TORRES STRAIT FINFISH WORKING GROUP MEETING 2017.1

16 - 17 March 2017

AFMA Office, 2nd Floor, Pearls Building, Victoria Parade, Thursday Island

MEETING TIME: **8:30 – 5:00pm Thursday 16th March**

8:30 – 12:00 Midday Friday 17th March

AGENDA v.3

1. Preliminaries

1.1. Opening Prayer / Acknowledgement of Traditional Owners / Welcome / Apologies

1.2. Adoption of Agenda

1.3. Declaration of Interests

1.4. Actions Arising

2. Fishery Updates

2.1. AFMA management and compliance update

2.2. TSRA update

2.3. Native Title update

2.4. PNG – National Fisheries Authority update

2.5. Queensland Department of Agriculture, Forestry and Fisheries update

2.6. Domestic compliance update

2.7. Torres Strait fisheries strategic issues including economic trends

3. Recommended Total Allowable Catches for 2017/18 Fishing Season

3.1 Spanish Mackerel

3.2 Coral Trout

3.3 Other reef line species

4. Research

4.1. Update – Monitoring the traditional take of finfish in the TSPZ

4.2. Update - Smart phone technology for remote data collection

4.3. Update – Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing

4.4. Research priorities

5. Management

5.1. Finfish harvest strategy project update

5.2. Options for ongoing scientific advice

5.3. Formalising finfish total allowable catches

5.4. Estimates of Traditional Inhabitant commercial catches

5.5. Development of a public register

5.6. Future management priorities

5.7. Crewing of Traditional Inhabitant Boats

5.8. Draft AFMA Finfish Fishery budget 2017/18

5.9. Grant of carrier licenses to non-traditional inhabitants

6. Other Business

Individuals seeking to attend the meeting as an observer must contact the Executive Officer – Andrew Trappett (andrew.trappett@afma.gov.au) beforehand.

TORRES STRAIT FINFISH WORKING GROUP	Meeting No. 2017.1 16-17 March 2017
PRELIMINARIES **Adoption of the Agenda**	**Agenda Item No. 1.2** **For Discussion and advice**

RECOMMENDATIONS

That the Working Group consider and adopt the Agenda.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
PRELIMINARIES Declarations of interests	Agenda Item No. 1.3 For discussion and advice

RECOMMENDATIONS

That the Working Group:

- **DISCUSS** and **PROVIDE ADVICE** on members' potential or direct conflicts of interest.
- **UPDATE** the standing list of declared interests at **Attachment A** if required.

KEY ISSUES

1. 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 disclose and declare any conflicts of interests.
2. Working group members are asked to confirm the standing list of declared interests (**Attachment A**) is accurate and provide an update to be tabled if it is not.

DISCUSSION

3. 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.
4. 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.
5. 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.

ATTACHMENT A - STANDING REGISTER OF DECLARED INTERESTS

Member	Position	Declaration of interest
Andy Bodsworth	Chair	Independent Consultant – Cobalt MRM (recently developed Torres Strait Finfish Action Plan report for TSRA/FRDC)
Andrew Trappett	FWG Executive Officer	Nil
Selina Stoute	AFMA Member	Nil
Tom Roberts	QDAF Member	Nil
Mariana Nahas	TSRA Member	Nil
Michael O'Neill	Research Member	Principal Fisheries Scientists, QDAF. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery.
David Brewer	Research Member	Independent Consultant. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery. Previous CSIRO researcher for TSSAC project investigating traditional take of finfish in Torres Strait.
Maluwap Nona	Industry Member	TIB licence holder. Chairperson Malu Lamar.
Tenny Elisala	Industry Member	TIB licence holder. Ranger, TSRA.
Frank Fauid	Industry Member	TIB licence holder
Tony Vass	*Industry (sunset licence holder representative)	No financial interest in Torres Strait Fisheries. Holds Queensland East Coast quota for coral trout and 'other' finfish species. Previous Torres Strait finfish operator. Representative for sunset licence holders.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16-17 March 2017
PRELIMINARIES Actions Arising	Agenda Item No. 1.4 For Noting

RECOMMENDATIONS

1. That the Working Group **NOTE** the progress of actions arising from the previous meeting held on 12-13 July 2016; and
2. **NOTE** the final meeting record of the 12-13 July 2016 Working Group meeting.

KEY ISSUES

Meeting record

1. The final meeting record for Finfish Working Group meeting of 12-13 July 2016 is provided at **Attachment A**
2. This record was circulated for comments on 26 September 2016
3. The period for comments was closed on 10 October 2016.
4. Technical comments were received from the Chairperson and a Scientific member and were incorporated.
5. The meeting record was closed and ratified as a true and accurate record and posted on the PZJA website for public viewing.

Actions arising

6. Progress against the actions arising from Working Group meeting is listed in Table 1.

ATTACHMENTS

Attachment A – Update on Action item 5 – Logbook changes

Attachment B - Finfish Working Group meeting 12 – 13 July 2016 final meeting record

Table 1: *Progress against action items from FWG meeting 12-13 July 2016*

Action Item	Action	Agenda	Agency	Completion Date	Status
1	QDAF member to provide a presentation at the next FWG meeting on the Queensland Government's Recreational Fishing survey and its application to Torres Strait, including survey methods and designs.	1.5	QDAF	Next FWG meeting	**In progress.** Update to be provided at agenda item 2.5
2	QDAF member to provide a summary of charter boat logbook data relevant to the Torres Strait at the next Working Group meeting.	1.5	QDAF	Next FWG meeting	**In progress.** Update to be provided at agenda item 2.5
3	QDAF to provide an update on recreational fishing data and charter boat operations within the TSPZ as a standing agenda item for future FWG meetings.	1.5	QDAF	Next FWG meeting	**In progress.** Update to be provided at agenda item 2.5
4	Dr Michael O'Neill to provide FWG members out-of-session the full report on the stock assessment for the East Coast coral trout fishery.	3	AFMA EO and Dr. O'Neill	Out of session	**Complete**. Emailed out of session.
5	AFMA to confirm the nature of logbook changes that occurred in 2003.	4.2	AFMA	Next FWG meeting	**Complete.** Update provided to Sci. Tech. Working Group – See **Attachment A**
6	AFMA to provide advice on the date of when the	4.2	AFMA and	Next FWG meeting	**Complete**

	investment warning for the fishery was issued.		TSRA		Investment warnings were issued on 6 November 2001 and again on 15 February 2002.
7	AFMA to report on the percentage of coral trout and Spanish mackerel caught within and outside the 10 nm exclusion zones prior to the introduction of these closures.	4.4	AFMA	Next FWG meeting	**In progress.** Update to be provided at March 2017 meeting.
8	Compliance updates to be added as a standing agenda item for future meetings.	5.8	AFMA, QDAF	Ongoing	**Complete** Compliance update added to AFMA update (item 2.1)

1.4 ATTACHMENT A

Torres Strait finfish logbook changes

The current TSF01 logbook was implemented in 2001 and became mandatory from 1 January 2003 (mid 2002/03 season).

The TSF01 logbook replaced the DPIE SM01 (compulsory from 1988) and DPIE/AFMA SM02 logbook (compulsory from 1990) which was used for the Spanish mackerel sector and the DPIE LF03 logbook which was used for the reef-line sector.

The major changes to the logbook were:

- Both Spanish mackerel and reef-line sectors are now using the same logbook
- Location is now recorded in latitude by longitude co-ordinates (previously was just grid and reef name or site name).
- Separate mackerel species are now pre-filled (Spanish, school, spotted, grey, salmon mackerel)
- Pre-filled suggestions are now made for more byproduct species (cod, barramundi cod, red emperor, spangled emperor, other emperors, maori wrasse, stripey bass) and two spaces for other species e.g. mixed reef.
- Catch percentage splits and size grading was required for coral trout (i.e. for all coral trout caught record what % were common, islander, leopard and blue-spot species).
- Recording of wildlife and protected species interactions.

Logbook Co-ordinator
AFMA
PO Box 376
Thursday Island, QLD 4875

Mackerel/Linefish Logbook
Torres Strait Protected Zone and Queensland

LOG No.	PAGE No.

Section 1

Boat Name	BOUNTY
MF Number	M30761
Boat Symbols	KA3-T

Personal Use Only — Comments

Skipper
Printed Name: J. DODD
Signature: J. Dodd

Section 2 (This section to be completed on every fishing day) — **Section 3**

Date	Trip* Length	No. Crew Fishing	Number Dories	Grid Fished	Location: Site Fished Reef, Cay, Island etc.	AM PM	Hours Fished	Dory One AM/PM Totals	Dory One Daily Prog. Totals	Dory Two AM/PM Totals	Dory Two Daily Prog. Totals	Dory Three AM/PM Totals	Dory Three Daily Prog. Totals	Dory Four AM/PM Totals	Dory Four Daily Prog. Totals	Number of Spanish Mackerel Daily Total	Number of Spanish Mackerel Progressive Total	Number Mackerel Trays Daily Total	Number Mackerel Trays Progressive Total	Other Fish Species Code	kg	Code	kg
20/12/01	S	2	2	D1	LAXTON REEF	AM	2	12	12	6	6					18		9		RE	27		
						PM	-	-		-										TV	12		
21/12/01	C	↓	↓	D1	LAXTON REEF	AM	3	18	42	11	24					31	49	26	35				
						PM	2	12		7										TV	30		
22/12/01		↓	↓	D1	UNDERDOWN IS.	AM	2	10	60	8	39					33	82	19	54				
						PM	2	8		7													
23/12/01		↓	↓	D1	UNDERDOWN IS.	AM	-	-	74	-	49					24	106	14	68	TV	30	PK	7
						PM	2	14		10										BK	12	SM	10
24/12/01		↓	↓	D1	UNDERDOWN IS.	AM	-																
						PM	-																
						AM																	
						PM																	
						AM																	
						PM																	
						AM																	
						PM																	
						AM																	
						PM																	
						AM																	
						PM																	
Totals									74		49						106		68	**Total kg**			

*D = Day Trip, S = Start of Trip more than one day
C = Continuing Trip, E = End of Trip

**Species codes are shown on Foldout templates

Example Page

Section 4

This section must be completed if the boat is not fishing for an extended period (eg. during bad weather)

From / / Until / /

Section 5

Unloading Information

This section is to be completed whenever you offload product.

Unload Date: 24 / 12 / 01

Port of Site of Unload: YORKE ISLAND

Mothership, Transport Company or Depot: EMU BAY

Spanish Makerel
Number of Trays: 68
Approximate Fillet: 1020 kg

Other Species
Approximate Fillet: 128 kg

Australian Fisheries Management Authority
PO Box 376 Thursday Island QLD 4875

Torres Strait Finfish Log – TSF01

Original Copy – Send to AFMA

Vessel Name: Blue Lagoon | Dist. Symbol: FWQT-9 | Log No: | Page No:

Extended Non-Fishing – I did not work between: 15/ 6 /02 and 30/ 6 /02 | Non-Fishing Code: 2

NON-FISHING CODES: 1 Bad Weather 2 In Port 3 Broken down 4 Steaming 5 Other fishery

TRIP CODE: S – Start of trip more than 1 day; C – Continuing Trip; E – End of Trip; D – Day Trip

		1 / 7 / 02	2 / 7 / 02	2 / 7 / 02	3 / 7 / 02	4 / 7 / 02	5 / 7 / 02	6 / 7 / 02
Date								
Non-Fishing Code								4
Trip Code		S	C	C	C	C	E	
Port of Departure		Thursday Is						
Location: (position of Primary vessel)	Latitude (dd,mm)	0 9 5 3	0 9 5 1	0 9 5 5	1 0 0 5	1 0 1 2	0 9 5 5	
	Longitude (ddd,mm)	1 4 3 3 5	1 4 3 3 6	1 4 3 4 0	1 4 3 4 5	1 4 3 3 5	1 4 3 2 0	
Total No. of Hours Fishing: (Combined hours of each Vessel operating)		24	12	16	27	18	28	
Targeting: (Circle) (Mackerel or Reef fish)		Mack / Reef	Mack / Reef	Mack / (Reef)	Mack / (Reef)	Mack / (Reef)	(Mack) / Reef	Mack / Reef
Method Used: LHL-Handline LTL-Trolling LDR-Dropline		LTL	LTL	LHL	LHL	LHL	LTL	
Total No. of Lines		8	8	4	4	3	8	
Catch Information (Mackerel)		Number	Number	Number	Number	Number	Number	Number
Tender 1 Fred Mack	Spanish	24	2				9	
	School							
	Spotted							
	Grey / Broad-barred						1	
	Salmon							
Tender 2 M. Barra	Spanish	18	3				14	
	School							
	Spotted							
	Grey / Broad-barred		1					
	Salmon							
Tender 3 Brian Maori	Spanish	17	6			1	8	
	School						2	
	Spotted	1						
	Grey / Broad-barred							
	Salmon					1		
Tender 4 S. Cod	Spanish	13	4				11	
	School		1					
	Spotted							
	Grey / Broad-barred							
	Salmon							
DAILY TOTAL	Total No. of Fish	73	17			2	45	
	No. of Tray/Cartons	22	5			0.5	16.5	
	Ave weight (kg)/Carton	12	12			10	10	
Processing codes: F – Fillet; W – Whole; HG – Headed & Gutted; GG – Gilled & Gutted	Processing Code	F	F			F	F	

Catch Information (Other Finfish Species)	No. Fish (optional)	Fresh Weight (kg)	No. Fish (optional)	Fresh Weight (kg)	No. Fish (optional)	Fresh Weight (kg)	No. Fish (optional)	Fresh Weight (kg)	No. Fish (optional)	Fresh Weight (kg)	No. Fish (optional)	Fresh Weight (kg)	No. Fish (optional)	Fresh Weight (kg)
Coral Trout (all species)			3	6		90		370		250	1	2		
Cod								5						
Barramundi Cod						10		15		15				
Red Emperor						10		2		5				
Spangled Emperor								10						
Other Emperors														
Maori Wrasse														
Stripey Bass														
other (specify) Mixed Reef						10		5						
other (specify)														

CORAL TROUT INFORMATION		No.	Ave kg	fish/ carton	No.	Ave kg	fish/ carton	No.	Ave kg	fish/ carton	No.	Ave kg	fish/ carton	No.	Ave kg	fish/ carton	No.	Ave kg	fish/ carton	No.	Ave kg	fish/ carton
Carton Totals:	Plate							25	12	12	15	14	12	3	12	15						
	Medium							4	10	10	13	10	10	18	10	11						
	Large							1	9	5				1	9.5	6						
Estimate % species split: (number)	Common							85			95			75								
	Islander							5			5			25								
	Leopard							10						5								
	Bluespot																					

Did your gear come into contact with or catch any **Wildlife or Protected Species**? ('Yes / No' tick box)

Y ☐ N ☑	Y ☐ N ☑	Y ☐ N ☑	Y ☐ N ☑	Y ☐ N ☑	Y ☐ N ☐

Please provide details of the interaction on the Wildlife and Protected Species Details Form at the back of the logbook

Comments:

I certify that the information I have provided on this form is a true and accurate record. Please provide an estimate of the time taken to complete this form: ____ minutes

Authorised Person/ Master's Printed Name: Fred Mack | Signature: Fred Mack | Date: 6/7/02

Torres Strait Finfish Working Group 2016.01

Meeting Record

12-13 July 2016

Note all meeting papers and record available on the PZJA v

www.pzja.gov.au

Australian Government

Australian Fisheries Management Authority

Box 7051, Canberra Business Centre, ACT 2610 / Ph. (02) 6225 5555 / Fax (02) 6225 5500 / AFMA Direct 1300 723 621 afma.gov.au

Contents

Meeting Participants

Members

Date	Name	Position	Declaration of interest
12-13 July 2016	Andy Bodsworth	Chair	Independent Consultant – Cobalt MRM (recently developed Torres Strait Finfish Action Plan report for TSRA/FRDC)
12-13 July 2016	Steve Hall	FWG Executive Officer	Nil
12-13 July 2016	Selina Stoute	AFMA Member	Nil
12-13 July 2016	Tom Roberts	QDAF Member	Nil
12-13 July 2016	Mariana Nahas	TSRA Member	Nil
12-13 July 2016	Michael O'Neill	Research Member	Principal Fisheries Scientists, QDAF. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery.
12-13 July 2016	David Brewer	Research Member	Independent Consultant. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery. Previous CSIRO researcher for TSSAC project investigating traditional take of finfish in Torres Strait.
12-13 July 2016	Maluwap Nona	Industry Member	TIB licence holder. Chairperson Malu Lamar.
12-13 July 2016	Tenny Elisala	Industry Member	TIB licence holder. Ranger, TSRA.

Date	Name	Position	Declaration of interest
12-13 July 2016	Frank Fauid	Industry Member	TIB licence holder
12-13 July 2016	Tony Vass	*Industry (sunset licence holder representative)	No financial interest in Torres Strait Fisheries. Holds Queensland East Coast quota for coral trout and 'other' finfish species. Previous Torres Strait finfish operator. Representative for sunset licence holders.

Observers

Date	Name	Position	Declaration of interest
12-13 July 2016	Kenny Bedford	*TSRA Board - Fisheries Portfolio	TIB licence holder. Member, FQMC President - Erub Fisheries Management Association
13 July 2016	Ian Liviko	*NFA (PNG)	Nil
12-13 July 2016	John Ramsay	TSRA Program Manager, Fisheries	Nil
12-13 July 2016	Nicole Murphy	Researcher, CSIRO	Principal scientist for TSSAC project investigating traditional take of finfish in Torres Strait.
12-13 July 2016	Andrew Tobin	Researcher, JCU	Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery.
12-13 July 2016	Pau Stephen	Fisher, Member of Kos & Abob	TIB licence holder.
12-13 July	Yen N. Loban	TSRA Board	TIB licence holder.

Date	Name	Position	Declaration of interest
2016			Member, TSFA.
12 July 2016	Harry Nona	Fisher	TIB licence holder.
13 July 2016	John Mathews	Project Officer, TSRA	Nil

* Permanent observer

Apologies

Name	Position
Eliziah Wasaga	Industry Member
Jerry Stephen	Industry Member
Ian Liviko (Day 1)	NFA (PNG)

Action items

Number	Action
1.	QDAF member to provide a presentation at the next FWG meeting on the Queensland Government's Recreational Fishing survey and its application to Torres Strait, including survey methods and design.
2.	QDAF member to provide a summary of charter boat logbook data relevant to the Torres Strait at the next Working Group meeting.
3.	QDAF provide an update on recreational fishing data and charter boat operations within the TSPZ as a standing agenda item for future FWG meetings.
4.	Dr Michael O'Neill to provided FWG members out-of-session the full report on the stock assessment for the East Coast coral trout fishery.
5.	AFMA to confirm the nature of logbook changes that occurred in 2003
6.	AFMA to provide advice on the date of when the investment warning for the fishery was issued.
7.	AFMA to report on the percentage of coral trout and Spanish mackerel fish caught within and outside the 10nm exclusion zones prior the introduction of those closures.
8.	Compliance updates be added as a standing agenda item for future meetings.

Recommendations

Number	Recommendation
1.	The FWG **recommended** for the 2017-18 Spanish mackerel fishing season that**:**

Number	Recommendation
	▪ TAC setting advice to be finalised subject to consideration of updated stock assessment and advice from the newly convened Technical Scientific Working Group; ▪ Technical scientific working group to review stock assessment update to allow for full consideration of inputs and outcomes. Technical scientific working group to report back to FWG; ▪ The technical scientific working group should comprise the follow members: ➢ Scientific members ➢ Two industry members: Tony Vass, Kenny Bedford ➢ Andrew Tobin ➢ Nicole Murphy ➢ Government ▪ The technical scientific working group should consider the following: ➢ Disproportionate effort in Bramble Cay ➢ Local factors – unexpected factors (eg environmental and/or climate change related effects) ➢ Changes in accessible area of the fishery (closures) ➢ Estimates of TIB, Traditional, Recreational catches ➢ Logbook data quality ➢ Stock structure ➢ Catch rate objectives (effort & catch) ▪ Recognising the importance of precautionary approach, as an interim approach (noting Harvest Strategy to be developed) TAC should not exceed best estimates of MSY after taking into account all other sources of fishing mortality;
2.	The FWG **recommended** that the Spanish mackerel TAC remain unchanged (187.7t tonnes) for the 2016-17 fishing season noting the following: • the current TAC (187t) is based on average catches 2001-05. A stable period of catch; • recent reported catches are > 100 tonnes; • proposed lease amount for 2016-17 is 99 tonnes (across four boats) (18% TIB to TVH catch ratio was used in updated stock assessment); • management risks include unreported catches and potential

Number	Recommendation

	unknown impacts from coral bleaching; and
	• on balance management risks are acceptable this season however the next season TAC setting process should take into account updated stock assessment and agreed estimates of catch from other sectors. Catches and the TAC remain within estimates of maximum sustainable levels:
	  • *Begg et al 2006* maximum sustainable levels 146-264t
	  • *O'Neil & Tobin 2016/17*: *Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing*
	  ▪ maximum sustainable levels 145-210t
	  ▪ catch rates may erode if future average harvest exceeded 150t

3.	The FWG **recommended** that the coral trout TAC (134.9 tonnes) remain unchanged for the current fishing season (2016-17) and the 2017-18 fishing season noting the following: • the TAC (134.9t) is based on average catches 2001-05. A stable period of catch; • although there is no stock assessment for coral trout, the Management Strategy Evaluation conducted (Williams et al 2007) using four constant catch scenarios (80-170t) predicted biomass of at least 70% of unfished by biomass by 2025; • proposed lease amount for 2016-17 is 74 tonnes (across four boats); and • industry feedback that catch rates on Islands are considered good.
4.	For the 2016-17 fishing season the FWG recommended that the leasing out of 28.5 tonnes of other species by TSRA be supported subject to following **ACTIONS**: 1. improved logbooks (that enable accurate reporting of all species. The FWG noted that the AFMA logbook would require reprinting creating a possible timing issue and use of the QDAF logbook may be constrained by administrative constraints); 2. Prior reporting (possible use of QDAF system?)
5.	The FWG **recommended** that subject to further consideration by the Technical Scientific Working Group of coral trout to byproduct catch ratios when targeting coral trout and total take of 'other

Number	Recommendation
	species' by other sectors – there should be no further increase above 30 tonnes until systems are in place to independently verify catches, a species-specific risk assessment has been undertaken and where applicable catch triggers and control rules have been agreed.

Agenda Item 1 - Preliminaries

1.1. Opening Prayer / Acknowledgement of Traditional Owners / Welcome / Apologies

Mr Frank Fauid opened the meeting in prayer.
Apologies were received from Eliziah Wasaga and Jerry Stephen (industry members), and Ian Liviko (NFA, PNG) for the first day of the meeting. Mr Liviko attended the second day of the meeting.

1.2. Adoption of Agenda

The Finfish Working Group (FWG) adopted the agenda without change.

1.3. PZJA requirements of WG members

The Chair noted that all meeting participants are required to participate in accordance with PZJA Fisheries Management Paper No. 1; the Chair noted the roles and functions of the FWG and the responsibilities of members and observers in the FWG when providing recommendations and advice.

1.4. Declaration of Interests

The FWG generally noted that there could be potential conflicts of interest for members and observers when providing information and advice on some agenda items. The Chair explained that members may be asked to leave the room for certain agenda items if specific conflicts arose.

1.5. Actions Arising Apologies

The FWG noted the status of the previous action items and the following key updates on the Queensland Government's Recreational Survey and charter boat arrangements:

- recreational surveys were conducted in 2010 and 2013. Completed through randomised phone survey. Data for Torres Strait is poor due to small sample size; and

- charter Boat operators must be licenced and complete logbooks. Currently there are nine charter boat licences with registered addresses in the Torres Strait. Since 2005 the total recorded catch of finfish from charter boat licences within the TSPZ is approximately 12 tonne.

The FWG noted industry advice that there has been an increase in multi-purpose charter boat operations working in the Torres Strait, and that there are several businesses based on the Cape.

The FWG agreed that it would be useful to gain a better understanding of the Queensland Government's recreational fishing survey including survey methods and design noting there may be potential to supplement the survey to improve data for the Torres Strait.

The FWG agreed to the following **ACTIONS**:

1. QDAF member to provide a presentation at the next FWG meeting on the Queensland Government's Recreational Fishing survey including survey methods and design;
2. QDAF member to provide a summary of charter boat logbook data relevant to the Torres Strait at the next Working Group meeting; and
3. QDAF member provide an update on recreational fishing data and charter boat operations within the TSPZ as a standing agenda item for future FWG meetings.

Agenda Item 2 – Fishery Update

2.1. AFMA management

The Working Group noted an update on historical catch reported for Spanish mackerel, coral trout and other reef line species as detailed in the Agenda paper.

The Working Group noted there is likely under-reporting of catch data for the TIB sector. Members noted the importance of good catch reporting to facilitate effective fisheries management. The FWG noted the outcome from other PZJA forums to support amending the *Torres Strait Fisheries Act 1995* to enable mandatory catch reporting for the TIB sector. The FWG **agreed** to support the proposal for the PZJA to implement mandatory catch reporting for the TIB sector.

2.2. TSRA update

The FWG noted the follow updates on current and planned activities for the TSRA Fisheries Program:

- Implementation of the TSRA Finfish Action Plan. The Finfish Action Plan provides a 10 year pathway for increasing catches within the TIB sector;
- In line with actions identified in the Finfish Action Plan, TSRA:
    - have partnered with FRDC (Fisheries Research Development Corporation) to fund projects investigating the feasibility of:
        - developing Jewfish, barramundi and crab fisheries;

        - exporting seafood product directly from the Torres Strait; and
        - developing a Torres Strait fisheries brand;
    - are undertaking an project internally to investigate the feasibility of a developing baitfish fishery (garfish and sardines) based around Warraber and Poruma;
    - Capacity building initiatives include the funding of:
        - two participants in the FRDC National Seafood Industry Leadership Course; and
        - two cadetships in marine science studies as part of a TSRA employment succession plan;

- The TSRA Investment Strategy will be released on 1 July and will initially have a focus on fisheries. Community consultation on the strategy will be undertaken; and
- Increased market interest in leasing opportunities noting outcomes of the proposed Finfish leasing for 2016-17 and Finfish Quota Management Committee (FQMC) outcomes will be discussed in more detail at agenda item 5.3.

The FWG noted that management advice, assessment and planning would be required to support the sustainable development and/or expansion of finfish fisheries and encouraged all related proposals to be tabled with the FWG for advice. Members also welcomed further updates on TSRA capacity building and investment strategy initiatives as they relate to fisheries.

2.3. Native Title

Mr Maluwap Nona requested that Malu Lamar be recognised as a formal member of the FWG, and that he was participating in the meeting in his capacity as an industry member and not Malu lamar. As a result, Mr Nona was not able to provide a native title update. The AFMA member advised that AFMA would work with Malu Lamar on possible representation options.

2.4. PNG

The FWG noted the following relevant updates for the PNG finfish fisheries (note: updates were provide by the AFMA member on meeting day 1 and the PNG-National Fisheries Authority representative on meeting day 2).

On day 2, Mr Ian Liviko (NFA) provided a further update on finfish developments in the PNG jurisdiction, including:

- PNG-NFA advised at the Fisheries Bilateral meeting in November 2015 that PNG would not be taking up their Spanish mackerel catch entitlements in the Australian jurisdiction of the TSPZ. It was noted at the meeting that PNG fishers are eager to enter the fishery in the future;

- an increase in the catch rate of barramundi has recently been observed. This is despite there being no increase in effort by fishers or the number of operators. Research to further investigate this trend is to be conducted in December 2016;
- a barramundi aquaculture facility in Daru recently ceased operation but still holds brood stock. There are plans for the facility to be handed over to NFA for it to determine the facility's future prospects;
- currently there is no compliance enforcement on (including mesh size limits of nets) on finfish catches in the fishery;
- most fishing activity for finfish occurs around Daru; and
- Juvenile Jewfish and mackerel (25-45 cm) have recently been caught by trawlers targeting other species, however, species identification and catch data are needed to verify whether these are the juveniles of commercially important species for the Torres Strait.

2.5. Strategic overview and update (including economic and market trends)

The FWG noted the following update by members and observers on recent fishery performance, trends, activities and issues occurring in the Torres Strait finfish and relevant fisheries:

- Queensland East Coast finfish fisheries (ECF):
    - fishers are experiencing good catches of coral trout and came close to reaching the TAC in the 2015-16 season (96% caught). As a result there is a high demand for coral trout quota which is now fully utilised;
    - in recent years species other than coral trout ('other species') have gone from being byproduct to now being specifically targeted by fishers as a result of high market demand. There is potential for similar trends to occur in the Torres Strait and it is important that good information (e.g. stock status and catch data) is available before further expansion occurs across these species and potential new areas. Some of these finfish species may be more vulnerable to overfishing;
    - Spanish mackerel catches in the ECF were poor in 2015-16 (300t caught equating to 51% of the TAC. Average catch to TAC ratio is 73%. Lowest catch recorded was 226t in 2007/08), with catch rates declining in recent years to the point where frozen product is not available (i.e. not enough mackerel are

being caught to warrant freezing of product as the small amount of catch is going straight to market as fresh product);

- with the interest in coral trout quota exceeding demand, more intense and targeted fishing for other species and a deteriorating Spanish mackerel fishery in the ECF, it is likely there will be increasing interest in Torres Strait finfish quota (Spanish mackerel, coral trout and other reef line species). The Torres Strait fishery (including Spanish mackerel at Bramble Cay) are considered to be in good condition.

- anecdotal evidence suggests that there has been a recent increase in the incidence of fin rot in live coral trout product. The cause is still to be determined, however it has been suggested it may be due to additional environmental stresses on the fish following the recent climatic conditions that resulted in the large-scale coral bleaching event off the far northern Queensland cost. QDAF are testing some samples.

- Torres Strait finfish update from industry;

  - there is renewed interest in targeting live trout in Torres Strait, as shown during the FQMC's recent assessment of expressions of interest to lease finfish quota in 2016-17. Two operators are planning to trial live;

  - there are signs that interest in the fishery from the TIB sector is growing;

  - Ugar fishers are currently focused on the Beche-de-mer Fishery as the local freezer is not operational. The freezer is required to support finfish operations;

  - noting possible resourcing constraints, community based strategies should be examined to improve the efficiency of compliance;

  - there is ongoing need to balance the benefits of leasing quota to non-indigenous operators while still providing fishing industry development and employment opportunities for locals (in line with the COAGs commitment to closing the gap in indigenous disadvantage). The TIB sector needs to be supported to participate directly in the fishery.

Agenda Item 3 – QLD Inshore Finfish and Spanish mackerel fisheries – overview of management and stock status

The FWG noted an update on the ECF including an overview of the East Coast Finfish Logbook and reporting parameters, harvest control rules and TAC setting process. A presentation on the ECF was requested to broaden members understanding of management approaches and issues in finfish fisheries within the region. The presentation provided is at **Attachment A**. Members noted key features of the ECF management framework including:

- mandatory catch reporting comprised of prior reporting, unload reports and catch disposal records; and
- a harvest strategy for coral trout comprising:
    - a target biomass of 68% of unfished biomass levels. A high biomass target was agreed based on the high costs of fishing and subsequent need to maintain high catch rates;
    - a target Catch Per Unit Effort (CPUE) of 25kg/dory day with a maximum TAC of 1 288 tonnes (recently CPUE has been around 19kg/dory day);
    - a limit CPUE of 7.25kg/dory day; and
    - a target fishery catch of 1150t which is equivalent to the average recorded catch between 2006 and 2008.

The FWG noted advice from some industry members and observers that Torres Strait fishers want to report catches but first to need to understand why and how. Members noted advice that TSRA have commissioned the development and delivery of a Fisheries Management Training course for PZJA consultative forum representatives through the University of Wollongong. Pilot courses have been run with more to follow.

The FWG agreed for the following **ACTION**:

- Dr Michael O'Neill to provided FWG members out-of-session the full report on the stock assessment for the East Coast coral trout fishery.

Agenda Item 4 – Research

4.1. Traditional take catch estimates: past estimates (Dr Busilacchi) and future research (CSIRO)

Past estimates of traditional take catches (Busilacchi, 2008)

The FWG noted the past estimates of traditional catches of finfish reported from the research project titled "*The subsistence coral reef fish fishery in the Torres Strait: monitoring protocols and assessment"*, including:

- the traditional catch of finfish by Erub, Masig and Mer in 2005/06 was estimated as 169 tonnes and included 62 different species. This was a notable increase from catch estimated by CSIRO in the 1990s.

- only a small proportion of the 2005/06 catch was Spanish mackerel or coral trout (CT), although this is still a significant quantity (approx. 20 tonnes).
- for the commercial species (including Spanish mackerel and coral trout) about 15% were taken for subsistence.
- the largest components of other species taken were Siganids (rabbitfish, spinefoot, parasa), mullet (thurud, wap) and trevally (whitefish).

The FWG **agreed** that the figures from *Busilacchi (2008)* are the current best estimate of traditional take of finfish.

Future research: *'Monitoring the traditional take of finfish species in the TSPZ'*
The FWG noted the presentation by the Research member on the research project titled: "*Monitoring the traditional take of finfish species in the TSPZ".* Members noted the overview of the study and that data collection was yet to commence. The project team advised that:

- the first field trip is planned for August followed by another in February. The focus of the first trip will be to train monitors; and
- the aim is for monitors to visit all households weekly for 12 months. The project is attempting a 'census' of households rather than surveying a sample of households.

Advice from the FWG was sought on the project methodology, preferred process for consultation and identification of traditionally important species. FWG members advised the following:

- communication will be critical and island specific approaches may be necessary;
- the project should aim to build peoples capacity to independently complete catch forms and where possible, the project should trial the collection of fish length data. Both of these initiatives may have long lasting benefits for future cost-effective data collection programs;
- "Other" species to be prioritised in the project should be determined using the following criteria:
    - vulnerability to overfishing;
    - importance for traditional fishing (high value / target species);
    - commonly caught based on previous catch surveys; and
    - overlap with commercial fishery (are they taken by commercial fishers)

- the Poruma fishers association is best suited to do the data collection for the Poruma community;
- names for each finfish species vary across communities and the best way for community members to identify individual species and correct

names will be for the researchers to supply pictures of finfish species endemic to the Torres Strait; and
- results from a previous Tagai College fish naming project for the central islands should be taken into account.

4.2. Spanish mackerel stock assessment update

Dr O'Neil (Research member) presented the draft findings of the revised Spanish mackerel stock assessment, completed as part of the research project "*Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing"*. Dr O'Neil noted that comments on the draft report were pending from the Torres Strait Scientific Advisory Committee.

The FWG noted that four stock analysis were conducted resulting among other outputs, four estimates of harvest levels to achieve Maximum Sustainable Yield (MSY). The estimates ranged from 145t to over 210t. Higher estimates were more uncertain.

Members also noted advice that the data contained less than expected year classes which may reflect the restricted length frequency sampling undertaken (Bramble Cay only for a few months). Maximum age of east coast Spanish mackerel is 26 years.

It was noted that further discussion of the revised stock assessment outcomes would be considered in relation to research priorities and recommendations for future TACs under agenda items 4.4 and 5.2 respectively.

The FWG agreed for the following **ACTIONS**:

1. AFMA to confirm the nature of logbook changes that occurred in 2003;
2. AFMA to provide advice on the date of when the investment warning for the fishery was issued.

4.3. Smart phone project

The FWG noted an update by the Executive Officer the project *Smart phone technology for remote data collection in Torres Strait traditional inhabitant fisheries*. Key updates and observations from other members included:

- the final draft report is pending (due April 2016);

- the project demonstrated that fishers were able to report catches through a smart phone catch reporting system however there were challenges around the logistics in engaging operators and maintaining user uptake of a voluntary catch reporting system;

- Erub fishers and the community freezer business found the smart phone application (the App) very useful. The additional information provided through the App was popular and used to assist fishers to determine the best time to go fishing (for example taking into account prevailing tides);

- TSRA strongly supports the continued development of an App system noting the potential benefit to fishers in having ready access to broader fishing related information and business tools; and

- the AFMA member advised that AFMA would continue to investigate AFMA's capacity to support catch reporting through an App noting back-end infrastructure is required to receive the information. AFMA is assessing and supporting a number of e-reporting initiatives, including e-logbooks across Commonwealth managed fisheries. Initiatives in the Torres Strait need to be considered within the context of AFMA's broader e-reporting program.

