is the case for the Tropical Rock Lobster Fishery). Note it is expected that conversion ratios may be updated overtime as new information becomes available.

Species Identification Guide

7. As part of the initial project to develop a harvest strategy for the Torres Strait Beche-de-mer Fishery, the project was extended to include additional work to update and re-print the Torres Strait Beche-de-mer (Sea cucumber) species ID guide and further develop sea cucumber conversion ratios and fill information gaps in conversion ratio data.
8. The update to the ID guide was requested by stakeholders at the second Beche-de-mer Harvest Strategy Workshop held in October 2017. The update was to include additional species not originally listed, information on BDM breeding seasons and species distributions and conversion ratios.
9. Correct species identification is important to understand total catch per species and it is important that tools are available to support this.
10. CSIRO have sought feedback from stakeholders on the ID guides at each Beche-de-mer Harvest Strategy Workshop and via a questionnaire to further inform the ID update.
11. CSIRO may require further comment from the Working Group on the final version of the new guide before publication and cessation of the Beche-de-mer Harvest Strategy project.

Table 1. Conversion ratios for beche-de-mer species.

Common name	Species	Live to Guttled	Live to Salted	Live to Dried	Guttled to Salted	Guttled to Dried	Salted to Dried	Salted to Guttled	Dried to Guttled
Sandfish	<i>Holothuria scabra</i>	0.496 ⁴	0.355 ⁴	AVE=0.049 ^{a14}	0.758 ⁴	0.094 ⁴	0.125 ⁴	1.319 ^d	10.638 ^{e4}
Surf Redfish	<i>Actinopyga mauritiana</i>	0.684 ^{2*}	-	AVE=0.084 ^{a12*}	0.873 ⁴	AVE=0.187 ^{2*4}	0.286 ⁴	1.145 ^d	AVE=5.930 ^{2*e4g}
Black Teatfish	<i>Holothuria whitmaei</i>	AVE=0.677 ^{2*34}	0.529 ³	AVE=0.108 ^{a12*3}	0.824 ^{f,4}	AVE=0.177 ^{2*f3}	0.220 ^f	1.213 ^{f,4}	AVE=5.663 ^{2*f3g}
White Teatfish	<i>Holothuria fuscogilva</i>	AVE=0.627 ^{2*c4}	0.593 ^c	AVE: 0.137 ^{1ab2*}	0.775 ¹	AVE=0.237 ^{12*}	0.309 ¹	1.290 ¹	AVE=4.219 ^{12*g}
Prickly Redfish	<i>Thelenota ananas</i>	AVE=0.667 ^{c4}	0.481 ^c	AVE=0.055 ^{1ab4}	AVE=0.736 ¹⁴	AVE=0.088 ¹⁴	AVE=0.118 ¹⁴	AVE=1.382 ^{1d4}	AVE=12.502 ^{1e4}
Hairy Blackfish	<i>Actinopyga miliaris</i>	0.480 ⁴	-	AVE=0.067 ^{a14}	0.964 ⁴	0.209 ⁴	0.217 ⁴	1.037 ^d	4.785 ^e
Curryfish (common)	<i>Stichopus herrmanni</i>	0.651 ²	-	AVE=0.036 ^{a1}	-	0.114 ²	-	-	8.772 ^{2g}
Elephants Trunkfish	<i>Holothuria fuscopunctata</i>	0.519 ⁴	-	AVE=0.133 ^{a1b4}	0.911 ⁴	0.242 ⁴	0.263 ⁴	1.097 ^{d4}	8.772 ^{e4}
Lollyfish	<i>Holothuria atra</i>	AVE=0.436 ^{c12*}	0.236 ^{c1}	AVE=0.063 ^{a1bc2*}	0.586 ¹	0.150 ^{12*}	0.256 ¹	1.706 ¹	5.917 ^{12*g}
Deepwater redfish	<i>Actinopyga echinites</i>	0.692	-	AVE=0.088 ^{a13}	-	0.152 ^{f3}	-	-	6.600 ^{f3}
Curryfish (vastus)	<i>Stichopus vastus</i>	-	-	-	-	-	-	-	-
Burrowing blackfish	<i>Actinopyga spinea</i>	0.544 ³	0.375 ³	0.073 ^{1a}	0.689 ^{f3}	0.135 ^{f3}	0.195 ^{f3}	1.449 ^{f3}	7.424 ^{f3}
Deepwater blackfish	<i>Actinopyga palauensis</i>	AVE=0.818 ^{c13}	AVE=0.593 ^{c13}	AVE=0.175 ^{a1b}	AVE=0.728 ^{1f3}	AVE=0.190 ^{1f3}	AVE=0.262 ^{1f3}	AVE=1.374 ^{1f3}	AVE=5.335 ^{1f3}
Golden sandfish	<i>Holothuria lessoni</i>	0.645 ³	0.526 ³	0.098 ^a	0.815 ^{f3}	0.152 ^{f3}	0.186 ^{f3}	1.226 ^{f3}	6.588 ^f

Common name	Species	Live to Guttled	Live to Salted	Live to Dried	Guttled to Salted	Guttled to Dried	Salted to Dried	Salted to Guttled	Dried to Guttled
Brown sandfish	<i>Bohadschia vitiensis</i>	0.735 ^{c1}	0.612 ^{c1}	0.116 ^{c1}	0.834 ¹	0.157 ¹	0.189 ¹	1.199 ¹	6.337 ¹
Leopardfish	<i>Bohadschia argus</i>	AVE=0.665 ^{c12}	0.572 ^{c1}	AVE=0.115 ^{c12}	0.777 ¹	AVE=0.171 ¹²	0.233 ¹	1.286 ¹	AVE=5.841 ^{12g}
Greenfish	<i>Stichopus chloronatus</i>	-	-	-	-	-	-	-	-
Stonefish	<i>Actinopyga lecanora</i>	0.894 ^{c1}	0.652 ^{c1}	AVE=0.154 ^{c12*}	0.729 ¹	AVE=0.158 ^{12*}	0.253 ¹	1.372 ¹	5.418 ¹

References – Table 1

¹Ngaluafe, P. & Lee, J. 2013. Change in weight of sea cucumbers during processing: Ten common commercial species in Tonga. SPC Beche-de-mer Information Bulletin 33: 3-8.

²Prescott, J., Zhou, S. & Prasetyo, A.P. 2015. Soft bodies make estimation hard: correlations among body dimensions and weights of multiple species of sea cucumbers. Marine and Freshwater Research 66: 857-865.

^{2*}Calculations from raw data used in Prescott et al., 2015. (Data provided by Shijie Zhou).

³Purcell, S.W., Gossuin, H., Agudo, N.S. 2009. Changes in weight and length of sea cucumbers during conversion to processed beche-de-mer: Filling gaps for some exploited tropical species. SPC Beche-de-mer Information Bulletin 29: 3-6.

⁴Skewes, T., Smith, L., Dennis, D., Rawlinson, N., Donovan, A. & Ellis, N. 2004. Conversion ratios for commercial beche-de-mer species in Torres Strait. AFMA Final Report #R02/119. 20 pp.

^aNgaluafe & Lee, 2013. Table 3; percent conversion ratios, total whole/fresh weight, from wet to dry product including values from other studies.

^bNgaluafe & Lee, 2013. Table 1; wet-to-dry conversion ratios.

^cWhole fresh weights noted in Purcell et al., 2009.

^dDerived: Inverse gutted to salted value Skewes et al. 2004.

^eDerived: Inverse dried to gutted value Skewes et al. 2004.

^eEmpirical: Values calculated from Purcell et al. 2009.

^gInverse: Values calculated from Prescott et al., 2015.

Table 2. Conversion ratios for curryfish species.

Common name	Species	Live to Gutted	Live to Salted	Live to Dried	Gutted to Salted	Gutted to Dried	Salted to Gutted	Salted to Dried	Dried to Gutted Boiled	Wet to Boiled	Wet to Boiled to Salted	Wet to Boiled to Salted to Dry
Curryfish (common)	<i>Stichopus herrmanni</i>	0.651 ² 0.5 estimate	-	0.033 ^{f,3} 0.039 ^{a,1} AVE=0.036	-	0.114 ²	-	-	2.66 ^h	0.375 ^h	-	0.25 estimate
Curryfish (vastus)	<i>Stichopus vastus</i>	-	-	-	-	-	-	-	-	-	-	-

References – Table 2

¹Ngaluafu, P. & Lee, J. 2013. Change in weight of sea cucumbers during processing: Ten common commercial species in Tonga. SPC Beche-de-mer Information Bulletin 33: 3-8.

²Prescott, J., Zhou, S. & Prasetyo, A.P. 2015. Soft bodies make estimation hard: correlations among body dimensions and weights of multiple species of sea cucumbers. Marine and Freshwater Research 66: 857-865.

³Purcell, S.W., Gossuin, H., Agudo, N.S. 2009. Changes in weight and length of sea cucumbers during conversion to processed beche-de-mer: Filling gaps for some exploited tropical species. SPC Beche-de-mer Information Bulletin 29: 3-6.

Footnote

^aNgaluafu & Lee, 2013. Table 3, percent conversion ratios, total whole/fresh weight, from wet to dry product including values from other studies.

^fEmpirical: Values calculated from Purcell et al. 2009.

Data

^hData from Ugar Island: Curryfish processing example (Provided by Rocky Stephens)

Curryfish x9

Boil & then weigh 8kg (800gr each, conversion ratio boiled to dry = 0.375)

Wet to dry – 2.4kg (300gr each, 0.375 conversion ratio dry to boiled = 2.66)

Table 3. Table of conversion ratios applied by AFMA including proxy ratios for where no ratio is available for a particular species or processing form.

Common name	Species	Live to Gutted	Live to Salted	Live to Dried	Gutted to Salted	Gutted to Dried	Salted to Dried	Salted to Gutted	Dried to Gutted	Boiled & Salted to Gutted
Black Teatfish	<i>Holothuria whitmaei</i>	0.677	0.529	0.108	0.824	0.177	0.22	1.213	5.663	1.213
Brown sandfish	<i>Bohadschia vitiensis</i>	0.735	0.612	0.116	0.834	0.157	0.189	1.199	6.337	1.199
Burrowing blackfish	<i>Actinopyga spinea</i>	0.544	0.375	0.073	0.689	0.135	0.195	1.449	7.424	1.449
Curryfish (common)	<i>Stichopus herrmanni</i>	0.651	0.652	0.036	0.964	0.114	0.309	1.382	8.772	1.382
Curryfish (<i>vastus</i>)	<i>Stichopus vastus</i>	0.894	0.652	0.175	0.964	0.242	0.309	1.382	12.502	1.382
Deepwater blackfish	<i>Actinopyga palauensis</i>	0.818	0.593	0.175	0.728	0.19	0.262	1.374	5.335	1.374
Deepwater redfish	<i>Actinopyga echinites</i>	0.692	0.652	0.088	0.964	0.152	0.309	1.382	6.6	1.382
Elephants Trunkfish	<i>Holothuria fuscopunctata</i>	0.519	0.652	0.133	0.911	0.242	0.263	1.097	8.772	1.097
Golden sandfish	<i>Holothuria lessoni</i>	0.645	0.526	0.098	0.815	0.152	0.186	1.226	6.588	1.226
Greenfish	<i>Stichopus chloronatus</i>	0.894	0.652	0.175	0.964	0.242	0.309	1.382	12.502	1.382
Hairy Blackfish	<i>Actinopyga miliaris</i>	0.48	0.652	0.067	0.964	0.209	0.217	1.037	4.785	1.037
Leopardfish	<i>Bohadschia argus</i>	0.665	0.572	0.115	0.777	0.171	0.233	1.286	5.841	1.286
Lollyfish	<i>Holothuria atra</i>	0.436	0.236	0.063	0.586	0.15	0.256	1.706	5.917	1.706
Prickly Redfish	<i>Thelenota ananas</i>	0.667	0.481	0.055	0.736	0.088	0.118	1.382	12.502	1.382
Sandfish	<i>Holothuria scabra</i>	0.496	0.355	0.049	0.758	0.094	0.125	1.319	10.638	1.319
Stonefish	<i>Actinopyga lecanora</i>	0.894	0.652	0.154	0.729	0.158	0.253	1.372	5.418	1.372
Surf Redfish	<i>Actinopyga mauritiana</i>	0.684	0.652	0.084	0.873	0.187	0.286	1.145	5.93	1.145
White Teatfish	<i>Holothuria fuscogilva</i>	0.627	0.593	0.137	0.775	0.237	0.309	1.29	4.219	1.29
Unidentified BDM	<i>n/a</i>	0.894	0.652	0.175	0.964	0.242	0.309	1.382	12.502	1.382

Notes

- 1 Yellow highlighted cells are known gaps and are filled in using most conservative conversion factor from that processing method from other species.
- 2 Boiled and Salted to Gutted uses same values as Salted to Gutted as boiling process is assumed to not add or remove any weight from live weight
- 3 Where curryfish species are not identified to species level (CUC), the most conservative ratio of the two species is applied (red text)
- 4 Where the sea cucumber species is not know, the most conservative ratio for that processing method is applied
- 5 All other processing methods are left as unconverted (Salted & Chilled, Chilled, Boiled & Frozen, Salted & Frozen, Frozen & Green, Boiled & Chilled, Boiled)

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
MANAGEMENT Catch Data Summary	Agenda Item 4.1 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Working Group:
 - a. **NOTE** the overview of catch and effort reporting for hand collection fisheries, as reported in catch disposal records (TDB02) by licensed fish receivers for the 2018 season and 2019 season to date (1 Jan 2019 till 4 July 2019);
 - b. **DISCUSS** and **PROVIDE ADVICE** on the likely accuracy of available data in reflecting true catch and effort for the Fishery noting in particular;
 - c. the numbers of licensed fishers and fish receivers versus those reporting;
 - d. the significant reduction in reported fishing effort and submission of catch disposal records (CDRs) in the 2019 season compared to 2018;
 - e. the timeliness of submission of CDRs to AFMA.

KEY ISSUES

Beche-de-mer catch and effort

2. How much?
 - a. As of 4 July 2019, a total of 4.1 tonnes of beche-de-mer has been reported across seven different species in the Fishery for this season as of 4 July 2019 as reported on 30 individual CDRs. Data during this period is only reported as recent as 31 May 2019 indicating that no catches of beche-de-mer have been reported in over two months (at the time of writing).
 - b. By comparison, a total of 22.5 tonnes of beche-de-mer (5 times more) had been reported across six species within the same time period during the 2018 season.
 - c. Due to AFMA's data confidentiality rules, AFMA is unable to provide a breakdown of catch per species for this season to date.
 - d. The updated total catch figure for all species in the 2018 season is 64.3 tonnes. This is an additional 30.1 tonnes on 110 additional CDRs reported since HCWG14 (**Table 1**).
 - e. Prickly redfish catches increased from 8.2 tonnes at HCWG14 to a final season total of 14.7 tonnes. A breakdown of catch by species is provided in **Table 4**. It should be noted however that this updated figure was only calculated in recent weeks as an additional 2 tonnes of prickly redfish catches were reported to AFMA. Given the TAC for prickly redfish is 15 tonnes, and the significant lag in the timeliness of data submission, the risk of actually overfishing the prickly redfish TAC is very high.

3. Where?

- a. Approximately 92% of all CDRs returned (individual CDR sheets) this season reported information on Area Fished as per the map in **Figure 4**. This is an improvement on the 2018 season, where only 84% of CDRs reported this voluntary information (**Figure 1**).
- b. Of the reports received this season containing information on Area Fished, only 3 areas were reportedly fished; Darnley (Area 16) (36%), Cumberland (Area 17) (39%) and Don Cay (Area 19) (17%) (**Figure 2**).

4. By how many TIB licence holders and fish receivers?

- a. In total only 9 licences (or 7%) of a total of 128 licences authorised to take BDM have been reportedly active this season (catch reported under a TIB licence that has been landed to a fish receiver).
- b. Reported catches have been landed to a total of 6 out of 77 licensed fish receivers (**Table 2**).

5. How timely was the data submission?

- a. In the 2019 season, 49% of CDRs were submitted to AFMA within 24 days. 24 days accounts for the maximum 3 day limit to send the white copy CDR to AFMA after the product is weighed, plus a conservative estimate of time (21 days) needed for CDRs to reach AFMA in the post.
- b. The average time between date landed and data received by AFMA is 52 days in the 2018 season, and 30 days in the 2019 season so far.
- c. At the time of HCWG14, 49% of CDRs were received within the appropriate time frame (24 days) however after HCWG14, the timeliness of CDR submission improved significantly (increasing to 57% received within the appropriate time frame).
- d. The Working Group is reminded that CDRs are required to be submitted to AFMA (i.e. sent in the post, or handed in to the office) within 3 days of the product being landed, weighed and recorded.

Beche-de-mer catch and effort reporting

6. Since HCWG14 voluntary effort and area reporting in the beche-de-mer fishery has improved. The provision of voluntary part B data (i.e. area fished, number of days fished and number of fishers) has increased.
7. The number of CDRs reporting information about area fished has increased from 80% to 87%, number of days fished has increased from 80% to 97% and CDRs with reported information on number of fishers has remained at 96% (**Figure 1**).
8. At the time of HCWG14, a total of 144 CDRs had been received by AFMA with a total of 34.2 tonnes of beche-de-mer reported. The final total reported catch for the 2018 season is now 64.3 tonnes across a total of 258 CDRs. This indicates that at least half of the commercial catches of beche-de-mer were reported in the last quarter of 2018.
9. Key findings on reporting performance to date are:
 - a. Overall levels of reporting have improved. A total of 258 Catch Disposal Records were received in 2018 with 64.3 tonnes of reported beche-de-mer catch. This is a significant increase from 2017, with only 59 voluntary docket book records submitted to AFMA. A

summary of the number of records received each year is outlined in **Figure 3**.

- b. 97% of CDRs reported information about the number of days fished and the number of fishers in 2019.
- c. 87% of CDRs reported information about the Area Fished in 2019.
- d. Some catch has been voluntarily reported in the daily Hand Collectable logbook (HC01) in the 2019 season however none were returned in 2018 (**Figure 3**).
- e. AFMA still suspects some catches are not being landed to and recorded by a fish receiver.