4.4. Research priorities

The FWG identified the following data and research needs:

Data needs

- Review logbook structure;
- Monitoring of non-commercial take (note partly being addressed through current research project on the traditional take of finfish);
- Improved rate of returns of freezer records for the TIB Sector; and
- Age and length structure data (medium term – relates to Harvest Strategy work, phase 2).

Research needs

- Genetic studies on Spanish mackerel to test single stock theory – particularly if PNG and NE QLD catches increase. This potentially could be achieved by using fishery data, fisher participation and/or a PhD study;
- Management Strategy Evaluation on harvest strategy options; and
- In the event that the western closure line is removed, investigate the potential impact on TAC.

The FWG also agreed on the following **ACTION**:

1. AFMA to report on the percentage of coral trout and Spanish mackerel fish caught within and outside the 10nm exclusion zones prior the introduction of those closures.

Agenda Item 5 – Management

5.1. Finfish Harvest Strategy

The FWG noted the project proposal to develop a harvest strategy for the fishery and that the funding proposal was still under consideration by the TSSAC.
Members and observers supported the development of a harvest strategy and provided the following observations and advice:

- a harvest strategy provides a clear management procedure for recommended TACs and in doing so, can provide greater certainty for industry;

- one benefit of harvest strategies is that they generally have a strong consultation process where key stakeholders have opportunity to provide their view on how the fishery should be structured. Furthermore, harvest strategies can include guiding principles;

- a harvest strategy for the finfish fishery should set out agreed set of decision rules for key species (i.e. Spanish mackerel and coral trout) and also include other species for which there is growing interest by fishers to target;

- the FWG should be proactive in managing what might become a valuable fishery in the future and that even with a lack of data the simplest form of control rules should be developed and can be built up as more data is available;

- it will be important to engage existing sunset licence holders in the development of the harvest strategy as these are the operators who have long-term experience and knowledge of the fishery and operational factors impacting the fishery;

- it will also be important to communicate well with fishers on the importance of data with all sectors in the development of the harvest strategy;

- catch per unit effort (CPUE) is a pivotal metric used to guide decisions in many fisheries. As an example, CPUE is the sole indicator in for place for the ECF coral trout fishery. A simple rule based on CPUE may be appropriate for the Torres Strait. A suite of other parameters used in the TVH fishery could also be considered and added through time to make sure the desires and aspirations for the fishery are maintained, noting that the primary objective is for sustainable stock and healthy economic return but other needs may to be considered in the Torres Strait context;

- the business decisions made by sunset licence operators is very dependent on the decisions and rules put in place to manage the fishery, and although they are an important sector for generating income for communities, they are at times in the dark about their future in the fishery (e.g. unsure if they'll be successful in accessing the fishery until a month or only weeks before season opening); and

- holding a pre-season briefing to hear from all sectors of the industry on what they want for the fishery is an option, particularly during the harvest strategy development. Pre-season briefings would be a good opportunity to build networks and provide a forum for the medium to long term aspirations for the fishery to be well communicated. Operators could then make informed decisions on how they structure their businesses.

5.2. Spanish mackerel and coral trout TACs

Spanish mackerel

The FWG **recommended** for the 2017-18 Spanish mackerel fishing season that**:**

- TAC advice to be finalised subject to consideration of updated stock assessment;

- a Technical scientific working group be convened to review the stock assessment update to allow for full consideration of inputs and outcomes. Technical scientific working group to report back to FWG;

- the technical scientific working group should comprise the follow members:
  - Scientific members
  - Two industry members: Tony Vass, Kenny Bedford
  - Andrew Tobin
  - Nicole Murphy
  - Government

- the technical scientific working group should consider the following:
  - disproportionate effort in Bramble Cay;
  - local factors – unexpected factors (eg environmental);
  - changes in accessible area of the fishery (closures);
  - estimates of TIB, Traditional, Recreational catches;
  - logbook data quality;
  - stock structure; and
  - catch rate objectives (effort & catch);

- recognising the importance of precautionary approach as an interim approach (noting Harvest Strategy to be developed) TAC should not exceed best estimates of MSY after taking into account all other sources of fishing mortality.

The FWG **recommended** that the Spanish mackerel TAC remain unchanged (187.7t tonnes) for the 2016-17 fishing season noting the following:

- the current TAC (187t) is based on average catches 2001-05. A stable period of catch;

- recent reported catches are > 100 tonnes;
- proposed lease amount for 2016-17 is 99 tonnes (across four boats) (18% TIB to TVH catch ratio was used in updated stock assessment);
- management risks include unreported catches and potential unknown impacts from coral bleaching on stocks; and
- on balance management risks are acceptable this season however the next season TAC setting process should take into account updated stock assessment and agreed estimates of catch from other sectors. Catches and the TAC remain within estimates of maximum sustainable levels:
    - Begg et al 2006 maximum sustainable levels 146-264t
    - O'Neil 2016:
        - maximum sustainable levels 145-210t
        - catch rates may erode if future average harvest exceeded 150t

Coral trout

The FWG **recommended** that the coral trout TAC (134.9 tonnes) remain unchanged for the current fishing season (2016-17) and the 2017-18 fishing season noting the following:

- the TAC (134.9t) is based on average catches 2001-05. A stable period of catch;
- although there is no stock assessment for coral trout, the Management Strategy Evaluation conducted (Williams et al 2007) using four constant catch scenarios (80-170t) predicted biomass of at least 70% of unfished by biomass by 2025;
- proposed lease amount for 2016-17 is 74 tonnes (across four boats); and
- industry feedback that catch rates on Islands are considered good.

The FWG identified the following issues for further consideration:

- significant decline in effort following buyout. What are the drivers?
    - historically, significant catches were taken within 10nm closure areas
    - possible localised depletion?
    - lack of effort - only one sunset licenced boat operating
- local factors – unexpected factors (eg environmental)
- moving to live coral trout - possible driver for changes in catch composition?
- QLD east coast data – take into account trends.
- estimates of TIB, Traditional and Recreational catches.

5.3. The Proposed leasing arrangements for 2016/17

The FWG considered the proposal for 28.5 tonnes of unspecified mixed reef species to be leased-out to sunset licence holders in the 2016-17 fishing season. The FWG's advice focused on potential sustainability risk associated with targeting of new species and increasing effort on other species. The FWG focused on more immediate risks, also addressing medium term risks in the event there was continued industry interest in these other species.

Proposed fishing plans

The FWG noted advice on the various fishing plans of operators seeking to take 28.5 tonnes in total of other species**.** The proposed fishing plans include:

- the take of 'other' species as a byproduct (ie not targeted);
- two operators plan to land live coral trout;
- one operator plans to target deepwater 'other species' (20 tonnes) including:
    - Emperor
    - Job fish
    - Flame snapper
    - Nannygai
- live fish to be unloaded in Cairns (via SeaSwift?); and
- one operator proposes to use two 'primary' vessels (note same operation is required to have VMS under QDAF conditions).

Relevant catch information and other considerations

The FWG noted relevant Information regarding past catch trends and catch ratios between coral trout/Spanish mackerel and other species include:

- Williams *et al* 2008 – *Population biology of coral trout species in eastern Torres Strait: Implications for fishery management*
- AFMA Logbooks
- Busilacchi 2008 – *The subsistence coral reef fish fishery in the Torres Strait: monitoring protocols and assessment.*

The FWG noted that regard should be given to management approaches within Queensland and appropriate native title consultation depending on the nature of these proposed fishing operations.

Risks and benefits

The FWG identified the following the risks and benefits associated with the proposed leasing of 28.5 tonnes of other species:

Risks

1. Uncertainty around catch composition (ie risks to specific species) arising from incomplete and/or inaccurate catch and effort reporting.
2. Current logbooks – not optimal for reporting a wider range of 'other' species.
3. Discards (survivorship? (i.e. targeting a wider range of species may change the composition of unwanted species that are caught and discarded (and the survivorship of those is largely unknown). Ultimately, there may be a wider range of species that are subject to higher mortality rates than previously and the consequences of that are unknown).
4. Deepwater species generally long lived 30-40 years. NT and Gulf area assessment found species have low natural mortality = sustainable harvest rate is low (take a low percent of the stock). 6 spp in aggregate in the Gulf limit = 450t.
    - Crimson snapper age at maturity 4-7yrs
    - Large mouth nannygai 9-12yrs

- Red emperor 10-13yrs
- Goldband snapper 6-8yrs
- Mangrove jack 8-11yrs
- Golden snapper 10-13yr

Benefits

1. Sustainable fishing industry development for traditional inhabitants

Recommended management options (managing the risks) immediate and medium term

Immediate

For the 2016-17 fishing season the FWG **recommended** that the leasing out of 28.5 tonnes of other species be supported subject to following **ACTIONS**:

1. improved logbooks (that enable accurate reporting of all species. The FWG noted that the AFMA logbook would require reprinting creating a possible timing issue and use of the QDAF logbook may be constrained by administrative constraints);

2. additional reporting conditions (ie in addition to daily logbook); and

3. Prior reporting (possible use of QDAF system?)

The FWG agreed the **priority outcome** from reporting measures is to have reliable catch data*, catch composition, location, timely reporting (by trip), effort and length (Dr O'Neil to advise on sample sizes, length classes).

*Not verified

Medium term

The FWG **recommended** that subject to further consideration by the Technical Scientific Working Group of coral trout to byproduct catch ratios when targeting coral trout and total take of 'other species' by other sectors -

> there should be no further increase above 30 tonnes until systems are in place to independently verify catches, a species-specific risk assessment has been undertaken and where applicable catch triggers and control rules have been agreed.

The FWG identified the following measures that may support further expansion in effort to other species:

1. observer coverage – provides verification of logbooks and biological samples (length and age);
2. port sampling – for biological samples;
3. species triggers (possible vulnerable species) and/or area triggers (possible risk of localised depletion);
4. consideration of iconic species, other values;
5. VMS (Agenda 5.7);

6. Fish Receivers System (Agenda 5.6); and
7. possible requirement for minimum ‘quota’ holdings for ‘other’ species.

The FWG identified the following for further consideration:

1. preliminary assessment of catches and catch ratio Coral trout and byproduct.

5.4. Removal of the western closure of the reef line fishery

The FWG noted that:

- the removal of the western closure of the reef line fishery was a long standing item and had broad support amongst Torres Strait communities;
- there is no management basis for the closure. Instead the closure reflects a historical jurisdictional boundary;
- there are potential economic benefits for the TIB sector in removing the closure;
- in the event that the closure was removed, TSRA would retain the closure within sunset licence lease agreements for the TVH sector. This approach could be reviewed subject to the direction of the community; and
- members had varying views on whether or not sufficient consultation on removing the closure had occurred. A key development since the last FWG meeting (2012) has been the Native Title Determination on the Regional Sea Claim, and it was noted that notification to the relevant Registered Native Title Bodies Corporate groups would be undertaken prior the PZJA making a decision.

Noting the need to undertake appropriate Native Notification, the FWG supported in-principle the removal of the western closure of the reef line fishery.

5.5. Finfish legislative instrument – consideration of measures

The FWG noted the proposed remaking of the Torres Strait Spanish Mackerel Fishery legislative Instrument.

In relation to the 50cm minimum size limit for grey mackerel (*Scomberomorous semifasciatus*) the FWG noted:

- that the minimum size limit for grey mackerel was well below the size at maturity and below the size limit for the ECF;
- a more appropriate size limit for grey mackerel would be 75cm;
- grey mackerel are not a common catch in the Torres Strait fishery and there are no logbook records of this species being caught in the Torres Strait; and
- that any changes on the limit for grey mackerel should be deferred as the priority is to have the instrument remade at the earliest opportunity.

5.6. Fish Receiver System

The FWG supported the proposal to replace the current Torres Strait Seafood Buyers and Processors Docket Book system with a mandatory Fish Receiver System for the all Torres Strait Fisheries, excluding Torres Strait Prawn Fishery by 1 December 2017 noting that the system will require:

a) all licence holders (including Traditional Inhabitants) to only dispose of commercially caught fish in those fisheries (not including fish caught during the course of traditional fishing) to a holder of a Fish Receiver licence; and

b) it will be mandatory for holders of Fish Receiver licences to comprehensively report details of all fish received (landed) for each fisher.

The FWG noted that AFMA would work with stakeholders to finalise the operational details of the Fish Receiver System

5.7. Vessel Monitoring System

The FWG supported the proposal to implement mandatory Vessel Monitoring System (VMS) for all commercially licenced primary and carrier vessels operating under the *Torres Strait Fisheries Act 1984* by 1 July 2017 where;

a) a primary boat is the boat nominated to the licence as the primary commercial fishing boat for the licence from which tender boats are authorised to operate;
b) freight shipping vessels are exempt; and
c) exemptions may be provided for carrier vessels that are 6 meters or less in length.

The FWG noted that industry would be responsible for the installation and maintenance cost for VMS units whilst AFMA would be responsible for monitoring costs. AFMA's costs would be covered within AFMA's existing budget.

5.8. Future Management Priorities

The FWG agreed on the following future management priorities:

- development of a harvest strategy;
- progressing issues identified under agenda items 5.2 and 5.3 through the Technical Scientific Working Group; and
- improving fishery data (freezer data, possible length frequency and otolith data collection).

The FWG agreed to the following **ACTION**:

1. Compliance updates be added as a standing agenda item for future meetings.

Agenda Item 6 – AFMA Finfish Fishery Budget 2016/17

The FWG noted AFMA's 2016/17 Finfish Fishery Budget.

Agenda Item 7 – Other Business

There was no other business.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
FISHERY UPDATES AFMA Management and Foreign Compliance Update	Agenda Item No. 2.1 For noting

RECOMMENDATIONS

That the Working Group **NOTE** the reported fishing activity for the Torres Strait Finfish Fishery and general updates from management and foreign compliance.

KEY ISSUES

1. Fishing activity in both the Spanish mackerel and reef line fisheries has been relatively stable since the 2008 buyout and commencement of the leasing arrangement (**Attachment A Figures 1 & 2**). The annual catch of Spanish mackerel was **83.7** tonnes in 2014-15 and **86.3** tonnes in 2015-16. Annual catches of coral trout were **21** tonnes in 2014-15 and **38.4** tonnes in 2015-16.
2. Finfish catches reported by Traditional Inhabitant licenced (TIB) fishers through docket-books remains low. The TIB sector reportedly caught 110kg of Spanish mackerel and 40kg coral trout in 2014-15, and 35kg and 285kg, respectively, in 2015-16. However, this is likely to be an underestimate due to catch reporting being voluntary for the TIB sector. In addition to the catch reported to AFMA, the project *Smart phone technology for remote data collection in Torres Strait traditional inhabitant fisheries* reported that TIB fishers from Erub caught 249kg of Spanish mackerel and 3010kg of coral trout in 2013-14, and 491kg and 210kg, respectively, in 2014-15. This project will be further discussed in Agenda Item 4.2.
3. AFMA is aware of growing interest and preparation among some TIB operators to increase their effort in the Finfish Fishery.

AFMA FOREIGN COMPLIANCE OPERATIONS UPDATE

4. Illegal foreign fishing in Australian waters is considered a serious threat to Australia's marine resources and preventing such activity is a very high priority of the Commonwealth Government. The Australian Fisheries Management Authority and the Australian Border Force are the leading agencies in protecting Australia's maritime borders against illegal foreign fishers.
5. Seven Vietnamese, four Indonesian and one Papua New Guinea boats have been apprehended this financial year. All matters were successfully prosecuted and the boats seized. None of these apprehensions occurred in the Torres Strait, however we remain vigilant with daily aerial surveillance and surface platforms patrolling the Torres Strait.
6. AFMA continues to work closely with our regional partners, particularly Papua New Guinea, in the fight against illegal foreign fishing.

VESSEL MONITORING SYSTEMS

7. The PZJA has decided that from 1 July 2017 a Vessel Monitoring System will be mandatory on all commercially licensed primary (vessels that tow tenders) and carrier vessels operating

under the *Torres Strait Fisheries Act 1984*. This decision has been approved by the Minister for Fisheries.

8. AFMA is managing the implementation of VMS and has written to operators outlining the requirements for installing VMS on their vessels.
9. Part of the PZJA decision includes a VMS exemption for dinghies used to fish, carrier boats six metres or less in length and freight shipping vessels.
10. The Working Group supported the implementation of VMS at its July 2016 meeting.

FISH RECEIVER SYSTEM

11. At its 12-13 July 2016 meeting, the FWG supported the proposal to replace the current Torres Strait Seafood Buyers and Processors Docket Book system with a mandatory Fish Receiver System for all the Torres Strait Fisheries, excluding Torres Strait Prawn Fishery by 1 December 2017 noting that the system will require:

    a. all licence holders (including Traditional Inhabitants) to only dispose of commercially caught fish in those fisheries (not including fish caught during the course of traditional fishing) to a holder of a Fish Receiver licence; and

    b. it will be mandatory for holders of Fish Receiver licences to comprehensively report details of all fish received (landed) for each fisher.

12. The development of this fish receiver system is under consideration by the PZJA.

WESTERN LINE CLOSURE

13. The removal of the western closure of the reef-line fishery has been a long standing item which has been supported in-principle by both the Finfish Working Group and Torres Strait communities.
14. At its July 2013 meeting the Finfish Working Group noted members had varying views on whether or not sufficient consultation on removing the closure had occurred. A key development since initial consultation on this issue has been the Native Title Determination on the Regional Sea Claim, and it was noted that notification to the relevant Registered Native Title Bodies Corporate groups would be undertaken prior to the PZJA making a decision.
15. Work is underway to document previous consultation processes and outcomes. This will then inform any further consultation needs prior to seeking a decision from the PZJA to remove the line.

NOAA MARINE MAMMAL INTERACTION DATA

16. The US National Oceanic and Atmospheric Administration (NOAA) has issued a “final rule” implementing import provisions of the *Marine Mammal Protection Act 1972* (MMPA).
17. These new regulations implement aspects of the MMPA that aim to reduce marine mammal bycatch associated with international commercial fishing operations, by requiring nations exporting fish and fish products to the United States to be held to the same standards as U.S commercial fishing operations. The rule comes into effect from 1 January 2017

18. AFMA has provided information on all Commonwealth fisheries and an overarching summary of marine mammal management to DaWR who is managing Australia's response to NOAA. The summaries outline the individual impacts of each fishery on marine mammals.

19. For all Torres Strait fisheries there are negligible to zero impacts on marine mammals by virtue of the fact that the fishing activities are non-invasive.

20. NOAA will assess the information provided and may seek further information on fisheries they have concerns about.

AMENDMENTS TO THE COMMONWEALTH FISHERIES LAW

21. Fisheries laws administered by AFMA that are used to managed all other Commonwealth fisheries are being amended provide that the AFMA must have regard to the objective of ensuring that the interests of commercial, recreational and Indigenous fishers are taken into account in the performance of its functions and require AFMA to try as far as practical to have memberships of commercial and recreational fishers on management advisory committees.

22. Current legislation does not explicit have regard for indigenous fishers.

LIST OF ATTACHMENTS

Attachment A – Summary of finfish fishery catch data

Summary of finfish fishery catch data

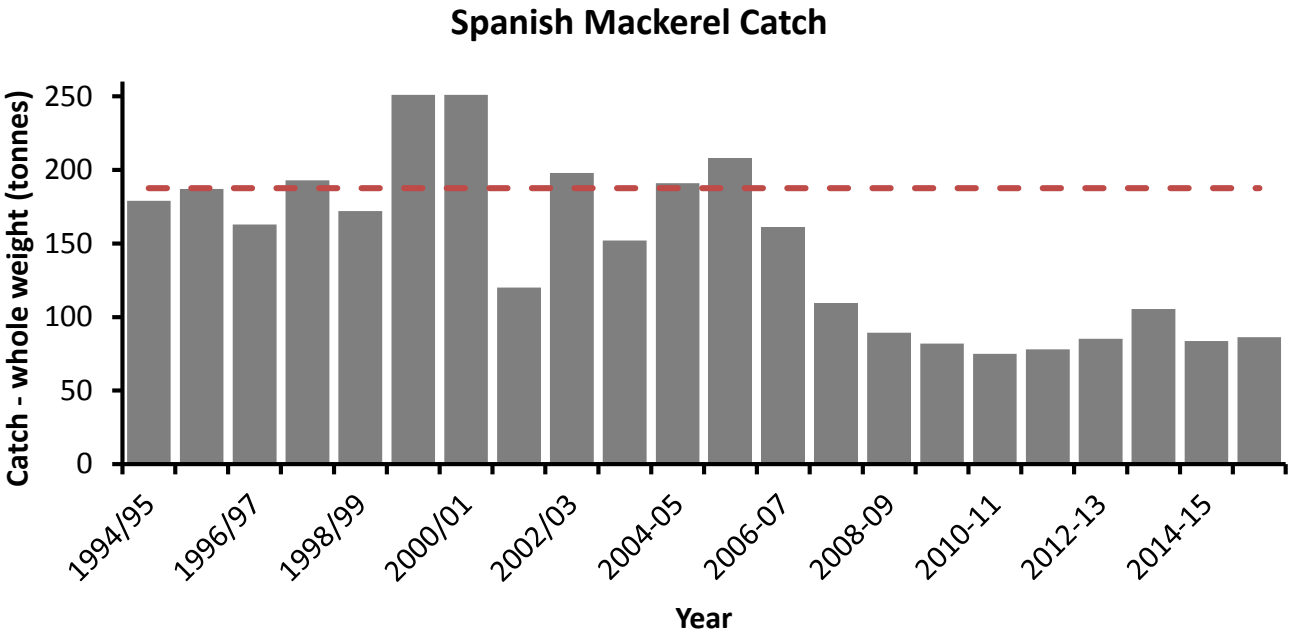

Figure 1: Torres Strait Spanish Mackerel Fishery historical catch records including the TAC (187.7t) (source: AFMA docket book/logbook database).

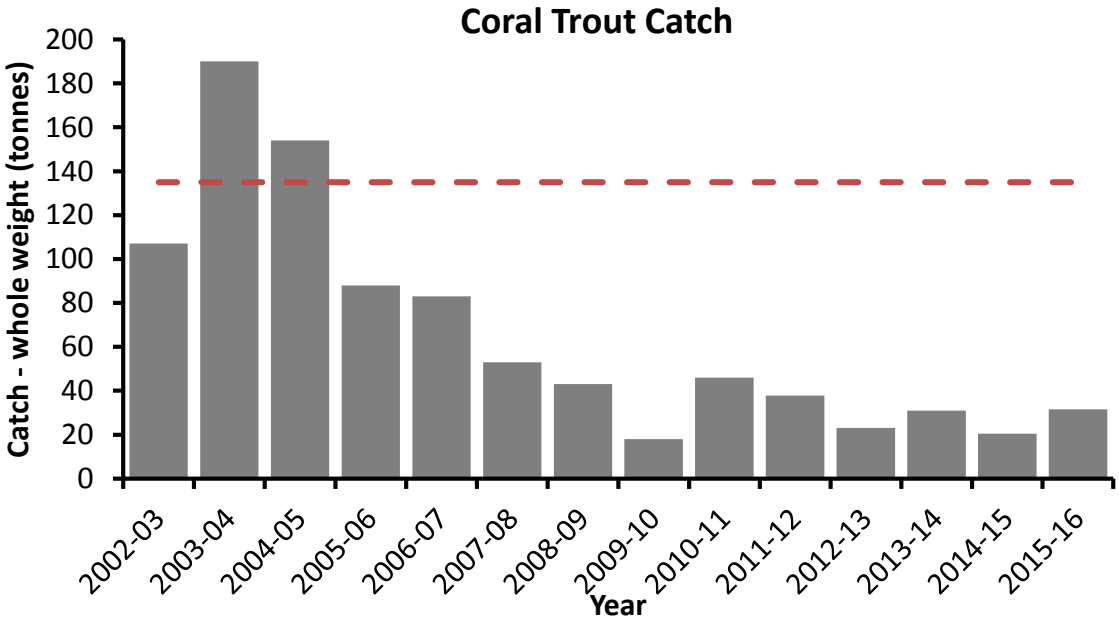

Figure 2: Torres Strait Coral trout historical catch records including the TAC (134.9t) (source: AFMA docket book/logbook database).

Table 1. Seasonal catches of other reef-line fish species since the 2008-09 season. Source: AFMA TSF01 logbooks.

Species	2008-2009	2009-2010	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	
Barramundi cod	542	238	1086	745	429	756	646	1223	
Red Emperor	223	70	398	202	125	160	207	256	
Sea Bass	843	10	79				15	84	
Spangled Emperor	197	68	244	29	35		8	45	
Emperor	1968				18			4	
Rock cods	125	280	706	1017	480	932	575	1364	
Trevally	1314					785	649	775	
Silver Trevally						172			
Venus Tuskfish		93	341	145	34	79			
Black Kingfish								11	
Jobfish			8					29	
Sea Bream Snapper								43	
Blue-toothed Tuskfish							1	30	
Australian Tusk								4	
Mangrove Jack								9	
Maori Sea Perch								6	
Parrotfishes								6	
Green Jobfish								5	
Total (other species)	**5212**	**759**	**2862**	**2138**	**1121**	**2884**	**2101**	**3894**	Av. 2.6 t

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 - 17 March 2017
FISHERY UPDATES **Torres Strait Regional Authority Update**	**Agenda Item No. 2.2** **For Noting**

RECOMMENDATIONS

That the Working Group **NOTE** updates relevant to the Finfish Fishery provided by TSRA.

BACKGROUND

1. Since 2008 the TSRA has leased-out fishing licences with individual catch entitlements on behalf on Traditional Inhabitants. The TSRA also facilitate activities in the region relating to the capacity development of traditional fishers.

2. At the last FWG meeting (12-13 July 2016) members welcomed further updates on TSRA capacity building and investment strategy initiatives as they relate to fisheries.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
FISHERY UPDATES Native Title Update	Agenda Item No. 2.3 For Noting

RECOMMENDATIONS

That the Working Group **NOTE** any updates on native title matters from members, including the representative from Malu Lamar (TSI) Corporation RNTBC (Malu Lamar).

KEY ISSUES

1. 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 titles rights in relation to commercial fishing must be exercisable in accordance with the *Torres Strait Fisheries Act 1984*.

2. Traditional Owners and native title representative bodies have an important role in the management of Torres Strait fisheries. It is important therefore that the Working Group keep informed on any relevant native title issues arising.

3. From discussions at other PZJA consultative forum meetings it has been agreed for a standing Native Title Updates agenda item to be included in future PZJA Working Group meetings.

4. At its 12-13 July 2016 meeting the FWG noted a request by industry member Mr Maluwap Nona that Malu Lamar Body Corporate be invited to provide an update to the working group. AFMA has extended an invitation to Malu Lamar to attend the March 2017 meeting as an observer and is investigating longer term arrangements in consultation with PZJA agencies.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
FISHERY UPDATE **PNG – National Fisheries Authority Update**	**Agenda Item No. 2.4** **For Noting**

RECOMMENDATIONS

That the Working Group **NOTE** the fishery update to be provided by representatives from the PNG National Fisheries Authority.

KEY ISSUES

1. Attendance by officials from the PNG National Fisheries Authority (NFA) is strongly welcomed. NFA official/s will provide an update on the PNG finfish fisheries at the meeting.

BACKGROUND

2. At the last Annual Australia - Papua New Guinea (PNG) Fisheries Bilateral Meeting held in Thursday Island in October 2016, the following was noted:

   - the meeting **NOTED** advice from AFMA that the stock assessment for Spanish mackerel had been updated and that the outcomes of the revised assessment were under consideration. AFMA advised that a reduction in the TAC may be recommended.
   - the meeting **NOTED** AFMA's standing invite for PNG-NFA's officers to attend PZJA consultative forums and in particular encouraged their attendance at the next forum meeting to consider the revised Spanish mackerel assessment early in the New Year.
   - Australia and Papua New Guinea both graciously **DECLINED** to enter into catch sharing arrangements for the 2017-18 fishing season.

3. At the 2016 Environment Management Committee (EMC) the following was noted relevant to PNG fisheries:

   - As requested by the committee in 2015, the PNG National Fisheries Authority (NFA) provided an update on barramundi and jewfish stocks. CSIRO was invited to give a presentation on barramundi research conducted in collaboration with NFA. The EMC thanked CSIRO for their presentation and ***requested*** a copy of the Powerpoint presentation and the CSIRO report on barramundi stocks.

   - The EMC ***requested*** NFA and CEPA to investigate further arrangements for improving management of barramundi including a stock assessment, management plan and potential protection of barramundi spawning areas in conjunction with the Western Provincial Government's Conservation and Environmental Protection Committee and report on progress at the next meeting.

- The EMC ***noted*** NFA's advice that they have not undertaken a stock assessment of Jewfish and are unlikely to have the capacity to do so in the short term.

4. At the second last Annual Australia - Papua New Guinea (PNG) Fisheries Bilateral Meeting held in Port Moresby in October 2015, the following was noted:

    - that Barramundi and jewfish are the key finfish species for the Western Province. PNG-NFA advised the status of these stocks is largely unknown however there is industry concern that stocks have been depleted.
    - advice from PNG-NFA that it aims to undertake research to assess the status of Barramundi stocks and review the management plan for the species. As part of the management plan review PNG-NFA aim to review the impacts of gear types noting lure fishing is becoming more prevalent over traditional netting.
    - advice from the PNG-NFA that juvenile jewfish are susceptible to trawling and that work being undertaken to develop and implement trawl bycatch reduction devices (BRD) will mitigate this impact. AFMA offered its expertise in BRD development as required by the PNG-NFA.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 March 2017
FISHERY UPDATE **Queensland Department of Agriculture and Fisheries**	**Agenda Item No. 2.5** **For Noting**

RECOMMENDATIONS

That the Working Group **NOTE** the fishery update to be provided by Queensland Department of Agriculture and Fisheries (QDAF) member.

BACKGROUND

At its July 2016 meeting The FWG noted the status of the previous action items and the following key updates on the Queensland Government's Recreational Survey and charter boat arrangements:

- recreational surveys were conducted in 2010 and 2013. Completed through randomised phone survey. Data for Torres Strait is poor due to small sample size; and

- charter boat operators must be licenced and complete logbooks. Currently there are nine charter boat licences with registered addresses in the Torres Strait. Since 2005 the total recorded catch of finfish from charter boat licences within the TSPZ is approximately 12 tonne.

The FWG also noted industry advice that there has been an increase in multi-purpose charter boat operations working in the Torres Strait, and that there are several businesses based on the Cape.

The FWG agreed that it would be useful to gain a better understanding of the Queensland Government's recreational fishing survey including survey methods and design noting there may be potential to supplement the survey to improve data for the Torres Strait.

The FWG agreed to the following **ACTIONS**:

1. QDAF member to provide a presentation at the next FWG meeting on the Queensland Government's Recreational Fishing survey including survey methods and design;

2. QDAF member to provide a summary of charter boat logbook data relevant to the Torres Strait at the next Working Group meeting; and

3. QDAF member provide an update on recreational fishing data and charter boat operations within the TSPZ as a standing agenda item for future FWG meetings.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 1. 2017 16-17 March 2017
Domestic Compliance Update	**Agenda Item No. 2.6** **For Noting**

RECOMMENDATIONS

That the Working Group:

1. **NOTE** the domestic compliance report in the Torres Strait Protected Zone (TSPZ)

KEY ISSUES

- QBFP aims to achieve an average of five days at sea per month to target compliance with fisheries rules and regulations. The QBFP officers also visit island communities to encourage voluntary compliance by clarifying licensing arrangements, networking with community members and gathering intelligence.

- The QBFP Compliance Risk Assessment process outlines high priority areas for each fishery. The priority compliance risks for the Beche-de-Mer fishery are unlicensed fishing (including Papua New Guinea nationals taking Beche-de-Mer within the TSPZ) and the take of species closed to fishing such as Sandfish, Surf Redfish and Black Teatfish. The priority compliance risk for the Pearl Shell Fishery is unlicensed fishing activity.

- In the current financial year (up to 6/03/17) at total of 52 patrol days have been completed in the Protected Zone this consists of;
    - Fifty two (52) sea days on board the police vessel,
    - Eight (8) days completed in Cairns and other centres on an ongoing investigation in relation to the tropical rock lobster fishery Beche- de-mer.
    - Inspection of coral reef fin fish (Torres Strait product) being unloaded in Cairns.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 -17 March 2017
FISHERY UPDATES **Torres Strait fisheries strategic issues including economic trends**	**Agenda Item No. 2.7** **For discussion and advice**

RECOMMENDATIONS

That the Working Group:

1. **NOTE** any updates provided by working group members on economic trends; and
2. **DISCUSS** and provide **ADVICE** on key strategic issues affecting the fishery**.**

KEY ISSUES

1. It is important that the Working Group develops a common understanding of any relevant matters within adjacent jurisdictions and what issues if any, are having the greatest impact on industry and the management of the fishery. Such understanding will ensure proceedings of the Working Group are strategically focused and may more effectively address each issue.

2. 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. Research 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.

BACKGROUND

3. At its July 2016 meeting the FWG noted the following updates by members and observers on recent fishery performance, trends, activities and issues occurring in the Torres Strait finfish and relevant fisheries:

    - Queensland East Coast finfish fisheries (ECF):

        - fishers are experiencing good catches of coral trout and came close to reaching the TAC in the 2015-16 season (96% caught). As a result there is a high demand for coral trout quota which is now fully utilised;

        - in recent years species other than coral trout ('other species') have gone from being byproduct to now being specifically targeted by fishers as a result of high market demand. There is potential for similar trends to occur in the Torres Strait and it is important that good information (e.g. stock status and catch data) is available before further expansion occurs across these species and potential new areas. Some of these finfish species may be more vulnerable to overfishing;

- Spanish mackerel catches in the ECF were poor in 2015-16 (300t caught equating to 51% of the TAC. Average catch to TAC ratio is 73%. Lowest catch recorded was 226t in 2007/08), with catch rates declining in recent years to the point where frozen product is not available (i.e. not enough mackerel are being caught to warrant freezing of product as the small amount of catch is going straight to market as fresh product);

- with the interest in coral trout quota exceeding demand, more intense and targeted fishing for other species and a deteriorating Spanish mackerel fishery in the ECF, it is likely there will be increasing interest in Torres Strait finfish quota (Spanish mackerel, coral trout and other reef line species). The Torres Strait fishery (including Spanish mackerel at Bramble Cay) are considered to be in good condition;

- anecdotal evidence suggests that there has been a recent increase in the incidence of fin rot in live coral trout product. The cause is still to be determined, however it has been suggested it may be due to additional environmental stresses on the fish following the recent climatic conditions that resulted in the large-scale coral bleaching event off the far northern Queensland cost. QDAF are testing some samples.

- Torres Strait finfish update from industry;

    - there is renewed interest in targeting live trout in Torres Strait, as shown during the FQMC's recent assessment of expressions of interest to lease finfish quota in 2016-17. Two operators are planning to trial live;

    - there are signs that interest in the fishery from the TIB sector is growing;

    - Ugar fishers are currently focused on the Beche-de-mer Fishery as the local freezer is not operational. The freezer is required to support finfish operations;

    - noting possible resourcing constraints, community based strategies should be examined to improve the efficiency of compliance;

    - there is ongoing need to balance the benefits of leasing quota to non-indigenous operators while still providing fishing industry development and employment opportunities for locals (in line with the COAGs commitment to closing the gap in indigenous disadvantage). The TIB sector needs to be supported to participate directly in the fishery.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
MANAGEMENT **Spanish mackerel total allowable catch recommendation for the 2017-18 fishing season**	**Agenda Item No. 3.1** **For discussion and advice**

RECOMMENDATIONS

That the Working Group:

a) **DISCUSS** and **PROVIDE ADVICE** on a 2017-18 fishing season TAC for Spanish mackerel taking into account:
   - advice from the Finfish Technical Scientific Working Group; and
   - catch estimates from outside the fishery (traditional and recreational take).

b) **NOTE** that advice from the Working Group will be considered by the PZJA.

KEY ISSUES

1. The FWG is being asked to provide advice on the TAC for 2017-18 fishing season.

2. At its last meeting (12-13 July 2016) the FWG recommended that a Technical Scientific Working Group (TSWG) be convened to review the updated Spanish mackerel stock assessment performed by O'Neill & Tobin (2015) to allow for full consideration of inputs and outcomes.