OTHER UPDATES

Licencing

- 10. A summary of licences for the hand collectable fisheries is provided in **Table 4**.
- 11. As of 4 July 2019, there were 128 Traditional Inhabitant Boat (TIB) licences authorised to catch beche-de-mer (BD) and 77 fish receiver licence holders. This season, a total of 6 different fish receivers have submitted CDRs with reported catch of beche-de-mer from only 9 different fishers.
- 12. TSRA continue to hold one TVH BDM licence package (1 Primary and 2 tenders). This licence is subject to future Protected Zone Joint Authority (PZJA) fisheries management arrangements consistent with achieving the objectives of the *Torres Strait Fisheries Act 1984* and Torres Strait Treaty. Any future decisions relating to the transfer and/or use of this beche-de-mer (BDM) licence, once held by the Commonwealth, will be referred to the PZJA.

Pearl Shell and Trochus Fisheries

- 13. Fishing activity in both the Pearl Shell and Trochus Fisheries remains negligible. The low level of catch and effort in the Pearl Shell and Trochus Fisheries is thought to be due to low market demand rather than a decline in stock availability.
 - a. There has been only one report through Catch Disposal Records (TDB02) of pearl shell and no reports of trochus this season.
 - b. Limited activity has been reported in the Pearl Shell Fishery reported since 1 December 2017. During a review of developmental permits issued for the taking of undersized pearl shell in 2015 and 2016, AFMA received verbal reports that approximately 800 pearl shell was collected during the permit period, with roughly 15-20% comprised of shell between 100-130 mm. It was also reported that this low level of take has continued with pearl shell collected on an opportunistic basis largely by TIB licence holders whilst targeting TRL or in TRL closure periods.

BACKGROUND

14. On 1 December 2017 the Fish Receiver system was implemented. It became mandatory for all Torres Strait Fisheries licence holders (excluding Torres Prawn) to land their catch to a licenced fish receiver as soon as the catch either came onto land or was landed to a Carrier vessel (excluding onto freight ships (i.e. Seaswift). When catches are unloaded directly to a freight ship the catch must be received by a Fish receiver when landed in port).
15. Between 8 April and 22 May 2019, AFMA conducted a round of community visits in the Torres Strait and Northern Peninsula Area to discuss the fish receiver system and report back to industry on how the system has been working since implementation. Generally, industry and communities were very pleased with the level of reporting through the FRS.
16. Licenced fishers are reminded that as a condition of their TIB licence they are required to land all commercial catch to a licenced fish receiver. Fish receivers are reminded that it is a condition of their fish receiver licence to complete a Torres Strait Fisheries Catch Disposal Record (TDB02) immediately after receiving product and return the completed TDB02 pages to AFMA within 3 business days. Any CDRs received more than 24 days after the reported date of landing (3 days to send, plus 21 days in the post) is considered to be a breach of the licence conditions of a Fish Receiver Licence.

Table 1. Summary of reporting statistics before and after HCWG14, and the 2018 season overall.

	1 Jan – 26 Sept 2018 (before HCWG14)	27 Sept – 31 Dec 2018 (after HCWG14)	2018 season overall
Number of CDRs submitted	144	110	258
Total reported catch	34.2 tonnes	30.1 tonnes	64.3 tonnes
No. of species reported	11	14	14
% of CDRs with Area Fished	80%	88% (↑ improvement)	84%
% of CDRs with Days Fished	80%	93% (↑ improvement)	77%
% of CDRs with no. fishers	96%	96%	96%
% of CDRs received within 24 days	49%	65% (↑ improvement)	57%
Average CDR receipt time	54 days	50 days	52 days
# active licensed fishers	25	22	34
# active fish receivers	9	11	13

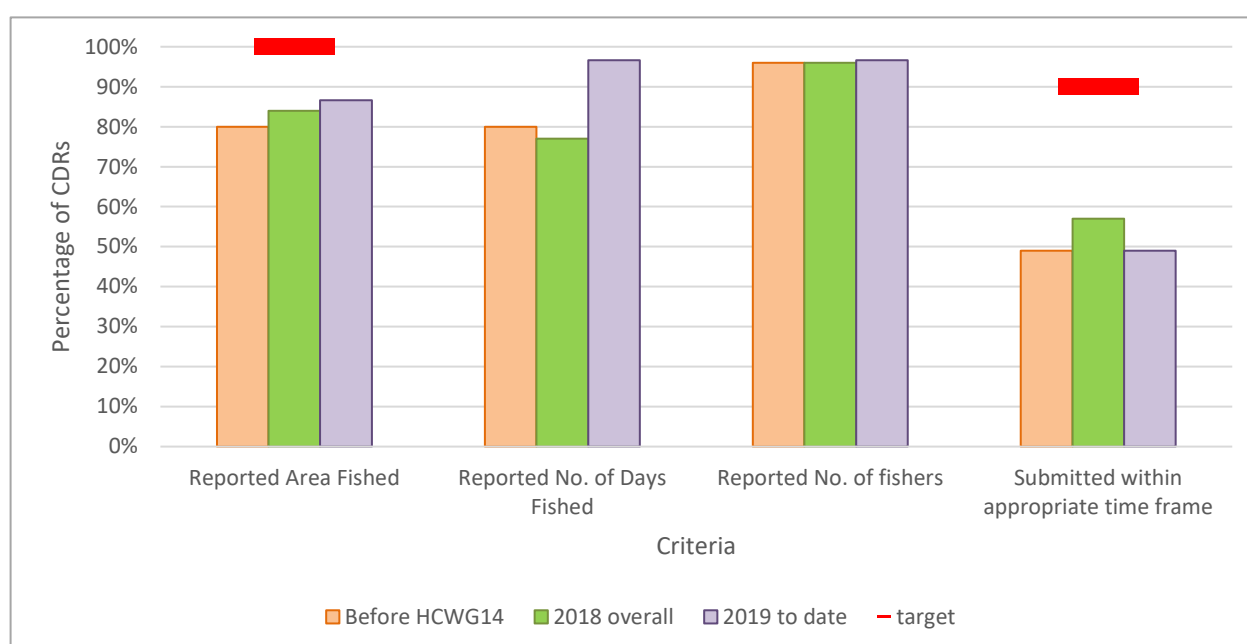


Figure 1. Percentage of CDRs with voluntary information reported and submitted within the appropriate time frame.

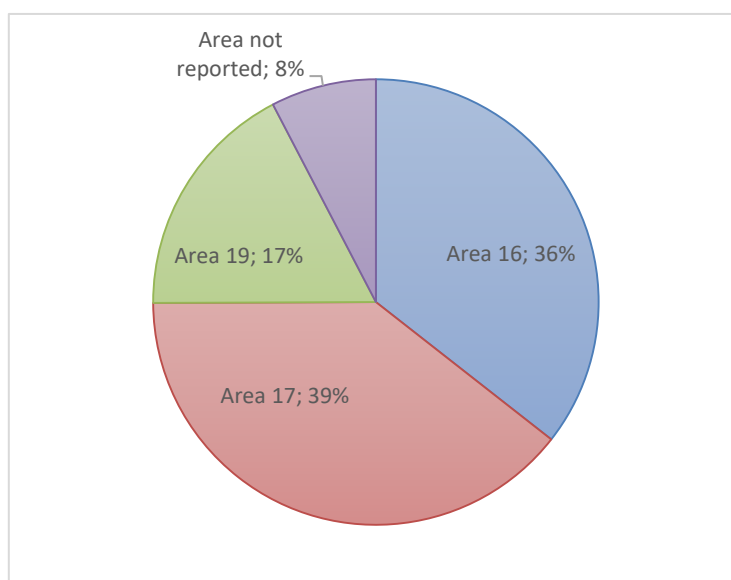


Figure 2. Proportion of reported catch in 2019 based on reported Area Fished.

Source: TDB02 catch disposal records.

Table 2. Number of licenced fishers and fish receivers reporting catches of BDM through catch disposal records compared with the number of licensed fishers authorised to catch beche-de-mer and those with fish receiver licenses.

Season	No. of fishers reporting beche-de-mer catch on CDRs	No. of beche-de-mer licence holders	No. of fish receivers submitting CDRs with beche-de-mer catch	No. of licensed fish receivers
2019	9	128	6	77
2018	35	126	13	78

Table 3. Summary of licenses for all Hand Collectable fisheries.

	TIB licences	TVH licences	Carrier Boat licences	Fish Receiver licences
Beche-de-mer	128	1 package (held in trust by TSRA)	12 (B and C)	77
Pearl Shell		7 total (5 primary/tender packages; 2 primary's)	11 (A, B and C)	
Trochus		0	5 (A, B and C)	

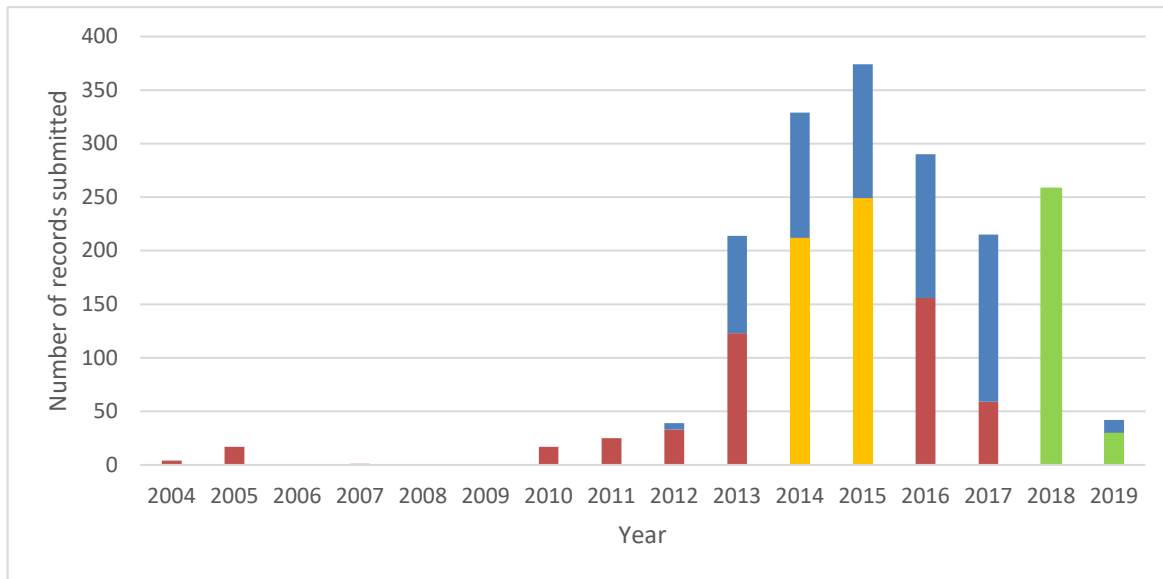


Figure 3. Number of catch records submitted each year. The red bars indicate voluntary TDB01 docket book data, the orange bars indicate years with Black Teatfish openings, blue bars indicate voluntary Hand Collection Daily Fishing Logs (HC01) and green bars indicate mandatory TDB02 Catch Disposal Records.

Table 4. Torres Strait Beche-de-mer Fishery historical catch records from 2005 to 2019 (4 July 2019).

Sources: AFMA docket book (TDB01) database, verbal reports obtained from industry during the 2015 Black Teatfish opening, Daily Fishing Logs (HC01), other correspondence and AFMA Catch Disposal Records (TDB02) for 2018 and 2019. This data does not include discarded or unreported catch.

Common Name	TAC (t)	Recorded catch (kg) ¹											
		2005	2007	2010	2011	2012	2013	2014	2015	2016	2017 ²	2018 ³	2019 ³
Black Teatfish	0 (15⁴)				75	2,001	138	16,624	23,303				
Prickly Redfish	15 (20⁵)	5,564	128	146	11,056	1,255	5,888	9,173	28,110	11,211	12,185	14,741	
Sandfish	0			5	31	2152	26	6				18	
Surf Redfish	0						52	1				0	
White Teatfish	15	734			3,179	13,294	12,633	16,341	4,200	990	747	1,774	
Blackfish	80 t 'basket'	186	128		507	73	216	1,960	3,596	1,098		1,368	
Curryfish					1,118				6,099	1,085	11,118	42,392	
Deepwater Redfish				7			5,024	4,229	5,546		597	172	
Elephant Trunkfish					4	28	2		133			190	
Golden Sandfish							52	351	55		160	8	
Greenfish							1	1	14			1,013	
Stonefish				459								0	
Leopardfish											63	2,322	
Brown sandfish											6	30	
Unidentified BDM											6,876	67	
'Basket' total		186	128	466	1,629	101	5,295	6,541	15,443	2,183	19,831	47,761	
Grand Total		6,484	2,56	6,17	15,970	18,803	24,032	48,686	71,056	14,384	32,764	64,300	4,109

¹ There was no catch reported in 2006, 2008, 2009.

² Catch data for 2017 is converted weights where processed form is known (47kg unknown), based on catch reported through tax invoices, HC01, TDB01 & TDB02. Verification was conducted to remove possible duplicates between records.

³ Data is reported through TDB02 Catch Disposal Records only and converted to wet weight gutted using CSIRO recommended conversion factors

⁴ The 15t TAC was available during 2014 and 2015 only.

⁵ The 20t TAC was available until the end of 2017. Yellow highlighted cells indicate an exceeded TAC

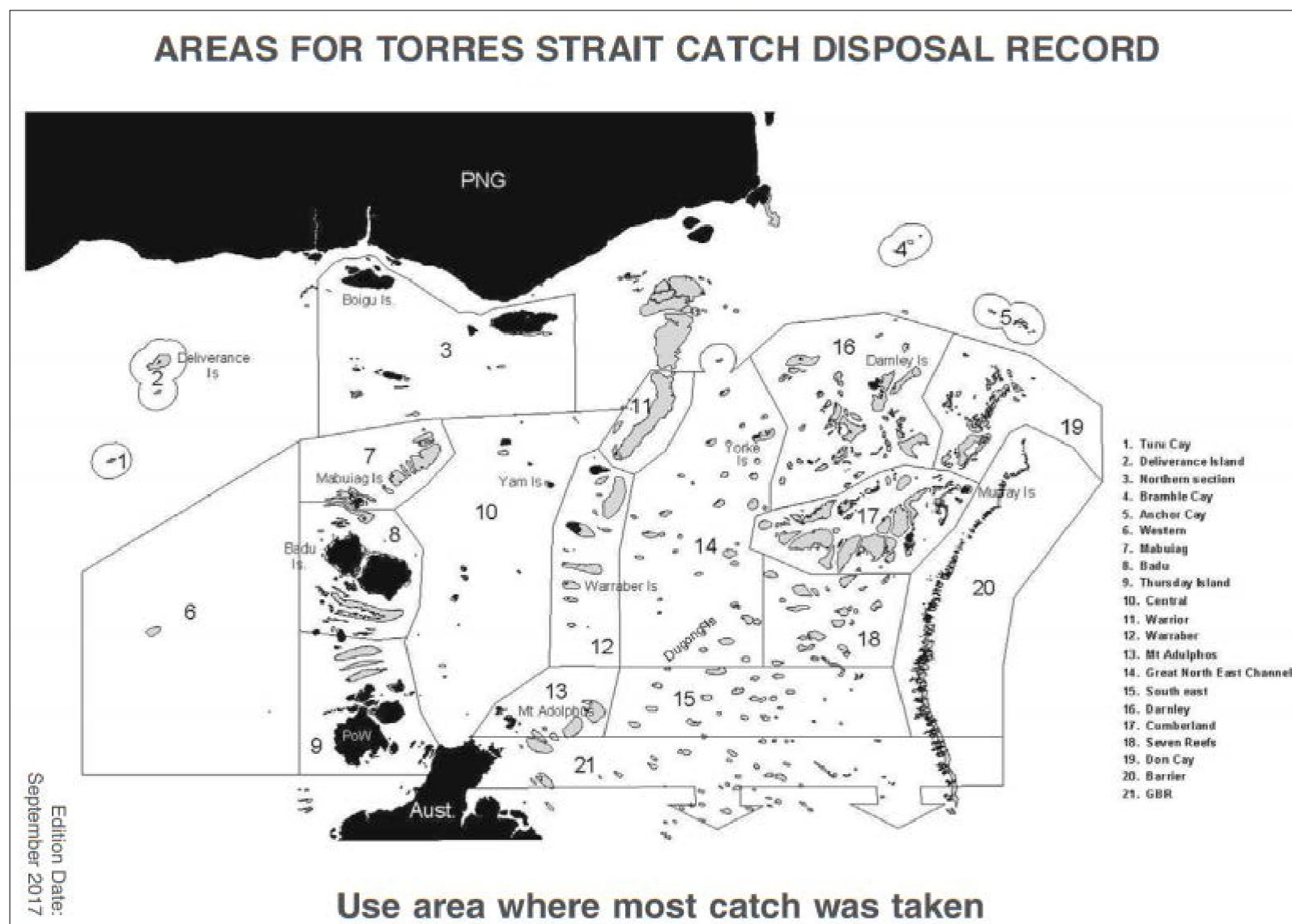


Figure 4. Areas for Torres Strait Catch Disposal Record (TDB02).

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
MANAGEMENT Compliance in the Beche-de-mer Fishery	Agenda Item 4.2 FOR INFORMATION

RECOMMENDATION

1. That the Working Group:
 - a. **NOTE** an overview of the Torres Strait domestic compliance program; and
 - b. **NOTE** key compliance risks in the Beche-de-mer Fishery.

KEY ISSUES

2. Over the last year AFMA have conducted 18 stakeholder / community meetings aimed at increasing education and awareness of compliance related issues and foster voluntary compliance with licence conditions and the fisheries management plans.
3. AFMA fisheries officers have conducted sixteen 'at sea' patrols with 47 boats inspected, fifteen ports / freight hubs were visited and twenty one fish receiver premises were inspected within the Torres Strait Protected Zone and adjacent waters this year. Supporting agencies involved Australian Border Force, Royal Australian Navy, Queensland Water Police and the Torres Strait Rangers.
4. Seven matters were referred to the Commonwealth Director of Public Prosecutions (CDPP) for consideration, with two cases were not proceeded, one case scheduled for hearing in August 2019 and four are currently under consideration by CDPP.
5. Of particular relevance to the HCWG, AFMA have identified a number of compliance risks and areas of interest in the Beche-de-mer Fishery that are of particular focus to the team.
6. These include:
 - a. Monitoring of catch reporting through the Fish Receiver System
 - i. With the introduction of the Fish Receiver System in 2017, and mandatory reporting of landings by the receiver to AFMA, a better understanding of what is being taken out of the Hand Collectable fisheries has improved significantly, which is to the benefit of a better managed sustainable fishery.
 - ii. AFMA officers continue to monitor catch movements through the Torres Strait on a regular basis and have identified catch not landed to a fish receiver prior to shipment, and catch taken by unlicensed fishermen. A number of consignments have either been detained pending further investigation and / or seized where evidence supports such an action.
 - b. Accurate and timely reporting by licenced fish receivers
 - i. Whilst most licenced fish receivers have been working cooperatively with AFMA there have been issues identified where further work through education and awareness has been required. The timely reporting of landed catches to AFMA, and the time lag to receipt by AFMA of the Catch Disposal Records (CDRs) is still being addressed.

- c. Unlicensed fishers
 - i. The issue of unlicensed fishers is of concern to AFMA where fishers without a licence, or holding an expired licence, have fished for commercial purposes. Where AFMA has identified the fisher involved and spoken with them, the expired licences have in most cases been renewed in the days following. AFMA encourage all fishers to ensure they are licenced and understand that it is a mandatory condition of their licence to land their catch directly to a licenced fish receiver.
 - d. Declines in reported landed catch reported
 - i. AFMA Compliance is concerned in the decline of reported fishing effort and reported landings in the Beche-de-mer Fishery this season. Less than 10 per cent of endorsed BDM licence holders and fish receivers are recorded as having been active this year. Where shipments of BDM product are identified as not having been landed to a licenced fish receiver by a licenced fisherman enforcement action will be taken, as this practice undermines the sustainability of the fishery now and into the future.
7. In consideration of the above mentioned risks, the AFMA Compliance team hold concerns that the level of catch reporting and compliance with the Fish Receiver System and licence conditions currently experienced in the BDM fishery is not sufficient to support an opening of black teatfish.
 8. Previous trial openings of black teatfish presented multiple compliance related issues:
 - a. Stockpiling of product prior the opening;
 - b. pre-season processing in private premises and on uninhabited islands;
 - c. the use of prohibited hookah apparatus;
 - d. unlicensed fishing operations;
 - e. boats over 7 metres involved in beche-de-mer fishing activities;
 - f. carrier vessels towing tenders and accommodating fishers;
 - g. voluntary reporting of catch by fishers was not supported by a large number of licenced fishermen resulting in the TAC on both occasions being significantly exceeded.
 - h. Catch reported by fishermen in 2014 was only 17.3% of reported landed catch
 9. In the event that black teatfish is opened to commercial fishing, and to mitigate the risk of the above mentioned compliance breaches, a targeted compliance and enforcement operation would need to be conducted both prior to and during the fishery opening.
 10. This would involve both land and sea based operations by multiple Fisheries officers and using multiple assets as well as targeted awareness campaigns regarding reporting requirements and compliance with licence conditions.

BACKGROUND

11. AFMA took over the Torres Strait Fisheries Domestic Compliance Program on 1 July 2018 from the Queensland Fishing and Boating Patrol.

12. To increase capacity in this area, AFMA has since recruited a third member to assist with the increase in work load in delivering both domestic and foreign compliance activities. Darwin and Canberra based officers have also assisted with targeted operations as required.
13. AFMA staff continue to educate and raise awareness with industry about the mandatory requirements of a TIB licence or fish receiver licence.
14. In addition, a number of patrols have taken place in key beche-de-mer fishery areas and inspections have been undertaken on processing premises and fishing grounds.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
MANAGEMENT Black Teatfish	Agenda Item 4.3 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Working Group:

- a. **NOTE** that the PZJA has agreed (out of session, February 2017) that fishing for Black Teatfish (*Holothuria whitmaei*) will remain closed until the risk of exceeding the total allowable catch (TAC) set for the species is substantially reduced through cost-effective management tools;
- b. **NOTE** the requirements under the draft harvest strategy for re-opening a closed species;
- c. **NOTE** the opportunity to better understand the biomass of black teatfish through the stock survey of Torres Strait beche-de-mer species planned for early 2020;
- d. **NOTE** the trends in reported catch and timeliness of reporting in the beche-de-mer fishery in consideration of the agreed reporting targets from HCWG14;
- e. **NOTE** the identified compliance risks in the beche-de-mer fishery and the expectations of the AFMA domestic compliance program; and
- f. **DISCUSS** and **ADVISE** on appropriate managements arrangements (including timing) as guided by the draft BDM Harvest Strategy for a sustainable black teatfish opening.

KEY ISSUES

2. AFMA considers the draft the Beche-de-mer Harvest Strategy (BDM HS) to be an appropriate guide to develop management recommendations for black teatfish. Although it has not yet been finally agreed by the PZJA, it represents strategic advice developed by the HCWG over the last three years. The draft BDM HS was approved by the PZJA for public consultation in April this year.
3. If agreed to by the PZJA, AFMA aims to implement the draft BDM HS in time for the commencement of the 2020 BDM fishing season.
4. The Working Group is being asked to provide advice on appropriate management arrangements (including timing) to allow for a future sustainable black teatfish opening. Relevantly:
 - a. the draft BDM HS sets out decision rules for re-opening a closed species; and
 - b. a BDM fishery independent dive survey is planned for the Fishery between late January and March 2020. The survey is expected to provide an updated stock assessment for black teatfish and other species.

Guidance under the Beche-de-mer Harvest Strategy – Re-opening Decision Rule (section 2.11.4)

5. The BDM HS prescribes clear guidance for re-opening a fishery (specific BDM species) that has been closed due to concerns around stock status and depletion, or for reasons such as needing to first ensure adequately precautionary measures are in place so that overfishing does not occur or the stock does not become overfished.
6. Further, the BDM HS advises that an opening should take into account previous survey information as well as recent catch history (both legal and illegal) and period over which the fishery has been closed.

Step 1: *Using all available information, first establish that the stock is above the limit reference point.*

7. The most recent stock survey information on black teatfish is from more than a decade ago (2009) and scientific advice at the time was that black teatfish stocks had recovered to near unfished biomass. However, since this advice, two black teatfish trial openings have occurred with both openings resulting in significant overcatch of the recommended TAC.
8. Although the 2009 stock status information indicated the stock is likely above the limit reference point, it is unknown what impacts the significant TAC overcatch had on the black teatfish stock during the past two trial openings, nor what level of possible illegal, unregulated and unreported (IUU) fishing has impacted on the stock.
9. The default limit reference point under the HS is a conservative level of 40% of unfished biomass. However, the HS states that where available, survey data may be used to select a lower limit reference level.
10. Taking in to account a stock survey on all Torres Strait beche-de-mer species confirmed for early 2020, there is an opportunity to obtain an updated snapshot of current black teatfish stock biomass relative to the limit reference point which will better inform a recommendation of a TAC for a possible trial opening.

Step 2: *Evaluate whether monitoring and management are adequate.*

11. Under the draft harvest strategy, the re-opening decision rule further advises that if a survey or available information suggests the stock is above the limit reference point, then evaluate whether monitoring and management arrangements are adequate and ensure that data collection and monitoring are clearly specified and implemented before any further consideration of an opening.
12. At the July 2018 meeting, HCWG13 acknowledged that another Black Teatfish opening is largely contingent on improved catch reporting through the fish receiver system and industry demonstrating accurate and timely reporting of other beche-de-mer species.
13. In October 2018, industry observers to HCWG14 agreed to improving the timeliness of reporting aiming for 100 per cent of all BDM CDRs being submitted in a timely manner by July 2019.

14. In the 18 months the FRS has been in place, catch reporting in the Beche-de-mer Fishery has progressed substantially, although overall reported catch and effort in the Beche-de-mer Fishery this season is notably low compared to last season (refer to Agenda Item 4.1). Despite a recent round of Fish Receiver System community visits, the timeliness of reporting and compliance with mandatory TIB and Fish Receiver licence conditions remains a concern of both AFMA management and compliance.
15. As discussed previously by the HCWG, additional management measures will be required for a black teatfish opening. This would be guided by the conditions prescribed under the Harvest Strategy including:
 - a. Accurate daily catch and effort reporting;
 - b. A precautionary trigger limit that prompts a temporary pause in fishing as catch records are collated to ensure overfishing does not occur;
 - c. An effective notification system to advise fishers as the TAC is approached;
 - d. Possible limitations on which species may be caught in conjunction with a re-opened species;
 - e. Opening the fishery in relation to other fishery season dates (i.e. tropical rock lobster), and favourable weather conditions; and
 - f. Consideration of cultural laws and community agreements.
16. If an opening is agreed to, the harvest strategy provides further guidance on setting a trial TAC and additional actions should the management conditions not be adhered to.
 - a. The trial opening needs to be set at a demonstrably conservative level with reference to values as shown in *Table 3* of the draft BDM HS.
 - b. If the trial TAC is exceeded by more than 5%, then the fishery is automatically paused (i.e. no fishing allowed) for the following year.
 - c. If data collection during the trial opening was not conducted satisfactorily, then the fishery is closed again.
 - d. If the TAC wasn't exceeded and reliable data were provided, these data need to be analysed to review the TAC and potential for the fishery to stay open in future, or be re-opened periodically after a pre-specified interval.
 - e. An ongoing condition of the fishery remaining open is that reliable data collection continues, and preferable includes additional data such as CPUE, spatial footprint and size composition.
17. Recommendations to reopen the black teatfish will need to clearly explain how the risk of exceeding the TAC will be reduced compared to the arrangements from the previous trial openings of 2014 and 2015 where the TAC was exceeded both times.
18. At HCWG14, AFMA provided a table that summarised a compilation of management arrangements and tools previously discussed at HCWG meetings and the 2016 Erub industry workshop (**Table 2**).

BACKGROUND

2014 trial opening

19. In 2014, the PZJA reopened fishing for black teatfish for the first time since the closure in 2003 (PZJA out of session decision, November 2002). Fishing was limited to a one month period (November) or until the TAC of 15 tonnes was caught. Key results of the trial were:
- a. the TAC was exceeded within two weeks of the one month trial. The total catch was estimated to be 16.624 tonnes;
 - b. it was necessary for AFMA to make daily contact with fishers, buyers, processors and freight companies to properly monitor catches; and
 - c. although there appeared to be good support from industry for the use of catch data forms prior to the season opening, only 17.3% of reported catch was reported by individual fishers. AFMA consulted widely with fishers, buyers and processors to determine the total catch.

2015 trial opening

20. In 2015, the PZJA again reopened fishing for Black Teatfish. Fishing was again limited to a one month period (November) or until the TAC of 15 tonnes was caught. Key results of the trial were:
- a. catch was not kept within the 15 tonne TAC limit. The fishery was closed after only eight days of fishing and fishers reported a total catch of 23.303 tonnes, 8.303 tonnes over the TAC;
 - b. interest by fishers in participating in the fishery increased. AFMA estimates that 64 fishers participated in the fishery in 2015 compared to 29 in 2014;
 - c. catch reporting rates by fishers and local community-based shore managers improved significantly from the 2014 trial opening. However, a significant lag between reporting and capture undermined the ability to manage the fishery within the TAC limit;
 - d. Approximately 68% of the product was collected by fishers working cooperatively with a central person reporting catch on behalf of a fishing operation;
 - e. There is a strong industry-held perception that significant levels of illegal fishing occurred. Allegations included fishing before the season commenced, using illegal fishing gear, and breaching both boat length limits and carrier vessel operating conditions.

21. A timeline of the history of Black Teatfish openings and closures is outlined in **Table 1**.

Recent Working Group recommendations and PZJA decisions

22. Since the 2015 trial opening the Working Group has been working to develop advice on the future management arrangements for Black Teatfish – this process is ongoing.
23. At its meeting in November 2016, the Working Group recommended the following minimum requirements for allowing further fishing for Black Teatfish:
- a. development and implementation of community-based catch monitoring arrangements (noting that in the short term these systems would be voluntary), starting with Community Monitoring Plans to be submitted to AFMA by 30 November 2016; and
 - b. implementation of a regulatory-based catch monitoring/reporting tool. The preferred tool being a mandatory FRS.

24. In February 2017, the PZJA agreed out of session that fishing for Black Teatfish will remain closed until the risk of exceeding the TAC set for the species is substantially reduced through cost-effective management tools.
25. At the HCWG13 in July 2018, it was recommended that AFMA prepare a proposal for the PZJA, for a Black Teatfish trial opening in December 2019, following consultation with communities about potential limited access for the five key eastern islands and to include a basis for scientific data to support the proposal after the finalisation of the harvest strategy.
26. AFMA has not progressed this matter due to competing priorities but also noting that any proposal to move away from the PZJAs current policy for open access would require detailed consultation, requiring significant time and resources. As noted under **Agenda Item 4.5**, AFMA recommends that issues of access (who and how much) should be considered as part of broader process to develop a strategic plan/vision for the Fishery. It is difficult to deal with such an issue on a species by species basis.
27. At the most recent HCWG meeting in October 2018, industry observers agreed to reporting performance targets and aimed to demonstrate improved timeliness of reporting. Further, other industry observers advocated for the development of an industry Memorandum of Understanding (MOU) that outlines what standards of data need to be provided by industry to AFMA in order to demonstrate improved catch reporting to the PZJA.

Table 1. Timeline of the Black teatfish fishery closures and openings.

Year	Meeting	Fishery status	Details
2003	Pre-HCWG	Closed	Black teatfish found to be overexploited. PZJA agreed to shut the fishery.
2009	HCWG3	Closed	CSIRO presented early results of a survey of stock abundance of Hand Collectables fisheries in the eastern Torres Strait. Results indicated that the Black teatfish stock has recovered to near unfished biomass. CSIRO recommended a conservative TAC of 25 tonnes. This recommendation was contingent on appropriate management strategies being in place to reduce the risk of over fishing and localised depletion.
2011	HCWG5	Closed	HCWG recommended to TS Fisheries Management Advisory Committee a 15 tonne TAC for Black teatfish to be available for one month. The opening was recommended to occur during the Tropical Rock Lobster hookah season to limit the transfer of fishing effort, and was contingent on mandatory catch reporting being agreed to by the PZJA.
Nov 2014	NA	Open	The fishery was opened for the first trial in November 2014. The fishery was set to close either after a month or when the 15 tonne TAC was reached, which ever came first.
Apr 2015	HCWG8	Closed	Following the 2014 trial, the HCWG recommended that the trial arrangements be maintained as part of the re-development of the fishery. A second opening in November 2015 was agreed to under the same conditions of 15t TAC or one month. A further recommendation was that catch reporting levels needed to improve significantly (from 17.3%) for further trials to be considered. The number of fishers reporting their catches increased, however there was still issues with the timeliness of reporting.
Nov 2015	NA	Open	The second Black teatfish trial opening was conducted. The catch was not kept within the 15 tonne TAC and the fishery was closed after eight days. The reported total catch was 23 tonnes; which was 8 tonnes over the TAC.
Jun 2016	HCWG9	Closed	Recommended not to open the fishery again until measures were in place to significantly reduce the risk of overshooting the TAC. An action item from the meeting was to hold a workshop, with the support of AFMA and the TSRA, with industry representatives to consider immediate options to improve catch reporting, short, medium and long term management options.
Oct 2016	Industry workshop	Closed	Following the recommendation from the HCWG, an industry workshop was conducted on Erub Island. The workshop involved industry members, fishers and buyers, from the eastern islands. A range of views were put forward by industry at the meeting, with some fishers wanting the fishery to be opened against as soon as possible (1 December 2016 was suggested) and others who wished to develop better catch reporting and community-based management arrangements. Advice from the meeting included:

Year	Meeting	Fishery status	Details
			<ol style="list-style-type: none"> 1. The development of community management plans; 2. A desire to move towards catch share allocations for the five communities. This allocation would be further restricted to operators from those communities to be decided by the PBC, cultural protocols to be adhered to; 3. Improved catch monitoring, possibly via mandatory logbooks. <p><u>Recommendation:</u> a) each community develop their community catch monitoring arrangements in details, b) proposals include other community based management arrangements (ie catch allocations, control over who can fish, cultural protocols) be developed and adopted by industry agreement, and c) that these proposals be submitted to the Hand Collectables Working Group and PZJA.</p>
Nov 2016	HCWG10	Closed	<p>The outcomes from the Industry Workshop were considered. The HCWG noted its previous recommendation that the fishery remain closed until measures are in place to improve reporting.</p> <p><u>Recommendation:</u> Minimum requirements for allowing further fishing for black teatfish</p> <ul style="list-style-type: none"> - Development and implementation of community based catch monitoring arrangements (noting that in the short-term these systems would be voluntary) to be submitted by 30 November 2016; and - Implementation of a regulatory-based catch monitoring/reporting tool. The preferred tool being a mandatory fish receiver system.
Feb 2017	PZJA	Closed	<p>The PZJA formally agreed to keep the black teatfish fishery closed until the risk of exceeding the TAC set for the species is substantially reduced through cost-effective management tools.</p>
June 2017	HCWG11	Closed	<p>HCWG noted the out of session agreement that the Black teatfish fishery would remain closed until cost-effective management arrangements were in place that would reduce the risk of over catching the TAC.</p>
Oct 2017	HCWG12	Closed	<p>No formal recommendations were made. The HCWG reiterated the need to obtain reliable catch data and limit fishing effort to support a future opening.</p> <p>Mandatory fish receiver system was implemented on 1 December 2017.</p>
July 2018	HCWG13	Closed	<p>The WG recommended that AFMA prepare a proposal for the PZJA, for a Black Teatfish trial opening in December 2019, following consultation with communities about potential limited access for the five key eastern islands and to include a basis for scientific data to support the proposal after the finalisation of the harvest strategy.</p>
Oct 2018	HCWG14	Closed	<p>Industry members and observers agreed to the following performance targets to demonstrate improved catch reporting to the PZJA;</p> <ol style="list-style-type: none"> a) 75 per cent of CDRs being submitted on time, by April 2019; and b) 100 per cent of CDRs being submitted on time by July 2019

Year	Meeting	Fishery status	Details
			Industry observers advocated for the development of an industry Memorandum of Understanding (MOU) that outlines what standards of data needs to be provided over to demonstrate improved catch reporting, as well as the details of the quarterly TAC management arrangements as proposed by industry observers.