3. The steps to developing advice on a TAC are set out below.

TAC RECOMMENDATION PROCESS

Step 1 Target biomass (how much of the fish stock should be left behind)

4. The TSWG **noted** that a harvest strategy is to be developed for the fishery which will establish formal reference points for the stock. In the interim, RBC advice should be made on the best available science and be guided by existing Australian Government harvest strategy policy.

5. The TSWG **recommended** that the B_{60} target reference point (aiming for a stock level at 60 per cent of unfished biomass, used here as a proxy for Maximum Economic Yield - MEY) is preferred over a Maximum Sustainable Yield (MSY) target reference point (B_{40}) for Spanish mackerel, recognising that the stock is a shared resource of high importance to traditional inhabitants.

6. The TSWG **noted** that:
   - similarly high target reference points have been recommended for the Torres Strait TRL fishery and in the '*Green paper on fisheries management reform in Queensland, July 2016'*; and
   - the updated stock assessment report recommended a target reference point above B_{MSY} to ensure healthy population biomass and catch rates, in order to achieve and balance sustainability, economic, social and cultural objectives.

Step 2 Recommended biological catch (stock assessment outcomes)

7. The TSWG met on 10 November 2016. The TSWG noted advice from the updated stock assessment report that if harvests increase above 150 t and/or fishing effort increases above 1000 operation days, then catch rates may erode in the long term.

8. The TSWG **recommended** a **Recommended Biological Catch (RBC)** of **125 tonnes** for the 2017-18 Spanish mackerel fishing season having regard for the following:
   - the need for a precautionary approach to take into account the uncertainties in the assessment;
   - the preferred interim target reference point of $B_{60;}$ and
   - the RBC is based on an estimated median total harvest (tonnes) of the preferred stock analyses 1 and 2 for the exploitable biomass at B_{60}.

Step 3 Take into account catches outside of the fishery to recommend a TAC

9. Consistent with Australian Government policy (detailed in the *Commonwealth Fisheries Harvest Strategy Policy and Guidelines 2007*), all sources of mortality (catch) must be taken into account when setting a TAC. This generally means the TAC equates to the RBC for the species minus expected catches to be taken outside of the fishery (**Table 1**. below).

10. At its last meeting, the FWG agreed that the catch figures from the *Busilacchi (2008)* report (**Attachment A** and discussed below) are the best estimate of traditional take of finfish. The working group also noted that data from the Queensland Government's Recreational Surveys conducted in 2010 and 2013 is poor due to the small sample size. There are no other estimates of recreational take available.

11. The Torres Strait Spanish mackerel fishery is listed under Article 22 of the *Torres Strait Treaty (1985)* and is subject to catch sharing arrangements with Papua New Guinea. PNG is entitled to take 40 per cent of the yearly TAC for Spanish mackerel should they nominate to do so. To date, PNG has not taken up any cross endorsed licenses. PNG-NFA advised at the 2016 Australia-PNG Fisheries Bilateral Treaty meeting that they will not take up the catch sharing arrangement in the 2017-18 season.

12. Taking into account the TSWG advice and advice from the FWG on traditional take **Table 1** sets out the TAC calculation. This calculation may be updated by further information provided by the QDAF member on recreational data and or further advice from the FWG.

Table 1 Spanish mackerel TAC calculation taking into account the TSWG advice and advice from the FWG on traditional take.

Source of catches	Expected Spanish mackerel catch (t)	Comments
Traditional (subsistence)	12	Refer to point 20 below for detail. Note includes total of catch estimates for Mer, Masig and Erub Islands.
Recreational	No estimates available	QDAF member to provide any available updates under Agenda Item 2.5
Charter	No estimates available	QDAF member to provide any available updates under Agenda Item 2.5
PNG catch sharing	0	PNG_NFA decline to enter into catch sharing arrangments
Total	12*	Subject to any updates from the QDAF member
TAC calculation: RBC minus other catches 125t (RBC recommended by the TSWG) – 12t (*Busilacchi (2008)* estimate of Traditional take) = **TAC 113 tonnes**		

BACKGROUND

Stock assessment outcomes

13. The 2006 stock assessment of Spanish mackerel (Begg *et al* 2006) has been updated by Michael O'Neill and Andrew Tobin as part of the current project "*Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing*." The assessment examines 11 additional years of logbook data (1989 to 2014).

14. The stock assessment was presented to the TSWG at their 10 November 2016 meeting. A copy of the TSWG meeting record is at **Attachment B**.

15. The TSWG accepted the new assessment as the best available stock assessment for Spanish mackerel whilst also noting sources of uncertainty in the assessment. The TSWG recognised that a level of uncertainty is expected in fishery stock assessments and that the current assessment should serve to guide future research and data priorities for the fishery.

16. The TSWG identified a range of additional analyses, research and data collection/analysis priorities to improve the stock assessment. These recommendations should be considered when developing future research priorities (Agenda item 4.4) and options for ongoing scientific advice (Agenda item 5.2).

17. A key recommendation of the report is for *"Management to adopt a precautionary approach to setting target levels of commercial harvest until further data of total catches and fish age structures are available"*.

18. The current Spanish mackerel TAC is **187.7 tonnes** and has remained unchanged since the 2008/09 season. The TAC is based on average annual commercial catches (TIB and TVH) between 2001-2005.

19. Spanish mackerel is currently classified as not overfished and not subject to overfishing (ABARES 2016). This stock status determination is based on findings of the 2006 stock assessment of Spanish mackerel (Begg *et al* 2006) and the low level of reported catches in the fishery. The O'neill & Tobin 2015 stock assessment updates the *Begg et al 2006* assessment.

Estimates of traditional finfish take

20. At its last meeting (12-13 July 2016) the FWG noted the past estimates of traditional catches of finfish reported from the research project titled "*The subsistence coral reef fish fishery in the Torres Strait: monitoring protocols and assessment"*, including:

    - the traditional catch of finfish by Erub, Masig and Mer in 2005/06 was estimated as 169 tonnes and included 62 different species. This was a notable increase from catch estimated by CSIRO in the 1990s.
    - only a small proportion of the 2005/06 catch was Spanish mackerel or coral trout (CT), although this is still a significant quantity (approx. 20 tonnes).
    - for the commercial species (including Spanish mackerel and coral trout) about 15% were taken for subsistence.
    - the largest components of other species taken were Siganids (rabbitfish, spinefoot, parasa), mullet (thurud, wap) and trevally (whitefish).

21. The FWG **agreed** that the figures from *Busilacchi (2008)* are the current best estimate of traditional take of finfish.

22. Since the last FWG meeting, AFMA has confirmed the catch figures in the Busilacchi (2008) report with CSIRO. At the last working group meeting the figure from **Attachment A** was available but without the exact figures which are now available. This study estimates 12t of Spanish mackerel was taken on average per year.

Process in making and implementing a revised TAC through the PZJA

23. Recommendations of this working group will be considered by the PZJA. Any changes to the TAC will need to be approved by the PZJA.

LIST OF ATTACHMENTS

Attachment A – Summary of the estimates of traditional finfish take in the Torres Strait

Attachment B - Meeting record – Torres Strait Finfish Technical Scientific Working Group meeting 10 November 2016

Best estimates of traditional finfish take in the Torres Strait

- The traditional catch of finfish by Erub, Masig and Mer in 2005/06 was estimated as 169 tonnes and included 62 different species (*Busilacchi 2008*) (Figure 1).
- This was a notable increase from catch estimated by CSIRO in the 1990s (Figure 2).
- Only a small proportion of the 2005/06 catch was Spanish mackerel (12 t) or coral trout (8 t), although this is still a significant quantity.
- For the commercial species (including Spanish mackerel and coral trout) about 15% were taken for subsistence.
- The largest components of other species taken were Siganids (rabbitfish, spinefoot, parasa), mullet (thurud, wap) and trevally (whitefish).

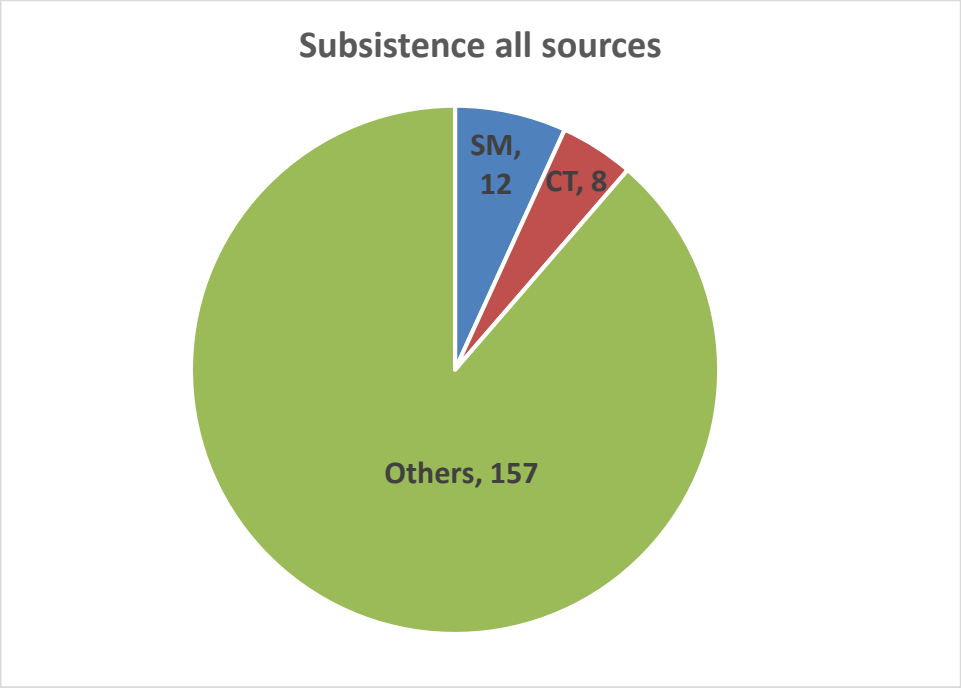

Figure 1. Traditional catch of finfish by Erub, Masig and Mer in 2005/06 (*Busilacchi 2008*).

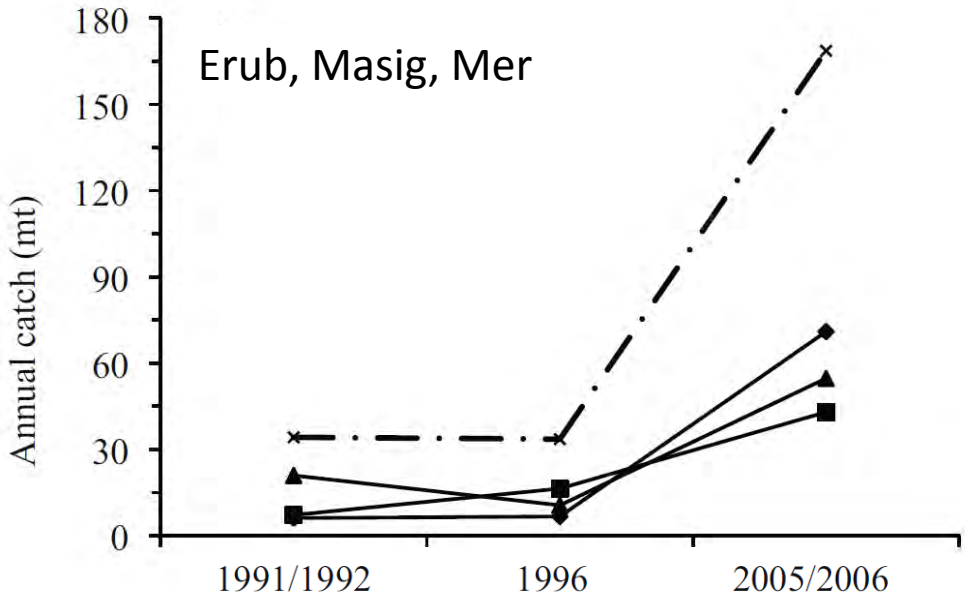

Figure 2. Traditional catch of finfish by Erub, Masig and Mer in 1991/92, 1996 and 2005/06 (*CSIRO 1992, 1996*; *Busilacchi 2008*). The dashed line is the total catch for all three communities.

Torres Strait Scientific Technical Finfish Working Group

Meeting Record

10 November 2016 – Brisbane

Note all meeting papers and record available on the PZJA webpage:

www.pzja.gov.au

Australian Government

Australian Fisheries Management Authority

Box 7051, Canberra Business Centre, ACT 2610 / Ph. (02) 6225 5555 / Fax (02) 6225 5500 / AFMA Direct 1300 723 621 afma.gov.au

Contents

Meeting Participants

Attendance

Name	Organisation	Declaration of interest
Eva Plaganyi	CSIRO	Research funding. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Beche-de-mer Fishery.
Steve Hall	AFMA	Nil
Selina Stoute	AFMA	Nil
Tom Roberts	DAF QLD	Nil
Mariana Nahas	TSRA	Nil
Michael O'Neill	DAF QLD	Research funding. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery.
David Brewer	Upwelling PL	Research funding. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery. Previous CSIRO researcher for TSSAC project investigating traditional take of finfish in Torres Strait.
Kenny Bedford	Erub	TIB licence holder. President - Erub Fisheries Management Association
John Ramsay	TSRA	Nil
Andrew Tobin	JCU	Research funding. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery.
Tony Vass	Industry	Nil. Does not own or operate a licence in Torres Strait. Holds Queensland East Coast quota for coral trout and 'other' finfish species.
Trevor Hutton	CSIRO	Research funding. Principal scientist for TSSAC project to develop a harvest strategy for the Torres Strait Finfish Fishery.

Name	Organisation	Declaration of interest
Andrew Trappett	AFMA, Meeting EO	Nil

Action items

Number	Action
1.	Next meeting of the working group to work towards developing a work plan for assessing risk and managing potential expansion of effort on 'other' reef line species.

Recommendations

Number	Recommendation
1.	The Torres Strait Finfish Scientific Technical Working Group **recommended** that the Torres Strait Finfish Working Group consider a Recommended Biological Catch (RBC) of **125 tonnes** for the 2017-18 Spanish mackerel fishing season noting the following: ▪ RBC of 125 tonnes was based on the updated stock assessment and was an estimated median total harvest of the preferred base case analyses 1 and 2, and an MEY reference point accepted by the working group. ▪ Using an assumed fishery management reference point of B_{MEY} (stock level at 60 per cent of virgin biomass) the assessment predicts annual harvests below 150 tonnes will maintain healthy biomass and catch rates.
2.	The working group **recommended** priorities for additional work on Spanish mackerel stocks in Torres Strait to further improve data collection and the stock assessment model.
3.	AFMA and TSRA, in consultation with temporary licence holders, to work on characterising fishing gear selectivity and different fishing practices and identify options for improving the accuracy and level of information collected through logbooks (a workshop with temporary licence holders was recommended as a starting point).

Agenda Item 1 - Preliminaries

1.1. Opening Prayer / Acknowledgement of Traditional Owners / Welcome / Apologies

Mr Kenny Bedford opened the meeting in prayer. Meeting chairperson Selina Stoute acknowledged the traditional owners, past and present, of the land where the meeting was held.

The working group noted that the meeting had been convened as an outcome of the Finfish Working Group meeting of 12-13 July 2016 (**Attachment A**). The group noted that the meeting had been formed with a scientific focus and was tasked with recommending a Spanish mackerel

Recommended Biological Catch (RBC) for the 2017-18 fishing season while the Torres Strait Finfish Working Group would focus on the management implications of this recommendation.

1.2. Adoption of Agenda

The Torres Strait Finfish Scientific Technical Working Group (the Working Group) adopted the agenda (**Attachment B**) without change.

Agenda Item 2 – Spanish Mackerel Stock Assessment

The working group noted the updated draft Spanish mackerel stock assessment detailed in the report titled: '*Torres Strait Spanish Mackerel Stock Assessment II, 2015, Torres Strait AFMA Project Number RR2014/0823*' and presented by Dr Michael O'Neill. The stock assessment updates the last assessment performed by Dr Gavin Begg in 2006. The last assessment suggested that harvests taken prior to 2007 were near or likely to be exceeding maximum sustainable levels. It was noted that the new assessment examines 11 further years of logbook data where harvest levels and fishing effort have declined since 2006 (average 64 to 105 t compared to an average of 98-233 t from 1989 to 2006).

The stock assessment

The working group accepted the new assessment as the best available stock assessment for Spanish mackerel whilst also noting sources of uncertainty in the assessment. The working group recognised that a level of uncertainty is expected in fishery stock assessments and that the current assessment should serve to guide future research and data priorities for the fishery.

The Working Group identified the following key uncertainties**:**

1. Catch data: Two potential sources of uncertainty in the catch estimates for the fishery include:
    a. deliberately inflated catch reports ('paper' fish) immediately following the 2002 investment warning. Total catches increased significantly in this period; and
    b. unaccounted changes in the traditional inhabitant (TIB) catch associated with some long term fishers exiting the fishery and some island freezer operations closing down. The working group supported the approach taken for the assessment to impute TIB catch for periods where data are missing based on 18.5% of logbook reported TVH catches.

2. Fish vulnerability (availability, selectivity and catchability): Industry members advised that operators can target certain sized fish. A better understanding of these behaviours may improve the CPUE standardisation and utility of length frequency samples. By way of example, industry members advised that at times:
    a. some fishers take different size classes of fish due to their gear setup;
    b. fishers limit effort and catches according to onboard / shore based freezer capacity;
    c. fishers may need to halt fishing and wait 3-4 days to unload catch to barges.

3. Spatial data: Spatial data was not used in the assessment due to missing data prior to the introduction of the TSF01 Logbook and a number of other periods where spatial information has not been reported in logbooks. Catch rate analyses were performed for individual vessels rather than over various spatial areas.

4. Stock structure: Biologically there is some uncertainty in stock connectivity between the Torres Strait and adjacent waters, where spatial-temporal patterns of fish movement may affect fish vulnerability and data.

5. Hyperstability: Hyperstability can occur in fisheries that target aggregations. Hyperstability is yet to be explored in the assessment (hyper-stability: where catch rates continue at a set rate over time but the stock abundance is actually declining); and

6. Restricted length frequency samples (by area and time) and the absence of larger size classes in the samples.

The Working Group **recommended** additional analyses be undertaken to improve the stock assessment including*:*

- sensitivity analyses to examine how the model might perform with 'domed vulnerability' where large fish are assumed to be less available to capture; and
- examination of CPUE data using 'indicator' vessels with known fishing histories as a means to further validate the CPUE time series.

To improve the stock assessment in the longer-term the Working Group **recommended** the following research and data collection/analysis priorities:

- appropriate spatial genetic sampling to clarify the current single Torres Strait stock/population structure assumption (noting the single stock assumption is the most precautionary approach);
- additional length frequency sampling to improve the spatial representativeness of biological data used in the model. This will assist in: a) assessing the fishing mortality and selectivity of the catch i.e. whether the catch size structure is representative of the underlying population age structure and b) validate fecundity at age assumptions;
- further data analysis and consultation with stakeholders to investigate options for improving the accuracy of the TIB catch data series; and
- AFMA and TSRA, in consultation with temporary licence holders, to work on characterising fishing gear selectivity and different fishing practices and identify options for improving the accuracy and level of information collected through logbooks (a pre-season workshop with temporary licence holders was recommended as a starting point).

Preferred model

Four stock analyses (model runs) were conducted (parameters described on report pp. 36) which generated estimates of harvest levels for either Maximum Sustainable Yield (MSY[1]) or Maximum Economic Yield (MEY[2]) reference points calculated to be $B_{0.4}$ and $B_{0.6}$ respectively. These correspond to the principles of the *Commonwealth Harvest Strategy Policy and Guidelines 2007,* noting no formal reference points have been set for Torres Strait finfish stocks at present.

[1] MSY **maximum sustainable yield:** the maximum average annual catch that can be removed from a stock over an indefinite period under prevailing average environmental conditions

[2] MEY **maximum economic yield:** the sustainable catch level for a commercial fishery that allows net economic returns to be maximised; generally more conservative (i.e. less harvest and fishing effort) than maximum sustainable yield

The working group noted the harvest estimates for an MSY reference point ranged from 145 t to over 210 t. The estimates from MEY analyses ranged from 122 t to 185 t (**Figure 1**).

The Working Group did not support the use of analysis 3 and 4 noting:

- analysis 4 was based on inflated harvests (1.75 times the average 1989-2014 logbook harvest) which the working group considered too high. Analysis 4 was included in the report for the purpose of contrast to document uncertainty; for possible unaccounted harvest across the Torres Strait. The result was noted by the group and management staff but further data evidence is required to verify the scenario for use in RBC procedures.
- analysis 3 had a high level of uncertainty.

The Working Group agreed that analyses 1 and 2 were acceptable noting:

- some concerns were raised that the parameters of analysis 1 were conservative estimates; and
- the *M* value (natural mortality) was fixed lower in analysis 2 and as a result, the steepness estimate (*h*) was higher. Future work should revisit the sensitivities of these parameters and investigate possible higher steepness values; together with the vulnerability uncertainty noted above.

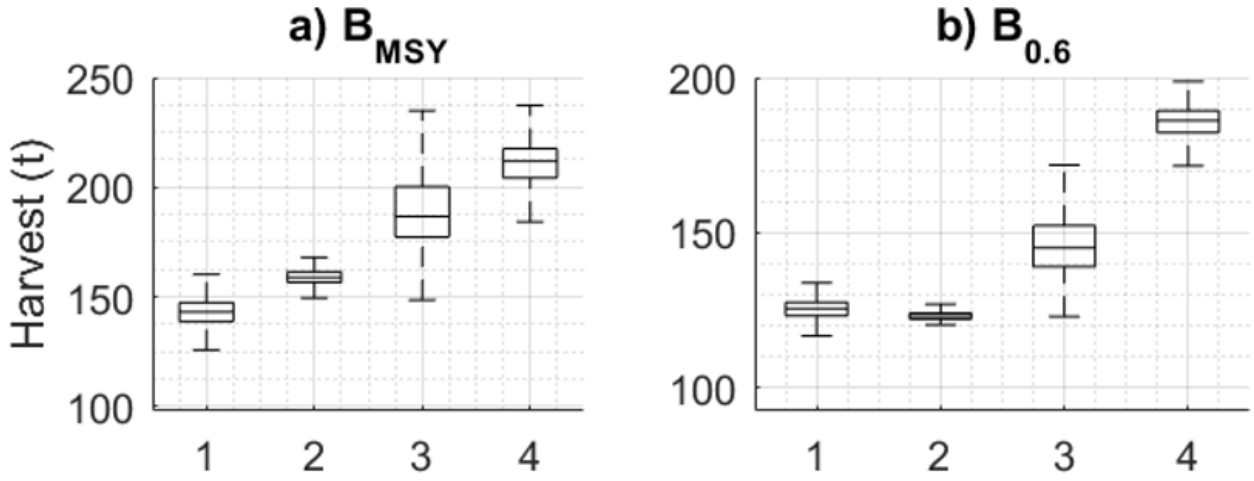

Figure 1. (Figure 20 of the report pp. 39) The estimated equilibrium harvest reference point (tonnes) for Spanish mackerel, where the first boxplots (a) is for the exploitable biomass at MSY ($B_{MSY} \approx B_{0.4}$) and the second boxplot (b) is for a higher exploitable biomass at 60% of virgin ($B_{MEY} \approx B_{0.6}$). Each boxplot illustrates the distribution around the median (line in the middle of each box). The bottom and top of each box were the 25th and 75th percentiles. The whisker lengths indicate about 99% coverage of the MCMC simulations. B_{MSY} median values (t) by scenario 1) 143.140, 2) 158.820, 3) 186.590, 4) 211.880 and $B_{0.6}$ median values (t) by scenario 1) 125.510, 2) 122.970, 3) 145.040, 4) 186.100

Target reference point

The working group noted that a harvest strategy is to be developed for the fishery which will establish formal reference points for the stock. In the interim RBC advice should be made on the best available science and be guided by existing Australian Government harvest strategy policy.

The working group **recommended** that the B_{60} target reference point (aim for a stock level at 60 per cent of unfished biomass, used here as a proxy for MEY) is preferred over a MSY target reference point (B_{40}) for Spanish mackerel, recognising that the stock is a shared resource of high importance to traditional inhabitants.

The working group **noted** that:

- similarly high target reference points have been recommended for the Torres Strait TRL fishery and in the '*Green paper on fisheries management reform in Queensland, July 2016'*; and
- the updated stock assessment report recommended a target reference point above B_{MSY} to ensure healthy population biomass and catch rates, in order to achieve and balance sustainability, economic, social and cultural objectives.

Recommended Biological Catch

The working group noted advice from the updated stock assessment report that if harvests increase above 150 t and/or fishing effort increases above 1000 operation days, then catch rates may erode long term.

The Working Group **recommended** an RBC of **125 tonnes** for the 2017-18 Spanish mackerel fishing season having regard for the following:

- the need for a precautionary approach to take into account the uncertainties in the assessment;
- the preferred interim target reference point of $B_{60;}$ and
- RBC is based on an estimated median total harvest (tonnes) of the preferred stock analyses 1 and 2 for the exploitable biomass at B_{60}.

Agenda Item 3 – Work plan for assessing risk and managing potential expansion in effort on 'other' reef line species

The working group agreed to defer discussion on this item to allow adequate time for a full discussion.

It was noted that assessing risk and managing potential expansion in effort on 'other' reef line species will likely be a lengthy process (e.g. more than one meeting) and would require substantial input from the working group members. It was also noted that the development of a harvest strategy will play a role in the formation of a work plan for 'other' reef line species.

Action: AFMA to explore options to convene a Technical Working Group Meeting alongside the Tropical Rock Lobster Resource Assessment Group meeting scheduled for 13 December 2016.

MEETING CLOSED 4:15 PM

Attachment A

Outcomes of the last Finfish Working Group – 12-13 July 2016

Number	Recommendation
1.	The FWG **recommended** for the 2017-18 Spanish mackerel fishing season that**:** ▪ TAC setting advice to be finalised subject to consideration of updated stock assessment and advice from the newly convened Technical Scientific Working Group; ▪ Technical scientific working group to review stock assessment update to allow for full consideration of inputs and outcomes. Technical scientific working group to report back to FWG; ▪ The technical scientific working group should comprise the follow members: ➢ Scientific members ➢ Two industry members: Tony Vass, Kenny Bedford ➢ Andrew Tobin ➢ Nicole Murphy ➢ Government ▪ The technical scientific working group should consider the following: ➢ Disproportionate effort in Bramble Cay ➢ Local factors – unexpected factors (e.g. environmental and/or climate change related effects) ➢ Changes in accessible area of the fishery (closures) ➢ Estimates of TIB, Traditional, Recreational catches ➢ Logbook data quality ➢ Stock structure ➢ Catch rate objectives (effort & catch) ▪ Recognising the importance of precautionary approach, as an interim approach (noting Harvest Strategy to be developed) TAC should not exceed best estimates of MSY after taking into account all other sources of fishing mortality;
2.	The FWG **recommended** that the Spanish mackerel TAC remain unchanged (187.7t tonnes) for the 2016-17 fishing season noting the following: • the current TAC (187t) is based on average catches 2001-05. A stable period of catch; • recent reported catches are > 100 tonnes; • proposed lease amount for 2016-17 is 99 tonnes (across four boats) (18% TIB to TVH catch ratio was used in updated stock assessment);

Number	Recommendation

	• management risks include unreported catches and potential unknown impacts from coral bleaching; and
	• on balance management risks are acceptable this season however the next season TAC setting process should take into account updated stock assessment and agreed estimates of catch from other sectors. Catches and the TAC remain within estimates of maximum sustainable levels:
	  • *Begg et al 2006* maximum sustainable levels 146-264t
	  • *O'Neil & Tobin 2016/17*: *Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing*
	  ▪ maximum sustainable levels 145-210t
	  ▪ catch rates may reduce if future average harvests exceed 150t

3.	The FWG **recommended** that the coral trout TAC (134.9 tonnes) remain unchanged for the current fishing season (2016-17) and the 2017-18 fishing season noting the following: • the TAC (134.9t) is based on average catches 2001-05. A stable period of catch; • although there is no stock assessment for coral trout, the Management Strategy Evaluation conducted (Williams et al 2007) using four constant catch scenarios (80-170t) predicted biomass of at least 70% of unfished by biomass by 2025; • proposed lease amount for 2016-17 is 74 tonnes (across four boats); and • industry feedback that catch rates on Islands are considered good.
4.	For the 2016-17 fishing season the FWG recommended that the leasing out of 28.5 tonnes of other species by TSRA be supported subject to following **ACTIONS**: 1. improved logbooks (that enable accurate reporting of all species. The FWG noted that the AFMA logbook would require reprinting creating a possible timing issue and use of the QDAF logbook may be constrained by administrative constraints); 2. Prior reporting (possible use of QDAF system?)
5.	The FWG **recommended** that subject to further consideration by the Technical Scientific Working Group of coral trout to byproduct catch ratios when targeting coral trout and total take of 'other species' by other sectors – there should be no further increase above 30 tonnes until systems are in place to independently verify catches, a species-specific risk assessment has been undertaken and where applicable catch triggers and control rules have been agreed.

Attachment B

TORRES STRAIT FINFISH TECHNICAL SCIENTIFIC WORKING GROUP MEETING

10 November 2016

The Space meeting room, Ground Floor
80 Anne Street, Brisbane

MEETING TIME:

9:00am – 3:00pm, Thursday, 10 November

AGENDA

1. **Preliminaries**
   1.1. Opening Prayer / Acknowledgement of Traditional Owners / Welcome / Apologies
   1.2. Adoption of Agenda
   1.3. Declaration of Interests

2. **Updated Spanish mackerel stock assessment review**

3. **Work plan for assessing risk and managing potential expansion in effort on 'other' reef line species**

4. **Other Business**

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16-17 March 2017
TOTAL ALLOWABLE CATCHES **Coral Trout: Recommended Total Allowable Catch for the 2017-18 Season**	**Agenda Item No. 3.2** **For noting**

RECOMMENDATIONS

That the Working Group **NOTE** that it recommended at its meeting on 12-13 July 2016 that the coral trout TAC (134.9 tonnes) remain unchanged for the 2017-18 fishing season.

KEY ISSUES

1. At its meeting on 12—13 July 2016 the FWG recommended that the coral trout TAC (134.9 tonnes) remain unchanged for both the 2016-17 and 2017-18 fishing seasons noting the following:
   - the TAC (134.9t) is based on average catches 2001-05. A stable period of catch;
   - although there is no stock assessment for coral trout, the Management Strategy Evaluation conducted (Williams et al 2007) using four constant catch scenarios (80-170 t) predicted biomass of at least 70% of unfished by biomass by 2025;
   - proposed lease amount for 2016-17 is 74 tonnes (across four boats); and
   - industry feedback that catch rates on Islands are considered good.

2. The FWG identified the following issues for further consideration:
   - significant decline in effort following buyout. What are the drivers?
     - historically, significant catches were taken within 10nm closure areas
     - possible localised depletion?
     - lack of effort - only one sunset licenced boat operating
   - local factors – unexpected factors (eg environmental)
   - moving to live coral trout - possible driver for changes in catch composition?
   - QLD east coast data – take into account trends.
   - estimates of TIB, Traditional and Recreational catches.

3. A harvest strategy is being developed for the fishery (see Agenda Item 5.1). The harvest strategy will provide guidance the type of data and assessments needed to underpin advice on future TACs taking into account the risk-catch-cost tradeoffs.

4. The harvest strategy project will have regard for the issues for consideration identified by the FWG listed in paragraph 2.

5. The TAC for coral trout is based on historical catch data from 2001-2005 and has remained unchanged since the 2008-09 season.

TORRES STRAIT FINFISH WORKING GROUP	16 – 17 March 2017
MANAGEMENT **3.3 Other reef-line species**	**Agenda Item No. 3.3** **For Discussion and Advice**

RECOMMENDATIONS

1. That the Working Group **DISCUSS** and **PROVDE ADVICE** on assessing risk and managing potential expansion in effort on 'other' reef line species.

KEY ISSUES

2. At its meeting on 12-13 July 2016, the Finfish Working Group recommended that subject to further consideration by the Technical Scientific Working Group (TSWG) of coral trout to by-product catch ratios when targeting coral trout and total take of 'other species' by other sectors –

   there should be no further increase above 30 tonnes until systems are in place to independently verify catches, a species-specific risk assessment has been undertaken and where applicable catch triggers and control rules have been agreed.

3. Although scheduled for discussion at the 10 November 2016 TSWG meeting, the development of a work plan to assess risk and manage expansion on other reef line species was deferred until a subsequent meeting.

4. Future expansion in effort for 'other' species requires effective risk assessment and management measures. Taking into account the risks identified by the FWG at its last meeting there is also a need to review the 30t limit in light of the species composition of catches taken this season.

5. AFMA proposes that a review of catches is undertaken following the current fishing season.

6. Further work to assess the potential to expand effort on 'other' species should depend on:

   a) a detailed fishing proposal for expansion;

   b) scientific advice on the conditions for any expansion in terms of species, location, catch levels, data collection requirements and any other matters required to mitigate risks to the stocks.

   c) where appropriate, management measures and policies be considered by the FWG; and

   d) available funding for the required scientific and technical advice.

7. Options for ongoing scientific advice is to be discussed under Agenda Item 5.2.

8. As requested by the FWG, updated catch data is provided at **Attachment A**.

BACKGROUND

9. Since 2008 the TSRA has leased-out fishing licences with individual catch entitlements for coral trout and Spanish mackerel on behalf of traditional inhabitants. For the first time TSRA are leasing catch entitlements for 'other' reef species in the 2016/17 season.

10. At its meeting on 12-13 July 2016, the Working Group noted the various fishing plans of operators seeking to take 28.5 tonnes in total of 'other' reef species i.e. not coral trout or Spanish mackerel**.** Three licences have been granted a catch entitlement for 'other' reef fish species in this current season with quotas of 1, 7.5 and 20 tonnes respectively. The proposed fishing plans as reported at the FWG include:

    - the take of 'other' species as a byproduct (i.e. not targeted);
    - two operators plan to land live coral trout;
    - one operator plans to target deepwater 'other species' (20 tonnes) including:
        - emperor
        - job fish
        - flame snapper
        - nannygai
    - live fish to be unloaded in Cairns; and
    - one operator proposes to use two primary vessels (note same operation is required to have VMS under QDAF conditions).

11. The FWG identified the following measures that may support further expansion in effort to other species:

    1) observer coverage – provides verification of logbooks and biological samples (length and age);
    2) port sampling – for biological samples;
    3) species triggers (possible vulnerable species) and/or area triggers (possible risk of localised depletion);
    4) consideration of iconic species, other values;
    5) VMS;
    6) Fish Receivers System; and
    7) possible requirement for minimum 'quota' holdings for 'other' species.

12. The FWG also identified the following for further consideration:

    1. preliminary assessment of catches and catch ratio of coral trout to byproduct.

13. The FWG identified the following the risks and benefits associated with the proposed leasing of 28.5 tonnes of other species:

    Risks

    - Uncertainty around catch composition (i.e. risks to specific species) arising from incomplete and/or inaccurate catch and effort reporting.
    - Current logbooks – not optimal for reporting a wider range of 'other' species.
    - Discards (post capture deaths).
    - Deepwater species are generally longer lived at ~ 30-40 years. NT and Gulf area assessment found species have low natural mortality therefore the sustainable harvest rate is likely to be low (taking a low percentage of the stock). Six species in aggregate are included in the in the Gulf limit of 450t:
        - crimson snapper (age at maturity 4-7yrs)
        - large mouth nannygai (9-12yrs)
        - red emperor (10-13yrs)
        - goldband snapper (6-8yrs)
        - mangrove jack (8-11yrs)
        - golden snapper (10-13yr)

    Benefits

    - Sustainable fishing industry development for traditional inhabitants

REPORTED CATCH DATA

14. Updated annual catch data for reef line species and the ratio of coral trout and 'other' reef fish species is provided in **Table 1.**

Post-buyback leasing data

15. At the 12-13 July 2016 Finfish Working Group meeting data from 2008-09 season to present was presented by season.

16. The average byproduct reef-line catch per year presented at the July 2016 meeting was 1.8 tonnes. Since this time, additional recent data has been added to this analysis meaning the value is now slightly higher at 2.6 tonnes a year on average.

17. Over the same period the average ratio of coral trout and 'other' reef-line species has varied between 5 to 18 per cent, with a mean season value of 8 per cent.