Table 2. Summary of risks and benefits of previously discussed management tools required to support a Black Teatfish opening.

KEY MANAGEMENT OBJECTIVE: Reduce the risk of exceeding the total allowable catch for Black Teatfish (Source: PZJA decision Jan 2017) Legislative Objectives (Torres Strait Fisheries Act 1984): (b) <i>to protect and preserve the marine environment and indigenous fauna and flora in and in the vicinity of the Protected Zone</i> (e) <i>to manage commercial fisheries for optimum utilisation</i> (g) <i>to have regard, in developing and implementing licencing policy, to the desirability of promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants.</i>				
Management tool		Details	Benefits	Risks
Catch Reporting	Mandatory Fish Receiver System	Reporting frequency to be increased to daily submission of CDRs. AFMA will need to implement a system that allows for submission of CDRs by electronic means.	The system is already in place and industry have the next 8-9 months to continue to demonstrate improvements in catch reporting.	Fishers and fish receivers will need to ensure they have means (eg reception to email, sms) to submit reports daily to AFMA. Some fishers undertake multi-day fishing trips camped on remote islands. Previously, carrier vessels have operated in remote areas. Product is considered landed when brought to shore or transhipped to a carrier vessel.
	Daily logbook reporting	Fishers voluntarily fill in and submit Hand Collection Daily Fishing Logs (HC01).	The provision of detailed catch and effort information captured through HC01 logs will provide useful data for the fishery. Will be an added element industry can use to demonstrate their commitment to providing accurate and timely data on the fishery, despite not being mandatory.	Until the necessary legislative amendments are made to support mandatory daily fishing log reporting, there is a risk that no fishers will voluntarily complete them.
Catch Limits	Closure Trigger	Set a TAC trigger at which point the fishery will be declared closed to allow for all outstanding catch reports to be submitted. During the 2015 trial opening, there was a lag in catch reports being received by AFMA, as many fishers reported previous	Will mitigate the risk of over catching the TAC by having less reliance on accurate catch reporting.	May reduce the incentive for fishers and fish receivers to report their catch immediately and accurately. If reporting is effective fishers will forego catch.

		days' catches a number of days after they were caught.		
	Precautionary TAC	Set a precautionary TAC that takes into account the risk of over catch. From the last Erub Workshop participants discussed setting the TAC at 10t rather than 15t.	Would mitigate potential stock impacts from of over-catching.	If reporting is effective fishers will forego catch (income).
Time and length of opening	Limited opening period	Instead of opening the fishery for 1 month or until the TAC is reached, set the opening for 3-4 days. The maximum daily recorded catch during the 2015 trial opening was 4.341 tonnes. Allowing for a 10% increase in fishers participating in the trial opening, the total catch expected over a 3 day period would be approximately 14 tonnes.	May mitigate the risk of over-catching by having less reliance on accurate catch reporting.	The pre-selected 3-4 day time frame for an opening may be impacted by weather variability (poor tides) and may be more difficult for fishers to participate given other commitments. It may not be possible administratively, alter the dates within a short-timeframe.
	Timing of opening	At the Erub Workshop participants discussed changing the season date to coincide with the opening of the TRL Fishery to reduce the number of fishers participating in the fishery. HCWG13 advised that any future trial opening should be in December.	At the HCWG13 members advised that a December opening allows people to earn an income before the Christmas period. This was identified as an important economic/social benefit consideration.	TRL fishers will have less opportunity to access the Fishery.
Improved Compliance Monitoring	Restricted Entry	a) Access to the opening is provided through developmental permits (discussed at the ERUB workshop) b) "Opt-in" – Subject to further consideration by AFMA - Fishers could be required to apply to AFMA to access the opening up until a particular date. After this time, no more applications for access are granted. A fishers application could require the fishers to advise on fish receivers they are likely to land they catch to. AFMA would produce a public list of 'black teat' fishers ahead of opening.	Could provide more accurate information on likely fishers and therefore assist in more effective compliance operations. May reduce the risk of a sudden increase in the number of fishers fishing in the Fishery. This can increase compliance risks but also has been raised as a concern for fishers who fish more regularly fishers. Noting, the size of the available catch, limiting the number of fishers may be consistent with the objective to manage for optimum utilisation. When there	a) The developmental permit process is lengthy (can take at least 4-5 months to process) and subject to further AFMA consideration may not be an appropriate administrative mechanism. b) Restricting Traditional Inhabitants access to Torres Strait Fisheries is inconsistent with current PZJA licencing policy. Any departures from this approach may not be supported by the PZJA and/or would require additional consultation and therefore time to progress.

			are too many fishers compared to the available TAC, the risk of overcapitalisation and negative economic returns increases.	
	Restricted Landings	<p>a) Restrict landings to specified communities or landing sites (e.g. criteria may be based on historic fishing areas and landings.). Discussed at the Erub Workshop.</p> <p>b) Restrict landings to specific fish receivers who meet specific criteria. Discussed at the Erub Workshop to be part of community-level plans.</p>	Limiting landing locations assist compliance monitoring.	<p>It is not clear that the Act supports restricting fishers to land to specific fish receivers or locations. Subject to further AFMA consideration.</p> <p>If the power clearly exists it may be difficult, therefore requiring more time to consider, to agree on fair and equitable criteria for determining who may be a fish receiver and the limited landing sites.</p>
	Closure of Beche-de-mer Fishery after a Black Teatfish opening	Close the entire Torres Strait Beche-de-mer Fishery (i.e. all species) for one month once fishing for Black Teatfish is closed. This would assist compliance but not necessarily address catch reporting issues. Discussed at the Erub Workshop.	May assist with compliance in mitigating the further take of Black Teatfish after the agreed opening period.	Would limit ongoing economic opportunity for industry if entire fishery is closed.
	Prohibition on carrier boats	<p>Carrier boats should not be permitted to receive Black Teatfish. The Fishery should instead be a small boat fishery with fishers working from the community. Discussed at Erub Workshop.</p> <p>Note: Carrier vessels are subject to VMS (exemption available for carrier vessels under 6m) if receiving product must comply with the fish receiving reporting requirements.</p>	Would reduce competition for fishing operations that do work with a carrier operation.	Limits operational flexibility for fishers. Some fishers advise that carrier vessels allow timely processing of product therefore is value adding.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
MANAGEMENT White teatfish (prepared by TSRA)	Agenda Item 4.4 For DISCUSSION and ADVICE

RECOMMENDATIONS

1. That the Working Group:
 - a. **DISCUSS** the proposed activities to be undertaken in the BDM fishery over the short, medium and long term that could facilitate the use of hookah for targeting of white teatfish in the Beche-de-mer fishery.
 - b. **RECOMMEND** whether to progress any specific activities as a management priority, taking into account other management priorities in Hand Collectable fisheries.

KEY ISSUES

2. The current management arrangements in the Beche-de-mer (BDM) fishery do not allow for the use of hookah for fishing for any BDM species.
3. Some stakeholders have sought support for the use of hookah equipment for the targeting of white teatfish in the fishery, due to its deeper water nature and difficulty in harvesting by free-dive method only. This issue has been discussed at several previous Working Group meetings, where the HCWG has:
 - a. noted a proposal from Mer industry to use hookah in Mer waters to fish for white teatfish
 - b. noted AFMA has written to all licence holders to seek their views on amending the hookah ban for a limited number of fishers to target white teatfish
 - c. noted a difference of opinions from stakeholders and communities about the proposed use of hookah in the fishery, with a strong preference from some communities that it not be undertaken in their waters or at all
 - d. noted concerns about the sustainability impacts of the use of hookah for targeting BDM species, and the risks related to current poor levels of catch reporting in the fishery
 - e. discussed current QLD management arrangements, and whether it is suitable as a basis for a possible future management model.
4. The use of hookah equipment to harvest white teatfish increases economic opportunities for traditional inhabitant fishers. However, there are a number issues relating to sustainability, compliance and safety which are outlined in the Background section.
5. The Working Group is asked to:
 - a. consider the below activities and possible outcomes that could support the targeting of white teatfish using hookah in the fishery;

- b. note that not all outcomes could be pursued at the same time, and a trade-off will need to be made between the timeframe taken to achieve each and which outcome is the most preferred.
- c. recommend to the PZJA if activities to facilitate the potential use of hookah apparatus for targeting white teatfish should be pursued alongside, or instead of, other management priorities in the Hand Collectable fisheries.

Table 1: Proposed short, medium and long term activities for discussion.

Timeframe	Activity	Possible Outcome
Short term 0-2 years	<ul style="list-style-type: none"> a) Improve catch reporting data through the FRS. b) Undertake BDM survey to better understand current stock status in the fishery. c) Implement BDM harvest strategy to monitor and adjust sustainable catch levels. d) Pursue legislative changes for mandatory daily logbook catch reporting. e) Consider how a 'one-operator' approach may be implemented and what additional conditions apply. 	<p><i>'One-operator'</i></p> <p>PZJA may have confidence in allowing the targeted take of white teatfish using hookah apparatus if catch data was improved.</p> <p>This could possibly be facilitated by utilising the one TVH BDM licence held by the PZJA (TSRA), which could allow for one operator to undertake targeted fishing with increased reporting and monitoring requirements.</p>
Medium term 3-5 years	<ul style="list-style-type: none"> a) Implement mandatory logbook catch reporting system and associated compliance regime. b) Assess options for limited entry/access to use of hookah in fishery (special licence and conditions, temporal and or spatial management, safety considerations). c) Undertake community consultation on possible options and provide advice to the PZJA. 	<p><i>'Limited operators'</i></p> <p>PZJA could consider the proposed management arrangements and stakeholder views to possibly allow for limited entry/access to the use of hookah for targeting white teatfish. This would be supported by a robust daily logbook catch reporting system to minimise sustainability risks to stocks.</p>
Long term 5+ years	<ul style="list-style-type: none"> a) Design, consult and implement a BDM strategic management plan that sets clear objectives and tools for long-term management of and access to the fishery – with full consideration given to the possibility of hookah as an allowed fishing method and the additional management arrangements in place to support this occurring on a sustainable basis. 	<p><i>'Revised management arrangements'</i></p> <p>PZJA could consider how the management arrangements agreed in a strategic management plan could support use of hookah in the fishery, if sustainability and other risks were adequately addressed.</p>

6. Short-term activities that could be progressed are outlined in more detail below for Working Group discussion.
 - a. Improve catch reporting data through the FRS. This should be developed alongside the approach for meeting catch data targets as discussed to facilitate an opening of the black-teatfish fishery.
 - b. Undertake BDM survey to better understand current stock status in the fishery. This has been funded by the TSRA to be undertaken in 2020.
 - c. Implement BDM harvest strategy to monitor and adjust sustainable catch levels. This has currently been subject to broad community consultation.
 - d. Pursue legislative changes for mandatory daily logbook catch reporting. The HCWG should consider how the implementation of this system could be supported whilst legislative changes progress through the legislative process.
 - e. Consider how a 'one-operator' approach may be implemented. It is proposed a discussion paper could be prepared on this issue for consideration at the next HCWG meeting.
7. The Working Group may wish to initially discuss the potential arrangements that might be appropriate to apply for a 'one-operator' approach, including consideration of:
 - a. daily catch logbooks reporting requirements
 - b. vessel monitoring
 - c. targeting of other species
 - d. fine-scale dive monitoring
 - e. temporal or spatial management
 - f. diver qualifications
 - g. who would determine the process for selecting approved operator

BACKGROUND

8. White teatfish a valuable species of Beche-de-mer with recent analyses of Asian markets showing it is one of the most valuable species. Full utilisation of the Total Allowable Catch would provide strong economic returns to fishers. However, there are currently a number of risks and issues for the Working Group to consider:
 - a. **Sustainability** – BDM are considered particularly vulnerable to over exploitation due to limited dispersal, patchy distribution, ease of collection, slow recovery from over fishing and the limited available information on biological and spatial distribution. Their relatively restricted mobility make them inherently vulnerable to localised depletion.
 - b. **Lack of data** – A significant concern in the BDM fishery is the lack of timely and accurate catch data limits the ability of the PZJA to effectively monitor catch and consequently stop the use of hookah diving equipment once the TAC has been reached. The last CatchWatch report (May 2019) records 2,320kg total catch, which has been confirmed by industry as likely not a true reflection of commercial take this season.

- c. **Compliance** – A major concern with allowing hookah has been that it will be used to exploit other shallow water BDM species, leading to localised depletion. There are significant challenges in monitoring the compliance of fisheries using hookah. The QDAF member stated at HCWG Meeting 14 that Queensland Fisheries and Boating Patrol was unlikely to permit the use of hookah for only one species due to the difficulties of monitoring and enforcement.
- d. **Safety** – Hookah diving at depths of greater than 20 meters in remote areas in Eastern Torres Strait Islands could pose a safety risk. The nearest hyperbaric treatment centre is located in Townsville and would require air evacuation, in which the changes to air pressure and altitude would likely worsen the patient. This was a component of the reason for the original prohibition on the use of hookah.
9. The Queensland East Coast BDM fishery permits the use of hookah equipment. However, there are significant differences in the management arrangements in the Torres Strait as set out in Table 2.

Table 2: BDM management differences between BDM Fisheries in Torres Strait and Queensland East Coast

Torres Strait Fishery	QLD East Coast Fishery
Variable participation from year to year with no limit on the number of TIB entrants to the fishery each year.	Limited entry of 18 licences held by three operators
Voluntary daily logbook reporting	Mandatory daily logbook reporting.
Mandatory catch receiver system.	Mandatory catch receiver system.
Harvest strategy in development, does not yet include spatial or temporal management.	Rotational zones harvesting. 156 zones which can only be harvested once every three years, and each zone is only fished for a maximum of 15 days.
Maximum boat size of 7m for each TIB operator.	Maximum of four divers per boat operating at any one time.
Minimum size limit closer to current estimate of size at sexual maturity (minimum sizes being reviewed as part of the Harvest Strategy).	Minimum size limits at least 15% greater than current estimate of size at sexual maturity for each species.
No spatial closures.	Large spatial areas closed to fishing due to marine park zoning.
Hookah and SCUBA apparatus not permitted.	Hookah and SCUBA apparatus permitted.
VMS not mandatory	VMS mandatory

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
MANAGEMENT Future Management Priorities	Agenda Item 4.5 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Working Group:
 - a. **DISCUSS** and **ADVISE** on future management priorities for the Hand Collectables Fisheries; and
 - b. **NOTE** the progress to date on previously identified management priorities.

KEY ISSUES

2. At HCWG14, some Working Group members and observers agreed that progressing the issue of lifting the prohibition on the use of hookah was a key management priority for the BDM Fishery. It was also acknowledged that as an action item out of HCWG13, the TSRA was tasked with developing a proposal to address this issue (see **Agenda Item 4.4**).
3. Previous meetings of HCWG identified a range of other management priorities;
 - a. development of a harvest strategy and recovery plans for overfished species;
 - b. future management arrangements for Black Teatfish and White Teatfish;
 - c. review the size limits set for the Torres Strait Beche-de-mer Fishery taking into consideration the size limits in place for the Queensland and the Commonwealth Coral Sea Fishery;
 - d. review weight conversion ratios for gutted and dried beche-de-mer species;
 - e. develop communication materials to assist industry members;
 - f. developing a Beche-de-mer management plan;
 - g. continuing education and awareness training with the Fish Receiver System; and
 - h. improving communications and engagement with industry.
4. A summary of how each management priority has been progressed to date is provided in **Table 1**.
5. AFMA management considers the implementation of the harvest strategy, including the consideration of survey outcomes, to be the highest immediate management priority for the BDM Fishery.
6. In the longer-term AFMA considers it a priority to develop strategic management plan or vision for the Fishery based on stakeholder aspirations to help guide the longer-term management of the Fishery (this is in addition to the harvest strategy which guides the setting of fishery-level TACs). This would help address long-standing issues and competing stakeholder views in the Fishery such as, how expansion and access should be managed. For example, the role of input controls and the need to maintain the PZJA policy for open and equal access for Traditional Inhabitants across and within fisheries. Broad stakeholder

input would be required to develop strategic management plan for the Fishery. AFMA is not yet resourced to undertake such a process.

BACKGROUND

7. This is a standing item for the HCWG. Having agreed management priorities (management issues to focus on) and a work plan aims to achieve a more efficient management process.
8. Based on discussions convened in the meeting and / or advice from individual members the Working Group is asked to review the standing management priorities and provide advice on any changes.
9. Where necessary, the Working Group should aim to assign an order of priority to items and a desired timeline.
10. Importantly the Working Group will need to have regard for resourcing. AFMA's budget for Hand Collectables Fisheries is tabled under **Agenda Item 6.1** for information.

Table 1. Comments relating to any progress against each management priority previously identified by the HCWG.

Management Priority			Comments
1	HCWG9 June 2016	Development of a harvest strategy and recovery plans for overfished species	Complete. CSIRO, together with AFMA, the HCWG and broader industry stakeholders have developed a Beche-de-mer Harvest Strategy which is set to be considered by the PZJA before the end of the 2018 fishing season.
2	HCWG9 June 2016	Future management arrangements for Black Teatfish and White Teatfish	Ongoing. The TSRA is working to assist TIB licence holders to develop a proposal to lift the hookah ban when fishing for white teatfish, to be put up to the PZJA for consideration. An update will be provided at the meeting. Future management arrangements for black teatfish is an ongoing matter for the HCWG (see Agenda Item 4.5).
3	HCWG9 June 2016	Review the size limits set for the Torres Strait Beche-de-mer Fishery taking into consideration the size limits in place for the Queensland and the Commonwealth Coral Sea Fishery	Complete. This work was progressed under the Harvest Strategy project. Proposed changes to minimum size limits of beche-de-mer will be considered by the PZJA as part of the Harvest Strategy.
4	HCWG9 June 2016	Review weight conversion ratios for gutted and dried beche-de-mer species	Ongoing. This work was progressed under the Harvest Strategy project. Updates to weight conversion ratios are captured within the new Beche-de-mer Species Identification Guide. CSIRO is continuing to work with industry on understanding weight conversion ratios for curryfish species.
5	HCWG9 June 2016	Develop communication materials to assist industry members	Ongoing. As part of the 2019 Fish Receiver System community visits, AFMA developed some educational material and frequently asked questions (FAQs) sheets for industry. A number of PZJA Traditional Inhabitant members also accompanied AFMA during the community visits and assisted in communicating the importance and benefits of the FRS. In addition, AFMA Thursday Island is continuing to work with the AFMA communications team to improve communications on a range of fisheries topics, including segments on Radio 4MW, the PZJA website and a fisheries notice board outside the AFMA Torres Strait office.
6	HCWG13 July 2018	Developing a Beche-de-mer management plan	Not yet progressed.

Management Priority			Progress to date
7	HCWG13 July 2018	Continuing education and awareness training with the Fish Receiver System	Ongoing. AFMA undertook a round of community visits in April and May 2019 to discuss the Fish Receiver System with industry and communities and AFMA continues to liaise with industry on how to improve reporting through the FRS.
8	HCWG13 July 2018	Improving communications and engagement with industry	Ongoing. See management priority #5
9	HCWG14 October 2018	Some Working Group members and observers agreed that progressing the issue of lifting the prohibition on the use of hookah	Ongoing. To be addressed by the TSRA under Agenda Item 4.4

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
RESEARCH Outcomes from TSSAC	Agenda Item 5.1 For INFORMATION

RECOMMENDATIONS

1. That the Working Group:
 - a) **NOTE** the outcomes of the recent TSSAC annual research cycle.

KEY ISSUES

2. At their meeting in October 2018, the HCWG14 identified that a key research priority for Torres Strait Hand Collectable fisheries was to undertake an experimental fishing survey to understand the stock status of sandfish on Warrior Reef. This was then identified in the Hand Collectables Five Year Fishery Research Plan for consideration in the TSSAC Annual Research Statement and research scopes.
3. During the call for research pre-proposals in November 2018, the TSSAC agreed to broaden the scope of the HCWG research priority to extend to a full stock survey of all Torres Strait beche-de-mer species with an additional focus on deeper water species.
4. The TSSAC met on 28-29 May 2019 to discuss full proposals for funding in 2019-20 and beyond. Seven projects were considered by the TSSAC and six were supported for funding, including the full proposal for a stock survey of Torres Strait beche-de-mer species. A full list of the supported projects is provided in **Table 1**. Copies of each funding application can be provided upon request.
5. Acknowledging the stock survey work as a very high priority for the Torres Strait Beche-de-mer Fishery, the TSRA agreed to committee additional funding to support this research being undertaken as soon as feasible, outside of the available TSSAC funds.
6. The final project “Measuring non-commercial fishing (indigenous subsistence fishing and recreational fishing) in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods” is supported in principle by the TSSAC, however they are working with the project team to try to amend the scope of the project before finalising.
7. An additional project, an ecological risk assessment for the beche-de-mer fishery is also being funded, and is a compulsory piece of work through ongoing contracts with the CSIRO, and not specifically assessed by the TSSAC.
8. The projects supported have committed TSSAC research funds for 2019-20, and approximately \$365,000 (of a possible \$411,000) for 2020-21. This leaves the TSSAC with approximately \$45,000 for any urgent tactical research projects during the 2020-21 financial year.
9. If other research is considered urgent and necessary, the TSSAC may apply for additional funding, or funding can be sought from external bodies such as the Fisheries Research and Development Corporation (FRDC).

Table 1. List of research projects endorsed by the TSSAC in the 2019/20 annual research cycle.

Research Project	Torres Strait Fishery
Fishery independent survey, stock assessment, Harvest Strategy and Recommended Biological Catch calculation for the Torres Strait Tropical Rock Lobster Fishery.	Tropical Rock Lobster
Spanish mackerel stock assessment	Finfish
Enhancing biological data inputs to Torres Strait Spanish mackerel stock assessment.	Finfish
Climate variability and change relevant to key fisheries resources in the Torres Strait — a scoping study	All fisheries
Management Strategy Evaluation (MSE) for the Torres Strait Prawn Fishery harvest strategy	Torres Strait Prawn
Ecological Risk Assessment (ERA) for the Torres Strait Beche-de-mer Fishery	Beche-de-mer
Torres Strait Sea Cucumber Stock Status Survey	Beche-de-mer
Measuring non-commercial fishing (indigenous subsistence fishing and recreational fishing) in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods	All fisheries

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
RESEARCH Torres Strait Beche-de-mer Stock Survey	Agenda Item 5.2 For INFORMATION

RECOMMENDATIONS

1. That the Working Group **NOTE** an update from CSIRO regarding the upcoming stock survey of Torres Strait beche-de-mer species.

KEY ISSUES

2. Fishery independent surveys are planned for the BDM Fishery over the next two years.
3. CSIRO will provide an update of the planned surveys including:
 - a. survey objectives;
 - b. key deliverables from the project; and
 - c. proposed survey schedule.
4. The Working Group is being asked to note this information and have regard for it when setting future management priorities and, where relevant, management advice.

BACKGROUND

5. In June 2019, the Torres Strait Scientific Advisory Committee (TSSAC) agreed to endorse the research proposal to undertake a stock survey of Torres Strait beche-de-mer species (refer to **Agenda Item 5.1**).
6. Dr Nicole Murphy from CSIRO is the Principle Investigator on the project with both Dr Tim Skewes and Dr Eva Plaganyi as co-investigators.
7. The project intends to develop a research program based on **three population surveys**:
 - a. the east Torres Strait fishery with the focus on prickly redfish, curryfish species, black teatfish and surf redfish;
 - b. a limited exploration of deep water habitats will be undertaken to extend our knowledge of the full extent of the white teatfish resource in east Torres Strait, and
 - c. a survey focussed on sandfish on Warrior reef.
8. The key deliverables from the survey are to:
 - a. Produce stock size estimates and distribution data, and assess the fishery status for each population of beche-de-mer in Torres Strait, including the sandfish fishery.
 - b. Use survey data to make recommendations on potential fishery expansion (e.g. TACs) and re-opening of closes fisheries.
 - c. Map important habitat variables, especially those relevant to fishery production.

- d. Make survey outputs available in a form suitable for us in the Beche-de-mer Harvest Strategy for Torres Strait.
 - e. Production of formal final reports and a plain English summary document with special consideration of Traditional Knowledge.
9. A copy of the full research proposal is provided at **Attachment 5.2a**.
10. The last surveys on east Torres Strait and Warrior Reef were carried out in 2009 and 2010 respectively. It is intended that the upcoming surveys be undertaken during the same months as past surveys. Considering this, the best time to survey the east Torres Strait is February or March, and in January for surveying sandfish on Warrior Reef. In order to maximise cost efficiency, the CSIRO is looking to do a combined survey in late January or March 2020.
11. The survey will be funded across the 2019/20 and 2020/21 financial years by the Torres Strait Regional Authority.

Torres Strait Scientific Advisory Committee research application

Please indicate the type of application you are submitting – an EOI in response to a call for research; or a full proposal in response to TSSAC advice that your initial application has been approved for further development:

X

Pre-proposal (Please complete Sections 1-4 inclusive)

Full Research Proposal (Please complete sections 1-8)

SECTION 1 - ADMINISTRATIVE SUMMARY

Project title:	Stock survey of Torres Strait Beche-de-mer species
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Applicant (organisation or person):	CSIRO Ocean & Atmospheric Research
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Contacts

Administrative

Title/Name:	Cathy Minnucci	Phone:	03 6232 5505
Position:	Finance Advisor	Email:	cathy.minnucci@csiro.au
Organisation:	CSIRO Oceans & Atmosphere	Postal address:	GPO Box 1538 Hobart, TAS 7001

Principal Investigator (person)

Title/Name:	Nicole Murphy	Phone:	07 3833 5948
Position:	Experimental Scientist	Email:	nicole.murphy@csiro.au
Organisation:	CSIRO Oceans & Atmosphere	Postal address:	Queensland BioSciences Precinct (QBP) 306 Carmody Rd, St Lucia, QLD 4072

Co-investigator (s)

Title/Name:	Tim Skewes	Phone:	0419 382 697
Position:	Collaborator	Email:	timskewes@outlook.com
Organisation:	Scientific expert	Postal address:	12 Watsonia St Redland Bay, QLD 4165

Co-investigator (s):

Title/Name:	Eva Plaganyi	Phone:	07 3833 5508
Position:	Principal Research Scientist	Email:	eva.plaganyi-lloyd@csiro.au
Organisation:	CSIRO Oceans & Atmosphere	Postal address:	Queensland BioSciences Precinct (QBP) 306 Carmody Rd, St Lucia, QLD 4072

Planned Start and End Date

Start Date:	01/07/2019	End Date:	15/12/2020
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SECTION 2 – PROJECT DESCRIPTION

PROJECT BUDGET: (Excluding GST)

Financial Year	AFMA	Applicant (in kind)	Applicant	Other
2019/2020	\$207,641	\$88,989		\$0.00
2020/2021	\$81,598	\$34,971		\$0.00
	\$0.00	\$0.00		\$0.00
Totals	\$289,239	\$123,960		\$0.00

SECTION 3 – PROJECT DESCRIPTION

Background and need (max 250 words) - *detail any important background relating to the project. Why it is important and being proposed (need). Any related projects or other information the TSSAC should know when considering it for funding.*

Beche-de-mer fisheries in Australia and the South Pacific have been subjected to increased fishing pressure in recent years due to increased prices for beche-de-mer in Asia. Research has shown that many South Pacific beche-de-mer fisheries have been over-exploited, with recovery being slow and sporadic (Purcell, 2013).

The Torres Strait Beche-de-mer Fishery (TSBDMF) has become an important source of income for Torres Strait islanders since it was re-established in the early 1990s. While most sea cucumber species are considered to be in good condition, closure or catch limits have been implemented for several high value fishery species such as sandfish, black teatfish and surf redfish. Currently, fishing is mainly focused on white teatfish, blackfish, deepwater redfish, prickly redfish and of late, curryfish species. Recently, there has been some evidence of local depletion for prickly redfish and curryfish i.e. fishermen reporting decreased catch rates.

Fishery dependent data (logbooks) were introduced to the TSBDMF in December 2017. There is still however, limited information available to assess the status of fishery populations, with incomplete catch and effort time series data available prior to 2017. A stock survey is presently the only viable method for determining the size and status of fished beche-de-mer populations for Torres Strait.

Objectives / performance indicators (max 250 words) - *list the major objectives or planned outcomes of the project. These will form your project milestones:*

We plan to develop a research program based on three population surveys:

1. Survey of the east Torres Strait fishery with the focus on prickly redfish, curryfish species, black teat fish and surf redfish.
2. Additionally, a limited exploration of deep-water habitats will be undertaken to extend our knowledge of the full extent of the White teatfish resource in east Torres Strait.
3. Survey focussed on sandfish on Warrior reef. We will also engage with Papua New Guinea to look at opportunities for collaborating to undertake a full scale survey (inclusion of northern Sandfish population).

Deliverables:

1. Produce stock size estimates and distribution data, and assess the fishery status for each population of beche-de-mer in Torres Strait, including the sandfish fishery.

2. Use survey data to make recommendations on potential fishery expansion (eg. TAC's) and reopening of closed fisheries.
3. Map important habitat variables, especially those relevant to fishery production.
4. Make survey outputs available in a form suitable for use in the new Beche-de-mer Harvest Strategy for Torres Strait.
5. Information from the project will be provided to AFMA and Torres Strait Island stakeholders in the form of formal final reports and a plain English summary document. Special consideration will be taken with Traditional Knowledge (TK).

Consultation and Engagement - *Note consultation is required for both the pre- and full-proposal phases for TSSAC projects. This differs from AFMA Research Committee Proposal requirements.*

Pre-proposal phase consultation

Briefly detail (this will form the skeleton of your community engagement strategy which must be developed as part of full proposal phase):

- *the areas in the Torres Strait region where the proposed research activities may occur*
- *the Torres Strait community groups or individuals that you will engage/involve from these areas in the development of and or during the project if it reaches full proposal phase (refer to Step 2 of Attachment A - Procedural Framework for Researchers in the Torres Strait).*
- *how you plan to engage/involve key stakeholders (e.g. community notices, telephone, email, employment, interviews, meetings, workshops) in the project development. Note, any potential fee for service rates need to be factored into your research project budget.*

CSIRO has carried out research on the Torres Strait Beche-de-mer Fishery since 1995. During this time, a number of abundance surveys of eastern Torres Strait, including two full scale surveys in 1995/96 and 2002 and two abbreviated surveys in 2005 and 2009 have been undertaken. Additionally, two full scale surveys for sandfish on Warrior reef were undertaken in 1995/96 and 2000, with relative abundance surveys also undertaken in 1998, 2002, 2004 and 2010.

As a project team, the principal investigator (Nicole Murphy), collaborator (Tim Skewes) and co-investigator (Eva Plaganyi), have over 45 years combined experience working together on the Torres Strait Beche-de-mer fishery, including regular consultation and communication with traditional owners.

Previous surveys have included a high level of interaction with Torres Islanders, both in the design and carrying out of the survey, and interpretation of results. The history, status and research of the fishery has been communicated to Torres Strait islanders through TSHCWG meetings, dedicated Island workshops and supply of appropriate communication material for conveying the outcomes of research projects to islander communities. Our belief is that there is a high level of awareness for the fishery among traditional owners. Any future surveys will be conducted at the same level of consultation with respect to community desires. Detailed survey designs will be discussed and ratified during targeted consultations with islander representatives, including Fisher representatives, Prescribed Body Corporates and Island Councillors, with the chance also for whole of community feedback.

As with previous surveys where Islanders from Mer and Erub participated in 2009 sampling, Islanders will be invited to be part of field work. The initial plan will be to invite those Islanders from Ugar, Poruma and Masig who volunteered to take one of the sea cucumber processing packs at the last Beche-de-mer Harvest Strategy workshop and meeting, in October 2018.

*If there has been any initial consultation and engagement outline with whom and key outcomes (note consultation is **not** necessary at the EOI stage but has sometimes occurred through existing relationships).*

A stock survey to understand the status of sandfish on Warrior Reef was identified as a research priority during the most recent sitting of the HCWG in October 2018. Additionally, understanding the current stock status for all beche-de-mer species was identified in the TSSAC research project scope for 2019-20.

Beche-de-mer Harvest Strategy supporting information will be used to guide the survey design, with information for species, habitat, fishery and population status, used to determine the approach to sampling (see Appendix A).

Additional opportunistic research will also be welcomed where possible. Previously, habitat mapping was undertaken at Iama in 2010 during the Warrior survey, as Island representatives had expressed a desire to investigate the potential for sea ranching of sandfish in the lagoon. Habitat mapping could be undertaken at Ugar (if desired/involved in survey work), as this links directly to a project opportunity by Traditional Inhabitant Fishers from Ugar and CSIRO researcher Leo Dutra, for the enhancement of beche-de-mer stocks.

Full proposal consultation and engagement

In accordance with the Procedural Framework for Researchers in the Torres Strait (Nakata 2018; Procedural Framework), the TSSAC full proposal requires two different aspects be completed.

1. Develop a stakeholder engagement strategy, including a plain-English community consultation package which should be used to undertake preliminary consultation with relevant stakeholders as part of your full proposal application. Follow instructions in Appendix 4 of the procedural framework ([Attachment A](#)).

2. Provide documentation and outcomes from the preliminary consultation and engagement conducted, including:

- *The level of stakeholder support – particularly from Traditional Inhabitants for the proposed work (include a list of who was contacted and whether they support the project, or if not, why).*
- *Any perceived risks or stakeholder considerations with the project.*
- *How traditional knowledge might be considered or incorporated to enhance the project, its outcomes and benefits.*
- *Any activities suggested by Traditional inhabitants to improve the project, or bring it into alignment with community needs.*
- *How the research outcomes will benefit Traditional Inhabitants directly or indirectly, or why it is not relevant/applicable (i.e. projects in the prawn fishery).*

Attach the stakeholder engagement strategy (which should have been updated as required following initial consultation) with your full proposal application.

Please see attached additional Stakeholder Engagement Strategy documents. A supplementary document to the full proposal will be provided to the TSSAC Executive Officer by 10 May, which will detail further comments or feedback received from communities during the consultation process.

Methods (max 250 words) – Please detail the basic methods that will be used to undertake this project.

The survey will be conducted in accordance to surveys undertaken in previous years. Site counts at repeated survey sites will be used to calculate population trends. The analysis will include an assessment of recruitment from site counts and size frequency data, a technique that has been shown to be viable from previous surveys. Estimates of gross environmental parameters such as seagrass and coral cover, will be collected during the survey, not only for assessing the effects of fishing, but for mapping and monitoring the environment in general.

Planned east Torres Strait and Warrior reef surveys need to be undertaken at similar times to previous year's surveys to coincide with seasonal and lunar phase cycles of sea cucumber activity. This reduces differences in survey observer rates that may result from changes in sea cucumber burrowing behaviour, due to seasonal and tidal factors and can better detect changes in sea cucumber population abundance.

Based on previous survey times, the optimal period to undertake the east Torres Strait survey is February or March, and January for surveying sandfish on Warrior Reef. However, taking into account timing of previous surveys, a combined survey to reduce costs could be undertaken in late January or March.