Table 1. Seasonal catches of reef-line fishes 2003-04 season to 2007-08 season. Source TSF01 logbooks.

Species	**2008-2009**	**2009-2010**	**2010-2011**	**2011-2012**	**2012-2013**	**2013-2014**	**2014-2015**	**2015-2016**	
Barramundi cod	542	238	1086	745	429	756	646	1223	
Red Emperor	223	70	398	202	125	160	207	256	
Sea Bass	843	10	79				15	84	
Spangled Emperor	197	68	244	29	35		8	45	
Emperor	1968				18			4	
Rock cods	125	280	706	1017	480	932	575	1364	
Trevally	1314					785	649	775	
Silver Trevally						172			
Venus Tuskfish		93	341	145	34	79			
Black Kingfish								11	
Jobfish			8					29	
Sea Bream Snapper								43	
Blue-toothed Tuskfish							1	30	
Australian Tusk								4	
Mangrove Jack								9	
Maori Sea Perch								6	
Parrotfishes								6	
Green Jobfish								5	
Total (other species)	**5212**	**759**	**2862**	**2138**	**1121**	**2884**	**2101**	**3894**	Av. 2.6 t
Coral trout	**28873**	**10538**	**40264**	**34982**	**21731**	**30162**	**20529**	**38452**	Av. 28.2 t
% of byproduct to coral trout	18	7	7	6	5	10	10	10	

Pre-buyback data

18. Data for the period prior to the buyback for which accurate logbook data exists (2003 to 2008 indicates that annual catches of byproduct reef species varied from 1.4 tonnes to 43.5 tonnes with an average yearly value of 20.5 tonnes.

19. The number of fishers reduced during this period from 21 fishers in 2003 down to 3 fishers in 2007.

Table 2. Seasonal catches of reef-line fishes 2003-04 season to 2007-08 season. Source TSF01 logbooks.

Species	**2003-2004**	**2004-2005**	**2005-2006**	**2006-2007**	**2007-2008**	
Cod - unspecified	9669	5337	639			
Red Emperor	7694	5459	1608	705	163	
Shark other	3284	10602	2680			
Barramundi cod	4758	3659	1591	1177	580	
Mixed fish	4525	3795	200	2		
Sea Bass	4658	3435	656	325	50	
Spangled Emperor	3992	3033	831	364	248	
Emperor	3523	2378	64	214	21	
Rock cods	40	676	1141	1216	358	
Maori Wrasse	581	1861	135			
Grouper and Cod		2320	377			
Fork-tailed Catfish						
Trevally	428	464				
Silver Trevally		348		372		
Sea Perch	305					
Black Kingfish		123	100	94		
Jobfish		55			13	
Eastern Blue Groper	24					
Australian Tusk	3			12		
Bight Redfish	3					
Sweetlips	2					
Byproduct total	**43487**	**43543**	**10022**	**4481**	**1433**	Season av. 20.5 t
Coral trout	124772	102977	50379	50590	32467	Season av. 72.2 t
% of byproduct to coral trout	35	42	20	9	4	

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 -17 March 2017
RESEARCH **Update – Monitoring the traditional take of finfish in the TSPZ**	**Agenda Item No. 4.1** **For noting**

RECOMMENDATIONS

That the Working Group **NOTE** the update on the current project *Monitoring the traditional take of finfish in the TSPZ* led by Nicole Murphy, CSIRO

KEY ISSUES

1. The initial pilot phase of the project has been completed and the first milestone report has been submitted (**Attachment A**).
2. Initial pilot phase survey work on Erub Island returned mixed results and achieved a 'snapshot' single collection of survey data. An ongoing monitoring program on Erub is not yet underway.
3. The project team is reviewing the utility of the preliminary data collected and will consider where focus should be placed for the remaining time and budget of the project.
4. The AFMA may seek advice from the FWG in future should revisions to the project scope be required.

BACKGROUND

5. CSIRO have advised that both the project background work (milestone report is at **Attachment A**) and the initial pilot phase survey work on Erub Island is now complete. Reports indicate that the project was well received by the Erub community with good attendance and support given at a community meeting introducing the project and CSIRO scientists.
6. The survey was unable to engage a long-term community monitor with the pre-arranged candidate falling through due to other commitments. Instead a revised single 'snapshot' survey was taken by the CSIRO staff while on the island. Despite community support, the survey was limited by time and participation levels. Some people were not entirely comfortable with providing their individual catch data.
7. The Erub Fisheries Management Association Chairperson has advised that to improve survey participation it will be important to:
    a. advise community members being surveyed upfront that the project was driven by the community;
    b. don't proceed with the survey if people are uncomfortable;
    c. use local monitors who are suitable for the role;
    d. work within the MyPathways program with support from the Rangers - monitoring could be a Mypathway activity and the monitor could be supported by the Rangers for transport (noting transport is not an issue on the other islands); and

e. recognise that it may take 3-4 months to get monitoring arrangements established.

8. At this stage there are no plans for the project team to return to Erub noting resources are allocated for the project to work across the remaining islands.
9. The project is planning to roll out training of monitors on Poruma and Masig islands with community permission being given. The Mer community is also supportive.
10. The project team intends to analyse the preliminary Erub survey data to determine its utility.
11. Noting that project has two broad objectives (1. collect data from five islands to estimate the traditional islander take of finfish (by way of a census of all houses) and 2. Investigate options for establishing an ongoing community base catch monitoring program) and the level of take-up achieved at Erub, it is prudent to review the focus of the project following an update on the utility of the data collected to date. Following this an informed decision might be made on the remaining time and budget of the project and where the focus should be most appropriately placed between:
    a. Obtaining sufficient data to produce a reliable estimate of traditional take. This might include a revised methodology focusing for example on collecting more data from fewer islands.
    b. General community awareness raising and capacity building to develop a community based reporting and monitoring framework in the longer-term. The scope could be revised to include both traditional and commercial catch reporting.
12. Advice will be sought from both the FWG and the TSRA FF Quota Management Committee (the committee which recommended the research) on any suggested changes to the project scope.

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Monitoring the traditional take of finfish species in the TSPZ

Progress report

Draft Monitoring Program

Nicole Murphy, Mibu Fischer, Tim Skewes and David Brewer

December 2016

A Milestone report for TSRA and AFMA

Australian Government
Australian Fisheries Management Authority

Australian Government

TSRA
www.tsra.gov.au

CSIRO Oceans and Atmosphere Flagship

Citation

Murphy N, Fischer M, Skewes T, Brewer D (2016) Monitoring the traditional take of finfish species in the TSPZ: A draft monitoring strategy. CSIRO, Australia.

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Important disclaimer

Contents

Figures

Tables

Acknowledgements

This research project was funded by the Torres Strait Regional Authority and CSIRO Oceans and Atmosphere.

1 Introduction

The Torres Strait Finfish Fishery (TSFF) is a multispecies fishery with both commercial and subsistence effort, fished by islanders and non-islanders. The fishery is managed as two separate fisheries, the Torres Strait Spanish Mackerel Fishery (TSSMF) and the Torres Strait Reef Line Fishery (TSRLF). The TSSMF predominately targets Spanish mackerel (*Scomberomorus commerson*), and the Torres Strait Reef Line Fishery (TSRLF) mainly targets Coral trout (*Plectropomus* spp., *Variola* spp.), with smaller catches of tropical snappers and emperors (Lutjanidae), trevally (Carangidae) and cods (Serranidae). There is also an inactive Torres Strait Barramundi Fishery (TSBF).

The TSSMF and TSRL fishery operate in eastern Torres Strait, with the western Torres Strait closed to fishing along a line from Cape York to Dauan Island. The majority of commercial catch is taken at Erub, Masig and Mer islands.

In 2007-2008 all commercial catch entitlements for the TSSMF and TSRLF reverted to the Traditional Inhabitant sector through the voluntary buy-back of Torres Strait Fishing Boat Licences (TVH licenses). Catch entitlements are held in trust by the Torres Strait Regional Authority (TSRA), with non-Traditional Inhabitant fishers participating in the fishery by leasing temporary (Sunset) licences. The TSRA also holds entitlements for Papua New Guinea (PNG) in accordance with the Torres Strait Treaty, where 40 per cent of Spanish mackerel endorsements are made available to PNG fishers (PZJA, 2014).

A management plan for the TSFF was finalised in 2013. The plan includes strategies for setting of a total allowable commercial catch, requirements on gear, size and area restrictions, take, and carry limits. A Quota Management Committee (QMC) determines the quota that will be available annually for non-Traditional Inhabitant leasing. A 10nm closure around the islands of Erub, Mer, Ugar and Masig is also in place for non-Traditional Inhabitant fishers leasing temporary licences.

Reporting of fishing activity and catch in the TSFF is compulsory for Sunset licence holders and Traditional Inhabitant fishers with boats over 7m (there are currently no Traditional Inhabitants operating boats over 7m) (PZJA, 2014). Licenced catch, including target and by-product, is monitored through compulsory logbook (TSF01) returns.

Catch reporting for the entire Traditional Inhabitant sector is non-compulsory. A voluntary reporting system is in place for small vessels (<7m in length) in the Traditional Inhabitant Boat (TIB) sector, with docket book recording introduced by the Australian Fisheries Management Authority (AFMA) in 2004. Fish buyers at community and commercial freezers also report product received from Traditional Inhabitant fishers using the Torres Strait Seafood Buyers and Processors Docket Book (TDB01) (see Appendix H).

Spatial catch data is used by regional management bodies (TSRA, AFMA) and local decision-makers in a co-management framework for catch monitoring, stock assessment and calculation of Total Allowable Catch (TAC) (Table 1).

Table 1. Decision analysis data needs matrix for catch.

DECISION TYPE	ANALYSIS TYPE	DATA NEEDS	TIMING OF DECISION
Catch allocation (leasing)	Committee decision	TAC TSI catch	Annual
TAC (sustainable catch)	Stock assessment Total catch	? Lease and TSI catch data	Annual to 5 yearly
Co-management harvest strategies	Community negotiation within a broad framework	Sustainable catch and stock structure Fisheries biology and ecology	As needs basis

Calculation of total fishery TAC is comprised of input catch data from the Traditional subsistence, TIB commercial, Recreational and Annual leased sectors (Figure 1).

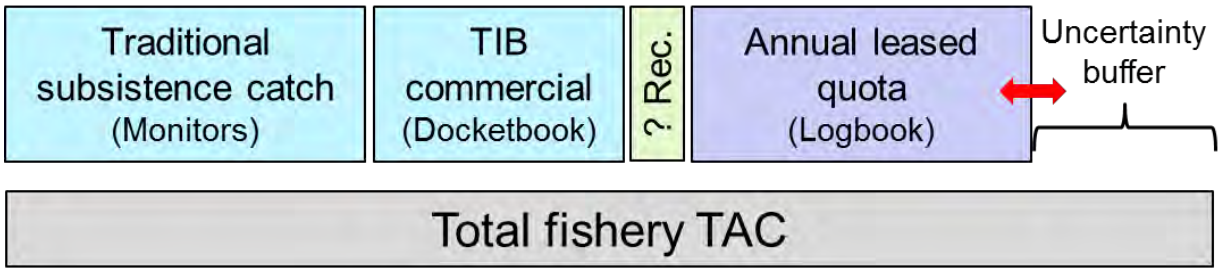


Figure 1. Catch sharing calculations for total fishery Total Allowable Catch.

The subsistence catch for the TIB sector and the traditional subsistence catch is currently not monitored. While the known catch of commercial species is well under the combined indicative minimum Maximum Sustainable Yield (MSY) estimates of about 230 t (80 t for coral trout and 150 t for Spanish mackerel), robust long time series catch data for the commercial and subsistence sectors of the TSFF is required.

Past creel studies of catch for the Torres Strait islands of Darnley, Masig and Murray showed approximately 15% of the annual total catch was retained for subsistence during commercial fishing (Busilacchi et al., 2012). Families of commercial importance including Serranidae, Lutjanidae and Lethrinidae were found to have decreased in catch over time, being targeted in both commercial and subsistence fishing (Busilacchi, 2008). It was also found that most of the commercially important species kept for subsistence, comprised individuals smaller than the minimum legal size (Busilacchi et al., 2012). Mugilidae and Siganidae also decreased in catch over time, suggesting localised over exploitation (Busilacchi, 2008).

Estimates of the subsistence catch of islander communities are essential to protect the Torres Strait finfish fishery from potential overexploitation. This project will produce data on the subsistence catch of Torres Strait Islander communities through an island monitoring program. Overall the project will take a whole-of-fishery and community approach, to facilitate future islander ownership of the program.

1.1 Objectives

- Characterise current and future data needs for the targeted finfish resources.
- Quantify the traditional take of finfish species in the Torres Strait Protected Zone, including the spatial distribution of catches within and if able, beyond the 10 nm zone of each community.
- Deliver cost effective and acceptable monitoring options to key stakeholders including options for the long-term continuation of traditional take surveys (potentially across a range of species).
- Train Torres Strait islanders (through the My Pathways or Rangers program) to carry out monitoring during the program and into the future.

1.2 Outputs

The outputs from the project will include estimates for subsistence finfish catches in Torres Strait. These will be collated with all other finfish data to assess the health of populations, helping to ensure that species remain abundant into the future. Monitoring surveys will also enable important home reef species for islands to be identified and managed sustainably. This knowledge also contributes to the development of a Torres Strait Finfish ID guide that incorporates local islander names for species, which further aids the understanding and utilisation of Torres Strait resources.

The project also provides training to Torres Strait islanders, developing management skill as well as understanding base level fisheries assessment needs and fishery observer practices. This will realise the potential for significant economic development for the TSFF, while protecting the livelihoods of Torres Strait islanders.

2 Categorisation - TSFF sectors

2.1 Torres Strait Spanish Mackerel Fishery

Three fisher types: Non Islander commercial, Traditional Inhabitant commercial and Traditional Inhabitant subsistence. Groups separated on the basis of four characteristics: Licencing, catch/quota, size limit and fishing gear.

2.1.1 **Non Islander commercial**

- Non-Traditional Inhabitants participate in the fishery through leasing a Sunset licence.
- Operate under a quota; allowance of 20 kgs at any one time.
- Permitted to use a general purpose bait net.
- Catch taken using trolling, hand-lining and drop-lining.
- Minimum Legal Size (MLS).

2.1.2 **Traditional Inhabitant - commercial**

- Traditional inhabitants participate in the fishery through TIB licences with mackerel endorsement.
- Operate under a quota; allowance of 20 kg at any one time.
- Permitted to use a general purpose bait net.
- Catch taken using trolling, hand-lining and drop-lining.
- Minimum Legal Size (MLS).

2.1.3 **Traditional Inhabitant – subsistence**

Traditional Inhabitants participate in the fishery, no restrictions.

Motorised boats.

2.2 Torres Strait Reef Line Fishery

Three fisher types: Non Islander commercial, Traditional Inhabitant commercial and Traditional inhabitant subsistence. Groups separated on the basis of six characteristics: Licencing, catch/quota, size limit, fishing gear, species and location.

2.2.1 **Non Islander commercial**

- Non-Traditional Inhabitants participate in the fishery through leasing a Sunset licence.
- Operate under a quota; 50 tonnes of coral trout 2010/11 (AFMA 2010).
- Permitted to use a general purpose bait net, other nets prohibited.

- Line fishing with no more than 6 hooks attached to each line.
- No more than 3 fishing apparatus can be used per boat.

2.2.2 Minimum legal size and Maximum legal size

- Vessels must be less than 20m.
- No take species.
  - Serranidae, Lutjanidae and Lethrinidae.

2.2.3 Barramundi

PNG coast, Saibai, Boigu, Moimi, Kaumag, Aubusi and Dauan Islands.

Hand spears, hand set monofilament gill nets.

2.2.4 Traditional Inhabitant - commercial

- Traditional inhabitants participate in the fishery through TIB licences with reef line endorsement.
- Operate under a quota.
- Permitted to use a general purpose bait net, other nets prohibited.
- Line fishing with no more than 6 hooks attached to each line.
- No more than 3 fishing apparatus can be used per boat.
- Minimum legal size and maximum legal size.
- Vessels must be less than 20m.
- No take species.
  - Serranidae, Lutjanidae and Lethrinidae.

2.2.5 Traditional Inhabitant – subsistence

- Traditional Inhabitants participate in the fishery, no restrictions.
- Single gear; hand lines.
- Permitted to use nets.
- Motorised boats.
- Mugilidae and Siganidae; targeted by gears from shore.
- Species fished:
  - Mugilidae and Siganidae, targeted by gears from shore; traditional inhabitant subsistence, traditional inhabitant commercial.
  - Serranidae, Lutjanidae and Lethrinidae, Non islander commercial and Traditional inhabitant commercial.

3 Islander consultation

3.1 Finfish Inception Meeting

See Appendix A for full meeting transcripts.

Monitoring the traditional take of finfish species in the Torres Strait Protected Zone, meeting held on 17th February 2016, Thursday Island, Torres Strait Regional Authority LMSU Building.

Representatives from Malu Lamar, My Pathway, TSRA, AFMA and CSIRO attended, where project approach, island involvement and implementation process were discussed.

3.2 Islander involvement

This project involves Torres Strait Islanders, both in the design, development and undertaking of the survey, as well as the interpretation of results. Initially, collaboration will involve the TSRA and AFMA to identify appropriate communities and stakeholders, and to design suitable communication materials for use during the project.

Once focus communities are identified, we will contact local community stakeholders including TSIRC Councillors, Prescribed Body Corporate Chairs and Fisher Group representatives to explain the project through an introductory letter and project fact sheet, and to seek approval and advice from communities. Interested communities will then be supplied with the project plan and appropriate background materials in common use language.

Prior to survey commencement, island stakeholders and the community will be met with in person to seek approval for the work, and to provide the opportunity for information sessions where further support and advice will be requested from the community.

3.2.1 **Project introduction letter**

OCEANS AND ATMOSPHERE

EcoSciences Precinct: Boggo Road, Dutton Park, QUEENSLAND 4102
GPO Box 2583, Brisbane QUEENSLAND 4001, Australia
T +61 1300 363 400 • ABN 41 687 119 230

PBC Chair
c/- TSIRC Torres Strait Island
Torres Strait Island
via Thursday Island QLD 4875

July 2016

Dear Councillor

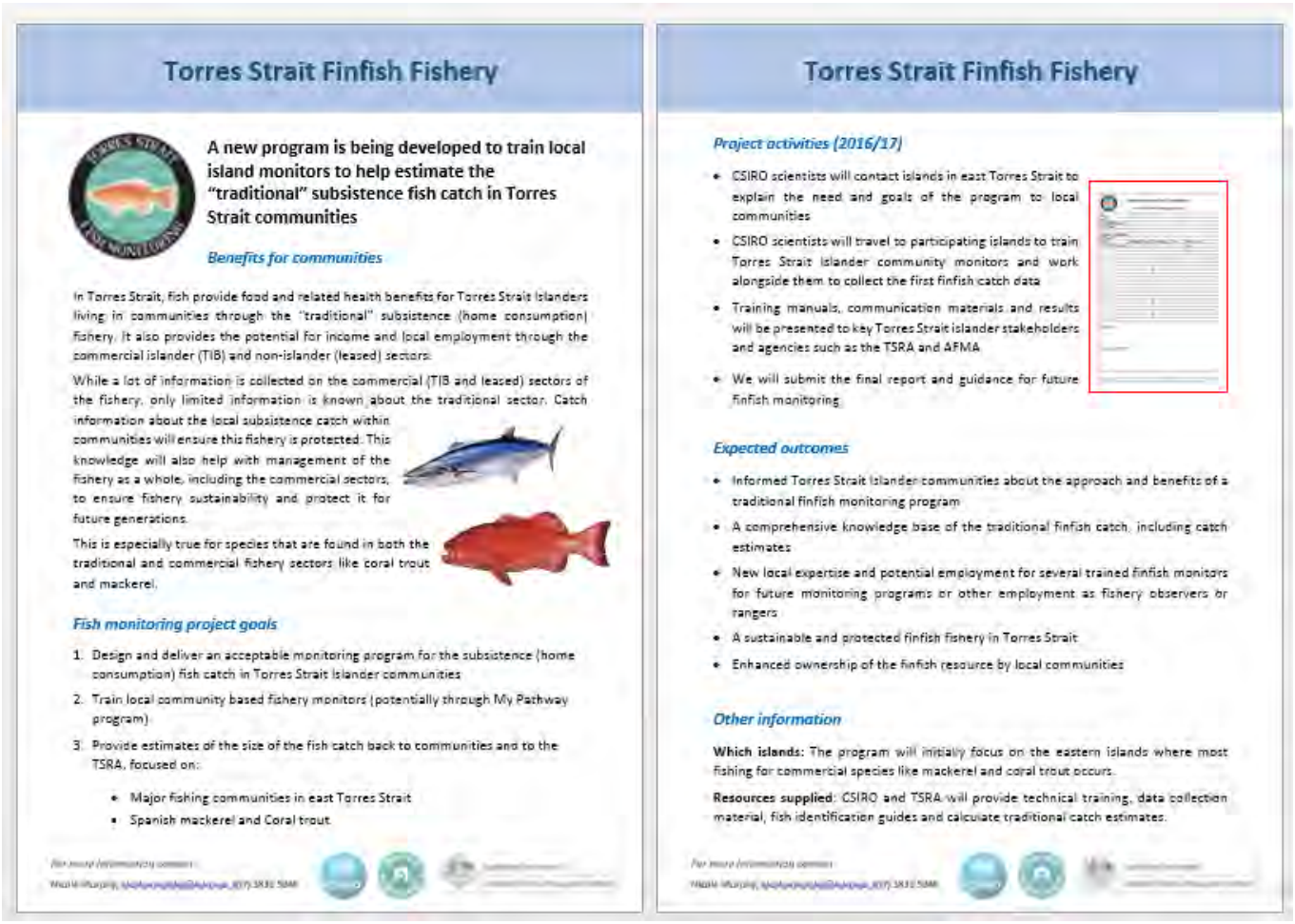
I would like to introduce myself please. My name is Nicole Murphy and I work for CSIRO Oceans and Atmospheric Research in Brisbane, Queensland. I understand Mr Tim Skewes recently contacted you in relation to a new program that is being developed to help estimate the 'traditional' subsistence fish catch in Torres Strait communities. It was great to hear that you were interested in the project and were happy for some further information to be provided, please find attached a project information sheet.
I will be involved with helping to organise and train the island fishery monitors. I would like to ask for your support and guidance please for this part of the project, in order for the most successful outcome of the new program.

If there is broad island agreement for the program, the project team will plan to visit sometime in late August for community consultation and potentially training of monitors.
Please feel free to contact me with any questions, my direct number is (07) 3833 5948 and my email address is nicole.murphy@csiro.au

Yours sincerely

Nicole Murphy

3.2.2 **Project factsheet**



Torres Strait Finfish Fishery

A new program is being developed to train local island monitors to help estimate the "traditional" subsistence fish catch in Torres Strait communities

Benefits for communities

In Torres Strait, fish provide food and related health benefits for Torres Strait Islanders living in communities through the "traditional" subsistence (home consumption) fishery. It also provides the potential for income and local employment through the commercial islander (TIB) and non-islander (leased) sectors.

While a lot of information is collected on the commercial (TIB and leased) sectors of the fishery, only limited information is known about the traditional sector. Catch information about the local subsistence catch within communities will ensure this fishery is protected. This knowledge will also help with management of the fishery as a whole, including the commercial sectors, to ensure fishery sustainability and protect it for future generations.

This is especially true for species that are found in both the traditional and commercial fishery sectors like coral trout and mackerel.

Fish monitoring project goals

1. Design and deliver an acceptable monitoring program for the subsistence (home consumption) fish catch in Torres Strait Islander communities
2. Train local community based fishery monitors (potentially through My Pathway program)
3. Provide estimates of the size of the fish catch back to communities and to the TSRA, focused on:
    - Major fishing communities in east Torres Strait
    - Spanish mackerel and Coral trout

For more information contact:

Torres Strait Finfish Fishery

Project activities (2016/17)

- CSIRO scientists will contact islands in east Torres Strait to explain the need and goals of the program to local communities
- CSIRO scientists will travel to participating islands to train Torres Strait Islander community monitors and work alongside them to collect the first finfish catch data
- Training manuals, communication materials and results will be presented to key Torres Strait Islander stakeholders and agencies such as the TSRA and AFMA
- We will submit the final report and guidance for future finfish monitoring

Expected outcomes

- Informed Torres Strait Islander communities about the approach and benefits of a traditional finfish monitoring program
- A comprehensive knowledge base of the traditional finfish catch, including catch estimates
- New local expertise and potential employment for several trained finfish monitors for future monitoring programs or other employment as fishery observers or rangers
- A sustainable and protected finfish fishery in Torres Strait
- Enhanced ownership of the finfish resource by local communities

Other information

Which islands: The program will initially focus on the eastern islands where most fishing for commercial species like mackerel and coral trout occurs.

Resources supplied: CSIRO and TSRA will provide technical training, data collection material, fish identification guides and calculate traditional catch estimates.

For more information contact:

4 Finfish Monitoring

4.1 Project approach

4.1.1 Goal

To estimate island TIB and subsistence catch with as precise and accurate an estimate as possible. Catch data to include undersize individuals and if possible, spatial and temporal components of the catch.

4.1.2 Design criteria

- Several design criteria were identified to best avoid misinterpretation and poor quality data (see Appendix E), these included:
- Census approach rather than sampling
- Community self-reporting
- Paper reports that can be collected and entered onto a central database
- Need for dedicated person on each island to act as facilitator and primary driver for data collection
- Making households the primary sampling unit on each island to ensure maximum coverage

4.1.3 Species

The survey will attempt to include all species, but specifically target:

- Tier 1: Spanish mackerel and Coral trout
- Tier 2: Barramundi cod, Lutjanids (commercial species), Cod (commercial species)
- Tier 3: All other finfish with initial focus on important species groups for islands (Trevally, Mullet, Siganids)

4.1.4 Islands

The first surveys will focus on the eastern and central islands where most Spanish mackerel and Coral trout are caught in Torres Strait.

4.1.5 Data collection

- Individual households will be given an ID code to protect their privacy
- Data sheets to record weeks catch in numbers by species and to be filled out by the fisher/household in the presence of the monitor

- Island monitor to co-ordinate data collation and transfer to a central facility eg. CSIRO or Thursday Island (AFMA/TSRA)
- Monitors to collect data on a set day
- Monitors to best manage their time eg. one village one day, other village next; as long as day of the week consistent

4.1.6 Data sheets

Catch monitoring will be recorded on data sheets and capture the following information:

- Species counts
- Use of fish for subsistence and/or income
- If fish are sold and where
- Island fisher demographic
- Length and/or weight data during dedicated sampling or when the opportunity arises

4.1.7 Data integrity

Data will be entered by CSIRO or by AFMA/TSRA staff and held in a central, secure facility. This will ensure a level of accuracy and comprehensiveness for the monitoring survey.

4.1.8 Analysis

Robust statistical approaches will be applied to counter bias and ensure sufficient precision. Any occurrences in the survey of missing time i.e. the monitor is unable to carry out his/her duties can be managed, but missing households will be difficult to recuperate.

Household data collected in addition to the fishing census will provide the capacity for sampling statistics. The final statistic for the survey analysis is identified as weight, with weight able to be calculated from length and conversion factors available from other Torres Strait data (Figure 2). Weight is also able to be calculated from average weight, using methods from other studies and existing size sampling of catch from the literature (Figure 3).

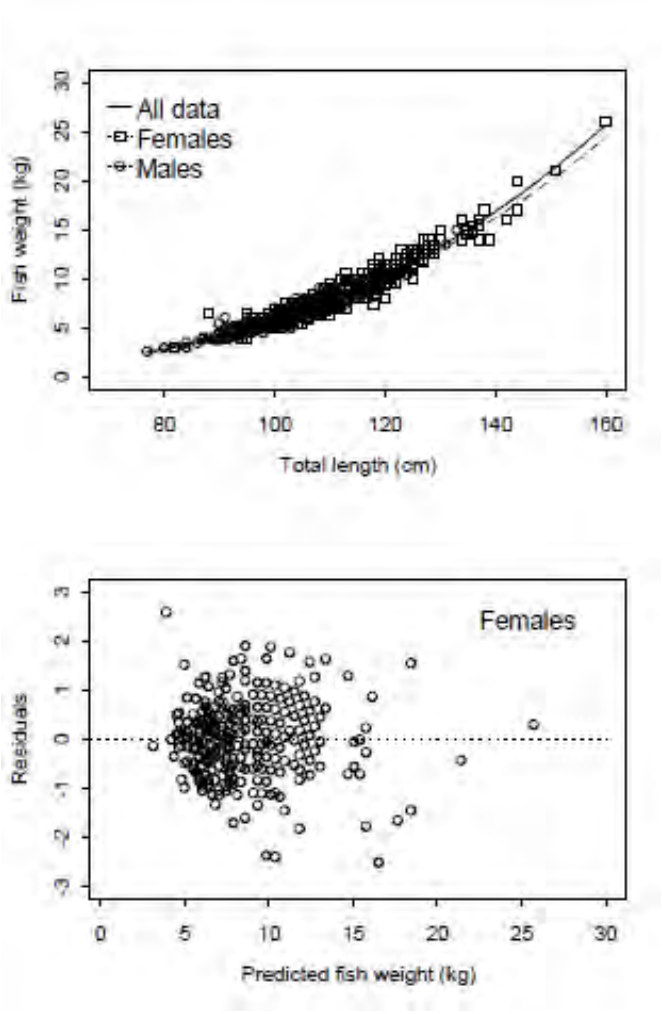


Figure 2. Total length (cm) – weight (kg) sex-specific relationships of Spanish mackerel (Begg et al., 2006).

Females: $Wg = 2.960e - 6(TL^{3.148})$

Males: $Wg = 4.224e - 6(TL^{3.068})$

All data: $Wg = 2.718e - 6(TL^{3.165})$

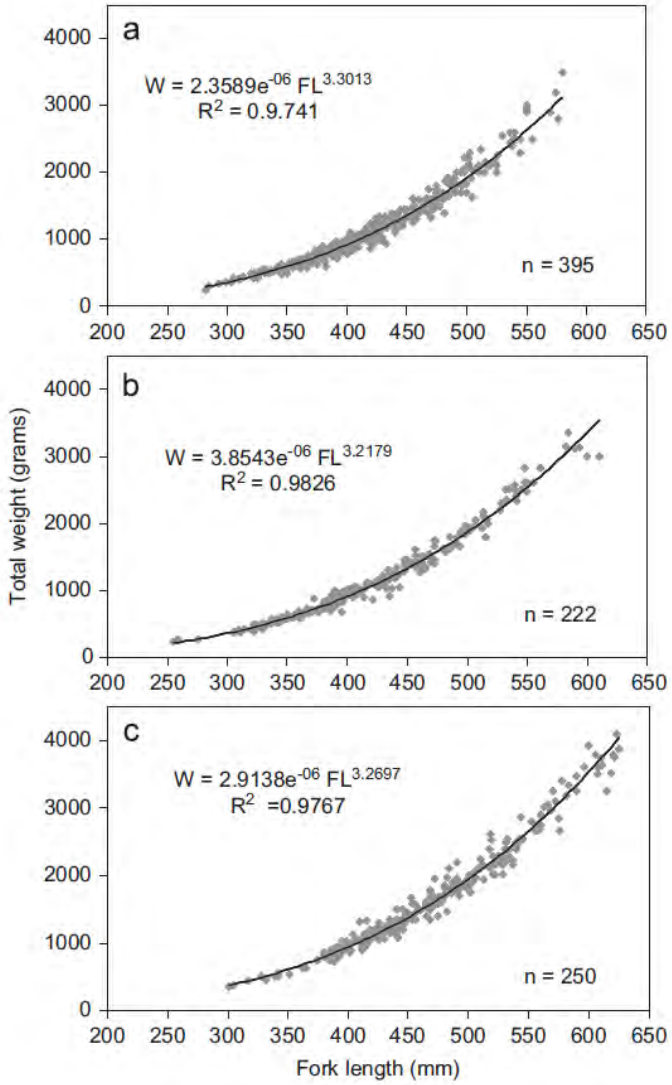


Figure 3. Length at weight data and fitted power curves for (a) *Plectropomus leopardus*, (b) *P. maculatus* and (c) *P. areolatus* from eastern Torres Strait (Williams et al., 2008).

$W = 2.3589e^{-06} FL^{3.3013}$ *Plectropomus leopardus*

$W = 3.8543e^{-06} FL^{3.2179}$ *P. maculatus*

$W = 2.9138e^{-06} FL^{3.2697}$ *P. areolatus*

4.1.9 Island monitors

Training for one, or more community members as monitors to carry out the survey will be instigated through the My Pathway and/or TSRA ranger program. The monitor will be identified by an island basis that best reflects community needs. Monitors will also have exposure to basic stock assessment principles and fishery population dynamics through the course of the project.

4.1.10 Communities

Depending on approval from Torres Strait communities for project involvement, the initial focus will be on the eastern and central islands of Erub, Masig, Mer, Poruma and Ugar. The most recent

fishing activity having occurred in this region, particularly for the commercially important species of mackerel and trout. Previous subsistence monitoring studies are also from this region, allowing for data comparisons for some species and years (Busilacchi, 2008).

The first finfish monitoring survey will begin as a pilot study at Erub Island, as proof of concept and to actively develop survey techniques through community input. This approach will allow for a more comprehensive roll out to other islands during the current project, or in the future.

5 Project risk

The finfish monitoring project will rely on a designated island monitor to document household catch on a weekly basis and submit records to a central holding facility. A comprehensive snapshot of island catch data will be obtained during island monitor training and when the first survey is undertaken. If further data recorded by monitors is patchy or non-existent, the initial data capture of island catch will enable correlation to previous work by Busilacchi (2008) for the islands of Erub, Mer and Masig. If this is the case, we believe the benefits of the finfish monitoring exercise with respect to knowledge generation concerning fishing dynamics, islander engagement and identifying issues related to Traditional Ownership far outweigh the project risk.

6 Ethical conduct

6.1 Traditional Knowledge

Special consideration will be taken with all 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 the TSRA and local island leaders to ensure full local support and agreement over the handling of TK information.

6.2 CSIRO Ethics Approval

All human research conducted by CSIRO must comply with the values, principles, governance and review processes specified in the National Statement on Ethical Conduct in Human Research (2007), the Australian Code for the Responsible Conduct of Research (2007) and any relevant state and national legislative requirements.

The Finfish Monitoring project has gained approval from the CSIRO Ethics committee and as such participants are required to sign a consent form detailing their role in the project (Figure 4), and be provided with specific project information and project contact details. Participants are able to withdraw from the project at any time and there is no risk of prosecution following disclosure of fishing information (Figure 5).

RESEARCH PARTICIPANT CONSENT FORM
Finfish Monitoring

Dear Participant

Please review the information below and sign where required if you agree to participate in this research project.

I _____ acknowledge that:

- I have agreed to participate in the above project being conducted by the CSIRO.
- I understand my participation in the research will involve a weekly interview about whether I went fishing during the last week and what I caught.
- I have been provided with contact details of the investigating officers and understand that I can contact them at any point during the study. I have also been provided with the contact details of an independent ethics officer at CSIRO should I wish to raise any concerns or complaints about the conduct of the research.
- I understand that my participation in the project is entirely voluntary and that I am free to withdraw from the study at any time and without having to provide a reason for my withdrawal.
- I understand that I may ask for part of all of the information provided by me to be removed from the study without penalty or explanation.
- I understand that the information I provide for this research will be used for the following purposes: *Design of an acceptable, long term finfish monitoring program* and will be treated confidentially. I will not be identified in any publications resulting from the study except where I have given my written permission for this to occur.
- Information provided by me will only be accessed by members of the research team and used for the purposes outlined above. It will be stored securely by the CSIRO and retained in archival storage.

Name: _____

Signature: _____

Date: _____

We thank you for your agreement to participant in this research.

Nicole Murphy and Kinam Salee, CSIRO

Figure 4. CSIRO Ethics human research consent form for participants.