Planned outcomes and benefits (max 150 words) – this should include how the research will be used by management to benefit the fishery and other stakeholders:

A sustainable beche-de-mer fishery would provide a substantial source of income and employment for Torres Strait Islander communities and downstream industries. Given that many of the world's beche-de-mer fisheries are fully or over-exploited, and that demand looks to be increasing, this fishery will likely be more valuable in the future.

Survey results will be made available in a form suitable for use in the new Beche-de-mer Harvest Strategy for Torres Strait. This will directly inform management decisions and possible future fishery expansion. It will also provide a framework for broader application of fishery data for monitoring.

We will also gather information on gross environmental parameters, not only for assessing the effects of fishing, but for mapping and monitoring the environment in general.

Project extension (max 100 words) - are there possible future research options that could result from this project?

There is a high probability of future research resulting from the currently proposed stock surveys, as project data will be prepared for inclusion in the new Beche-de-mer Harvest Strategy for Torres Strait.

Additionally, possible habitat mapping at Ugar links directly to a project opportunity by Traditional Inhabitant Fishers from Ugar and CSIRO researcher Leo Dutra, for the enhancement of beche-de-mer stocks.

Risk Analysis - be sure to consider risks specific to conducting research in the Torres Strait including community support or lack thereof.

CSIRO have successfully carried out a number of similar surveys in Torres Strait, as well as beche-de-mer research in areas across northern Australia and in PNG. The project team has extensive experience working together on the Torres Strait Beche-de-mer fishery, including regular consultation and communication with traditional owners.

Capacity (max 100 words) - Are there any past or current projects relevant to this proposal funded through the TSSAC, TSRA, FRDC or other organisation? Outline the Investigators' experience in the proposed

Past Beche-de-mer surveys of east Torres Strait have been undertaken in 1995-96 (full scale), 2002 (full scale), 2005 (relative) and 2009 (relative); and sandfish surveys of Warrior Reef undertaken in 1995-96 (full scale), 1998 (relative), 2000 (full scale), 2002 (relative), 2004 (relative) and 2010 (relative).

The project team has over 45 years combined experience working on the Torres Strait Beche-de-mer Fishery.

research and Torres Strait region.

SECTION 4 - Schedule of Payments

As a general rule, up to 10% of the total project cost may be provided as an initial payment and a minimum of 30% of the total project cost must be left for the final report.

Milestones	Deliverable date (Please refer to instructions)	Schedule of AFMA payment(s) (excluding GST)
1. Initial payment on signing of contract	On signing	\$28,923
2. Conduct BDM survey of East Torres Strait	31 March 2020	\$122,557
3. Milestone report	15 July 2020	\$20,050
4. Draft final report	31 Oct 2020	\$30,938
5. Final report	15 Dec 2020	\$86,771
TOTAL		\$289,239

SECTION 5 - Description of Milestones

Details on each milestone must provide sufficient information to justify the milestone cost and should match the performance indicators. The description field will describe the work to be completed for that milestone with the justification field elaborating further on the categories of cost - for example salary.

Milestone: 1. \$28,923

Date: On signing

Financial Year	Salaries	Travel	Operating	Capital	Total
	\$17,716	\$1,008	\$10,199	\$0.00	\$28,923

Description:

Initial payment on signing of contract

Justification:

10% of project cost on initial signing of contract

Milestone: 2. \$122,557

Date: 31 March 2020

Financial Year	Salaries	Travel	Operating	Capital	Total
	\$75,070	\$4,272	\$43,215	\$0.00	\$122,557

Description:

Conduct BDM survey of East Torres Strait, including review of historic CSIRO seabed mapping data

Justification:

Data analysis, field and gear costs associated with mobilization and field work

Milestone: 3. \$20,050

Date: 15 July 2020

Financial Year	Salaries	Travel	Operating	Capital	Total
	\$12,281	\$699	\$7,070	\$0.00	\$20,050

Description:

Submission of milestone report

Justification:

Write up of survey work and results

Milestone: 4. \$30,938

Date: 31 October 2020

Financial Year	Salaries	Travel	Operating	Capital	Total
	\$18,950	\$1,079	\$10,909	\$0.00	\$30,938

Description:

Submission of draft final report for comment

Justification:

Results of analyses of data and write up

Milestone: 5. \$86,771

Date: 15 December 2020

Financial Year	Salaries	Travel	Operating	Capital	Total
	\$53,150	\$3,024	\$30,597	\$0.00	\$86,771

Description:

Submission of final report, addressing of comments from draft final report

Justification:

30% of project cost for final report

Section 6 – Special Conditions

If relevant, this field will be used to assist in contract preparation for any special conditions. Examples of special conditions

may relate to marine spatial closures (including access) or any other clauses not specifically contained in the contract.

Section 7 - Data management

Identify the appropriate Intellectual Property category applicable to this application. Choose ONE from below:

Code	Description
1	Published, widely disseminated and promoted, and/or training and extension provided. Relates mainly to outputs that will be available in the public domain.
2	Published, widely disseminated and promoted, and/or training and extension provided. Related products and/or services developed. Relates mainly to outputs that will largely be available in the public domain, but components may be commercialised or intellectual property protected.
3	Published, widely disseminated and promoted, and/or training and extension provided. Related products and/or services developed. Relates mainly to outputs that may have significant components that are commercialised or intellectual property protected.

The following IP category applies to this application:

2. Published, widely disseminated and promoted, and/or training and extension provided. Related products and/or services developed. Relates mainly to outputs that will largely be available in the public domain, but components may be commercialised or intellectual property protected.

I have searched for existing data (refer to guidelines on how to search the Australian Spatial Data Directory and Oceans Portal):

[Yes / No]

Provide a brief description of the data to be generated from the project and how this data will be stored for future protection and access, including:

- information on data security or privacy issues and applying to the data
- Nominated data custodian

Survey data e.g. counts and measurements, will be entered into and stored in existing Access and Oracle databases. Data storage, protection and access is governed and managed according to CSIRO policy guidelines, in accordance with CSIRO rules and regulations.

- Document how research data, traditional knowledge and intellectual property will be handled during your project, including but not limited to:
- Acknowledging where the data or information used in research comes from, so that any income made from selling a concept in the future will be adequately linked to a community's contribution/ knowledge so they also receive financial or other benefit from "selling" a concept onward.
- How you will negotiate use and publish of traditional knowledge with communities. For example do traditional inhabitants allow public publication of information or only for project activities and reported on in internal reports? This will depend on data sensitivity and privacy (such as fishing grounds etc).
- Are there any other ethical considerations you have identified for this project which need to be managed?
- Are you committed to gaining ethics approval for this project from a suitable body such as a university or AIATSIS?

- Acknowledging where the data or information used in research comes from, so that any income made from selling a concept in the future will be adequately linked to a community's contribution/ knowledge so they also receive financial or other benefit from "selling" a concept onward.

N/A

- How you will negotiate use and publish of traditional knowledge with communities. For example do traditional inhabitants allow public publication of information or only for project activities and reported on in internal reports? This will depend on data sensitivity and privacy (such as fishing grounds etc).

Special consideration will be taken with any Traditional Knowledge (TK) collected during the project. TK will only be used with the express permission of the traditional owners. Guidance will be sought from local Island leaders and the TSRA to ensure full local support and agreement over the handling of TK information.

- Are there any other ethical considerations you have identified for this project which need to be managed?

N/A

Are you committed to gaining ethics approval for this project from a suitable body such as a university or AIATSIS?

N/A

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
MANAGEMENT Research Update	Agenda Item 5.3 FOR INFORMATION

RECOMMENDATIONS

1. That the Working Group:

- a. **NOTE** the verbal update provided by the Scientific members on recent research activities relating to beche-de-mer fisheries in Australia and internationally; and
- b. **NOTE** the presentations/reports by industry members Rocky Stephen and Simon Naawi on the beche-de-mer re-seeding work they are independently involved in.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
RESEARCH Five Year Fishery Research Plan 2020/21 – 2023/24	Agenda Item 5.2 For DISCUSSION & ADVICE

RECOMMENDATIONS

1. That the Working Group:

- a) **NOTE** that a rolling five-year research plan for the Hand Collection Fisheries is used to inform the Torres Strait Scientific Advisory Committee's (TSSAC) annual call for research funding proposals;
- b) **NOTE** that while there is likely limited research funding available in the 2020/21 financial year the HCWG should discuss research priorities and consider future research needs;
- c) **DISCUSS** and **PROVIDE ADVICE** on research priorities for a rolling five-year research plan 2020/21 - 2023/24 for Hand Collectable Fisheries (**Attachment 5.2a**).

KEY ISSUES

2. Under the new TSSAC Strategic Research Plan (SRP) (**Attachment 5.2b**), each PZJA Working Group and Resource Assessment Group (RAG) is tasked with identifying research priorities for their respective fisheries and updating their five year rolling fishery research plans by August in year.
3. For the 2019/20 financial year, seven projects were considered by the TSSAC, six of which were supported for funding.
4. Of most relevance to Hand Collectable Fisheries, this includes the "Torres Strait Sea Cucumber Stock Status Survey" which is funded by the TSRA. Additionally, an ecological risk assessment for the beche-de-mer Fishery is also being funded as a compulsory piece of work through ongoing contracts with the CSIRO, and not specifically assessed by the TSSAC.
5. There are two other projects not specifically Hand Collectable Fishery related, but applicable more broadly across the Torres Strait including "Climate variability and change relevant to key fisheries resources in the Torres Strait – a scopy study", and "Measuring non-commercial fishing (indigenous subsistence fishing and recreational fishing) in the Torres Strait in order to improve fisheries management and promote sustainable livelihoods".
6. While there is likely limited research funding available in 2020/21, it remains a valuable task in discussing research priorities and considering future research needs for Hand Collectable fisheries.
7. The Working Group should review the five year research plan and amend where necessary according to any new objectives projected for the next five years. Another opportunity to amend the research plan will be provided in 2020 before the 2021-22 call for research. For reference, a summary of previously identified research priorities is provided at **Table 1**.

BACKGROUND

8. The Torres Strait Scientific Advisory Committee operates under a Five Year Strategic Research Plan. The SRP is the overarching document providing the TSSAC's strategic themes which guide priority setting for research in the Torres Strait fisheries over a five year period. The document identifies three research themes, and under these, strategies and possible research activities against these themes. The document also provides guidance to researchers on research application development and the TSSAC and PZJA forums in assessing applications through the assessment criteria in the SRPs appendices. The SRP was finalised by the TSSAC in mid-July 2018.
9. The TSSAC requires each fishery to develop a five year fisheries research plan, which fits into the themes identified in this SRP.

Torres Strait Fisheries Strategic Research Plan 2018-2023

10. The SRP specifies the research priorities and strategies that the PZJA intend to pursue in Torres Strait fisheries, and provides background to the processes used to call for, and assess, research proposals. The research priorities can be broad, covering all topics within the SRP, some of which may be funded by AFMA, and some of which may require funding from other funding bodies.
11. There are 3 research themes within the SRP, under which the HCWG could identify research priorities for the Beche-de-mer, trochus and pearl shell fisheries (**Table 2**). There are several strategies under each theme and suggested ideas to help the Working Group to get thinking about the sorts of projects which may go under these themes and strategies.

Rolling Five Year Fishery Research Plans

12. In the past, fishery specific research planning was undertaken through fishery specific research priorities being included in the SRP and each Torres Strait fishery completing a list of annual research priorities, which fed into the TSSAC annual research statement. This process has now been simplified by combining individual fishery planning into one rolling five year research plan per fishery. The plans are written by the relevant Torres Strait forum (Working group, MAC or RAG) based on the themes and strategies identified in the 5 year SRP. These plans are then used by AFMA and the TSSAC to create an annual research statement (ARS), listing annual priorities for Torres Strait research across all fisheries. The new plan should simplify this process.
13. The rolling five year research plans will be updated annually, thus always having a five year projection for research. It is possible that these plans will not be finalised in time for the development of the TSSAC 2020-21 ARS. In this case, fisheries will be asked to submit a one year list of research priorities for 2019-20, and the rolling five year research plan will be applied to the following year (2020-2021 and beyond).

Table 1. Advice from the Hand Collectables Working Group (HCWG) on research and data needs

Meeting	Description	HCWG Discussion
HCWG9 (June 2016)	Harvest Strategy	The HCWG agreed that future research priorities would be guided by the Harvest Strategy to be developed over the coming 18 months.
HCWG11 (June 2017)	Stock status of sandfish and the feasibility of a re-seeding program	<ul style="list-style-type: none"> Concern from industry that the status of the sandfish stock on Warrior Reef was not currently known with the last survey being carried out in 2010. Members and observers noted advice from the AFMA member that as part of the harvest strategy project, agreed minimum information requirements together with supporting management measures could be developed to guide any resumption of fishing. Fishery independent surveys may be one way to obtain an understanding of stock status. Advice was sought on the potential benefit and feasibility of a re-seeding program to facilitate stock rebuilding. The Research Member advised that while there may be some benefit, any re-seeding program would need to be well designed to ensure that moving stock around the strait did not disrupt the natural spawning potential of this recovering species.
	Harvesting larvae for ranching	<p>Some industry members and observers queried whether juvenile beche-de-mer that washes up on the shoreline from time-to-time in large numbers, could be harvested and be grown-out for ranching and potentially used to restore depleted stocks.</p> <p>The research member advised that:</p> <ul style="list-style-type: none"> this would be a challenging project. samples and juveniles should ideally be collected for research and identification; and the only grow-out in hatcheries at the moment is for sandfish and that small beche-de mer could potentially be used to seed reefs.
HCWG12 (October 2017)	General	<p>The HCWG noted a presentation by the research member and acknowledged the following future research needs identified:</p> <ul style="list-style-type: none"> Stock status (density, size, catch, areas fished, collaboration with PNG on shared stocks). Conversion ratios (Curryfish boiled and salted). Biology (growth, mortality, size and seasonality of breeding). Value adding, best practice processing and drying (particularly for lower value species). Requirements for harvest strategy implementation.

HCWG13 (July 2018)	Harvest Strategy	<p>The HCWG agreed that progressing work on the Harvest Strategy would help to identify additional research priorities including:</p> <ul style="list-style-type: none"> a) Standardising conversion ratios b) Understanding biological parameters (growth, mortality, breeding)
HCWG14	General	<p>The HCWG recommended that the key research priority for Torres Strait hand collectable fisheries was to undertake an experimental fishing survey to understand the stock status of sandfish on Warrior Reef.</p> <p>Further, the HCWG noted a suite of current and potential research priorities that have been previously identified for the beche-de-mer fishery as outlined below:</p> <ul style="list-style-type: none"> a) Harvest Strategy Development b) Stock assessments <ul style="list-style-type: none"> i. Surveys ii. Analysis of fishery data (all fishery species) c) Conversion ratios <ul style="list-style-type: none"> i. Curryfish boiled and salted to gutted weight d) Biology and ecology <ul style="list-style-type: none"> i. Habitat, reproduction, growth, recruitment to inform size limits; spatial and temporal management ii. Taxonomy iii. Ecological Risk Assessments e) Value adding <ul style="list-style-type: none"> i. Product handling, processing with training and reference material ii. Alternative products (konowata and marine adhesives) f) Climate change impacts/opportunities g) Enhancement/reseeding depleted populations h) CITES (non-detriment findings), Marine Stewardship Council Certification i) Economic analysis, marketing, value chain analysis, fishery capitalisation

Table 2. Torres Strait fisheries strategic research themes, strategies and research activities

Theme 1: Protecting the Torres Strait marine environment for the benefit of Traditional Inhabitants	
Aim: Effective management of fishery stocks based on understanding species and their biology and ecological dependencies so it can support Traditional Inhabitant social and economic needs.	
Strategy 1a - Fishery stocks, biology and marine environment	<p>Possible research activities under this theme may include:</p> <ul style="list-style-type: none"> a. Stock assessment and fishery harvest strategies for key commercial species. b. Ecological risk assessments and management strategies for fisheries. c. Minimising marine debris in the Torres Strait. d. Addressing the effects of climate change on Torres Strait fisheries through adaptation pathways for management, the fishing industry and communities. e. Incorporating Traditional Ecological Knowledge into fisheries management. f. Methods for estimating traditional and recreational catch to improve fisheries sustainability.
Strategy 1b – Catch sharing with Papua New Guinea	<p>Possible research activities under this theme may include:</p> <ul style="list-style-type: none"> a. Status of commercial stocks and catches by all sectors within PNG jurisdiction of the TSPZ. b. Good cross-jurisdictional fisheries management through better monitoring and use of technology.
Theme 2: Social and Economic Benefits	
Aim: Increase social and economic benefits to Traditional Inhabitants from Torres Strait Fisheries.	
Strategy 2a - Promoting social benefits and economic development in the Torres Strait, including employment opportunities for Traditional Inhabitants	<p>Possible research activities under this theme may include:</p> <ul style="list-style-type: none"> a. Models for managing/administering Traditional Inhabitant quota b. Understanding what influences participation in commercial fishing by Traditional Inhabitants. c. Understanding the role and contribution of women in fisheries. d. Capacity building for the governance of industry representative bodies e. Methods for valuing social outcomes for participation in Torres Strait fisheries. f. Identifying opportunities and take-up strategies to increase economic benefits from Torres Strait fisheries.
Theme 3: Technology and Innovation	
Aim: To have policies and technology that promote economic, environmental and social benefits from the fishing sector.	
Strategy 3a – Develop technology to support the management of Torres Strait fisheries.	<p>Possible research activities under this theme may include:</p> <ul style="list-style-type: none"> a. Electronic reporting and monitoring in the Torres Strait, including for small craft. b. Technologies or systems that support more efficient and effective fisheries management and fishing industry operations.



Five-year Research Plan 2020/21 – 2024/25

Torres Strait Hand Collectable Fisheries

Beche-de-mer
Pearl shell
Trochus



**COMPILED BY THE HAND COLLECTABLES WORKING GROUP
(HCWG15)**

August 2019

ABOUT THIS PLAN

The Torres Strait Scientific Advisory Committee (TSSAC) seeks input from each fishery advisory body (Resource Assessment Group (RAG), Management Advisory Committee (MAC) or Working Group (WG)) to identify research priorities over five year periods from 2020/21 to 2024/25. This template is to be used by the relevant advisory body to complete their five-year plan. The plans are to be developed in conjunction with the TSSAC Five-year Strategic Research Plan (SRP) with a focus on the three research themes and associated strategies within the SRP.

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

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

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

TROCHUS

There have been no reports of trochus being harvested since 2010. The low level of catch and effort is thought to be due to low market demand rather than a decline in stocks. While there is no activity in the fishery, 77 trochus endorsements are currently issued to traditional inhabitant boat licence holders.

The Torres Strait Trochus Fishery was granted World Trade Organisation (WTO) export approval under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) until 9 October 2026. No conditions were imposed on the fishery do to its inactive status.

No research priorities are currently identified.

Table 1. Research priorities for Torres Strait Hand Collectable Fisheries for 2020/21 – 2024/25.

Note: the light blue shaded projects are funded. * 2019/20 financial year budget is committed.

Proposed Project	Objectives and component tasks	Year project to be carried out and indicative cost							Other funding bodies	Evaluation		
		2019/20*	2020/21	2021/22	2022/23	2023/24	2024/25	Notes on project timings		Priority essential /desirable	Priority ranking (1-5)	Theme
Stock Status Survey	To undertake a stock survey of all Torres Strait beche-de-mer species with a focus on deeper water species	\$207,641	\$81,598					Endorsed by TSSAC – survey work expected to commence in early 2020	Torres Strait Regional Authority (primary) CSIRO (in-kind)	Essential	2	1
Ecological Risk Assessment (ERA)	Conduct an ERA for the TSBDM Fishery	\$15,000						Nil	CSIRO (in-kind)	Desirable	3	1
Climate Change impacts and vulnerability	Scoping study across all Torres Strait	\$40,000								Desirable	3	1
Understanding critical uncertainties for Torres Strait species and processing methods for all species	Undertake field sampling of BDM species to develop conversion ratios for boiled and salted weight to gutted weight.									Essential	1	1
Improving best practice processing methods of beche-de-mer	Understanding and improving industry processing methods to achieve higher market prices (particularly for lower value species)		Not costed - advice pending					Subject to broader collaborative funding		Desirable	3	3
Understanding biological parameters of BDM species, including growth, mortality, size	Identifying gaps in knowledge of biological parameters of BDM species and investigating options for collaborative research		Difficult to cost due to lack in feasible methodologies.					Contingent on finalisation of BDM Harvest Strategy with identification of data uncertainties		Desirable	3	

Commented [LG1]: Whilst this work was previously identified at HCWG12, preliminary out-of-session advice from the Scientific member is that there is a lack of feasible methodologies.

AFMA is seeking HCWG advice on the prioritisation of this work and availability of other funding.

and breeding seasonality.								in the Torres Strait.				
Management Strategy Evaluation (MSE) of the use of hookah whilst fishing for beche-de-mer species										Desirable		
Ecological Risk Assessment (ERA)	Conduct an ERA for the Torres Strait Pearl Shell (TSPF) Fishery				\$20,400			Nil	CSIRO (in-kind)	Desirable	5	1

Commented [LG2]: This work was previously identified through the 2015 Annual Operating Plan. AFMA is seeking HCWG advice on the prioritisation of this work and availability of other funding.

Torres Strait Fisheries Strategic Research Plan 2018-2023

TORRES STRAIT
PZJA
PROTECTED ZONE
JOINT AUTHORITY



Australian Government
Australian Fisheries
Management Authority



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Torres Strait Scientific Advisory Committee

The Torres Strait Scientific Advisory Committee (TSSAC) includes members from each of the three main Protected Zone Joint Authority (PZJA) agencies (the Australian Fisheries Management Authority, the Torres Strait Regional Authority and Fisheries Queensland), industry members and scientific research members. TSSAC is responsible for providing advice to the Australian Fisheries Management Authority (AFMA) Executive on the use of AFMA research funds for Torres Strait fisheries research. This Torres Strait research provides critical information to the Minister and the Protected Zone Joint Authority (PZJA) for the management of Torres Strait commercial fisheries.

As part of its role the TSSAC:

- develops research priorities for PZJA fisheries in conjunction with the Resource Assessment Groups (RAGs) (or Management Advisory Committees (MACs) and Working Groups (WG)) and addresses PZJA's management needs and objectives as specified in the *Torres Strait Fisheries Act 1984* (the Act) and this plan;
- reviews and advises (where required) on individual fishery research plans for PZJA managed fisheries;
- advises the AFMA Executive on the allocation of research funds, and provides milestone reports and accounts against the use of funds.
- informs Torres Strait communities of project outcomes.

AFMA provides the TSSAC secretariat duties, including organising meetings and managing research contracts and projects milestones.

The TSSAC relies on the assistance of the various PZJA advisory groups (MACs, RAGs and Working Groups) to develop fishery-specific research plans and priorities based on this Strategic Research Plan (SRP). These groups provide current and up to date scientific and operational advice to the TSSAC as it relates to research proposals and fishery. More information about the advisory groups is provided at section 2.4 below.

The Terms of Reference for the TSSAC is at ([Appendix A](#))

About this plan

This plan specifies the research priorities and strategies that the PZJA intend to pursue in Torres Strait fisheries, and provides background to the processes used to call for, and assess, research proposals.

This SRP has been developed by AFMA in consultation with TSSAC to assist the PZJA to pursue the objectives of the *Torres Strait Fisheries Act 1984* (the Act) through research.

This document sets out the five year strategic plan (2018-2023) for research in Torres Strait fisheries to support a framework for fishery-specific, five-year research plans, and a TSSAC annual research statement.

1. Part one sets out the research planning and priorities, including the current research themes, strategies and possible research activities (Part 1 and [Appendix B](#)). It also provides guidance to researchers developing applications for research funding.
2. Part two provides guidance for the TSSAC and PZJA advisory groups when assessing research applications (see [Appendix C](#)).

Supporting information for the TSSAC and researchers can be found in appendices and referenced documents, which are useful when developing research applications.

It is intended that the SRP be a living document that responds to a changing environment. In line with this intent, this plan will be reviewed by the TSSAC as needed, but not later than 2022.

Part 1 Research planning and priorities

1.1 Role of five year fishery research plans and link to the TSSAC Strategic Research Plan

The three research themes described in this section are strategic priorities for Torres Strait and provide a basis for advisory forums (RAGs, MACs and working groups) when developing their five-year fishery research plans (see section 2.3.2).

The five year fishery research plans will vary between fisheries depending on the status of the fishery, its information requirements and particular knowledge gaps. Although it is a five year plan, the advisory forums are required to review and update the fishery plan annually so the plan will always have a five year projection.

The TSSAC uses both the strategic priorities in the SRP and the specific priorities within individual fisheries research plans to compile the TSSAC Annual Research Statement (ARS). The ARS is the list of priority research for a given year that researchers will focus on when developing research proposals. The ARS is also the key document for RAGs, MACs and WGs in their prioritisation of research applications for TSSAC funding consideration. All groups including TSSAC and researchers should refer to the 'criteria for assessing research investment' ([Appendix C](#)) when developing, assessing and ranking research proposals.

1.2 Torres Strait Fisheries Research Themes, Strategies and Research Activities

The TSSAC has identified three research themes, related strategies and possible research activities (basis for proposals) for the next five years that will help the PZJA to pursue the objectives of the *Torres Strait Fisheries Act 1984* (Appendix A) and improve fisheries management in the Torres Strait.

Researchers are encouraged to use this SRP and the five year fishery plans when considering and planning their proposed research in the Torres Strait, regardless of where they may seek funding. The TSSAC process ensures

robust consultation with a broad range of stakeholders regarding funding priorities through the PZJA advisory forums.

Theme 1: Protecting the Torres Strait marine environment for the benefit of Traditional Inhabitants

Aim

Effective management of fishery stocks based on understanding species and their biology and ecological dependencies so it can support Traditional Inhabitant social and economic needs.

Strategy 1a - Fishery stocks, biology and marine environment

Possible research activities under this theme may include:

- Stock assessment and fishery harvest strategies for key commercial species.
- Ecological risk assessments and management strategies for fisheries.
- Minimising marine debris in the Torres Strait.
- Addressing the effects of climate change on Torres Strait fisheries through adaptation pathways for management, the fishing industry and communities.
- Incorporating Traditional Ecological Knowledge into fisheries management.
- Methods for estimating traditional and recreational catch to improve fisheries sustainability.

Strategy 1b – Catch sharing with Papua New Guinea

Possible research activities under this theme may include:

- Status of commercial stocks and catches by all sectors within PNG jurisdiction of the TSPZ.
- Good cross-jurisdictional fisheries management through better monitoring and use of technology.

Theme 2: Social and Economic Benefits

Aim

Increase social and economic benefits to Traditional Inhabitants from Torres Strait Fisheries.

Strategy 2a - Promoting social benefits and economic development in the Torres Strait, including employment opportunities for Traditional Inhabitants

Possible research activities under this theme may include:

- Models for managing/administering Traditional Inhabitant quota
- Understanding what influences participation in commercial fishing by Traditional Inhabitants.
- Understanding the role and contribution of women in fisheries.
- Capacity building for the governance of industry representative bodies
- Methods for valuing social outcomes for participation in Torres Strait fisheries.
- Identifying opportunities and take-up strategies to increase economic benefits from Torres Strait fisheries.

Theme 3: Technology and Innovation

Aim

To have policies and technology that promote economic, environmental and social benefits from the fishing sector.

Strategy 3a – Develop technology to support the management of Torres Strait fisheries.

Possible research activities under this theme may include:

- Electronic reporting and monitoring in the Torres Strait, including for small craft.
- Technologies or systems that support more efficient and effective fisheries management and fishing industry operations.

Part 2 Research management and administration

The PZJA, established under the Act, is responsible for the management of fisheries in the Australian Jurisdiction of the Torres Strait Protected Zone (Figure 1). The PZJA members comprise the Commonwealth and Queensland Ministers responsible for fisheries, and the Chair of the Torres Strait Regional Authority.

Fisheries research findings are critical to the PZJA exercising its functions, and in particular, for monitoring the condition of the Torres Strait fisheries. Good research more broadly assists the PZJA to pursue the legislated objectives. For more information about the PZJA or the PZJA agencies responsible for the day to day management of Torres Strait fisheries see annual reports on the PZJA website (www.pzja.gov.au).

The TSSAC is the only committee that is solely focused on Torres Strait fisheries research, although other committees or agencies (see below) may sometimes fund and manage research projects relevant to Torres Strait fisheries. The different funding sources and management are discussed below.

Research in the Torres Strait comes with a unique set of challenges. The traditional way of life and Torres Strait Island culture are critically important to the communities residing across the many remote islands in the Protected Zone. Consequently, research needs to pay special attention to the social and economic contexts which are unique to the region. This includes consideration of the potential impacts that research may have on Torres Strait communities, both overt through direct interaction with communities and the more subtle emotional or psychological impacts of research activities taking place in and around culturally significant places.

2.1 Research Funding Environment

Torres Strait fisheries operate in a complex management environment with social, economic and cultural objectives being pursued alongside contemporary environmental and fisheries management objectives.

Therefore, the scope of potential fisheries research is necessarily broad. Research ranges from assisting Traditional Inhabitants to pursue their aspirations within local fisheries, undertaking routine science stock assessments and surveys, adaptation to the effects of climate change and ways to improve sustainability of, and economic and social benefits from the Torres Strait fisheries.

2.2 AFMA research funds

The TSSAC primarily funds research through AFMA's annual research contribution (currently at \$410 000 annually).

These funds are allocated at the discretion of the AFMA executive, based on recommendations of the TSSAC. The TSSAC considers research proposals based on the priorities set in this SRP and the ARS. When the TSSAC is unable to recommend funding for a project due to funding constraint, it may recommend that researchers go to other funding bodies. Depending on the priority and degree of funding constraint the TSSAC may support the project but ask the researcher to seek co-funding from another body.

Research priorities identified by the TSSAC in its SRP are also intended to implicitly influence other funding agencies in the research they may fund as it relates to Torres Strait fisheries. Equally, the TSSAC should be mindful of research being funded by other bodies, particularly where it may overlap with TSSAC priorities.

It is not possible to meet all Torres Strait research needs through the AFMA funds. Funding constraints are not likely to change and it would be beneficial for the TSSAC to play a greater role in supporting researchers to find other funding opportunities in order to broaden research delivery in the Torres Strait. This could be achieved through improved collaboration among research providers with an interest in the Torres Strait region. AFMA will actively engage in seeking greater collaboration between the TSSAC and other bodies.

2.3 Other funding bodies

Funding for Torres Strait fisheries related projects is sometimes provided by other government agencies or external funding bodies for Torres Strait research. This can take the form of contributions towards AFMA funded TSSAC projects, or be completely funded external to TSSAC and AFMA. In these cases, the funding body will manage the project themselves with little or no TSSAC comment. Information on some of these funding bodies and agencies is provided below. Further information about their role and research programs can be found on the agency websites.

2.3.1 Government Agencies

The Department of Agriculture and Water Resources, along with the Torres Strait Regional Authority and the Queensland Government may provide funding support for certain Torres Strait fisheries projects based on the relevance to their jurisdiction and their current priorities. Sometimes these projects and funds are managed by the TSSAC. TSRA in particular inject significant funds for Torres Strait fisheries research on a regular basis. TSRA funded projects generally have a focus on capacity building and traditional fisheries, or commercial fisheries with an indigenous interest, and generally compliment the TSRA core program work.

2.3.2 The Fisheries Research and Development Corporation (FRDC)

The FRDC is a statutory authority within the portfolio of the Federal Minister for Agriculture and Water Resources, jointly funded by the Australian Government and the commercial fishing industry. The FRDC may fund projects in the Torres Strait if such projects fit within the FRDC's Research, Development and Extension (RD&E) plan. The FRDC uses Commonwealth, State and Territory research advisory committees to assess and recommend projects for funding in line with the RD&E Plan.

The Indigenous Reference Group (IRG), FRDC

The IRG is the FRDC's Indigenous Fishing sub-program advisory partner. The IRG was established by the FRDC in 2012 to assist in working towards a

RD&E plan for indigenous Australians to improve economic, environmental and social benefits to Australia's indigenous people. The current priorities for the IRG, can be found at the FRDC website (www.frdc.com.au) Some of these priorities are highly relevant to Torres Strait fisheries, including;

- Primacy for Indigenous People
- Acknowledgement of Indigenous Cultural Practices
- Self-determination of indigenous rights to use and manage cultural assets and resources
- Economic development opportunities arising from Indigenous peoples cultural assets and associated rights
- Capacity building opportunities for Indigenous people are enhanced.

Human Dimensions Program, FRDC

The FRDC also has a new Human Dimensions Program, focusing on social-science and economic research related to fisheries. Information on this program can also be found on the FRDC website (www.frdc.com.au).

2.3.4 The Commonwealth Scientific and Industrial Research Organisation (CSIRO)

The CSIRO has a long history of contributing funding support for CSIRO-led Torres Strait research. This generally occurs as a co-funding of project managed through the TSSAC.

2.3.6 Collaboration among research providers

There are both formal and informal links between staff from many of these external funding bodies and agencies that contributes to successful funding of research in the Torres Strait. Improved collaboration among research providers may lead to more efficient use of research funds.

AFMA, as a key funding agency for Torres Strait fisheries research, will consult with external research providers and key research stakeholders in an

effort to improve collaboration among these groups and transparency about proposed Torres Strait fisheries research.

2.4 MACs, RAGs and Working Groups

MACs, RAGs and WGs are actively involved in the PZJA's research planning process for the Torres Strait.

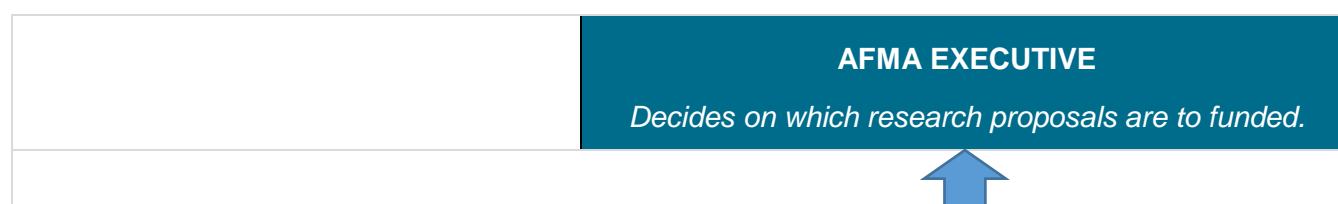
The roles of these different groups are less distinct than in the AFMA Commonwealth fisheries forums, as the working groups and MAC (there is currently only one MAC operating in Torres Strait) have a very similar function. There are now two RAGs within Torres Strait fisheries. Both Torres Prawn MAC and the hand collectible working group also perform RAG functions (primarily scientific advice).