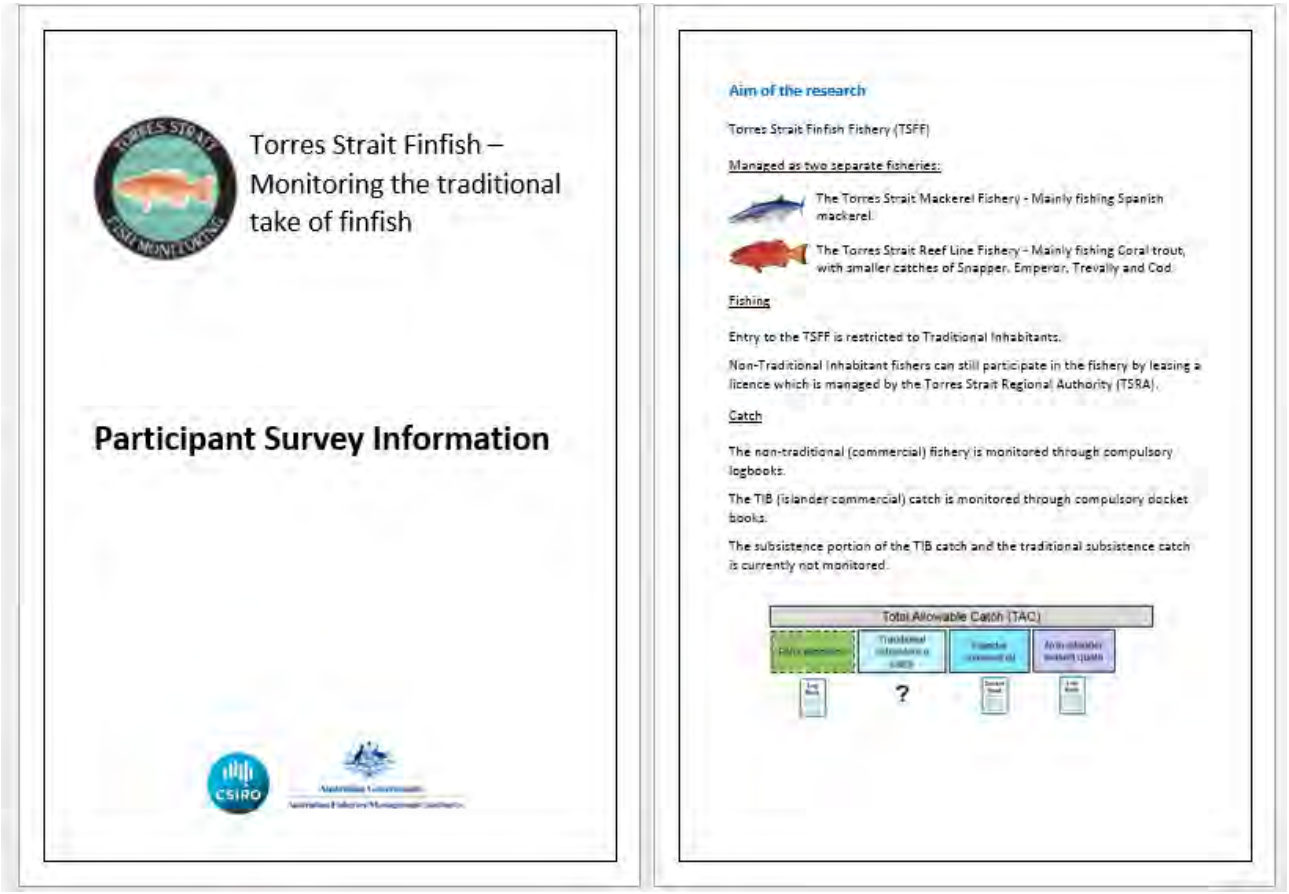


Figure 5. Finfish project information for participants.

6.3 Culturally appropriate approaches

An important component of this project will be the promotion and inclusion of traditional language and approaches. Terminology and language is critical and will be incorporated where possible.

A list of local island names for target finfish species will be developed alongside a fish ID guide for islands and be provided to communities. These will be updated as the project progresses. Islander names for target species will also be recorded to best enable identification of finfish.

7 Island surveys

7.1 Target species list

A target species list of finfish for the survey was compiled from literature reviews, fisher and islander advice (Table 2). This list was based on commercially important species, as well as species that are important home reef species for island communities.

Table 2. Finfish monitoring project target species list for Torres Strait.

Scombridae – Mackerel, tuna, bonito	
Fish species	**Common name**
Scomberomorus commerson	Spanish mackerel, Narrow-barred Spanish mackerel
Grammatorcynus bicarinatus	Shark mackerel
Scomberomorus queenslandicus	School mackerel
Scomberomorus semifasciatus	Grey mackerel
Serranidae – Sea basses, groupers, fairy basslets	
Fish species	**Common name**
Plectropomus leopardus	Common coral trout, Leopard coral grouper, Leopard coral trout
Plectropomus maculatus	Barcheek coral trout, Spotted coral grouper
Plectropomus laevis	Bluespotted coral trout, Black saddled coral grouper, Chinese footballer
Plectropomus areolatus	Passionfruit coral trout, Square tail coral grouper
Cephalopholis miniata	Coral cod, Coral hind
Chromileptes altivelis	Barramundi cod, Humpback grouper
Variola louti	Yellow edge coronation trout, Yellow-edged lyretail, Coronation trout
Variola albimarginata	White edge coronation trout, White-edged lyretail
Labridae - Wrasses	
Cheilinus undulatus	Humphead maori wrasse, Humphead wrasse, Double-headed maori wrasse
Choerodon schoenleinii	Blackspot tuskfish
Choerodon venustus	Venus tuskfish
Lethrinidae - Emperors	
Lethrinus miniatus	Red throat emperor, Trumpet emperor, Sweetlip emperor
Lethrinus nebulosus	Spangled emperor
Lethrinus laticaudis	Grass emperor
Lethrinus lentjan	Redspot emperor, Pink eared emperor
Lethrinus mahsena	Yellow tailed emperor
Lutjanidae - Snappers	
Lutjanus carponotatus	Stripey bass, Spanish flag snapper, Stripey perch
Lutjanus bohar	Red bass, Two-spot red snapper
Lutjanus sebae	Red emperor, Emperor red snapper
Lutjanus russellii	Moses perch, Russell's snapper
Lutjanus johnii	John's snapper, Golden snapper, Fingermark
Lutjanus argentimaculatus	Mangrove red snapper, Mangrove jack
Lutjanus erythropterus	Crimson snapper, Big mouth nannygai
Lutjanus malabaricus	Malabar blood snapper, Small mouth nannygai
Aprion virescens	Green jobfish
Pristipomoides multidens	Goldbanded jobfish, Goldband snapper, Stripey
Siganidae - Rabbitfishes	
Siganus lineatus	Goldline Rabbitfish, Golden-lined spinefoot
Scaridae - Parrotfish	
Scarus ghobban	Blue barred orange parrotfish, Blue-barred parrotfish
Carangidae – Jacks and pompanos	

Gnathanodon speciosus	Golden trevally
Caranx fulvoguttatus	Yellowspotted trevally
Caranx ignobilis	Giant trevally
Elagatis bipinnulata	Rainbow runner
Mugilidae – Mullet	
Valamugil buchanani	Bluetail mullet
Haemulidae – Grunts	
Plectorhinchus gibbosus	Brown sweetlip, Harry hotlips

7.2 Fish ID guide

A finfish ID guide for Torres Strait was compiled from the target species list for the Finfish project (Figure 6). The guide was developed to assist those participating in the survey to avoid possible misidentification. The guide will be updated from feedback as the project progresses.

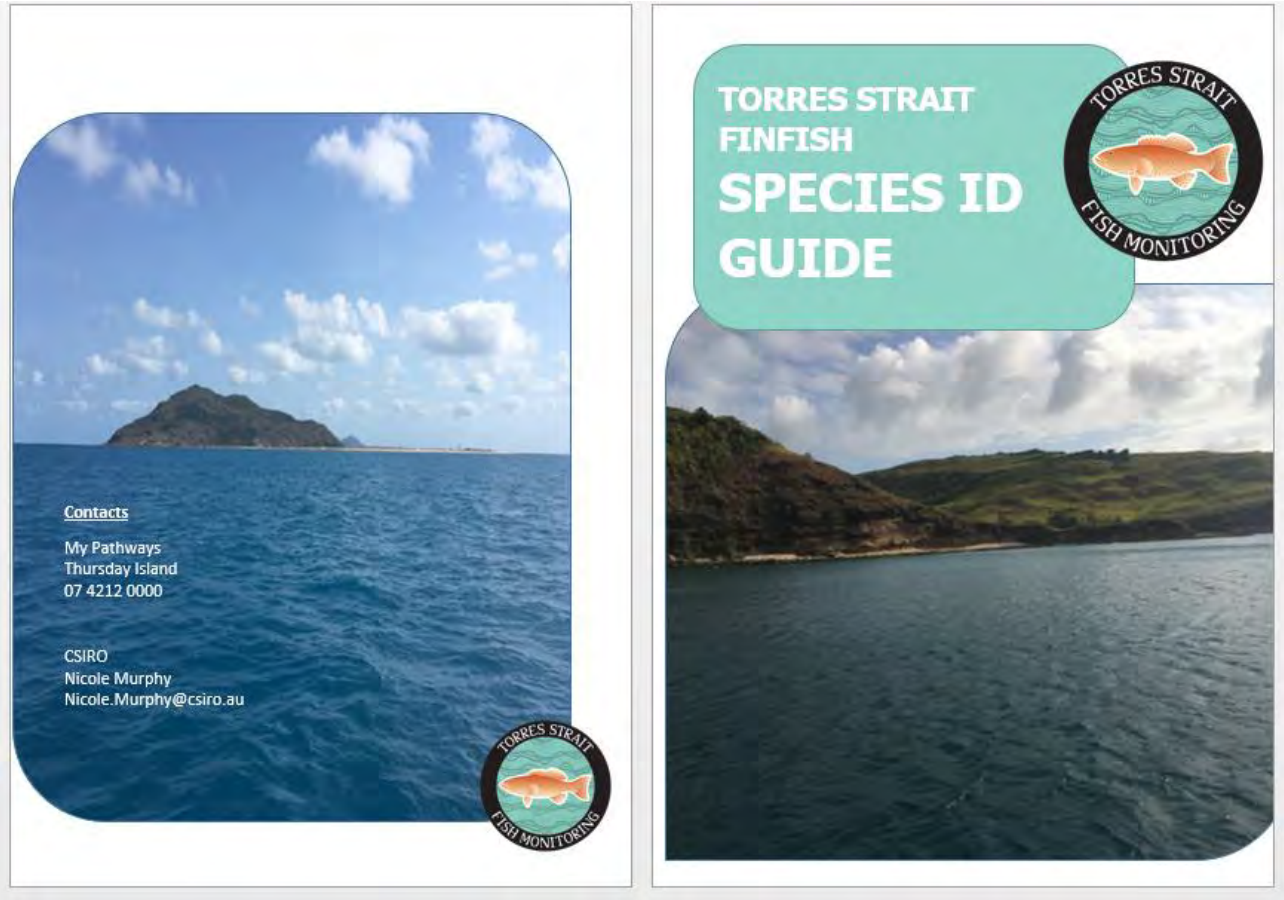


Figure 6. Finfish monitoring project species ID guide for Torres Strait.

7.3 Island names for common fish species

Island names for the Finfish project target species were compiled from the literature and verbal feedback, with Torres Strait language and island derivations also included (Table 3). The list will be updated and added to as the project progresses.

Table 3. Finfish project islander names for target species including Torres Strait language and island derivation.

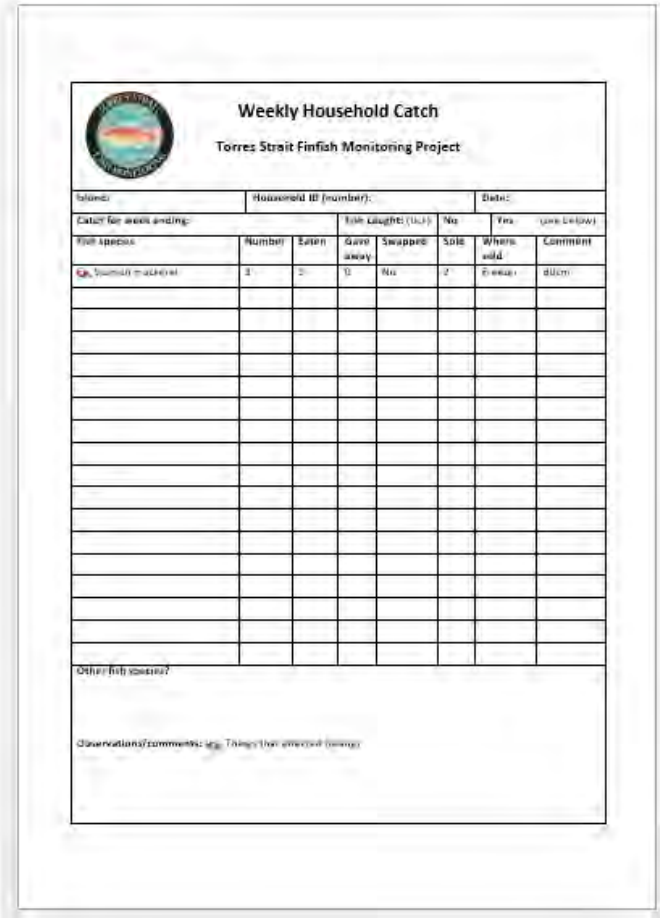
Serranidae – Sea basses, groupers, fairy basslets					
Island name	**Scientific name**	**Common name**	**Language**	**Island**	**District/region**
Mamamlar, Koit, Witi, Withi	*Plectropomus leopardus*	Coral trout, Common coral trout, Leopard coralgrouper, Leopard coral trout	-	-	East TS, West TS
Neud	*Plectropomus laevis*	Bluespotted coral trout, Black saddled coral grouper, Chinese footballer	-	-	East TS
Garum, Gorom	*Cromileptes altivelis*	Barramundi Cod, Humpback grouper	-	Darnley, Murray, Yorke	East TS, West TS
Mamamlar	*Variola louti*	Yellow edge coronation trout; Yellow-edged lyretail, Coronation trout	-	-	East TS
Siar	*Cephalopholis miniata*	Tomato cod, Coral cod, Coral hind	-	-	East TS
Scombridae – Mackerel, tuna, bonito					
Island name	**Scientific name**	**Common name**	**Language**	**Island**	**District/region**
Duboi, Kaper	*Grammatorcynus bicarinatus*	Shark mackerel	-	-	East TS
Argi, Dhubo, Dabu, Dabor, Debu, Dubai Gaigai, Geigi	*Scomberomorus commerson*	Spanish mackerel, Narow-barred Spanish mackerel	-	Mabuiag	East TS, West TS
Carangidae – Jacks and pompanos					
Island name	**Scientific name**	**Common name**	**Language**	**Island**	**District/region**
Matei, Maui, Yalo waitpis	*Gnathanodon speciosus*	Golden trevally	Creole	Mainly Mer	Eastern TS
Lutjanidae - Snappers					
Island name	**Scientific name**	**Common name**	**Language**	**Island**	**District/region**
Patu	*Lutjanus sebae*	Red emperor, Emperor red snapper	-	Darnley, Murray, Yorke	-
Tanik	*Lutjanus johnii*	John's snapper, Golden snapper, Fingermark	-	-	-
Teunab	*Pristipomoides multidens*	Goldbanded jobfish, Goldband snapper, Stripey	-	-	-
Siganidae - Rabbitfishes					

Island name	Scientific name	Common name	Language	Island	District/region
Parsar	*Siganus lineatus*	Goldlined rabbitfish, Golden-lined spinefoot, Spiny spinefoot	-	Darnley, Murray, Yorke	-
Sphyraenidae - Barracudas					
Island name	**Scientific name**	**Common name**	**Language**	**Island**	**District/region**
Mugarir, Mugaral	*Sphyraena* spp.	Barracuda	-	Mabuiag	-
Mugilidae - Mullet					
Island name	**Scientific name**	**Common Name**	**Language**	**Island**	**District/region**
Muragudal	*Ellochelon vaigiensis*	Northern mullet, Diamond scale mullet, Squaretail mullet	-	Mabuiag	-
Mallet, Simalet, Zogar	-	Mullet, Big mullet	Creole	-	-
Haemulidae - Grunts					
Island name	**Scientific name**	**Common Name**	**Language**	**Island**	**District/region**
Buz, Taur	*Pomadsys kaakan*	Javelin grunter, Queensland trumpeter, Spotted javelinfish	Miriam	Mabuiag	Eastern TS

7.4 Data sheets

The Finfish project has five data sheets to be filled out (Table 4. Example of Finfish project data sheets. Two are required at the start of the survey, these are the survey participation agreement form for all participants, and a Household Number Assignment form where each house is assigned a unique number by the finfish monitor for confidentiality purposes. On a weekly basis, there will be three forms to fill out, these include the Weekly Household Catch form recording species caught, a Weekly Household Survey form detailing fishing and a Weekly Island Summary form filled out by the Finfish Monitor to record the households surveyed.

Table 4. Example of Finfish project data sheets.



Weekly Household Catch

Torres Strait Finfish Monitoring Project

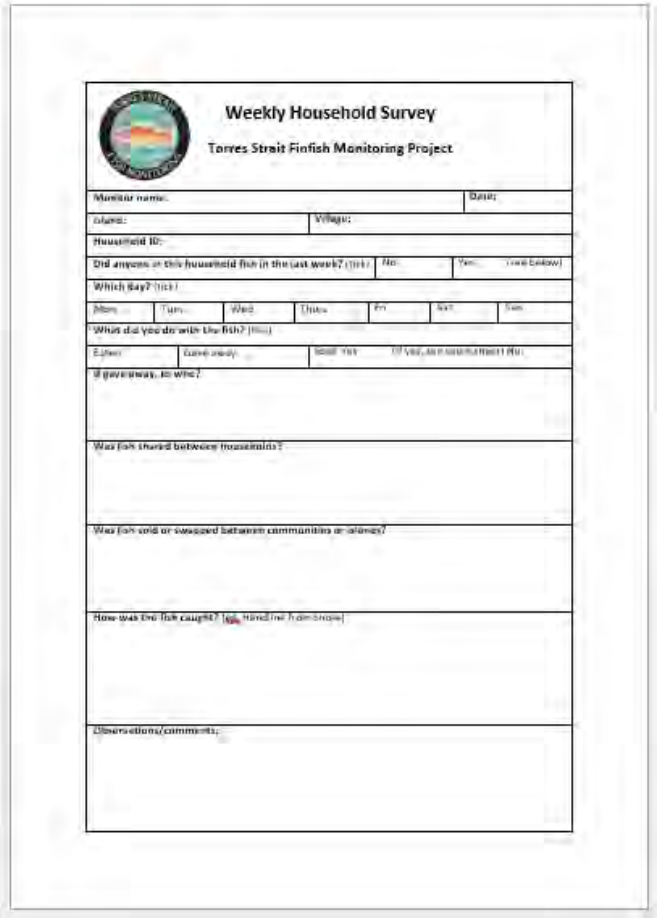
Island: Household ID (number): Date:

Catch for week ending: Fish caught (tick): No Yes (see below)

Fish species	Number	Eaten	Gave away	Swapped	Sold	Where sold	Comment
e.g. Spanish mackerel	3	2	0	No	1	Cairns	dilum

Other fish species?

Observations/comments: e.g. Things that affected fishing



Weekly Household Survey

Torres Strait Finfish Monitoring Project

Monitor name: Date:

Island: Village:

Household ID:

Did anyone in this household fish in the last week? (tick) No Yes (see below)

Which day? (tick)

Mon Tues Wed Thurs Fri Sat Sun

What did you do with the fish? (tick)

Eaten Gave away Sold? Yes (if yes, go to next box) No

If gave away, to who?

Was fish shared between households?

Was fish sold or swapped between communities or islands?

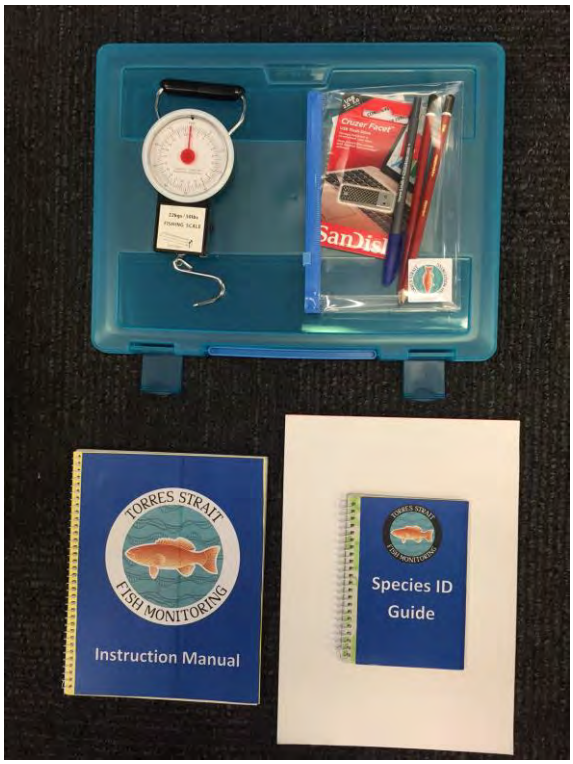
How was the fish caught? (e.g. Handline / dori / spear)

Observations/comments:

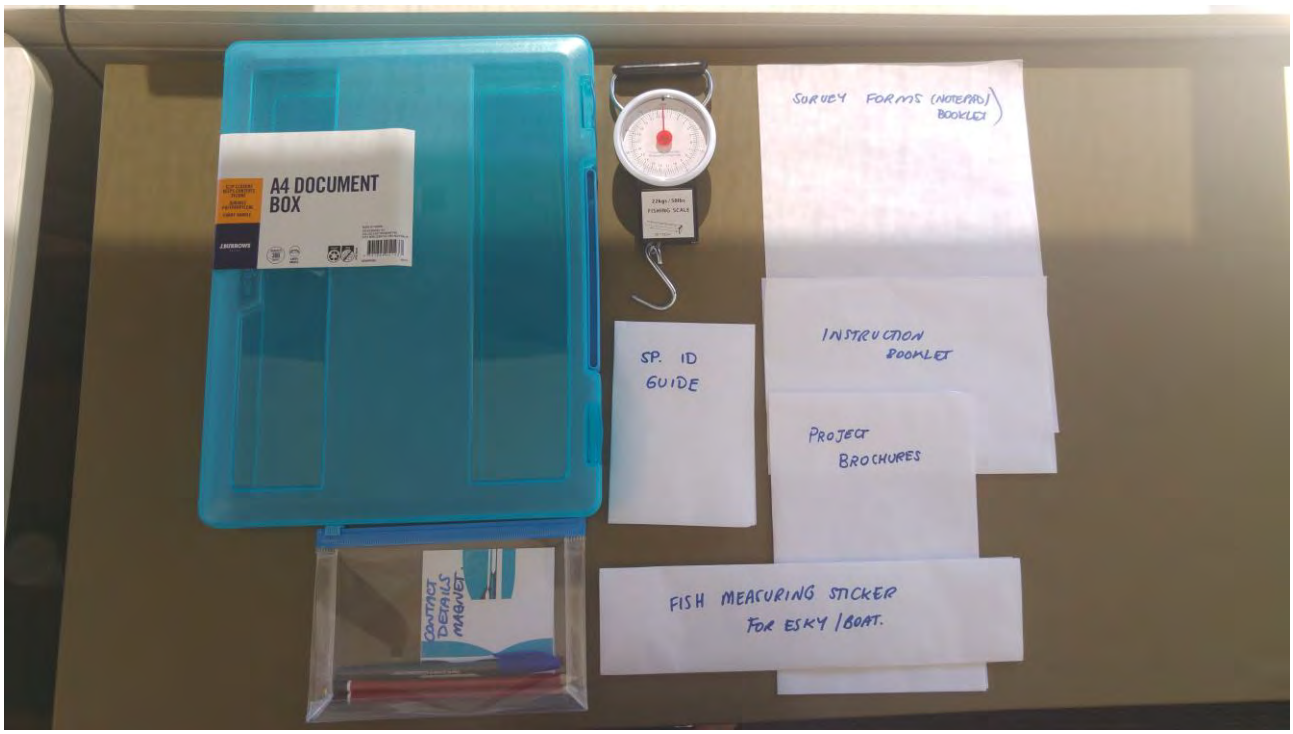
7.5 Monitoring gear

Each Finfish Monitor will be provided with a vest for identification, a project manual, participant information handout, any supplies and a backpack for undertaking the surveys. Participating households will also be provided materials to assist with the project where needed.

7.5.1 **Island monitor kit**



7.5.2 **Household kit**



8 Future work

8.1 Surveys

A pilot survey will be undertaken at Erub Island as prove of project and to streamline the survey process. It is then planned for subsequent surveys to be rolled out to the islands of Masig and Poruma, with Mer and Ugar to follow.

8.2 Data entry and analysis

Submission of data will be co-ordinated with the Finfish Monitor to determine the most suitable method. This may be:

- Monitors to post survey forms to CSIRO in Brisbane using addressed prepaid envelopes
- Monitors to scan sheets and email or dropbox nicole.murphy@csiro.au
- Monitors to enter data (eg. into Microsoft Excel) and email or dropbox nicole.murphy@csiro.au
- Development of an electronic survey (SurveyMonkey) to use on a tablet

8.3 Quality assessment

Entering of Finfish project data into a central holding facility will allow for ongoing critical assessment of data quality. Data will also be compared with previous creel surveys of the islands of Erub, Masig and Mer as well as comparison with freezer docket books. Weekly reporting of survey data will also enable 360 degree feedback from the Finfish Monitor and participating households.

8.4 Final reporting

Final reporting from data analysis will involve estimates of the overall traditional fishery take and composition, catch per island per year, monthly catch and spatial data if available. Where possible, factors affecting catch, estimates of fishing stock status including the status (if any) of exploited subsistence stocks, and interactions with subsistence and commercial catch for Spanish mackerel and reef line commercial fisheries will be included.

8.5 Outcomes

The outcomes from this project will produce the most comprehensive knowledge base to date for the traditional finfish catch in Torres Strait, contributing towards a sustainable finfish fishery for islanders. Impacts of the commercial finfish fisheries can be mitigated with data from the project used to assign priority when allocating species quotas, allowing for protection of the subsistence fishery. Island communities will additionally benefit from enhanced ownership of finfish resources

from further understanding of the socioeconomic importance of the subsistence sector. New local expertise in finfish monitoring and management through the engagement of trained monitors will also value add to Torres Strait livelihoods.

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Appendix A Finfish Monitoring Project Inception Meeting

A Finfish Inception Planning workshop was held on the 17th February 2016 at the TSRA LMSU Building, Thursday Island.

Notes from meeting

A.1 Attendees

Name	Agency	Job title	Contact
Maluwap Nona	Malu Lamar	Torres Strait Regional Sea Claim Title holders	maluwap.ali.nona@gmail.com 0428 309 337
Kenny Bedford	Erub Fishers association	President	kennybedford@hotmail.com
Mariana Nahas	TSRA	Office responsible for fishery matters	mariana.nahas@tsra.gov.au 07 4069 0745
Selina Stoute	AFMA	Torres Strait fishery manager	Selina.Stoute@afma.gov.au
Steve Hall	AFMA	Fishery manager	steve.hall@afma.gov.au
Tim Skewes	CSIRO	Project scientist	tim.skewes@csiro.au
David Brewer	CSIRO	Project scientist	david.brewer@csiro.au

A.2 Meeting objectives

- Introduce the project and gain broad agreement on project objectives.
- Outline and discuss the project approach and work-plan, including focus communities.
- Gather information on various aspects of the project consultation and implementation process.

A.3 Current finfish fishery in Torres Strait

A.3.1 Fisher types

There was some discussion of the fisher types that occur on Torres Strait Island communities. The following categories were recognised:

- Subsistence only. Mostly fishing from shore or boating out a short distance.
- TIB/subsistence mixed. Islander fishers catching fish for sale and for subsistence (sometimes the latter being undersized fish). This include 3 subtypes (based on point of sale):

a. Selling to an island freezer or island based middle-man;
b. Selling directly to a processor on TI or the mainland;
c. Selling internally islanders on the island - a within-island "commercial" sector (probably not huge, but important to take into account).

➢ TIB sell only sector. Currently none of these.

A.3.2 Subsistence catch

There was some discussion and difference of opinion on the size and composition of this sector. CSIRO presented an analysis of the most recent subsistence catch monitoring from the eastern islands that indicated a substantial subsistence catch with significant numbers of commercial species. It was noted that this catch is most likely quite variable in time and location.

CSIRO reiterated that this project is focused on the subsistence catch of finfish, particularly of the commercial species that consumed within island communities. This was recognised by the meeting participants as a difficult undertaking and that monitoring other sectors would potentially detract from this primary objective.

A.3.3 TIB Sector

The TIB (Islander commercial) sector includes islander fishers selling fish to islander freezers and other buyers via selling directly to processors on the mainland or locally. Erub (Darnley) Island is the only community freezer currently active. There are some other private buyers (sole operators) on several islands (e.g. Mer, Erub, Ugar) that fish, buy and sell to processors in Cairns or locally. Some Torres Strait islanders are in the process of obtaining larger vessels (but not there yet) which will catch fish and process on board for sale down the supply line.

The point was strongly made that the local commercial fishery catch (catch sold by islanders to other islanders) should be captured and included as a subsector. This is an important fishery component for the TSRA and AFMA to quantify for the overall management and promotion of the fishery.

AFMAs Docket book program is primarily focussed on quantifying the TIB catch that goes through the island freezers. AFMA expressed a view that any commercial sectors in the islander fishery could/should be captured using a Docket book /logbook. This needs further discussion but should be promoted as part of the overall project justification.

The current Docket book program is being run by AFMA. It is considered unreliable and not comprehensive. It is currently being used on Erub, however it is not clear whether it is being actively supported and collected by an AFMA officer. The TSRA rep indicated that she would be willing to re-invigorate the Docket book program back to the TSRA for consideration with AFMA.

CSIRO committed to try and structure the monitoring program to account for the internal commercial fishery catch. CSIRO made the point that the overall monitoring approach needed to be simple to administer and apply and that any additional complexity was a risk to the ongoing success of the program. Additionally, there may be tax and other implications associated with the internal commercial fishery that will need to be handled sensitively (see ethics section). We also needed to consider being careful not to double count fish in the subsistence and artisanal catch.

It was stated that, based on a Centre for Aboriginal Economic Policy Research (CAEPR) economic report that looked at the small-scale commercial fishery (sometimes called “black market” fishery), black market sales can be detrimental to fisheries operations in the Torres Strait, business set ups, economic returns etc (Arthur, 2005) . CSIRO will get the CAEPR report and integrate its findings into our justification of the project. Again, this will have to be treated sensitively as there are potential implications for this sector.

ACTION: TSRA and AFMA to consider renewed focus and support for the Docket book program, including application to small scale fish sellers on eastern islands.

ACTION: The fishery conceptual diagram needs to be updated by CSIRO to reflect the internal commercial sector.

A.3.4 Recreational sector

There was some discussion of the recreational and charter sector, its size and potential for monitoring. The rec sector is made up of non-islanders visiting or living in Island communities, and charter boats. There was general agreement that the sector was increasing. Although it was not a big issue when the sector was small, with more boats and more people it’s becoming a concern regarding the volume of take. The catch of charter and recreational fishing is currently unknown but there is anecdotal reports of quantities of mackerel and coral trout being taken.

There has been reports of large charter boats fishing out of Murray in the last few years – including the Outer Barrier and Ashmore Reef. Typically charter vessels will have up to 6 dorries plus technology to find fishing spots. The trend and concern is that they may becoming more substantial.

These fishing operations haven’t come through any formal approval process. Traditional owners (TOs) at the meeting expressed the view that we were talking about traditional native title sea country here so different to other areas in Qld. One issue around this is that TO catches will be monitored but not the catch from non-traditional owners. This, along with likely increases in the take from the rec sector has prompted a need to consider recording the catch from this sector.

However, while this is potentially an important sector to monitor, the PZJA/SAC had no mandate to manage rec fishing. It was generally agreed that this issue be followed up (particularly by Malu Lamar) and will be raised at appropriate fora, such as the upcoming finfish working group meeting. Malu Lamar indicated that they will write a letter to the PZJA to let them know of their concern over the growing recreational fish take.

There was general agreement that the recreational fishing sector will be dealt with separately (not in this project). Non-islanders living in communities could be included in the subsistence catch monitoring project (they should not be selling the catch in any case).

ACTION: Stakeholders to raise the monitoring of the recreational and charter sector with the PZJA and Finfish working group.

ACTION: CSIRO to include non-islander rec fishers in the monitoring protocol.

A.3.5 TVH sector

It was recognised that there could be some advantages to engaging with the TVH (non-islander) sector:

- build continuity between all stakeholders
- foster a better relationship with industry
- managing the fishery from a whole-of-industry point of view
- training and value adding

The best forum for this would be the Finfish working group which will meet sometime this year.

There is also the potential to interact with the Torres Strait Maritime Pathways Program (TSMPP), which is a partnership between the Australian Maritime Safety Authority (AMSA), Maritime Safety Queensland (MSQ) and the Torres Strait Regional Authority (TSRA). It has been working since 2013 to develop maritime skills and capabilities for Torres Strait Islander and Aboriginal people.

A.4 Project scope

A.4.1 Focus communities

Although the project proposal was focused on the communities of the Torres Strait PZ (i.e. outer islands), the meeting agreed that an initial project implementation on all communities of the TSPZ would not be feasible, and that the focus would be on the eastern and central islands which would be treated as a pilot for a future, broader implementation across the TSPZ. Most of the recent fishing activity has occurred in this region, particularly for commercial species such as mackerel and trout (although it may extend into other parts of Torres Strait in the future). Also the most recent subsistence monitoring research is from this region (Busilacchi, 2008).

ACTION: CSIRO will need to clarify the regions of focus for the project.

A.4.2 Species monitored

It was reiterated that the focus of this project is on the commercial quota species that were caught in the subsistence fishery. However, CSIRO will either include other non-quota species or design the program so that other species can be included in the future.

A.4.3 Spatial resolution of catch data

The TS SAC have suggested that the fish caught should be identified as being within 10nm of communities. The meeting recognised that this may be important for local depletion concerns, and for providing more detail on the interaction between the islander and non-islander sectors of the fishery. In fact, very few fish are currently caught by community members outside the 10nm zone (at the moment).

CSIRO suggested that this aspect could be covered using an occasional questionnaire – e.g. maps – ‘what proportion of your fish comes from outside the 100 nm zone?’. There was general agreement for this approach.

A.5 Monitors engagement

An important aspect of this project is payment for the island based monitors being trained during (and potentially after) the project. CSIRO reiterated that there was no provision in the budget for payment for island based monitors. There were 2 possible sources of monitors considered:

- Rangers. These would probably require a fee for service arrangement.
- My Pathway. There will probably be a payment structure built onto this via the standard MyPathways processes.

It was also suggested that the training count towards an accreditation (TAFE, My Pathway can investigate, Tagai College)?

ACTION: CSIRO will investigate the potential support offered by My Pathway for engaging and supporting the monitoring positions (Kenny Bedford offered to discuss this further).

A.6 Consultation and human ethics

There was some discussion about the importance of appropriate and comprehensive consultation and consent from the TOs (e.g. tribal elders). TO consent can be complex to negotiate and achieve. However, it's important that we interact with the TOs through the elders. They should understand what is happening and be supportive.

The permissions should be mostly aimed at Prescribed Body Corporate (PBC) (and through them to the elders) and the Councillor as the administrative contact on the islands. After that come the Board members and Fisher group reps. Sometimes the Council of Elders will be naturally present at a community meeting. If not then it is probably important to seek them out.

Everyone thought an agreed MOU would be a good idea for the ongoing implementation of the project.

A.6.1 Verbal versus written consent

Malu Lamar is potentially able to provide some advice about the levels of consent and the need for prior written consent versus verbal consent. There was some agreement that a written consent form may present some challenges.

The committee generally supported the approach to gaining informed consent by the CSIRO project. CSIRO will draft up the written and verbal consent tools and send back to the committee for approval. We will then send to the CSIRO Ethics committee.

There is a current study/review being done by Professor Nakata (JCU) looking at extending the protocols for research consent. CSIRO will look at any findings it produces that has relevance to this project.

ACTION: CSIRO to draft the written and verbal consent tools and send back to Steering and CSIRO Ethics committees for approval.

ACTION: CSIRO to review study by Prof. Nakata (JCU) on extending protocols for research consent and will identify any findings relevant to this project.