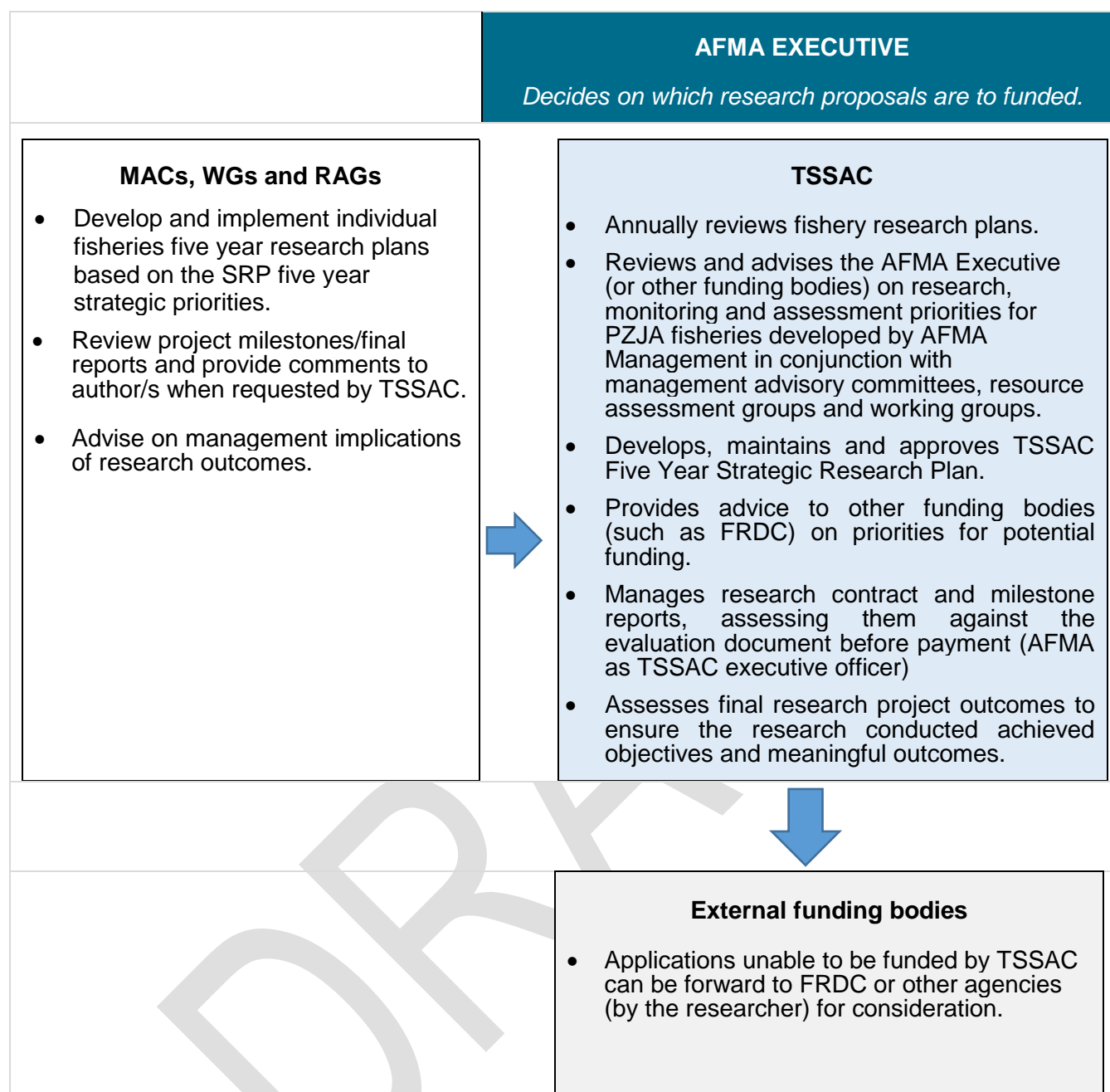
The collective scientific functions of these groups are to review scientific data and information and provide advice to the PZJA on the status of fish stocks, sub-stocks, species (target and non-target species) and the impact of fishing on the marine environment. This advice assists the Minister and PZJA in the role of managing commercial fishing within PZJA fisheries, particularly in relation to monitoring the condition of the Torres Strait fisheries.

The collective management advisory function is to provide advice on fishery-specific management policies and plans to assist the Minister and PZJA in the role of managing commercial fishing across the PZJA fisheries.

In relation to the TSSAC function, each of these groups will lead the preparation of the rolling five year, fishery-specific research plans which are underpinned by the SRP. See Figure 2 below for a map of roles and responsibilities during the TSSAC funding application process.

Figure 2. Roles and responsibilities of key participants in the PZJA's annual research cycle for Torres Strait fisheries





2.4 Confidentiality of community fishing data and intellectual property

Data collected during research projects can be regarded as confidential to local communities, or non-indigenous fishers. Confidentiality requirements should be considered for all research projects that may generate intellectual property related to traditional knowledge, or contain data, such as fishing grounds or catch data, of individual communities or fisheries. This data should be treated in the same way as commercial in confidence commercial fishing data. Researchers should consider the types of data they will be

collecting, and gain prior agreement from each community or relevant stakeholder/s as to how the data will be used for example. only for decision making or to be published in the public domain.

DRAFT

TSSAC's annual research cycle

Table 1. TSSAC funding Cycle

	TSSAC PROCESS
February	<p>Research providers submit pre-proposals for assessment, which meet the scopes provided by TSSAC in November.</p> <p>EOIs submitted are circulated to fisheries managers/ RAGs & MACs for comment; Fisheries Managers, RAGs/MACs identify any additional research priorities for potential FRDC funding.</p>
March	<p>TSSAC meets via teleconference to assess pre-proposals and Management/RAG/MAC comments.</p> <p>Applicants notified of TSSAC comments on their pre-proposals and asked to develop the consultation package (for review by AFMA by end of March) for use during full proposal development.</p>
April	<p>Researchers to complete full proposal (6 weeks total with consultation period)</p>
May	<p>Late May/ early June. TSSAC meet face to face to review full proposals and endorse final applications, or suggest necessary changes before endorsement.</p> <p>Applicants advised of the TSSAC's final evaluation.</p>
June	
July (START)	<p>TSSAC confirm the research budget for the new financial year (it doesn't generally change from year to year - \$410 000).</p> <p>New contracts and variations for essential research projects prepared and put in place, confirming forward budgets.</p> <p>RAGs, WGs and MACs to identify THEIR PRIORITY RESEARCH NEEDS for funding in the next financial year by updating their <i>five year rolling fisheries research plan</i>. This should be framed around strategies in the 5 year strategic research plan. Provide to TSSAC EO by end August.</p>
August	<p>RAGs/MACs submit their five year rolling fishery research plan to the TSSAC</p>

	Executive Officer, currently lisa.cocking@afma.gov.au, by end August.
September	TSSAC EO drafts the TSSAC Annual Research Statement (ARS) with each fisheries priorities for the current year.
October	<p>TSSAC meets (face to face or via teleconference) to finalise the PZJA ARS and agree on priorities for the TSSACs call for applications in November.</p> <p>AFMA develop scopes for the priority research projects and send to TSSAC out of session for consideration.</p>
November	The annual research call opens in November. Scopes sent to researchers seeking pre-proposals.

Appendix A: TSSAC Terms of Reference

Terms Of Reference

- i. Identify and document research gaps, needs and priorities for fisheries in the Torres Strait in conjunction with the PZJA advisory groups.
- ii. develop, maintain and approve the Torres Strait Five Year Strategic Research Plan. This includes balancing tactical short term needs and strategic needs to identify research gaps and priorities.
- iii. review rolling five (5) year research plans for Torres Strait fisheries
- iv. provide advice to the AFMA executive on priorities for the allocation of AFMA research funds and potential risks to achieving intended outcomes.
- v. Provide advice on effective consultation strategies with communities regarding research projects to ensure engagement throughout the project.
- vi. Consider the level of community support for research proposals and advise researchers on any actions needed to improve community consultation before a project is supported.
- vii. ensure research outcomes are communicated to community stakeholders.
- viii. provide advice to FRDC or other research providers on Torres Strait research priorities for potential funding consideration.
- ix. assess research investment and outcomes for the Torres Strait fisheries to measure the extent to which intended sustainability, social and economic needs are being met.
- x. provide a forum for expert consideration of scientific issues referred to the TSSAC by the Torres Strait advisory groups.
- xi. provide other advice to the Torres Strait advisory groups on matters consistent with TSSAC functions.
- xii. review research / consultancies, stock assessments, and other reports and outputs relevant to Torres Strait fisheries and advise the Torres Strait advisory groups on their technical merit.
- xiii. convene Fisheries Assessment workshops as appropriate to review and address assessment needs for Torres Strait fisheries.

Appendix B: Key factors influencing Torres Strait fisheries research needs

In developing this plan and the drivers for research in the Torres Strait, there are a number of factors which have been taken into account. This includes whole of Government policies and objectives relevant to the Torres Strait. These are explained in some detail below.

The Torres Strait Fisheries Act 1984 (the Act)

The PZJA is created under the Act; the legislation used by the Australian and Queensland Governments when managing Torres Strait fisheries.

The Act makes the PZJA responsible for monitoring the condition of the fisheries under its control and formulating policies and plans for their good management. In performing these functions, the Act requires the PZJA to have regard to the rights and obligations conferred on Australia by the Torres Strait Treaty' (<https://www.legislation.gov.au/Details/C2016C00677>), and in particular, the following management priorities:

- (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.

Australian Government priorities

The Australian Government has identified priorities for research that are significant in shaping fisheries research effort and its reporting, namely:

- Global trends
- National Research Priorities
- Rural Research and Development Priorities

Global Trends

The five major trends that are expected to influence primary industries globally during the next 20 years, as identified by the Rural Industries Research and Development Corporation in its report *Rural Industry Futures – Megatrends impacting Australian agriculture over the coming twenty years*, include:

A hungrier world: Population growth will drive demand for food and fibre

A bumpier ride: Globalisation, climate change and environmental change will reshape the risk profile for agriculture

A wealthier world: A new middle class will increase food consumption, diversify diets and eat more protein

Transformative technologies: Advances in digital technology, genetic science and synthetics will change the way food and fibre products are made and transported

Choosy customers: Information-empowered customers of the future will have expectations for health, provenance, sustainability and ethics

National RD&E Strategy for Fishing and Aquaculture

The National Fishing and Aquaculture RD&E Strategy 2015-20 provides direction to improve the focus, efficiency and effectiveness of RD&E to support Australia's fishing and aquaculture industry.

The identified goals and key strategies are:

- Australia's fisheries and aquaculture sectors are managed, and acknowledged, to be ecologically sustainable.
- Security of access and resource allocation.
- Maximising benefits and value from fisheries and aquaculture resources.
- Streamlining governance and regulatory systems.
- Maintain the health of habitats and environments upon which fisheries and aquaculture rely.
- Aquatic animal health, and biosecurity (inclusive of pests) Aquaplan 2015-2019.

FRDC Research Development and Extension Plan 2015-20

The FRDC's RD&E Plan 2015-20¹ is focused on maximising impacts by concentrating on knowledge development around three national priorities:

1. Ensuring that Australian fishing and aquaculture products are sustainable and acknowledged to be so.
2. Improving productivity and profitability of fishing and aquaculture.
3. Developing new and emerging aquaculture growth opportunities.

¹ http://frdc.com.au/research/Documents/FRDC_RDE-Plan_2015-20.pdf

Appendix C: Criteria for assessing research investment in Torres Strait fisheries

The TSSAC will apply these criteria in assessing and ranking research proposals. Researchers should use the criteria as a guide when developing research applications and RAGs, MACs and WGs should also use these criteria when assessing proposals.

	Strongly disagree -----> strongly agree											Notes
Attractiveness	1	2	3	4	5	6	7	8	9	10	N/A	
1. Is there a priority need for the research (does it align with the Torres Strait Strategic Research Plan and Annual Research statement)?												
2. Is/are the end-user/s identified?												
3. Do the outcomes have relevance and are they appropriate to the end-users?												
4. Do the outputs contribute towards outcomes and are they measureable?												
5. Does the proposal actively engage Traditional Inhabitants and Torres Strait Islanders in the research?												
6. Are there employment opportunities for Traditional Inhabitants and Torres Strait Islanders?												
7. Does the research contribute to the knowledge that underpins ecosystem based fisheries management (EBFM) to improve the quality of decisions made?												

8. Does the project involve capacity development for Communities? If so, TSSAC to discuss if there is funding from other agencies such as the IRG or TSRA that could support this project.													
Feasibility													
9. Does the applicant and their team / resources have the capacity to produce the outputs?													
10. Is the budget appropriate to meet the outputs and outcomes?													
11. Does the proposal outline a coherent strategy surrounding data collection, analysis, and storage?													
12. Does the proposal include appropriate plans (for example, adoption, communication and/or commercialisation plans) to ensure that the full potential of the research is realised through adoption of research outputs by end-users?													
13. Are the methods scientifically sound, well described and consistent with the projects objectives?													

<p>14. Research will be most effective when there is effective engagement with fishery stakeholders, particularly Traditional Inhabitants of the Torres Strait, and where the research has widespread stakeholder support (refer to procedural framework for undertaking research in the Torres Strait and the TSSAC research proposal application).</p> <p>Does the project identify the key stakeholders and how they will be engaged regarding the project in a culturally appropriate way?</p>													
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DRAFT

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
OTHER BUSINESS Budget Update	Agenda Item 6.1 For INFORMATION

RECOMMENDATIONS

1. That the Working Group:
 - a. **NOTE** the expenditure against Torres Strait Hand Collectable Fisheries in 2018/19; and
 - b. **NOTE** the budget overview for the 2019/20 financial year ahead.

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 each fishery.
3. AFMA consults with industry on its budget with all Commonwealth managed fisheries. Consultation with stakeholders 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. Note that the budget information provided here does not include AFMA salaries and other indirect costs or example, other AFMA compliance and operating costs such as overheads, research administration, logbook programs (including entering Catch Disposal Records) data management and licensing costs.

Expenditure against the 2018/19 budget

5. AFMA's 2018/19 budget for direct costs for the Hand Collectable fisheries was \$84,531.
6. The budget covered:
 - a. One 3-day Working Group meeting on Thursday Island;
 - b. One 2-day Working Group meeting on Thursday Island; and
 - c. One 1-day Industry Workshop on Erub
7. A breakdown of the 2018/19 expenditure is provided in **Table 1**.
8. The variance between the budget and actual expenditure (**Table 1**) is largely due to the fact that HCWG15 was intended to be convened during the 2018/19 financial year, however due to limited member availability and other competing Torres Strait priorities the meeting is now being convened in the 2019/20 financial year, resulting in all associated costs coming out of the 2019/20 budget.
9. Underspent funds from the Hand Collectables budget contributed to other Torres Strait fishery expenses including the recent round of community visits and consultation on the

draft Beche-de-mer Harvest Strategy, the development of minimum size limit rulers (still in production) and an industry exposure trip for three PZJA traditional inhabitant members to Canberra and Lakes Entrance AFMA offices.

10. The 2018/19 budget has included costs for two scientific members however the HCWG has operated with only one scientific member in the past three years.
11. In addition to the 2018/19 budgeted direct costs, AFMA commissioned the CSIRO project to develop a harvest strategy for the Beche-de-mer Fishery. In the 2018/19 financial year AFMA contributed an additional \$51,882 of its research budget to extend this project.

2019/20 budget

12. The 2019/20 direct costs Hand Collectables budget is \$114,344 (**Table 2**).
13. These funds are intended to cover:
 - a. two 2-day HCWG meetings on Thursday Island (including sitting fees) with additional invited industry participants (**Table 3**); and
 - b. one 1-day Industry Workshop (**Table 4**).
 - c. General administrative costs for printing and publications
14. This years (2019/20) budgeted direct costs represent a \$29,813 increase over the last 2018/19 budget of \$84,531 (**Table 2**). This increase is primarily due to a proposed stakeholder workshop ahead of a potential black teatfish opening. Extra funding has been allocated to support travel expenses for industry stakeholders to understand the requirements for an opening.
15. Further, the TSRA have committed a total of \$289,239 to fund the Stock Survey of Torres Strait Beche-de-mer species over the 2019/20 and 2020/21 financial years.
16. Note that this information only relates to AFMA's budget. TSRA provides funding to facilitate Traditional Inhabitant industry member representation at all PZJA Forums.

Table 1. Breakdown of 2018/19 expenditure and budget allocation for Hand Collectables Fisheries

Type of Expense	2018/19 Budget	2018/19 Expenditure	Variance
Airfares	36,219	22,816	13,403
Accommodation	12,600	6,190	6,410
Sitting fees and intersessional work	22,992	14,811	8,181
Meals (including meeting catering)	7,533	3,889	3,644
Venue Hire	1,197	842	355
Other travel costs (parking, ferry transfers, mileage)	1,500	1,261	239
Printing and publication costs	2,490	1,705	785
Other miscellaneous costs	0.00	151	-151
TOTAL	84,531	51,665	- 32,866

Table 2. Summary of 2019/20 budget by meeting

Total cost for 2 x 2-day meetings (T.I.)	78,876
Total cost for Industry workshop (based Erub)	32,828
Administration costs (printing and publications)	2,640
Total	114,344

Table 3. Budget for Industry Workshop (costs based on Erub Island)

Airfares/helicopter charters	25,780
Accommodation/Catering	6,700
Ferry/taxi/parking	348
Total	32,828

Table 4. Budget for HCWG meeting costs including air fares, accommodation, ferry, meals/catering, venue hire and sitting fees for a 2-day meeting based on Thursday Island.

* meals are included in travel allowance (TA) budget allocation. Meeting dinner is considered a separate expense but combined with TA when reporting on broader expense types.

1 x 2-day HCWG meeting based on Thursday Island									
Member	Origin	Airfares	Accomm	Taxi/ ferry/ parking	TA	Meeting Dinner	Venue Hire	1 x 2-day meeting total	Sitting Fees & Intersessional Work
HCWG Chair	Cairns	800	600	178	483	395	600	3,056	3,048
Scientific Member	Brisbane	1,200	600	178	483			2,461	1,716
Scientific Member	TBA* (based on Brisbane base)	1,200	600	178	483			2,461	1,716
Invited industry participant	Mer	1,320	900	58	483			2,761	-
Invited industry participant	Ugar	6,500	900	-	483			7,883	-
Invited industry participant	Masig	1,200	900	58	483			2,641	-
Invited industry participant	Poruma	1,100	900	58	483			2,541	-
Invited industry participant	Erub	1,300	900	58	483			2,741	-
Malu Lamar Rep	TBA* (based on average Eastern Island base)	1,200	900	59	483			2,642	966
TOTALS		15,820	7,200	825	4,347	395	600	29,187	10,251
TOTAL MEETING COST (one meeting)								39,438	
TOTAL COST (two meetings)								78,876	

Notes

The chair is paid 1 extra day of sitting fees for preparation time per meeting plus 50% of travel times.

The scientific member is paid 50% of travel time.

TORRES STRAIT HAND COLLECTABLES WORKING GROUP	Meeting 15 1-2 August 2019
OTHER BUSINESS	Agenda Item 6.2 For DISCUSSION

RECOMMENDATION

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