A.6.2 Participation information sheet

This should outline the objectives and origins of project, as well as the benefits and incentives, and risks. It should also be easy to digest and understand.

RECOMMENDATION: - CSIRO will develop our permission approach and then send back to members of the Steering committee.

A.6.3 Culturally appropriate approaches

An important component of this project will be the promotion/inclusion of traditional language and approaches.

Steve Hall has a list of the local names. It was recognised that terminology and language will be critical and we need to incorporate as much as possible. Traditional/subsistence/kai kai fishery – talk to Sara Busilacchi as well.

ACTION: CSIRO and AFMA, in consultation with Steve Hall to incorporate traditional language and approaches in full measure.

A.7 Post project

After this project, the PZJA (via the SAC) will need to decide how finfish monitoring should continue: e.g. an ongoing continuous basis, or a survey every 3 years or other. Repercussions include levels of continued commitment to employment of monitors.

A.8 Project support

Attendees were generally supportive of the project objectives and approach. They were also happy to help with advice regarding the Island nation names and other traditional language issues.

Continued support from Malu Lamar and others in the PBC area will be critical to the success of the project.

Although we anticipate a high level of support from participating communities, we will have to be ready to respond to a rejection of involvement by Islander representatives and communities.

9.1 Project approach

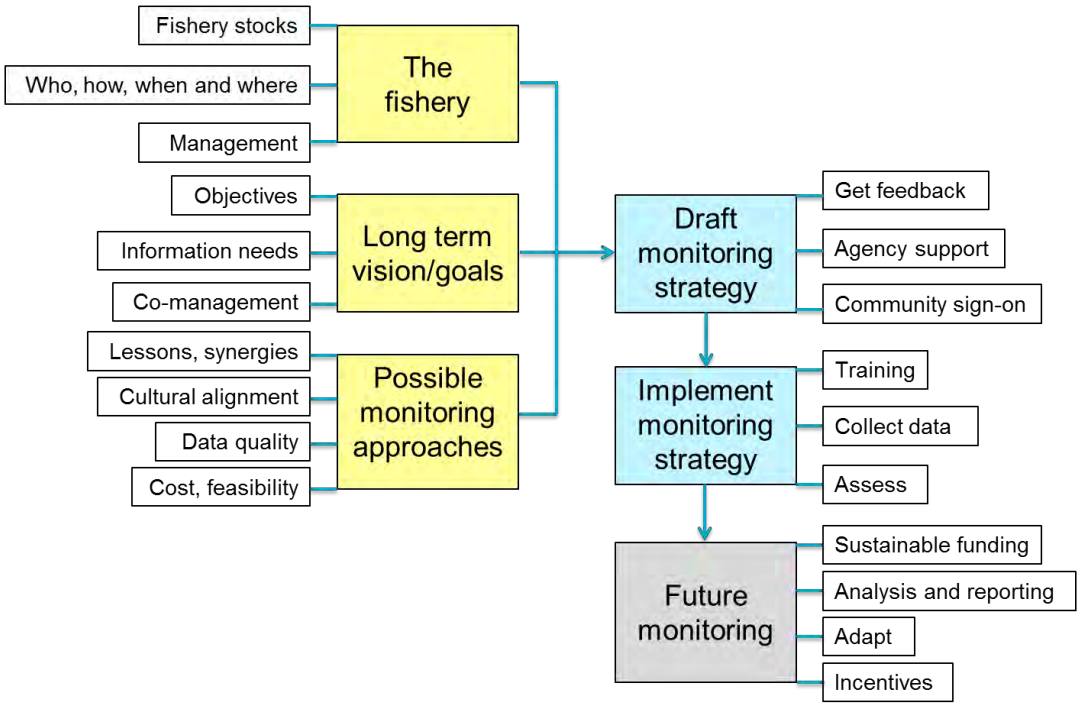


Figure 7. Project approach

9.2 Consultation and communication

Figure 8. Consultation and communication

Appendix B **Review of the Torres Strait Finfish Fishery**

B.1 Commercial fishery

B.1.1 Spanish mackerel

The Torres Strait Spanish Mackerel Fishery (TSSMF) operates predominantly in the eastern Torres Strait (Figure 9) within the Torres Strait Protected Zone (TSPZ). The narrow-barred Spanish mackerel (*Scomberomorus commerson*) is mainly targeted, with the fishery expanded in 1999 to include School mackerel (*Scomberomorus queenslandicus*), Grey mackerel (*Scomberomorus semifasciatus*), Spotted mackerel (*Scomberomorus munroi*) and Shark mackerel (*Grammatorcynus bicarinatus*) (PZJA, 2014).

Catch

In 2013-14, 105.4 t of Spanish mackerel was caught, 85.2 t in 2012-13 and 88 t in 2010, catch in 2010 was worth around $0.78 million (catch records are provisional with fishing data from Traditional Inhabitants collected through a non-compulsory docket book system) (AFMA, 2010; ABARES, 2015). The decline in catch from >250 t in 2005 to around 100 t in 2007 onwards, reflects catch entitlements reverting to the TIB sector with the voluntary buy-back of all TVH licenses (Figure 10; Figure 11) (PZJA, 2014).

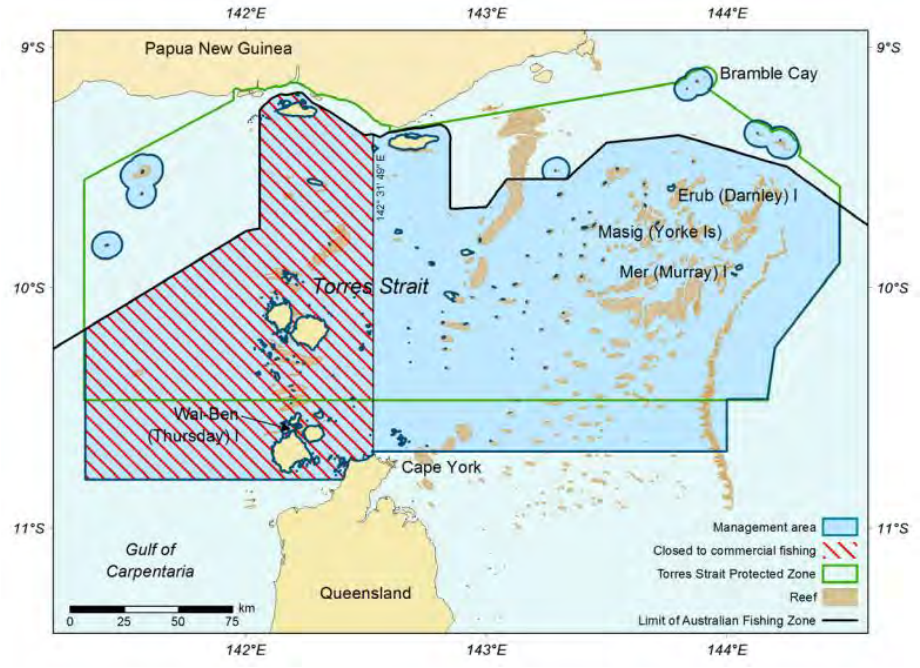


Figure 9. Map showing area of Spanish Mackerel Fishery in Torres Strait (PZJA, 2014a).

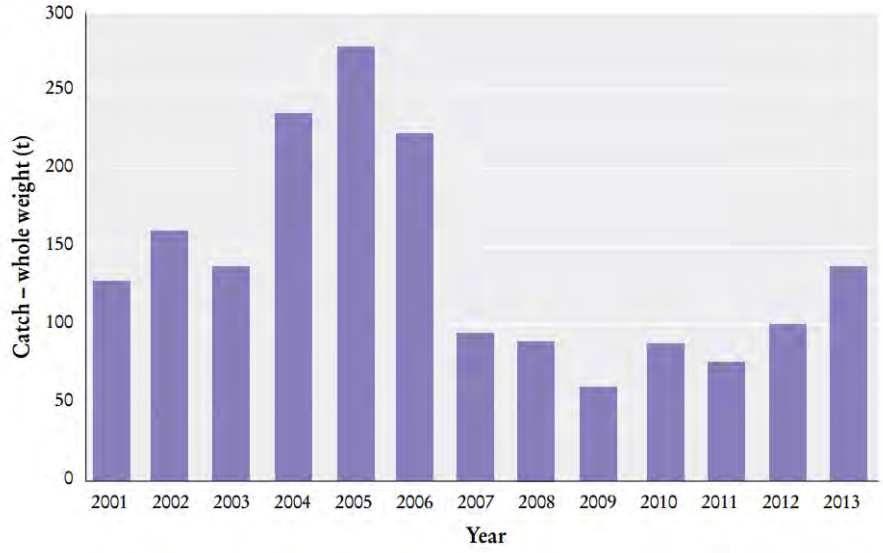


Figure 10. Catch history for Spanish mackerel in the Torres Strait Finfish Fishery (reported in calendar years) (Source: Logbook data docket book data 2004 to 2013 and other records 2001 to 2013) (PZJA, 2015).

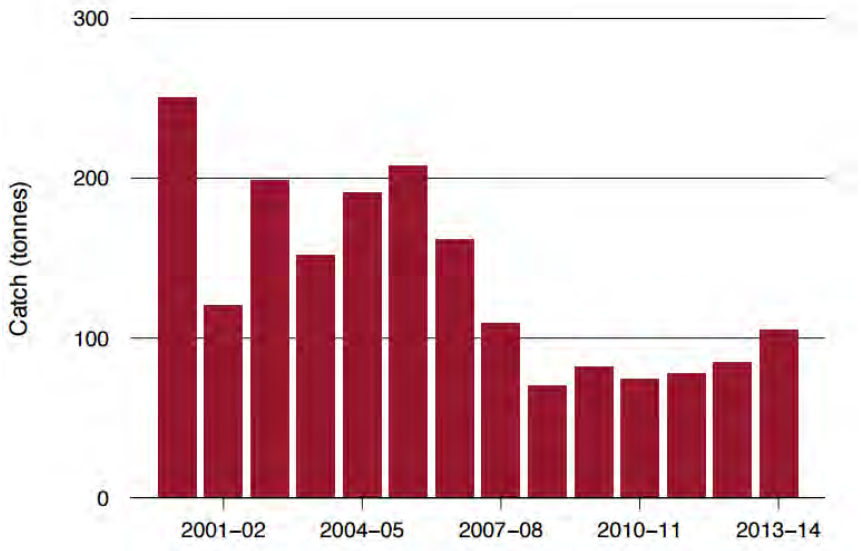


Figure 11. Catch history for Spanish mackerel in the TSSMF, 2000–01 to 2013–14 (reported in financial years) (ABARES, 2015).

The quantity of Spanish mackerel taken for traditional purposes is unknown. Busilacchi (2012) study showed that between 6-25% of subsistence catch taken during commercial fishing is Spanish mackerel and likely undersized individuals (PZJA, 2014).

Effort

Spanish mackerel are fished by trolling, generally from dories and/or dinghies operating by themselves or from a primary vessel. The majority of catch is taken by commercial operators leasing Sunset licences (PZJA, 2014).

In 2013-14, 136 TIB licences with mackerel endorsements were issued, with 135 in 2012-13, 131 in 2011 and 161 in 2009. Five Sunset licences were leased to fish the TSSMF in 2013-14 and four in 2012-13 (AFMA 2010, ABARES, 2015) (PZJA, 2014).

B.1.2 Reef line species

The Torres Strait Reef Line Fishery is a multi-species fishery targeting a variety of reef fish species (Figure 12). The fishery focuses primarily on higher valued species including Coral trout (*Plectropomus spp.*), Barramundi cod (*Cromileptes altivelis*), mixed reef fish (*Lutjanus spp.* and *Lethrinus spp.*) and species of Rock cod (*Epinephelus spp.*).

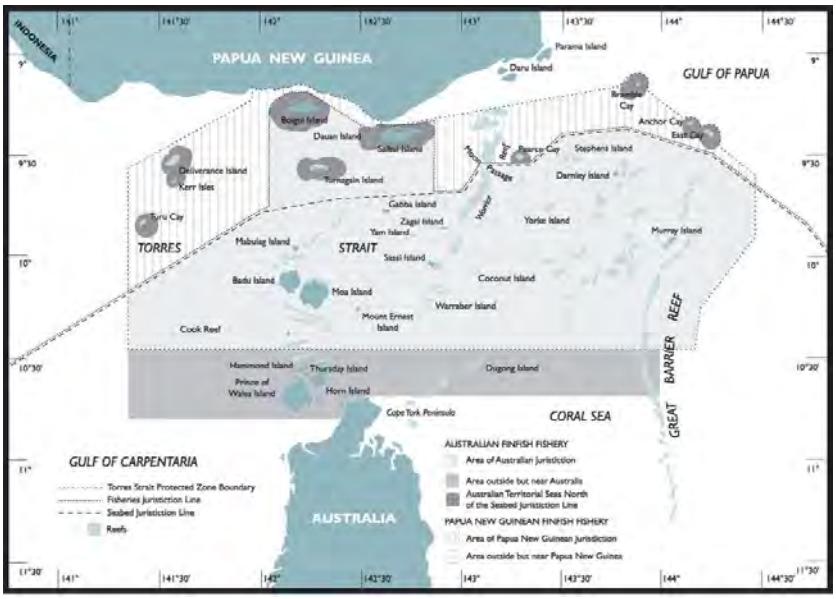


Figure 12. Map showing area of Reef Line Fishery in Torres Strait (PZJA, 2014).

Catch

- Commercial

Between 2001 and 2004 catches of Coral trout were similar 130-150 t, declining markedly in 2006 to around 60 t. This correlates with reduced effort from the banning of nets throughout the TSPZ, and fewer operators participating in the fishery (Figure 13) (PZJA, 2013).

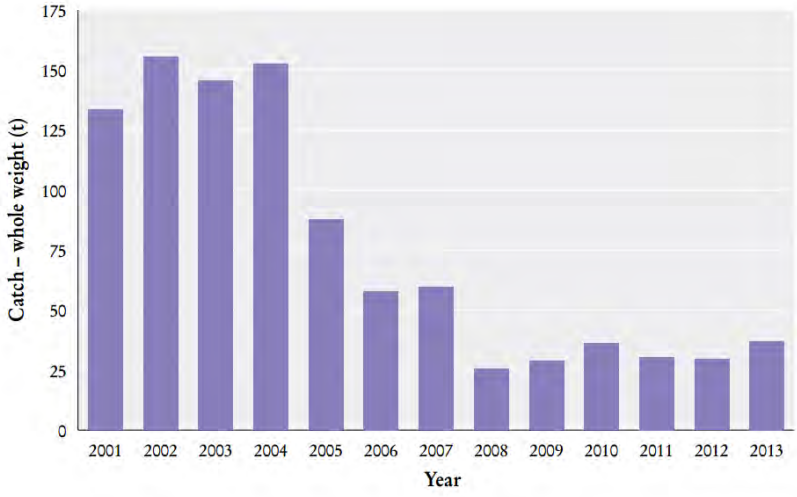


Figure 13. Catch history for coral trout in the Torres Strait Finfish Fishery (reported in calendar years) (Source: Logbook data 2001 to 2013, docket book data 2004 to 2013 and other records) (PZJA, 2015).

A further reduction in catch from >50 t to around 30 t in 2008 onwards, coincides with the voluntary buy-back of TVH licences endorsed to fish the TSRLF, where all catch entitlements were transferred to the Traditional Inhabitant sector (PZJA, 2014).

In 2010, landed species for the TSRLF totalled 39.6 t, with Coral trout composing the majority of the catch (36.2 t) (Table 5Table 5. Logbook catch data from the Torres Strait Reef Line Fishery (including catches from both TIB-licensed boats and Sunset-licensed boats) received during 2010 (PZJA, 2014). (Collection of catch data from Traditional Inhabitant fishers is voluntary; catch records for 2010 are provisional (PZJA, 2014)). The 2010 season catch of 36.2 t of Coral trout had an estimated value of $0.69 million. In 2013-14, 30.9 t of Coral trout and 2.1 t reef fish was caught and 23.1 t of Coral trout and 1.3 t of reef fish in 2012-13 (AFMA 2010; ABARES, 2015; PZJA, 2014).

Table 5. Logbook catch data from the Torres Strait Reef Line Fishery (including catches from both TIB-licensed boats and Sunset-licensed boats) received during 2010 (PZJA, 2014).

Species	Catch (kg)
Coral trout	36,195
Red emperor	327
Barramundi cod	926
Other	2169
Total	39,617

An unknown quantity of finfish are taken during the course of traditional fishing (PZJA, 2014b).

Effort

Finfish are generally taken by hand lines, with the use of nets banned throughout the TSPZ and outside but near area since December 2005 (PZJA, 2014). The use of nets for traditional fishing is still allowed.

In 2007 the PZJA agreed on a nominal TAC of 134.9 t for Coral Trout for the TSPZ, with 145 TIB licences holding reef line entries issued to Traditional Inhabitants in 2010. In 2013-14, 132 TIB licences with reef line entries were endorsed, with 122 in 2012-13,131 in 2011, 145 in 2010 and 161 in 2009 (ABARES, 2015). One sunset licence was leased to fish the TSRLF in 2013-14 and 2012-13, and one in 2010-11 with a 50 t quota (ABARES, 2015; AFMA 2010; PZJA, 2014).

The closure of a freezing facility on Murray Island in late 2010 is believed to have negatively affected profitability and interest in the Torres Strait Finfish Fishery. Fishers have limited access to freezing capacity and there has been inconsistent supply to processors. This has led to a negative impact on marketability, prices and catch (TSRA, pers. comm., 2011).

B.1.3 TIB Sector

The TIB (Islander commercial) sector includes islander fishers selling fish to islander freezers and other buyers via selling directly to processors on the mainland or locally. Erub (Darnley) Island is the only community freezer currently active. There are some other private buyers (sole operators) on several islands (e.g. Mer, Erub, Ugar) that fish, buy and sell to processors in Cairns or locally.

Some Torres Strait islanders are in the process of obtaining larger vessels (but not there yet) which will catch fish and process on board for sale down the supply line.

B.1.4 TVH sector

Torres Strait Spanish Mackerel Fishery

The majority of the catch is taken by a small number of commercial operators utilising primary boats carrying tenders. Sunset licences are leased through the TSRA with agreed conditions for fishing in the fishery, including a Total Allowable Catch (TAC) and area closures (PZJA, 2014).

Five sunset licences were leased to fish the TSSMF in 2013-14 and four in 2012-13 (AFMA 2010, ABARES, 2015) (PZJA, 2014).

Torres Strait Reef Line Fishery

One sunset licence was leased to fish the TSRLF in 2013-14 and 2012-13, and one in 2010-11 with a 50 t quota (AFMA 2010, ABARES, 2015).

Commercial important species commonly targeted included those from Serranidae, Lutjanidae and Lethrinidae (Busilacchi, 2008).

B.2 Recreational and charter sector

The recreational and charter sector catches are unknown and considered relatively minor. (Busilacchi, 2008).

The recreational sector is made up of non-islanders visiting or living in Island communities, and charter boats. There is general agreement that the sector is increasing (Inception Planning Workshop, 2015). Although it was not a big issue when the sector was small, with more boats and more people it's becoming a concern regarding the volume of take. The catch of charter and recreational fishing is currently unknown but there is anecdotal reports of quantities of mackerel and coral trout being taken.

There has been reports of large charter boats fishing out of Murray in the last few years – including the Outer Barrier and Ashmore Reef. Typically charter vessels will have up to 6 dorries plus technology to find fishing spots. The trend and concern is that they may become more substantial.

These fishing operations haven't come through any formal approval process. Traditional owners (TOs) at the meeting expressed the view that we were talking about traditional native title sea country here, so different to other areas in Qld. One issue around this is that TO catches will be monitored but not the catch from non-traditional owners. This, along with likely increases in the take from the recreational sector has prompted a need to consider recording the catch from this sector.

However, while this is potentially an important sector to monitor, the PZJA/SAC had no mandate to manage recreational fishing. It was generally agreed that this issue be followed up (particularly by Malu Lamar) and will be raised at appropriate fora, such as the upcoming finfish working group

meeting. Malu Lamar indicated that they will write a letter to the PZJA to let them know of their concern over the growing recreational fish take.

There was general agreement that the recreational fishing sector will be dealt with separately (not in this project). Non-islanders living in communities could be included in the subsistence catch monitoring project (they should not be selling the catch in any case).

Stakeholders will raise the monitoring of the recreational and charter sector with the PZJA and Finfish working group. CSIRO to include non-islander rec fishers in the monitoring protocol.

B.3 Barramundi

Barramundi (*Lates calcarifer*) fishing is restricted to territorial waters adjacent to the Australian islands of Saibai, Boigu, Moimi, Kaumag, Aubusi and Dauan, in the north-west of Torres Strait near the PNG coast. Barramundi are taken using hand spears and hand set monofilament gill nets, with the fishery mainly exploited for subsistence (PZJA, 2013; PZJA, 2014).

An unknown amount of Barramundi are harvested from Boigu and Saibai islands. All harvested Barramundi are under legal commercial size limits and are eaten locally. There are no recent records of commercial sale (PZJA, 2014a).

B.4 Traditional take

Increases in catch and effort for traditional fishing have been observed over time (Busilacchi et al., 2013a; Busilacchi et al., 2013b). However, there has not been an associated decrease in catch rates between the early 1990s and 2005 (Figure 14) (Busilacchi, 2008).

Suggested reasons for increased catches are a result of social, cultural and economic factors driven by modernisation on islands. Islanders have greater access to motorised boats and modern fishing gears (e.g. nets), allowing them to travel further and improve catch rates (Busilacchi, 2008; Busilacchi et al., 2013; Busilacchi et al., 2013b).

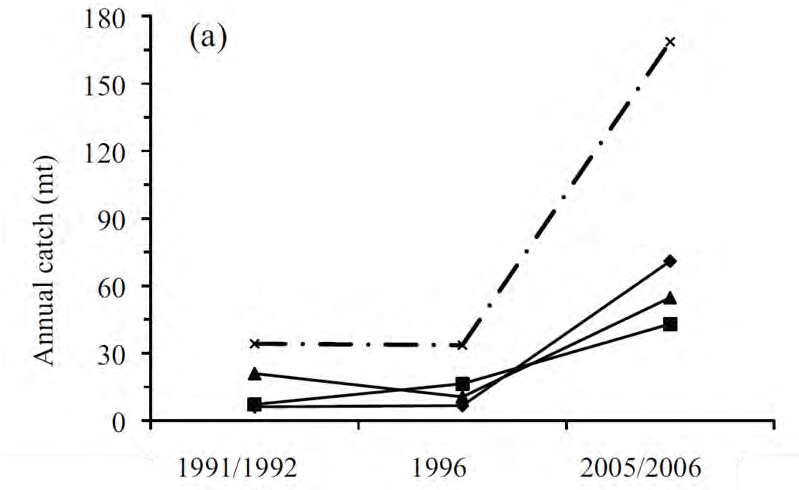


Figure 14. Estimated subsistence catch in 1991/1992, 1996 and 2005/2006 on Darnley (diamond), Murray (square) and Yorke (triangle) Islands; combined island catch (dash) (Harris et al., 1997, Busilacchi et al., 2013).

Appendix C **TSFF Management plan**

C.1 Commercial fishery

A management plan for the TSFF was finalised in 2013, comprising strategies for setting of total allowable commercial catch. The TSFF is currently managed under input controls which are enforced under the Act through Fisheries Management Instrument No. 8 (Prohibitions Relating to the Taking, Processing and Carrying of Finfish) and No. 79 (Prohibitions Relating to the Taking, Processing and Carrying of Spanish Mackerel). Both notices outline the requirements on gear, size and area restrictions, take and carry limits. Other supporting legislation that governs the management of these fisheries includes the Torres Strait Fisheries Regulations 1985 and the Torres Strait Treaty 1985 (PZJA, 2014).

As the buyout of non-traditional inhabitant licences resulted in a marked decrease in TSFF catch, a quota system was considered unnecessary on commencement of the management plan. The plan allows for quota to be introduced in the future if required, with provisions allowing for maximum flexibility such that the most appropriate quota management system can be introduced based on the status of the fishery at the time (PZJA, 2014).

In 2007-2008 all catch entitlements reverted to the Traditional Inhabitant sector with the voluntary buy-back of Torres Strait Fishing Boat Licences (TVH licenses). Entitlements are held in trust by the Torres Strait Regional Authority (TSRA). The TSRA also holds entitlements for Papua New Guinea (PNG) in accordance with the Torres Strait Treaty, where 40 per cent of Spanish mackerel endorsements are made available to PNG fishers (PZJA, 2014).

To fish commercially in the TSFF, licenses are granted as either Traditional Inhabitant boat (TIB); available only to Traditional Inhabitants residing in the Torres Strait or Sunset licences; available to both Traditional Inhabitants and non-Traditional Inhabitants under lease agreements with the TSRA. Entries are attached to licences that allow the licensee to commercially fish in either the Reef Line fishery and/or the Mackerel fishery. A limited number of Sunset licences are held by the TSRA that may be temporarily transferred to non-Traditional Inhabitants to enable them to participate in the fishery as per PZJA policy. The number of TIB licences is currently not restricted (PZJA, 2014). (see Appendix G).

A Quota Management Committee (QMC) determines the quota that will be available annually for non-Traditional Inhabitant leasing, with the quota based on a TIB harvest allowance and supply required by processors and purveyors. Leasing arrangements specify agreed conditions for fishing in the fishery including a Total Allowable Catch (TAC) and area closures. A 10nm closure around the islands of Erub, Mer, Ugar and Masig is in place for non-Traditional Inhabitant fishers leasing temporary licences (Table 6) (Busilacchi, 2008).

Table 6. Reported Total Allowable Catch and Maximum Sustainable Yield for Spanish mackerel and Coral trout.

Statistic	Source	Spanish mackerel	Coral trout
Nominal TAC (t)	PZJA website	112.6	134.9
	PZJA Annual report	188*	135
MSY (t)	ABARES	169/150[1]	

* with 40% allocated to PNG under treaty catch sharing arrangements

Note: There are differences in the catch (SM and CT) and TAC reported (for SM in any case) between the PZJA and ABARES documents.

[1] Begg et al. 2006

Future management strategies for the TSFF subsistence fishery need to encompass increased fishing effort from modernisation of fishing techniques, catch being shipped off islands and retaining of catch for subsistence purposes during commercial fishing (Busilacchi, 2008) (Williams et al. 2008).

C.1.1 Spanish mackerel

Management objectives for the Torres Strait Spanish Mackerel Fishery were developed in conjunction with the Torres Strait Fisheries Act 1984 and the Torres Strait Treaty and set by Protected Zone Joint Authority (PZJA, 2014b) (Torres Strait Fisheries Act 1984 https://www.legislati on.gov.au/Details/C2015C00482; Torres Strait Treaty http://www.austlii.edu.au/au/other/dfat/treaties/1985/4.html) (http://pzja.gov.au/the-fisheries/torres-strait-spanish-mackerel-fishery).

Objectives

- To manage the mackerel resource so as to achieve its optimal utilisation;
- To maximise the opportunities for Traditional Inhabitants of both Australia and Papua New Guinea to participate in the commercial fishery; and
- To promote the fishery as a line fishery.

Regulations

- The taking of mackerel is restricted to trolling, hand-lining and drop-lining only;
- Commercial mackerel operators are permitted to use a general purpose bait net to take bait for their own use;
- An allowance of up to 20kgs of Spanish mackerel and/or reef fish may be carried at any one time by all holders of a Torres Strait fishing licence granted under section 19(2) or 19(3) of the Act; and
- Minimum legal size limits measured from the snout to caudal fin tip apply (Table 7).

Table 7. Minimum legal size limits for mackerel species.

Species	Size (mm)
Spanish mackerel (*Scomberomorus commerson*)	750
Spotted mackerel (*Scomberomorus munroi*)	600
School mackerel (*Scomberomorus queenslandicus*)	500
Grey mackerel (*Scomberomorus semifasciatus*)	500

Arrangements

A management plan for the Torres Strait Spanish Mackerel Fishery is under development. Interim management arrangements continue to apply to all fishers as per Fisheries Management Notice (FMN) No.79. A nominal TAC of 112.6 t for Spanish mackerel is also used as a guide for sustainable management of the Australian resource.

Many of the management arrangements for the Spanish Mackerel Fishery are included in Prohibition relating to the Taking, Processing and Carrying of Finfish (Gear, Size and Area Restrictions and Take and Carry Limit) including :

- Fishing method is restricted to line fishing (unless in the course of traditional fishing) with no more than 6 hooks attached to each line;
- No more than 3 fishing apparatus can be used per boat;
- Commercial net fishing with a net other than a bait net is prohibited (see FMI No.8 for bait net specifications);
- Minimum size limits apply to all species taken commercially and maximum size limits apply to some species (see FMI No.8 for specific details);
- A seasonal barramundi closure exists (for commercial fishing) from midday 1 November each year to midday 1 February the following year;
- A permanent area closure by net fishing methods in that part of the finfish fishery west of 142°09', and in part of the fishery east of 142°09' and north of 10°28';
- A permanent closure by line fishing methods in the area of the fishery west of 142°31'49" (except in the course of traditional fishing);
- Vessels must be less than 20 metres in length;
- The removal of fins from a shark and subsequently disposing of its torso is prohibited; and
- The following species are listed as no take species:
    - Potato Cod (*Epinephelus tukula*)
    - Queensland Groper (*Epinephelus lanceolatus*)
    - Chinaman Fish (*Symphorus nematophorus*)
    - Paddletail (*Lutjanus gibbus*)
    - Humphead Maori Wrasse (*Cheilinus undulatus*)
    - Hammerhead Shark (*Sphyrna lewini*)

- Grey Nurse Shark (*Carcharias taurus*)
- Tiger Shark (*Galeocerdo cuvier*)

Strategic Assessment

The TSSMF was strategically assessed under the Environment Protection and Biodiversity Conservation Act 1999 during 2008, and was formally accredited as a Wildlife Trade Operation in late November 2008. The Torres Strait Finfish Fishery Management Plan 2013 came into effect on 16 July 2013 (PZJA, 2014).

C.1.2 Reef line fishery

The objectives for the Torres Strait Finfish (Reef Line) Fishery were developed in conjunction with the Torres Strait Fisheries Act 1984 and the Torres Strait Treaty, and set by Protected Zone Joint Authority (PZJA, 2014) (http://pzja.gov.au/the-fisheries/torres-strait-finfish-reef-line-fishery).

Objectives

- To manage the resource so as to achieve optimum utilization.
- To maximise opportunities for Traditional Inhabitants of Australia and PNG to participate in the commercial fishery.

Regulations

A management plan for the Torres Strait Finfish (Reef Line) Fishery is under development and will be included in the Torres Strait Spanish Mackerel Fishery. Catch entitlements are also held aside to provide for catch sharing arrangements for Papua New Guinea if required. A Finfish Working Group has been established to provide advice to the PZJA on issues related to the Reef Line Fishery (PZJA, 2013).

Strategic Assessment

The TSRLF was strategically assessed under the Environment Protection and Biodiversity Conservation Act 1999 during 2008 and was formally accredited as a Wildlife Trade Operation in late November 2008. The Torres Strait Finfish Fishery Management Plan 2013 came into effect on 16 July 2013.

C.2 PNG Shared stocks

Catch sharing arrangements exist between Australia and PNG for Spanish mackerel as an Article 22 fishery (http://pzja.gov.au/the-fisheries/catch-sharing-with-papua-new-guinea/).

Appendix D **Stock assessment - TSFF**

D.1 Spanish mackerel

The most recent stock assessment for the TSSMF was undertaken in 2006. A sex and age structured population model was used which resulted in stock considered to be fully exploited (Begg et al., 2006; Busilacchi et al. 2012).

The buyback of non-traditional TIB licences over 2007-08 resulted in a reduction of catch and effort, with the fishery not considered to be overfished or subject to overfishing in 2010 (ABARES, 2015; PZJA, 2014; Woodhams et al., 2011)

Information available for the TSSMF indicates the stock has been relatively stable during a period of several decades. Limited exchange is believed to occur between Spanish mackerel stocks in Torres Strait, the Gulf of Carpentaria and the east coast of Queensland (PZJA, 2014b).

D.2 Coral trout

The status of Coral trout, the main target species is unknown due to a lack of any formal stock assessment (Williams et al. 2011). A management strategy evaluation of the fishery using 2004 data concluded that strategies at the time would maintain Coral trout stocks above 40% virgin biomass (Williams et al. 2007). In 2009 and 2010, Coral trout species (*Plectropomus* spp. and *Variola* spp.) in the TSPZ were not considered overfished (PZJA, 2014; Finn et al., 2015; FRDC, 2014).

In 2010, the TSRLF was considered under exploited with catch rates below historic levels, indicating stock is not over fished (PZJA, 2014). The fishery is currently classified as sustainable. (Woodhams & Mazur, 2009).

Appendix E **Review of traditional catch monitoring approaches**

By Mibu Fischer

E.1 Past monitoring approaches

- Creel surveys (with questionnaires)
  - Roving reporters (CSIRO/AFMA) (1990-2004)
  - Embedded researchers e.g. Kwan (2004); Busilacchi (2008)
- Fisher catch recording
  - Smartphone fisher recording (2011)
- Community monitoring
  - Rangers (Dugong) current. Not assessed? Culturally sensitive.
- Commercial logbooks
  - TVH/Sunset TIB (>7 m) compulsory logbook (TSF01)
  - TIB through freezer docketbooks (2004) TIB sector. Not compulsory. Limited coverage and success?

Monitoring non-commercial (e.g. recreational and traditional) fishers around the world is generally a challenge for resource owners, fisheries managers and scientists. In addition there may be a certain level of wariness from fishers towards fisheries management organisations who, in the past, have enforced restrictions on species after surveys have been conducted (NRC, 2006). A traditional subsistence fishery, where there is usually limited management agency regulation and a strong cultural link, is even more difficult to survey due to the irregular/patchy nature of the activity, where fishers do not necessarily fish every day or for the same period of time.

Various monitoring approaches have been used to gather information about subsistence fishing. Around the world and in Torres Strait a number of methods have been trialled, the most common methods include access surveys, creel surveys, and frame and bus route surveys. In Torres Strait a number of these methods involved an observer/interviewer placed within a community, where they record observations of fishing activity at certain locations and/or times, or conduct interviews with community members. A snapshot of these methods is described below.

In Australia Indigenous Fisheries have been investigated by a few researchers, many of these studies are focused between Broome and Cairns (Henry & Lyle, 2003), as well as the Great Barrier Reef. Surveys have also been conducted in Northern New South Wales, around the Tweed region and Victoria (Schnierer, 2011).

Historical traditional catch monitoring has occurred several times in Torres Strait, including previous CSIRO monitoring of the Traditional catch on Yorke Island in 1984-86 (Poiner & Harris, 1991), and for all Torres Strait communities in 1991-2001 (Harris et al., 1997; Skewes et al., 2004), and a study of the traditional catch from three eastern Torres Strait communities in 2005/06 (Busilacchi, 2013b).

Choosing the right style of survey is important yet difficult for fisheries scientists as they can be expensive, as well as have a higher level of error if the wrong survey technique is used (Table 8).

Table 8. Comparison of census versus sampling approaches.

Approach	Advantages	Disadvantages
Census	More precision	Expensive
Sampling	Cheaper	Lower precision Harder to implement

E.2 Sampling Approach

Surveying recreational and traditional fisheries can be difficult, especially settling on a survey method that provides accurate and timely information, that includes both good coverage and at an acceptable cost (Griffiths et al., 2010; NRC, 2006). It can be difficult due to the variances in fishing activity namely spatial distribution and temporal scales (Smallwood et al., 2011). Despite this there are a myriad of sampling approaches used by fisheries scientists and managers when gathering information about recreational and traditional fisheries.

E.2.1 Frame Surveys

The frame survey method is a census-based approach involving roving observers to collect data on both the catch and effort for a single day of fishing within a set area. This data is then extrapolated using a formula that includes data of all the fishing 'vessels' and gear that could be operating in a given area (Stamatopoulos, 2002). A survey conducted by Harris et al. (1994) used the 'Frame' survey method from Bazigos (1974) to collect fishing information on Torres Strait Islander fishing activities. The information gathered from the survey was compared to population information from the Australian Bureau of Statistics (ABS). Harris et al., (1994) split the survey areas in accordance with the ABS sampling districts and the observers stayed within these set 'districts' (Harris et al., 1994). Although this technique has been applied to numerous fisheries studies it is expensive due to the need to have an observer actively gathering information (Harris et al., 1994; Smallwood et al., 2011).

E.2.2 Access Point Surveys

A traditional access point survey involves observing a portion of the target fishery, collect catch and effort data in the selected portion and then expand the observations to the whole fishery (Pollock et al., 1994; Pollock et al., 1997; Robson & Jones, 1989). The observation generally occurs at an 'access point' i.e. boat ramp or jetty where fishers coming in from a day's fishing can be interviewed by survey agents waiting at the access point. Traditional access point surveys are

complete surveys, meaning that the survey agents gather all the information about an interviewee for a single day, compared to an incomplete survey which would only gather a portion of information on fishers throughout the day and use an equation to quantify their total catch for the day (Smallwood et al., 2011).

E.2.3 Bus Route Surveys (BRS)

Bus Route Surveys (BRS) are described in Pollock (1994) and Robson & Jones (1989), and is a popular method for sampling recreation fisheries (e.g. Dews et al., 1993; Harris et al., 1995; McGlennon & Kinloch, 1997). BRS incorporate access point survey methods which were designed to assess fisheries that cover a wide geographic area (Robson & Jones, 1989), whereby a survey agent waits at an access point (e.g. boat ramp) to observe fisher behaviour or to interview fishers about their fishing activity (Robson & Jones, 1989). BRS differ from traditional access point surveys as survey agents do not spend their whole survey time waiting at the one access point, instead the survey agent as a set time period at various access points and has to travel between them in a pre-determined random order for each survey day, the travel order generally changes each day.

There have been a number of BRS conducted within Torres Strait (Busilacchi et al., 2013b; Dews et al., 1993; Harris et al., 1995). Dews et al. (1993) in conjunction with frame surveys used bus route surveys to cover large areas of island communities where there are numerous fishing locations. The communities were monitored in this fashion from 3 to 10 days before moving on to another community and returning every 3 months. This survey involved an observer recording the quantity, fish species and fishing method used by a community throughout the entire day and if possible, including the weight of all catches. In some cases the observer would interview a fisher the next day if they ran out of time the previous day. This information is based on memory only and hence a more subjective form of data. Within the survey there was also an option to record that a fisher was seen, but an interview was unable to be conducted. The different observations were given different weightings in relation to the type of observer/fisher interaction (Dews et al. 1993).

In addition to the fishing information the observer also gave an ‘effectiveness’ score at the end of each sampling day. The purpose of this was to determine what percentage of fishing activity the observer felt they had recorded over an entire day. For example, if an observer gave an effectiveness score of 100 percent, they felt that they had recorded all the fishing activity for the community on that sampling day, this type of scoring can be illusory in favour of the observer.

Another BRS was conducted on the reef fishes of Torres Strait by Busilacchi et al. (2013b). This study used the BRS method supported by semi-structured interviews. The BRS were split into two shifts AM (0700 – 1300) and PM (1300 – 1900). Night surveys were not conducted for safety reasons. It was noted that the majority of night fishers started their fishing between 1800 and 1900 hours, so only the night activity for the last site of the day was recorded.

McGlennon & Kinloch (1997) looked at the effectiveness of BRS in a South Australian scalefish fishery. They suggest that BRS are more affordable than traditional access surveys and that survey teams can reach smaller sites that would generally be ignored in a larger survey, despite this affordability in relation to Torres Strait Islands where there are numerous islands across a large spatial area this method is still quite costly.

E.2.4 Video surveillance

Alternative survey approach is to monitor sites through video cameras, the study conducted by Smallwood et al. (2011) in Western Australia placed cameras at 4 access points, although the initial process of placing the cameras at each site were cheap the cost to analyse the footage is costly, allows bias for determining fishing activity and can only include information that is seen from the camera location.

E.3 Data Collection Method

Within in each survey approach comes the data collection method, this method can vary and the same type of method can be used with different sampling approaches. Generally there are two kinds of data collection methods recognized, they are onsite and offsite collection (NRC, 2006). Onsite collection refers to data that is collected in the field either though observation or interviewing fishers access points. Whilst offsite collection indicates data that is collected via a phone interview or self-reporting methods (NRC, 2006).

E.3.1 Interviews

The use of interviews to gather fishing information is a costly process, it relies on the communication techniques of the survey agent and the relationship they develop with the interviewee. There can be two types of interviews onsite and offsite, with onsite interviews the survey agent often combines a question and answer style with pre-determined questions, with what is known as a creel survey (defined below), this type of interview is costly and time consuming for the researchers. This led surveys to become offsite interviews allowing fishers to nominate a preferred interview time for the telephone survey agent to call and ask a set of questions about their fishing activity. In addition to the survey agent needing telephone training the answers are still subjective to the information the fisher is willing to divulge. As Torres Strait communities span across a wide spatial area this also increases the cost of face-to-face interviews, however there are both positive and negatives to both interview methods. No matter the type of interview, the questions asked are always an important feature, there are multiple types of questions to allow varying styles of answers, the study by Dews et al. (1993) and Harris et al. (1995) originally had a set structured interview however, the set questions were changed to allow open ended answers to gather more information about the nature of the fishery studied. Busilacchi et al. (2013b) had a semi-structured interview that was recorded, to allow analysis at a later date and to prevent any bias in recording information. The point of this was, like Harris et al (1995) and Dews et al. (1993), to allow fishers responses to gather more information about the fishery than was previously known. In regards to recording surveys to prevent bias this comes with an added cost of the time taken to analyse each interview which can vary in length.

E.3.2 Creel surveys

One of the most used survey approaches in recreational fisheries, a creel survey is when a fisheries manager collects catch information directly from a fisher's 'basket'. This information can include, but is not limited to: species caught, size of individual fish, gear used, time spent fishing, type of

boat used and other such information. Creel surveys along with many other methods are used in conjunction with other approaches.

E.3.3 Self-reporting

Smart-phone application that was used by French, Hartmen & Lyle (in prep), although the full report is not available as yet, the study showed participation in self-reporting methods using technology is not fully supported. Their data showed that there were high participation rates to begin with, but as the survey time frame went on, the number of fishers reporting their catches via the app reduced drastically. The researchers also placed a self-reporting application on a tablet at the local community freezers and that data showed that participation rates from fishers at that location were one hundred percent when compared to the individual reporting apps.

Another log-book survey was completed, alongside other survey methods, by Schnierer (2010) in NSW north coast around the Tweed River targeting Indigenous fishers in the area. This study was conducted in an area where identifying Indigenous fishers in a large community is more difficult. Fifty-six fishers participated in the survey who were found using a 'snow-ball' sampling technique, all fifty-six completed a questionnaire, whilst only 20 participated in filling out cultural fishing log-books.

Log-book surveys generally only work when a known sampling frame is understood, such as fishing licenses (Smallwood et al., 2011), however this method is cost-effective when utilized with appropriate fisheries. Researchers can still gather log-book information from fisheries where there is no sampling frame, but this data would be supporting another collection method (Bray & Schramm, 2001).

Appendix F **Traditional fishing study, Torres Strait**

F.1 Review of study by Sara Busilacchi for Darnley, Yorke and Murray Islands

F.1.1 Which species?

- Coral trout, Groupers, Tropical snappers, Emperors and Lutjanids (Busilacchi et al., 2012).

Mugilidae and Siganidae are commonly targeted using gears from shore. Carangidae have increased in importance as a target group in subsistence fishing, both in traditional and commercial practices. Commercially important species of Serranidae, Lutjanidae and Lethrinidae are also taken for subsistence during commercial fishing (Busilacchi, 2008).

Species of economic importance where individuals smaller than the Minimum Landing Size (MLS) were retained for subsistence included *Lutjanus carponotatus*, *Pletropomus leopardus* and *P. maculatus* (Busilacchi et al., 2012).

F.1.2 Composition of catch

Differences in subsistence catch composition between islands were mainly a result of location. Fishers on Murray Island have access to the outer barrier reefs unlike fishers from the inner islands. The absence of *P. maculatus* and the presence of *Variola louti* in the catch of Murray Island fishers reflects their relative abundance on the outer reefs (Busilacchi et al., 2012).

Catch composition was found to change when commercial species were declared no take eg. *Symphorus nematophorus*, because of high ciguatera toxicity. Proportions of this species in the subsistence catch would increase accordingly (Busilacchi et al., 2012).

Variation in catch composition was also found with changes in MLS for species eg. *Cheilinus undulatus* (new MLS at 75 cm and maximum size at 120 cm) and *Cromileptes altivelis* (new MLS at 45 cm). These changes in regulations corresponded to increases in proportions of these species in subsistence catch (Busilacchi et al., 2012).

Similar to other tropical reef fisheries around the world, price fluctuation of several species of minor economic importance is a factor determining inter-annual changes in subsistence catch composition. Fishers often decide to retain for subsistence those species fetching low prices on the market (Busilacchi et al., 2012).

F.1.3 Catch

Spanish mackerel was found to comprise between 6-25% of subsistence catch during commercial fishing trips and were most likely undersized (Busilacchi, 2012).

An unknown quantity of reef fish is taken each year during the course of traditional fishing (PZJA, 2014b).

F.1.4 Condition of fishery

In 2005-06 levels of subsistence catch were up to 6 times higher than those estimated from data collected at the same islands in 1991-92 and 1995-96 (Figure 15) (Figure 16) (Busilacchi et al., 2013). Increased yields are comparable to reference points of sustainability for fisheries in the South Pacific (Busilacchi, 2008).

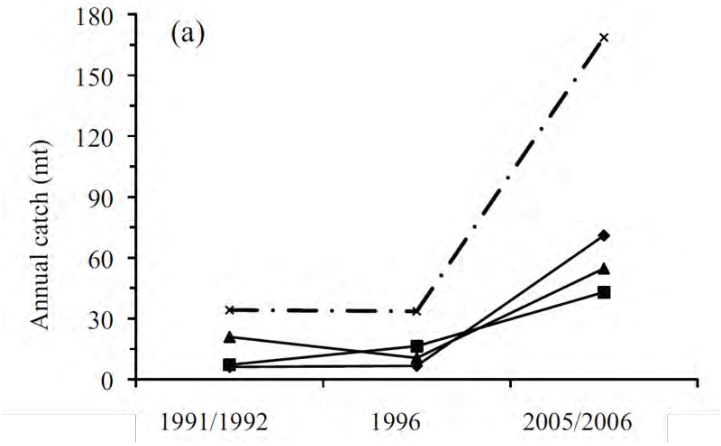


Figure 15. Estimated subsistence catch in 1991/1992, 1996 and 2005/2006 on Darnley (diamond), Murray (square) and Yorke (triangle) Islands; combined island catch (dash) (Harris et al., 1997, Busilacchi et al., 2013)

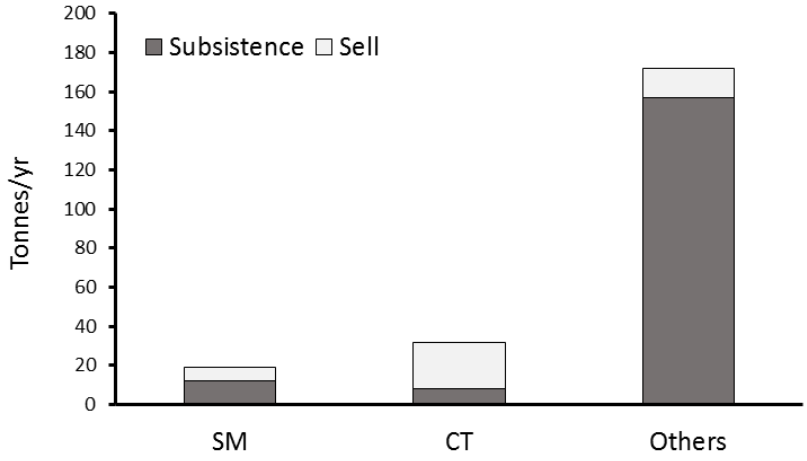


Figure 16. Annual catch for Darnley, Masig and Mer Islands, 2005/6, subsistence and TIB fishers (Bussilachi, 2008)

Approximately 15% of the annual total catch for Darnley, Yorke and Murray islands was retained for subsistence during commercial fishing. Subsistence catch of the most commercially valuable species almost entirely comprised individuals smaller than the minimum legal size (Busilacchi et al., 2012).

Mugilidae and Siganidae have decreased in catch over time suggesting localised over exploitation. Families of commercial importance including Serranidae, Lutjanidae and Lethrinidae have also decreased in catch over time, being targeted in both commercial and subsistence fishing (Busilacchi, 2008).

Overall catch rates for single fishing gears suggest signs of localized exploitation (Busilacchi, 2008). Catch rates of gillnet and castnet from shore have decreased over time, and current values are low in comparison to similar reef fish fisheries in the South Pacific (Busilacchi, 2008).

Appendix G **Licensing**

www.pzja.gov.au/resources/publications/annual-reports

Table 9. Number of Master Fisherman's licences by combinations of Torres Strait fisheries (current as at 30 June 2011).

Fishery	Licences
Tropical rock lobster	22
Tropical rock lobster, reef line, Spanish mackerel, and pearl	5
Tropical rock lobster, reef line, and prawn	1
Tropical rock lobster, reef line, Spanish mackerel, pearl, and prawn	6
Tropical rock lobster, and Spanish mackerel	2
Tropical rock lobster, Spanish mackerel, and pearl	35
Tropical rock lobster and pearl	5
Reef Line	5
Reef line and Spanish mackerel	4
Reef line, Spanish mackerel, and prawn	4
Reef line and prawn	48
Spanish mackerel	7
Pearl	3
Prawn	39
Bêche-de-mer	5
Total	191

Table 10. Number of TIB licences in each Torres Strait fishery (current as at 30 June 2011).

Fishery	Licences
Bêche-de-mer	38
Crab	65
Tropical rock lobster	277
Reef line	119
Spanish mackerel	132
Pearl shell	39
Trochus	63

Table 11. Number of Torres Strait Sunset Fishing Boat Licences in each Torres Strait fishery (current as at 30 June 2011). Numbers provided for boat licences exclude those held in "No Boat" status.

Fishery	Primary	Tenders	Total
Reef line	1	4	5
Spanish mackerel	3	5	8

Appendix H **TIB Docket Books**

Torres Strait Seafood Buyers and Processors Docket Book

RECIPIENT CREATED TAX INVOICE

Seller:	Jonny Roger	Boat symbol:	DY143	Book No.	Page No.
Seller's ABN:	64 333 666 999	Seller's Licence No.	QF 123		
Seller's Address:	21 Coconut Drive Darnley Island			Date:	11/2/14

Fishing effort and boat details – Traditional Inhabitant Boat (TIB) only

No. of divers/fishers: 2

Days fishing: 1 — Area fished: (From map (write no. of area most fished)) 16

Methods used: (tick box, use more than one if needed) ☐ Hookah (MDH) ☑ Handline (LHL) ☐ Drop line (LDR) ☑ Free dive (MDF) ☐ Rod and reel (LRR) ☐ Other–specify ☐ Lamp fishing (MLF) ☐ Troll (LTL)

Non Traditional Inhabitant Boat (TIB) fishers & buyers of PNG & east coast product only

Region Fished: (tick box) ☐ Torres Strait ☐ East Coast Queensland ☐ Papua New Guinea

Has the seller recorded their catches elsewhere?: (tick box) ☐ YES (please indicate) → ☐ TRL04 Logbook ☐ TSF01 Logbook ☐ Other → ☐ No

Details of catch being sold

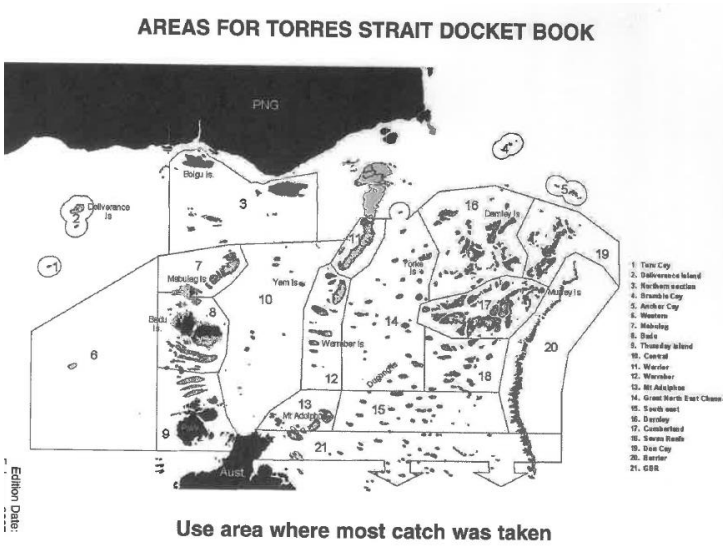
Species	Processing Code	Grade	Kg	$/Kg	$/Kg	Amount
Rock Lobster	L	1-2 kg	10.5	25		$262.50
Rock Lobster	T	—	7.2	48		$374.40
Coral Trout	GG	under 1 kg	14.4	7		$100.80
Coral Trout	GG	1 kg plus	4.1	8		$32.80

Completed by:	Mick	Subtotal	770.50
Signature:	Mick Joes	GST	77.05
Payment received:		TOTAL	847.55

Australian Fisheries Management Authority, PO Box 376, Thursday Island QLD 4875 — For assistance Phone: (07) 4089 1990 Fax: (07) 4089 1277

WHITE COPY: Fisher (seller) YELLOW COPY: AFMA PINK COPY: Buyer (you)

Edition Date: ____



Torres Strait Seafood Buyers & Processors Docket Book - TDB01

How to Complete

Page Header Section

Enter the seller's name, the seller's boat symbol, the seller's ABN (Australian Business Number), the seller's licence number (if applicable), seller's address and the date here.

Fishing Effort and Boat Details - Traditional Inhabitant Boat (TIB) Only Section

Boat symbol
Enter the distinguishing symbol (mark) of the dingy that caught the fish or the primary vessel if fishing using tenders or if fishing from the primary vessel. If the seller's vessel does not have a distinguishing symbol leave blank.

Days fishing
Record the number of days the seller spent fishing to catch the fish being sold.

Number of divers / fishers
Record the number of divers or fishers used to catch the fish being sold.

Area fished
Refer to the map provided and write down the number of the zone where the majority of the fish being sold were caught.

Method
Tick which method was used to catch the fish being sold, if the method used isn't listed tick 'other' and write in the method used.

Non Traditional Inhabitant Boat (TIB) Fishers & Buyers of PNG and East Coast Product Only Section

Region fished
Tick which area most of the catch being sold came from.

Have you recorded catches elsewhere?
Tick box to indicate yes or no.
If you answered yes, indicate where else catch information has been recorded. For example catches of tropical rock lobster may have been recorded in the Tropical Rock Lobster Daily Fishing Log (TRL04).

Details of Catch Being Sold Section (All Fishers)

Record the species being sold, the processing code (see codes on fold out flap), grade, and the weight being sold in kilograms.

Two columns are provided to record dollars paid per kilo, choose the first column if you are happy to provide price per kilo information to AFMA. If you do not want to provide price information use the second column. The last column is to record total amount paid, this will not transcribe to AFMA's copy.

Sending Returns to AFMA

Please send yellow copies of completed docket sheets to AFMA in the reply paid envelopes provided or post them to:

The AFMA Logbook Coordinator
PO Box 376
Thursday Island QLD 4875

Please send docket sheet returns in once a month

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e enquiries@csiro.au
w www.csiro.au

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TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16-17 March 2017
RESEARCH **Update – Smart phone technology for remote data collection in Torres Strait traditional inhabitant fisheries**	**Agenda Item No. 4.2** **For Noting**

RECOMMENDATIONS

That the Working Group **NOTE** an update on the outcomes of the project *Smart phone technology for remote data collection in Torres Strait traditional inhabitant fisheries* (the smart phone project).

KEY ISSUES

1. Since the last FWG meeting key updates on the smart phone project are:
    a) delivery of the final report is still pending;
    b) further development by AFMA of a smart phone system to collect catch data is on hold subject to a review of AFMA's framework for the provision of information, communication and technology (ICT); and
    c) the development of any new ICT systems, including a smart phone data collection system, will need to be supported by the revised framework.

BACKGROUND

2. The research project *Smart phone technology for remote data collection in Torres Strait traditional inhabitant fisheries* was undertaken on Erub Island and started in May 2014. The project aimed to assess the viability of using smart phone technology to improve the quality of fisheries data collected from the traditional inhabitant boat licenced fishers participating in the Torres Strait commercial finfish fishery.
3. As part of the project a smart phone application (app) was developed that provided fishers with a simple method of recording catch and effort data which is then automatically transmitted back to a central database.
4. Fishers indicated that the app was easy to use, however usage of the app was poor throughout the project, with some users not recording any data and the most diligent user recording approximately 70% of their catch. At the end of the study the reporting rate had dropped further.
5. A catch recording app was also developed and deployed on a tablet at the Erub community freezer. The data accuracy and completeness was high at the freezer. A comparison with the paper records (which are used to pay fishers and hence are relatively complete) showed over 99% accuracy and 100% completeness. This was a vast improvement from the previous paper based system where records were infrequently returned to AFMA or in some cases lost.
6. Data collected from the project revealed that the fishery primarily consisted of participants who fish sporadically and individually catch small quantities. While the project demonstrated that a smart phone catch reporting system was feasible for use in the fishery, it concluded that the biggest challenge for implementing such a system was the

logistics in engaging a large and changing target group of operators to develop and maintain user uptake of a voluntary catch reporting system.

7. At the last FWG meeting (12-13 July 2016), members made the following key observations:

- the final draft report is pending (due April 2016);
- the project demonstrated that fishers were able to report catches through a smart phone catch reporting system however there were challenges around the logistics in engaging operators and maintaining user uptake of a voluntary catch reporting system;
- Erub fishers and the community freezer business found the smart phone application (the App) very useful. The additional information provided through the App was popular and used to assist fishers to determine the best time to go fishing (for example taking into account prevailing tides);
- TSRA strongly supports the continued development of an App system noting the potential benefit to fishers in having ready access to broader fishing related information and business tools; and
- the AFMA member advised that AFMA would continue to investigate AFMA's capacity to support catch reporting through an App noting back-end infrastructure is required to receive the information. AFMA is assessing and supporting a number of e-reporting initiatives, including e-logbooks across Commonwealth managed fisheries. Initiatives in the Torres Strait need to be considered within the context of AFMA's broader e-reporting program.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 March 2017
RESEARCH **Update - Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing**	**Agenda Item No. 4.3** **For Noting**

RECOMMENDATIONS

That the Working Group **NOTE** an update on the outcomes of the acoustic monitoring component of the Spanish mackerel research project "*Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing".*

KEY ISSUES

1. In 2014 AFMA funded the project titled: *Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing*. This project includes:
    a. an update of the 2006 stock assessment of Spanish mackerel (Begg *et al* 2006) with contemporary data,
    b. an analysis of contemporary commercial logbook records to explore vulnerabilities of Spanish mackerel to capture through seasons and lunar phases, and
    c. employing acoustic monitoring techniques to better understand the aggregating and movement characteristics of Spanish mackerel within the major fishing groups and jurisdictions of Bramble Cay, Ugar and Erub Islands.

2. The updated Spanish mackerel stock assessment was considered by the FWG at its last meeting and the Finfish Technical Scientific Working Group at its meeting on 10 November 2016.

3. The acoustic monitoring of Spanish mackerel movements is almost complete. The tagging was completed to answer two questions:
    a. How long do mackerel remain aggregated at particular sites?, and
    b. Do mackerel move between Bramble Cay and the waters around Erub and Stephen Islands?

4. Mackerel were tagged with small acoustic tags at both Bramble Cay, as well as in waters around Erub Island, during the fishing seasons of 2014 and 2016. In 2014, the trends were for mackerel to stay for only short periods at Bramble Cay.

5. After consulting with community members at Ugar, data collected in 2014 from the fringing reef of Ugar and from Obe Reef in 2016/17 will not be used by the project.

6. In 2016, data from Bramble Cay were sparse. A number of receivers were lost, so no data were recoverable.

7. The data from receivers placed around Erub are yet to be collected.

8. By comparison to similar studies conducted on the Queensland East Coast, very few data were collected from the Torres Strait. On the East coast, the project collected many thousands of tag recordings compared with the < 100 tags recordings in this project. Lost gear, strong tidal currents and community engagement limited the capacity to collect more data.

9. Attached are the funding application (**Attachment A**) and last milestone report (**Attachment B**).

10. Note the project was extended by 12 months due to delays in having the necessary Scientific Permit granted in time for field work scheduled in 2016.

LIST OF ATTACHMENTS

Attachment A - Funding Application - *Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing*

Attachment B – Milestone report Dec 2015

Australian Fisheries Management Authority
FUNDING APPLICATION

The Australian Fisheries Management Authority provides funding for strategic research projects in Torres Strait Fisheries guided by advice from the Torres Strait Scientific Advisory Committee.

ADMINISTRATIVE SUMMARY

Project Details

Project Title - **Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing**

Planned Start Date - June 2014
Planned End Date - June 2016

Project Applicant
Organisation - Centre for Sustainable Tropical Fisheries and Aquaculture, James Cook University
Large Organisation (more than 20 people)
[No]

Project Budget Summary[1]

BUDGET[2]	TOTAL PROJECT COSTS					CONTRIBUTIONS			
Year	Salary	Travel	Operating	Capital	TOTAL	AFMA Contribution	Applicant Contribution	Applicant In kind	Other In kind
2013/14			$25,000		$25,000	$25,000			
2014/15	$166,231	$13,800	$29,000	-	$209,031	$122,493	$39,962	$112,464	$43,500
2015/16	$168,995	$13,800	$3,400	-	$186,195	$98,097	$41,031	$117,007	$43,500
Totals	$335,226	$27,600	$57,400	-	$420,226	$245,590	$80,993	$229,471	$87,000

External Review

Do you agree to any information being sent to external reviewers (if no please send separate advice to the AFMA) -
[Yes]

The TSSAC may engage external consultants to review applications. If you do not agree to information being sent to external reviewers, then select “No”. Applicants should advise the TSSAC separately "in-confidence" of any information that they do not wish to be sent to a reviewer, and any potential reviewers they do not wish to be engaged.

[1] Please list budget exclusive of GST
[2] Please list budget exclusive of GST

Administrative Contact

Name
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Family Name - Ryan
Position - Grants Administrator
Organisation - James Cook University

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Principal Investigator

Please enter only one Principal Investigator details. The Principal Investigator would be expected to work for the applicant.

Name
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Family Name - Tobin
Position - Senior Research Fellow,
Organisation - Centre for Sustainable Tropical Fisheries and Aquaculture, James Cook Uni

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Co-Investigator

Enter Co-Investigator details. You can enter more than one Co-investigator.

Name
Given Name - Michael
Family Name - O'Neill
Position - Principal Fisheries Scientist
Organisation - Animal Science, Department of Agriculture, Fisheries and Forestry

Contact Details
Phone Number - +61 7 5453 5949
Email - michael.o'neill@daff.qld.gov.au

PROJECT DESCRIPTION

Project Challenge

This EOI will address research priorities C) Finfish – 2b Development of operational management objectives, performance measures and decision rules to inform future management strategy evaluation; 2c Understanding PNG cross jurisdictional finfish migration; and 3a Understanding of growth maturity, fecundity and spawning characteristics of Spanish mackerel and Coral trout.

Project Species

Species Group	- Scombridae (Mackerels)
Species	- Spanish mackerel, *Scomberomorus commerson*

Background

Describe why and **how this application was developed**. In particular describe the strategic challenge that it addresses and how it relates directly to other current or recently completed projects. Do not repeat the information provided under Need or Other Related Projects. Detail the consultation with end-users and potential beneficiaries that took place while developing the application.

Spanish mackerel is very important finfish resource of the Torres Straits that currently provides a business base for the Torres Strait Regional Authority (TSRA) (quota ownership and lease) as well as traditional (TIB) and non-traditional (TVH) fishers and fishing businesses alike. The Spanish mackerel resource is also shared with Papua New Guinea (PNG), and although PNG do not currently access the fishery, participation may be likely in future years. Most of the contemporary catch is landed by TVH fishers, however through training programs and initiatives and the work of the TSRA, TIB participation may increase in future years.

Spanish mackerel are a highly productive species that can support valuable long-term fisheries provided sustainable limits are well defined and management plans and goals are based on robust science. The inaugural stock assessment (completed in 2006) suggests the Torres Strait Spanish mackerel fishery is most likely being harvested near or exceeding maximum sustainable levels, with biomass levels estimated to be at 26-67% of unfished levels. Importantly, the inaugural assessment acknowledges the significant uncertainty in the outputs based on inputted data. In order to provide greater certainty to all stakeholders of the Torres Strait Spanish mackerel fishery, the fishery may need to be rebuilt to move it away from the knife edge of overfished status. Considerations of how to achieve such a re-building goal include a range of steps including re-evaluating current stock status, explore the vulnerability of mackerel to contemporary line fishing methods and defining how mackerel aggregate and move among reefs to better understand exposure to fishing.

The proposed project will re-visit the 2006 stock assessment with more robust data inputs as well as updated analytical methods that in combination will provided for greater certainty in stock status. A quantitative analysis of TVH logbook data will examine the vulnerability of Spanish mackerel to contemporary line fishing methods and reveal when and where mackerel are most vulnerable to capture. Acoustic monitoring will complement the logbook analysis by defining the movement and aggregating characteristics of Spanish mackerel within the fishing grounds. In combination, these outputs will allow for greater certainty in the future management of the Torres Strait Spanish mackerel stock. Simultaneously, the project outputs will allow the TSRA and TIB and TVH fishers alike to more confidently assess fishing business structures and potential investments.

Consultation

Specify the relevant consultation with Torres Strait Islanders industry, fisheries management and other parties undertaken before submission of this application, and the level of support for this application. **Particular emphasis should be included on meaningful engagement with relevant Traditional Owners and support from them for the project. Researchers should note that The TSSAC may require formal support from relevant communities for individual research projects if appropriate. Researchers should consider information in the document A Guide for Fisheries Researchers Working In Torres Strait[3].**
Researchers should clearer detail how they intend to engage Traditional Owners and what protocols they will follow in doing so. Enclose any documented support for this application from beneficiaries.

The need for this research was initially identified by the TVH sector of the Torres Strait Spanish mackerel fishery (Tony Vass) and subsequent conversations with AMFA managers (Shave Fava, Brendan Rayner, Alicia Sabatino). Subsequently,

discussions also occurred with TIB fishers Kenny Bedford (Erub Island) and Rocky Stephen (Ugar Island). The project proposal and objectives have also been identified with the Papua New Guinea (PNG) National Fisheries Association (Philip Polon, Ludwig Kumoru), who also expressed interest in the project given joint ownership.

Need

Define succinctly, in no more than 300 words, the need for the project and how it relates to relevant plans, stakeholder aspirations and strategies. Particular emphasis should be placed on need and benefits from the research for Traditional Owners. The need should describe why the application is needed. Do not repeat the information provided under Background.

Spanish mackerel is susceptible to overfishing because of an obligate transient aggregating behavior (Tobin et al., 2013). Although this behavior can allow fisheries to operate with economic efficiency harvesting large numbers of fish in short periods of time, transient aggregating species may also be prone to depletion. The Spanish mackerel fishery in the Torres Straits is considered fully fished (Begg et al 2006), though has a long history of production for both Torres Strait Islanders and commercial non-Islander fishers. There is a current need to revisit the stock assessment as well as better understand the movement and aggregating characteristics of Spanish mackerel within the major TS fishing grounds around Bramble Cay, Ugar (Stephen) and Erub (Darnley) Islands. There are concerns that increased participation in the Bramble Cay fishery may jeopardise future economic viability, while the effectiveness of the 10 mile exclusion zones around Ugar (Stephen) and Erub (Darnley) Islands for the protection of local Spanish mackerel fisheries are not yet known. Future complexities include catch sharing among TIB, TVH and PNG and the outputs of this research will better inform those decision processes.

Planned Outcomes

Quantify and/or qualify in terms of public and/or private benefits the Planned Outcome(s) that this project will contribute to achieving. In fewer than 300 words show how the Planned Outcome(s) will meet the Need, and specifically identify the sector(s) of the industry and/or community that will benefit directly from the Planned Outcome(s). Describe the relevance of the outcomes to fisheries management and the planned path for uptake.

.

Within the waters of the Torres Strait, the primary planned outcome will be improved management of the Spanish mackerel fishery through a combination of: an improved understanding of the vulnerability of Spanish mackerel to sustained fishing pressure directed at spawning aggregations; a quantification (acoustic monitoring) of how long mackerel remain aggregated and exposed to fishing and whether individual mackerel are exposed to fishing at different reefs (movement); and a robust stock assessment of the current status of the Torres Strait Spanish mackerel population.

The benefit from these outcomes will largely lie with the Torres Strait Islanders. More specifically, the planned outcomes will benefit future sustainable management of this important fishery. Sustainable management will have flow on benefits to the TSRA, and both TIB and TVH fishers alike with continued lease revenue for the TSRA and facilitation of strong fishing businesses and/or business planning for TIB and TVH fishers.

In total, these outcomes will benefit TS fisheries and Islanders through better informed and improved management decisions. The outcomes may also benefit fishing business planning by informing long-term viability as well as identifying which seasons/lunar phases mackerel are most abundant thus improving catch rates and product marketing.

Objectives

State succinctly the specific objective(s) of the project. Each objective should state in one sentence "what" is to be achieved rather than "why" (Need) and "how" (Methods).

1. Update the 2006 stock assessment with contemporary data and collate all data for consideration in defining future management objectives and harvest strategies.

2. Complete a quantitative analysis of contemporary commercial logbook records to explore vulnerabilities of Spanish mackerel to capture through seasons and lunar phases.

3. Employ acoustic monitoring techniques to better understand the aggregating and movement characteristics of Spanish mackerel within the major fishing grounds and jurisdictions of Bramble Cay, Ugar (Stephen) and Erub (Darnley) Islands.

Methods

Describe the scientific/technical methods or protocol to be used including types of experiments, fish species involved, the data to be obtained and the means of interpreting the data. Explain clearly the statistical sampling and analysis to be undertaken. Provide support for any new methods and/or techniques to be employed. Detail the qualifications and skills of the key staff to be engaged on the project. A well constructed method will enable you to build your budget systematically. Describe how the research will be conducted in culturally appropriate ways (refer to '*A Guide for Fisheries Researchers Working in Torres Strait')*.

Objective 1 –
Two age-structured population models will be used to calculate and compare annual trends in biomass of Torres Strait Spanish Mackerel. The Spanish mackerel population will be modelled in annual time steps, with the population stratified by age class and sex. The key data input for the models, since the Begg et al 2006, will be the standardised catch rate indices; no recent fish-age-structured data have been collected.

Methods from objective 2 and generalised linear models (GLM) will be employed to derive indices of abundance (standardised catch rates). From the analyses, two annual time-series of standardised catch rates will be considered: 1) analysis of non-zero daily catches; where no fishing effort records on hours fished and hours search time are typically available for locations of zero catch, and 2) the second analyses will explore overcoming hyperstability caused by limited effort reporting. For analysis 2, a surrogate will be explored for change in the frequency of harvesting (finding-catching-keeping) a Spanish mackerel. A two-component GLM methodology will be followed to correspond to presence (harvesting) or absence of Spanish mackerel in the fishery. Data on individual fishers, locations, wind strengths, multi-target species, years, regions and months will be considered. All fishing areas from the Torres Strait (six regions, Begg et al 2006) will be spatially evaluated and appropriately averaged for changes in aggregated fishing effort (Carruthers et al 2011; Walters 2003).

Time series of Spanish mackerel standardised catch rates and harvest, and biological data on growth, age-at-recruitment, longevity, maturity, and historical age structure will be modelled. The Begg et al 2006 model will be modernised with the Australian east coast assessment methods to use uncertainty in historical harvest tonnages and likelihood functions to balance simultaneous model fits to catch rate and age-structured data. A stochastic stock reduction analysis (SRA) will also be compared. SRA simulates changes in abundance by subtracting estimates of mortality and adding estimates of new recruits, where the new recruits are a function of the current stock size and the leading stock recruitment parameters (Walters 2006). Stochastic SRA generates parameter distributions by conducting large numbers of Monte Carlo simulation trials. By resampling from these trials using likelihood weighting, confidence intervals on all model outputs will be formed. Forward projections beyond the existing time series will conducted to predict the possible impacts of alternative harvests.

As per Begg et al, stock status ratios will be updated along with management quantities for BMSY, F=0.5M and MEY surrogates for B0.5 – B0.7. In addition, catch rate reference points will be produced for stock status monitoring. These outputs, together with acoustic monitoring of mackerel movement, will enable management to gauge concerns of increased fishing and economic viability at Bramble Cay and for the TS stock as a whole, plan future monitoring, and inform on catch sharing arrangements as needed.

Objective 2 –
A quantitative analysis of the commercial logbook data will be completed following the methods of Tobin et al (2013). These methods have been proven robust for identifying the influence of season and lunar phase on the catches of Spanish mackerel on the Queensland east coast. Understanding how these factors influence the Torres Strait fishery will be instrumental for future discussions and decision processes as related to harvest strategies and business planning. The metrics used in these analyses are a generic catch-per-unit-effort metric which is identifiable by all stakeholders. The data analysed will include the TVH fishery logbook records as held by the AFMA.

Objective 3 -
Acoustic monitoring shall be achieved using Vemco VR2W receivers and V9 transmitters that have been successfully employed to track Spanish mackerel among the spawning reefs off Townsville (Tobin, FRDC Project 2010-007). Captured mackerel will be tagged in the dorsal musculature with uniquely coded v9 transmitters that allow for individual fish movement to be tracked. Acoustic receivers will be deployed throughout the main Spanish mackerel fishing grounds – likely at Erub (Darnley) Island, Ugar (Stephen) Island and Bramble Cay – though final positioning may change depending on the experience and advice of TIB and TVH fishers. The acoustic array will be deployed to ensure that when a tagged mackerel moves through or aggregates in the nominated areas of interest its presence will be recorded. During the mackerel seasons of 2014 and 2015, six groups of 10 mackerel will be tagged and released within the array. Data collected by the acoustic receivers will be used to calculate residency and roaming indices to quantify the likelihood of movement away from reefs as well as likelihood of movement between reefs. The data can also predict how long mackerel remain aggregated at particular reefs. Kaplan Meier plots will be used to identify the aggregating characteristics as related to season and lunar influences to better inform sustainable management or business (fishing effort) planning.

The acoustic monitoring component of the proposed project will provide opportunities for TIB hands-on participation in the project. Specifically, the local ecological knowledge of TIB fishers of historically important fishing locations and hence mackerel aggregation sites will benefit the placement of the acoustic array as well as the tagging of mackerel with acoustic transmitters. Wherever possible, the involvement of local TIB fishers will be encouraged through timely notification of the research and subsequent invitation to participate.

Begg G, Chen C, O'Neill M, Rose D. 2006. Stock assessment of the Torres Strait Spanish mackerel fishery. CRC Reef Research Centre Technical Report No. 66, CRC Reef Research Centre, Townsville.

Campbell, A. B., O'Neill, M. F., Staunton-Smith, J., Atfield, J., and Kirkwood, J. 2012. Stock assessment of the Australian East Coast Spanish mackerel (Scomberomorus commerson) fishery. The State of Queensland, Department of Agriculture, Fisheries and Forestry. 138 pp.

Carruthers, T. R., Ahrens, R. N. M., McAllister, M. K., and Walters, C. J. 2011. Integrating imputation and standardization of catch rate data in the calculation of relative abundance indices. Fisheries Research, 109: 157-167.

Mapstone B, Tobin A, Jones A, Begg G. A review of reef line fishing in Torres Strait. CRC Reef Research Centre Townsville, 37pp.

Tobin A, Currey L, Simpfendorfer C. 2013. Informing the vulnerability of species to spawning aggregation fishing using commercial catch data. Fisheries Research 143:47-56.

Walters, C. 2003. Folly and fantasy in the analysis of spatial catch rate data. Canadian Journal of Fisheries and Aquatic Sciences, 60: 1433-1436.

Walters, C. J., Martell, S. J. D., and Korman, J. 2006. A stochastic approach to stock reduction analysis. Canadian Journal of Fisheries and Aquatic Sciences, 63: 212-223.

Risk Analysis

Identify the threats to the objectives being achieved. Describe the means of overcoming these threats. Use the sub headings "Threat" and "Contingency".

Research Related Risks :
Threat - Loss of acoustic receivers
Contingency - The CSTFA has a small repository of older generation VR2s that can be accessed by the project in event of lost equipment. The staff of the CSTFA has extensive experience in placement and mooring methods suitable for a range of different substrates, habitats and sea conditions. This is experience will minimise the likelihood of receiver loss in the first instance.

Threat - Post release mortality of tagged mackerel
Contingency – The methods used in the capture, tagging and release of Spanish mackerel will be the same developed, tested and proven by recently completed FRDC Project 2010-007. The commercial mackerel fishing experience of PI Tobin will be invaluable for capture methods and handling techniques that preserve the vigour of captured and tagged mackerel.

Threat - Poor capture rate of mackerel for acoustic tagging exercise.
Contingency – Project staff will work closely with TIB and TVH fishers to ensure time invested in the field work component (capture, tag and release of Spanish mackerel) is targeted to the most productive areas at the most productive times.

Organisational Related Risks:
Threat - Staff departure
Contingency - A unique advantage of the CSTFA is that it is embedded within JCU, and we have excellent access to future technical staff in the form of recent graduates and work experience personal, that are often well placed to fill technical and research staff should any depart. Further, the CSTFA have 6 senior research scientist who each have a diversity of expertise, and are again well placed to fill the roles of departing senior staff.

Performance Indicators

Identify measureable performance indicators against which the success of the overall project can be evaluated relative to the Project Objectives. Include any socio-economic indicators that would be relevant to the research project.

1. The completion of the stock assessment will be a significant performance indicator, though will not be realised until late within the project. However, given the inaugural stock assessment concluded it likely that the TS Spanish mackerel fishery is fully exploited revising this assessment with contemporary data and methods will be a significant performance indicator.

2. Alternately, analysis of commercial logbook data will be prioritized and completed early within the project. Understanding the recent history of the spatial and temporal aspects of spawning aggregations inferred from commercial fisher effort and catches data, is pivotal to maximizing the benefits of the acoustic monitoring data that will be produced through the methods addressing Objective 3. The analysis of commercial logbook data will be completed and results distributed by December 2014. This analysis will clearly elucidate when Spanish mackerel are most vulnerable to fishing. This information will be useful in a number of ways. If the stock is considered fully- or over-exploited, knowing when the fish are most vulnerable to fishing greatly benefits the introduction of management measures that may be required to reduce harvest(s). Alternatively, if stock status is healthy these analyses will identify peak fishing times and/or places to the benefit of all stakeholders in the fishery.

3. Similar to performance indicator 2, the final performance indicator will be the presentation of the acoustic monitoring results. This will be a two-tiered process including the presentation of summary results from the 2014 monitoring early in 2015, as well as the final acoustic results again in mid-2016. These outputs will specifically focus on describing the movement and aggregating characteristics of Spanish mackerel as relevant to the 10 nmile Islander exclusion zones and the TVH dominated Bramble Cay fishery. Whether or not mackerel move among these zones will be important knowledge for future management and business structuring.

Related Projects

List other research related to this project undertaken either by the applicant or other researchers, and state how such research will be integrated into or benefit this project. Indicate searches undertaken. Australian research can be found on databases such as ARRIP and ABOA. Searches are available on a fee for service basis from Seafood Services Australia (ph 1300 130 321).

It is also important where the application has been submitted previously to list any rejected applications and explain why they were rejected and how this application has addressed any feedback.

Related projects include –
Tobin et al 2013 Informing the vulnerability of species to spawning aggregation fishing using commercial catch data. Fisheries Research 143, 47-56.
Tobin et al (in review) Utilising innovative technology to better understand Spanish mackerel spawning aggregations and the protection offered by marine protected areas. FRDC Project 2010-0 07 Final Report.
Begg et al 2006 Stock assessment of the Torres Strait Spanish mackerel fishery. CRC Reef Tech Report 66.
These projects add significant value to the proposed research as they include empirical evidence of the success of the techniques and methods in providing high quality data and outputs as relevant to the research priorities and questions.

Outputs and Extensions

Describe the outputs that will arise from the project. Outputs are knowledge, processes and technology that when adopted will contribute to achieving planned outcomes. End-users are often in the best position to decide the most appropriate outputs, so consider having them describe their output needs. Outputs may take many forms including: publications, guides, codes of practice and models in print or electronic media.

Provide a Dissemination, Extension & Commercialisation Plan for extending the results of the project. **Particular emphasis should be included on communication and extension strategies that are suitable for Traditional Owners.** Include in the plan information on the organisation that will undertake the extension and on the relationships that will be developed with end-users in order to facilitate the adoption of the results.

The AFMA policy is to make project results publicly available, however, parties may agree to protect any intellectual property arising from the project. Unless there is a compelling reason otherwise, no protection or confidentiality will apply to results of AFMA funded projects. If protection of intellectual property is agreed to, the parties will agree on a strategy to do so. This may also result in the exchange of a separate intellectual property management agreement.

Notwithstanding the above, documenting the relative ownership of intellectual property resulting from the project is important particularly in the event that such intellectual property may have a commercial value. To ensure appropriate apportionment of ownership over intellectual property, detail any direct or related intellectual property owned by the applicant, the AFMA (or its predecessors) and/or any other organisation at the commencement of the project.

There are three key outputs that will arise from the project.

Stock Assessment Output -
For fisheries managers, the TSRA, TIB and TVH fishers the stock assessment will define the status of the TS Spanish mackerel stock using the most up-to-date methods and data to reduce the current uncertainty of stock condition. This output will be valuable knowledge for the managers, businesses and fishers alike who participate in the Spanish mackerel fishery. The output will be greater certainty of current stock condition. With this knowledge, annual quota can be set with greater certainty than is currently available.

Vulnerability Assessment Output –
The output of the vulnerability assessment will be similarly beneficial to fisheries managers, the TSRA, TIB and TVH fishers as this output will identify times and/or places where Spanish mackerel are most vulnerable to fishing (highest catch rates) as well as those times and/or places where mackerel are least vulnerable to fishing. This knowledge will significantly aid in the development of protective fisheries management measures if they are in fact needed; and/or provide for better business planning by identifying times and places of commercial volumes of catch.

Acoustic Monitoring Output –
The output of the acoustic monitoring will be significant knowledge advancement in understanding Spanish mackerel aggregating and movement characteristics. In particular, the 10nmile exclusion zones the current exist around some Torres Strait Islands are presumed to offer some protection to the “home island reefs and fish”. For a highly mobile species like Spanish mackerel, individual fish may move widely among reefs. Knowledge of these aggregating and movement patterns will allow for the better management of home island as non-home island fisheries. If Spanish mackerel are unique to individual reefs and islands (as the case is for Queensland east coast Spanish mackerel), then the fishing activities at Bramble Cay may not affect local island mackerel. Alternately, if mackerel move widely throughout the TS, fishing effort and catch at Bramble Cay may impact on local island mackerel stocks. This knowledge will improve understand and the information basis for sustainable future management.

Communication and Extension
Recognising the importance of the project results to the traditional inhabitants of the Torres Strait Islands, the best method(s) for communication and extension of project results will be guided by the TSRA. The project at all times will clearly attribute all knowledge, data and resulting outputs to the appropriate traditional inhabitants, islands or fishermen associations as required. Similarly, the project outputs will be regularly made available in appropriate formats to ensure the Torres Strait community in informed of the project intent, progress and findings. Where possible, field work will include Torres Strait Islander fishers with expertise in the Spanish mackerel fishery, and through these collaborations will be a commitment to respect local Torres Strait traditions and customs.

Intellectual Property

Identify the appropriate Intellectual Property category applicable to this application. Choose ONE from below.

CODE 1
Published, widely disseminated and promoted, and/or training and extension provided. Relates mainly to outputs that will be valuable in the public domain.

Flow Of Benefits

Estimate, as percentages of total benefit, the Flow of Benefits to the potential beneficiaries of this project. Careful consideration should be given to apportioning the Flow of Benefits as the TSSAC will seek advice from the nominated on the appropriateness and priority of the application, and on the potential benefits of the project following its completion.

There are a number of ways to apportion flow of benefits. For example, the flow of benefits across the commercial sector could be based on the relative gross values of production; across the recreational sector could be based on population; and across all fishing industry sectors could be based on the relative percentages of catch. The ABARES website contains more information on fisheries statistics.

Fishery (including aquaculture) Managed by:	Commercial(%)	Recreational(%)	Traditional(%)
ACT			
AFMA	35	5	60
NSW			
NT			
QLD			
SA			
TAS			
VIC			
WA			

Data Management

I have searched for existing data. (Refer to guidelines on how to search the Australian Spatial Data Directory and Oceans Portal) [Yes]

Provide a brief description of the resulting data from the project and how this data will be stored for future protection and access.

Data management should include a description of the data to be produced by the research and show details on the following aspects:

Data security or privacy issues, applying to the data.
Nominated data custodian, clearly identifying the party responsible for this data and the database/repository system that .the data will be stored in. AFMA may require researchers to provide copies of data and or metadata to them.

I have searched for existing data.
All data collected through this project will be subject to JCU ethics approval, which will dictate how the data are collected and stored. All data will be stored in an Microsoft Access relational database located on a secure server in the School of Earth and Environmental Sciences at James Cook University with a daily backup routine. This method has been used successfully by the CSTFA to maintain large amounts of sensitive and confidential data for more than a decade.
The data resulting from the project will include raw data from fisher logbooks and acoustic monitoring equipment. The logbook data will be kept confidential, as will any shared local ecological knowledge from either Torres Strait Islanders or TVH fishers.
The custodian of the data will be the project PI.

BUDGET

Milestone List

Identify the key milestones against which progress of the project will be measured. All tangible outputs for the project should be listed as milestones together with the dates by which their achievement is anticipated, and the criteria for verifying that the milestones have been achieved. All milestones must be costed.

To facilitate project management please base milestone dates on the completion of significant reportable activities rather than traditional calendar dates such as end of the month, financial or calendar year.

Due Date	Details	Justification	Salary	Travel	Operating	Capital
1 June 2014	Project contracting, ordering of acoustic monitoring gears from Canada to ensure timely start of project	Operating: Purchase of acoustic monitoring equipment including 12 Vemco acoustic receivers (12 @ $1,800 = $21,600) and anchoring gear ($3,400 total).	-	-	$25,000	-
15 Dec 2014	First round of acoustic monitoring field work complete with 30 Spanish mackerel tagged and monitored during the 2014 spawning season. Access to the logbook data secured and preliminary analysis initiated.	Salary: for Tobin (30%) and O'Neill (15%). Travel: a total of 4 airfares ($10,600) and 16 nights' accommodation ($3,200) to conduct field work in the outer islands and Bramble Cay Operating: IT requirements ($2,500), project advertising and dissemination ($500). 60 Vemco V9 transmitters (60 @ $483 each = $26,000).	$39,650	$13,800	$29,000	-
30 June 2015	Preliminary analysis and outputs from the acoustic monitoring completed. Commercial logbook data analyses. Stakeholders (primarily TSRA, CFG, TIB and TVH fishers) briefed on project progress (logbook analysis and first round of acoustic monitoring) via factsheets.	Salary: for Tobin (30%) and O'Neill (15%).	$40,043			
15 Dec 2015	Second round of acoustic monitoring complete with	Salary: for Tobin (30%) and O'Neill (15%). Travel: a total of 4 airfares ($10,600) and 16 nights' accommodation ($3,200) to	$40,444	$13,800	$3,000	

	30 Spanish mackerel tagged and monitored during the 2015 spawning season. Incorporation of data into stock assessment model and preliminary completion for model runs.	conduct field work in the outer islands and Bramble Cay. Operating: IT requirements ($2,500), project advertising and dissemination ($500)				
30 June 2016	Draft final report including final stock assessment Stakeholder de-brief through the TSSAC and TSRA, CFG, and TIB and TVH fishers.		$40,853			
			$160,990	$27,600	$57,000	

Cash Contributions

Contributor Name	Contributor Contact Details	Amount

Schedule of Payments

The schedule of payments is automatically generated. If there is a cash contribution associated with the project please specify the breakdown between the milestones.

Unfortunately there are no cash contributions to this proposed project.

Special Budget Considerations

Include information that may impact on the project budget. This could include revenue from the sale of publications or other items (e.g. fish sales or capital items) or details of potential co-funding arrangements.

There are no special budget considerations in this proposed project.

Contribution by Applicant

Provide estimates of contributions (cash and in kind) made to the project to cover staff, facilities, vessels, and administrative support costs. Ensure any cash contributions from the applicant are captured here.

Year	Salaries	Travel	Operating	Capital	Justification
2014/15 (JCU)	$138,962				Salary: 20% of Tobin salary ($26,462) as well as the JCU institutional overheads, providing office space, library facilities and admin to support this salary

					contribution ($112,464).
2015/16 (JCU)	$144,538				Salary: 20% of Tobin salary ($27,531) as well as the JCU institutional overheads, providing office space, library facilities and admin to support this salary contribution ($117,007).

Contribution by Other

Provide estimates of contributions (cash and in kind) made to the project from other government and private investors to cover staff, facilities, vessels and administrative support costs. Ensure any cash contributions from other sources (not applicant or AFMA) are captured here.

Year	Name of Contributor	Salaries	Travel	Operating	Capital	Justification
2014/15	QDAFF	$57,000				Salary: 15% of O'Neill salary ($13,500) as well as the QDAFF institutional overheads, providing office space, library facilities and admin to support this salary contribution ($43,500).
2015/16	QDAFF	$57,000				Salary: 15% of O'Neill salary ($13,500) as well as the QDAFF institutional overheads, providing office space, library facilities and admin to support this salary contribution ($43,500).

Research Progress Report – AMFA Project RR2014/0823

Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing.

Milestone 2: due 15 December 2014,
submitted 15 December 2014

Brief progress report delivered to AFMA outlining action on:

1. First round of acoustic monitoring
2. Thirty Spanish mackerel tagged and monitored for the 2014 spawning season
3. Logbook data access and preliminary analysis initiated

Progress against milestone:

The first milestone has been achieved. The first round of acoustic monitoring has been completed. Acoustic receivers were deployed around Bramble Cay, Ugar and Erub Islands in early September and retrieved in December 2014. A total of 30 Spanish mackerel were tagged with acoustic transmitters in early September, with 20 mackerel tagged at Bramble Cay and 10 mackerel tagged at 3 mile (east of Ugar Island). The acoustic receivers from Ugar and Erub have been downloaded and detection data suggests a number of mackerel tagged at Bramble Cay were detected at Ugar Island. This data is very preliminary and must be treated cautiously. Detection data from the receivers around Bramble Cay is yet to be examined.

The commercial (TVH) logbook data has been secured from AFMA and some preliminary exploratory analysis completed. Robust analyses of the logbook data will begin in early 2015.

A project update flyer will be compiled early in the New Year and distributed to all stakeholders and relevant interested parties.

The co-operation and assistance given by the Erub Island community, and in particular Kenny Bedford and Sammy Mye, was particularly helpful in completing the acoustic monitoring component of this milestone and was very much appreciated. Similar co-operation and assistance by the TVH fishing vessel “New Traveller” and crew (Egon, Al and Eddie) was also very much appreciated and instrumental in completing the first round of acoustic monitoring.

At this time, we do not expect any issues with this research project progressing as proposed.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 March 2017
RESEARCH Research priorities	Agenda Item No. 4.4 For discussion and advice

RECOMMENDATIONS

That the Working Group **NOTE** the identified research priorities for the finfish fishery.

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on any changes to research priorities noting the next public call for research funding application will be for projects starting 2019/20.

KEY ISSUES

1. This is a standing item for the FWG. Having agreed research priorities aims to achieve a more efficient management process.

2. Generally, the Torres Strait Scientific Advisory Committee (TSSAC) makes an annual public call for funding applications to conduct research to support fisheries management decisions. The call for research identifies research priorities to be addressed. AFMA seeks advice from the PZJA fishery consultative forums on fishery specific research priorities.

3. The FWG is asked to note the table outlining budget commitments for the next financial years (**Attachment A**) and note that due to research funding being almost fully committed for the next two financial years, the next public call for funding applications for research will be for the 2019/20 financial year.

4. There may be opportunity to fund small tactical research projects with AFMA's projected unspent research funds (2016-17 85k; 2017/18 28k; 2018/19 88k).

5. Research and data priorities discussed at the last FWG meeting and by the Technical Scientific Working Group are provided below.

6. It is likely that the Finfish Harvest Strategy to be developed will provide a key guide to future research priorities in the fishery.

7. Note that in relation to point 8.d. (below) arrangements are being made to convene an industry workshop in July 2017 to work with fishers on clarifying model inputs for the Spanish mackerel assessment and reviewing the fishery logbook.

DISCUSSION

8. The 12-13 July 2016 meeting of the Finfish Working Group identified the following general research priorities:

a. Genetic studies on Spanish mackerel to test single stock theory – particularly if PNG and NE QLD catches increase. This potentially could be achieved by using fishery data, fisher participation and/or a PhD study;
b. Management Strategy Evaluation on harvest strategy options; and
c. In the event that the western closure line is removed, investigate the potential impact on TAC.

9. The 12-13 July 2016 meeting of the Finfish Working Group identified the following data needs:
    a. Review logbook structure;
    b. Monitoring of non-commercial take (note partly being addressed through current research project on the traditional take of finfish);
    c. Improved rate of returns of freezer records for the TIB Sector; and
    d. Age and length structure data (medium term – relates to Harvest Strategy work, phase 2).

10. At its 10 November 2016 meeting the Finfish Technical Scientific Working Group recommended the following data collection/analysis priorities to improve the Spanish mackerel stock assessment in the longer term. The FWG should have regard for these priorities:
    a. appropriate spatial genetic sampling to clarify the current single Torres Strait stock/population structure assumption (noting the single stock assumption is the most precautionary approach);
    b. additional length frequency sampling to improve the spatial representativeness of biological data used in the model. This will assist in: a) assessing the fishing mortality and selectivity of the catch i.e. whether the catch size structure is representative of the underlying population age structure and b) validate fecundity at age assumptions;
    c. further data analysis and consultation with stakeholders to investigate options for improving the accuracy of the TIB catch data series; and
    d. AFMA and TSRA, in consultation with temporary licence holders, to work on characterising fishing gear selectivity and different fishing practices and identify options for improving the accuracy and level of information collected through logbooks (a pre-season workshop with temporary licence holders was recommended as a starting point).

11. Additionally the Scientific Technical Working Group identified the following two additional analyses be undertaken to improve the Spanish mackerel stock assessment including:
    e. sensitivity analyses to examine how the model might perform with ‘domed vulnerability’ where large fish are assumed to be less available to capture; and
    f. examination of CPUE data using ‘indicator’ vessels with known fishing histories as a means to further validate the CPUE time series.

STATUS OF TORRES STRAIT RESEARCH PROJECTS

Research projects in progress

12. There are three TSSAC recommended research projects relevant to the Finfish Fishery that are either in progress or starting soon:

    a. *Harvest Strategies for the Torres Strait Finfish* led by Trevor Hutton. Identified as a high management priority (**CONTRACTING PHASE**). Update is provided at agenda item 5.1.

    b. *Monitoring the traditional take of finfish species in the TSPZ* (**IN PROGRESS**) led by Nicole Murphy. Update is provided at agenda item 4.1
    c. *Defining the status of Torres Strait Spanish mackerel to inform future fisheries allocation and sustainable fishing* (**IN PROGRESS**). Update is provided at agenda item 4.3.

13. The TSRA has also facilitated research in line with the Finfish Action Plan. The TSRA:
    a. have partnered with FRDC (Fisheries Research Development Corporation) to fund projects investigating the feasibility of:
        - developing Jewfish, barramundi and crab fisheries;
        - exporting seafood product directly from the Torres Strait; and
        - developing a Torres Strait fisheries brand;
    b. are undertaking an project internally to investigate the feasibility of a developing baitfish fishery (garfish and sardines) based around Warraber and Poruma;

14. At the last FWG meeting the working group noted that management advice, assessment and planning would be required to support the sustainable development and/or expansion of finfish fisheries and encouraged all related proposals to be tabled with the FWG for advice.

Recently closed (or in finalisation) projects

15. *Smart phone technology for remote data collection in Torres Strait traditional fisheries* – final report is still pending (**IN FINALISATION**). Update on the outcomes is provided at agenda item 4.2.

LIST OF ATTACHMENTS

ATTACHMENT A – Table of budget commitments and availability

Attachment A

Table 1. Budget commitments and availability for 2016/17 TSSAC project

Funding Years	Project code	Torres Strait Research	Project Budget	2016/17 FY Total (Budget $440)	2017/18 FY Total (Budget $440)	2018/19 FY Total (Budget $440)
14/15		Improved TSPF profitability and pathways for a sustained flow of TSPF benefits to TS Communities	$89,659			
13/14 - 14/15 15/16		Smartphone - data collection (PI Haartmann)	$186,000.00			
13/14 - 14/15		2014 TRL Stock Assessment and TAC (PI Plaganyi-Lloyd)	$627,615.97 ($909,337.42)	$16,000		
13/14- 14/15- 15/16		Defining the aggregating and movement behaviour of Spanish Mackerel to inform future fisheries allocation and sustainable fishing*	$245,590.00	$40,853*		
15/16		Production of a Sea Cucumber product processing training video for Torres Strait Communities	$10,000			
15/16		Consultative and administrative processes for scientific research in the Torres Strait Islands	$16,500			
15/16 16/17		Monitoring the traditional take of finfish in the Torres Strait Protected Zone	$199,802	$59,941.10 (-$59,941.10)		
15/16 16/17		Bêche De Mer Harvest Strategy	$26,721	$37,224	$15,486	
16/17 17/18 18/19		TRL fishery surveys, stock assessment, HCR and RBC	$759,855	$239,030	$243,348	$277,476
16/17 17/18		Finfish Fishery Harvest Strategy	$200,961	$32,580	$123,662	$44,719
		Total costs of proposed projects for Fin Year (A)		**$324,834**	**$382,496**	**$322,195**
		TSSAC Chair/Scientists Sitting fees & meeting costs (B)		Approx. $29,500	Approx. $29,500	Approx. $29,500
		(C) - Total costs = (A) + (B) (includes all projects and TSSAC admin costs)		$354,334	411,996	$351,695
		Balance - $440 000 - (C)		**$85,666**	**$28,004**	**$88,305**

Projects set for completion in 2014/15

Projects for completion in the 2015/16

Projects funded through TSRA agreement (i.e. not taken out of $440,000)

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
MANAGEMENT **Finfish Harvest Strategy Project Update**	**Agenda Item No. 5.1** **For noting**

RECOMMENDATIONS

That the Working Group **NOTE** the project update to be provided by project leader Dr Trevor Hutton, CSIRO.

KEY ISSUES

1. The development of a harvest strategy has been identified by the FWG as a key management and research priority.
2. At its 12-13 July 2016 meeting the FWG was supportive of a funding application presented '*Harvest Strategies for the Torres Strait Finfish fishery*'
3. The TSSAC has approved the funding proposal and the project is now entering the contracting phase.
4. Dr Trevor Hutton will be joining the meeting via teleconference for this agenda item. This will provide the FWG with an opportunity to consider the project work plan.

BACKGROUND

5. At its 12-13 July 2016 meeting FWG members and observers supported the development of a harvest strategy and provided the following observations and advice:
    - a harvest strategy provides a clear management procedure for recommended TACs and in doing so, can provide greater certainty for industry;
    - one benefit of harvest strategies is that they generally have a strong consultation process where key stakeholders have opportunity to provide their view on how the fishery should be structured. Furthermore, harvest strategies can include guiding principles;
    - a harvest strategy for the finfish fishery should set out agreed set of decision rules for key species (i.e. Spanish mackerel and coral trout) and also include other species for which there is growing interest by fishers to target;
    - the FWG should be proactive in managing what might become a valuable fishery in the future and that even with a lack of data the simplest form of control rules should be developed and can be built up as more data is available;
    - it will be important to engage existing sunset licence holders in the development of the harvest strategy as these are the operators who have long-term experience and knowledge of the fishery and operational factors impacting the fishery;
    - it will also be important to communicate well with fishers on the importance of data with all sectors in the development of the harvest strategy;

- catch per unit effort (CPUE) is a pivotal metric used to guide decisions in many fisheries. As an example, CPUE is the sole indicator in for place for the ECF coral trout fishery. A simple rule based on CPUE may be appropriate for the Torres Strait. A suite of other parameters used in the TVH fishery could also be considered and added through time to make sure the desires and aspirations for the fishery are maintained, noting that the primary objective is for sustainable stock and healthy economic return but other needs may to be considered in the Torres Strait context;

- the business decisions made by sunset licence operators is very dependent on the decisions and rules put in place to manage the fishery, and although they are an important sector for generating income for communities, they are at times in the dark about their future in the fishery (e.g. unsure if they'll be successful in accessing the fishery until a month or only weeks before season opening); and

- holding a pre-season briefing to hear from all sectors of the industry on what they want for the fishery is an option, particularly during the harvest strategy development. Pre-season briefings would be a good opportunity to build networks and provide a forum for the medium to long term aspirations for the fishery to be well communicated. Operators could then make informed decisions on how they structure their businesses.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 March 2017
MANAGEMENT **Options for ongoing scientific advice.**	**Agenda Item No. 5.2** **For discussion and advice**

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on options for receiving ongoing scientific advice to assist in the management of the Finfish Fishery and in doing so:

a) **DISCUSS** and **PROVIDE ADVICE** on the future role of the Finfish Technical Scientific Working Group; and

b) if applicable, **DISCUSS** and **PROVIDE ADVICE** on the terms of reference and membership for a Resource Assessment Group (RAG).

KEY ISSUES

1. At its last meeting (12—13 July 2016) the FWG recommended that a Technical Scientific Working Group (TSWG) be convened to review the Spanish mackerel stock assessment to allow for full consideration of inputs and outcomes. The FWG recommended membership and provided guidance on issues for consideration (**Attachment A**).
2. Having regard for the short-medium term management priorities, research and data needs identified by both the FWG and TSWG, ongoing expertise-based scientific advice will assist in the effective management of the Finfish Fishery.
3. There are several ways the FWG and PZJA could gain ongoing scientific advice. These include but are not limited to, FWG Scientific members during working group meetings, the continuation of the TSWG, formation of a Resource Assessment Group (RAG) or by targeted consultancy.
4. AFMA's preference is to establish a formal PZJA RAG with an initial three year appointment. This option is preferred by AFMA to enable scientific advice to be developed in forum sufficiently resourced with specific terms of reference. The ongoing need for a Finfish Fishery RAG could then be reviewed overtime according the management needs in the fishery.
5. The general terms of reference (ToR) for a PZJA RAG are set out in the PZJA Fisheries Management Paper No. 1 (PZJA FMP No. 1) (**Attachment B**). AFMA recommends they be adopted for a Finfish RAG. The general ToR are:
    a. Analyse, assess, and report on the fishery status against agreed reference points, including target and non-target stocks, impacts on the marine environment from fishing, and the economic efficiency with which stocks are fished;

    b. Identify improvements and refinements to assessment methodology;

    c. Evaluate alternative harvest strategies or TAC settings. This includes providing advice on confidence limits or risk levels associated with particular management/harvest strategies;

d. Assist the relevant MAC and/or the WG to develop, test, and refine sustainability reference points and performance indicators for the fishery. Advise on stock status and trends relative to these reference points and indicators;

e. Identify and document fishery assessment and monitoring gaps, needs and priorities. These should be communicated to the SAC so that they can be incorporated in the Torres Strait strategic research plan;

f. Provide advice and recommendations to the SAC on issues consistent with RAG functions;

g. Facilitate peer review of assessment outputs;

h. Facilitate/drive a collaborative stock assessment with adjacent jurisdictions;

i. Maintain awareness of current issues by promoting close links with the MACs, SACs and any other Torres Strait RAGs; and

j. Liaise with other researchers, experts and key industry members.

6. FMP 1 provides the minimum requirements for RAG membership. The minimum membership is one representative across the various stakeholder groups (refer to section 7.1.4, FMP 1). Consistent with FMP 1, AFMA recommends the continuation of the membership composition of the TSWG with the addition of an extra industry representative:
    - Chairperson;
    - Government (AFMA, QDAF, TSRA);
    - three industry members (note TSWG has two industry members);
    - three scientific (members)

7. Please note AFMA continues to work on possible representation options for Malu Lamar (RNTBC) within the PZJA consultative structure forums. One outcome may be for a Malu Lamar (RNTBC) position to be created on all advisory forums.

8. AFMA proposes to make an open call for applicants for the scientific and industry members. Applicants would be assessed by a PZJA agency selection panel.

LIST OF ATTACHMENTS

Attachment A – Finfish Working Group recommendation on the formation of a Scientific Technical Working Group

Attachment B – PZJA Fisheries Management Paper No. 1 (PZJA FMP No. 1)

Finfish Working Group recommendation on the formation of a Scientific Technical Working Group 12-13 July 2016

The FWG **recommended** for the 2017-18 Spanish mackerel fishing season that**:**

- TAC setting advice to be finalised subject to consideration of updated stock assessment and advice from the newly convened Technical Scientific Working Group;
- Technical scientific working group to review stock assessment update to allow for full consideration of inputs and outcomes. Technical scientific working group to report back to FWG;
- The technical scientific working group should comprise the follow members:
  - Scientific members
  - Two industry members: Tony Vass, Kenny Bedford
  - Andrew Tobin
  - Nicole Murphy
  - Government
- The technical scientific working group should consider the following:
  - Disproportionate effort in Bramble Cay
  - Local factors – unexpected factors (eg environmental and/or climate change related effects)
  - Changes in accessible area of the fishery (closures)
  - Estimates of TIB, Traditional, Recreational catches
  - Logbook data quality
  - Stock structure
  - Catch rate objectives (effort & catch)

PROTECTED ZONE JOINT AUTHORITY

FISHERIES MANAGEMENT PAPER No. 1

(PZJA FMP No.1)

MANAGEMENT ADVISORY COMMITTEES, SCIENTIFIC ADVISORY COMMITTEES, WORKING GROUPS AND RESOURCE ASSESSMENT GROUPS

MAY 2008

Prepared by the Australian Fisheries Management Authority
on behalf of the Protected Zone Joint Authority

CONTENTS

LIST OF ATTACHMENTS

1. ACRONYMNS/DEFINITIONS

For the purposes of this document:

AFMA	Australian Fisheries Management Authority
DAFF	Department of Agriculture, Fisheries and Forestry
EO	Executive Officer
FMP	Fisheries Management Paper
MAC	Management Advisory Committee
PNG	Papua New Guinea
PZJA	Protected Zone Joint Authority
QDPI&F	Queensland Department of Primary Industries and Fisheries
RAG	Resource Assessment Group (including Stock Assessment Group, species Assessment Group or any scientific group).
SAC	Scientific Advisory Committee
TSFMAC	Torres Strait Fisheries Management Advisory Committee
TSPMAC	Torres Strait Prawn Management Advisory Committee
TSPZ	Torres Strait Protected Zone
TSRA	Torres Strait Regional Authority
WG	Working Group

2. PURPOSE

This Fisheries Management Paper sets out the Torres Strait Projected Zone Joint Authority's (PZJA) policy for the operation and administration of Management Advisory Committees (MACs), Scientific Advisory Committees (SACs), Working Groups (WGs) and Resource Assessment Groups (RAGs) or other associated consultative groups.

This paper also outlines key decision making processes associated with the delivery of advice in the pursuit of the Protected Zone Joint Authority's (PZJA) legislative objectives. This includes the interactive processes, respective roles and responsibilities between the PZJA, MACs, SACs, WGs and RAGs.

3. INTRODUCTION

Sections 40(7-8) of the *Torres Strait Fisheries Act 1984* (the Act) provide for the establishment of advisory committees "….to provide information and advice to the Protected Zone Joint Authority on scientific, economic and technical matters related to any fishery."

In the Australian area of jurisdiction, traditional fishing and the commercial fisheries are managed by the Torres Strait Protected Zone Joint Authority (PZJA). The PZJA, established under the *Torres Strait Fisheries Act 1984* (the Act), comprises the Federal and State (Queensland) Ministers responsible for fisheries, and the Chair of the Torres Strait Regional Authority (TSRA). The PZJA is responsible for managing fisheries in the Torres Strait Protected Zone (TSPZ). The PZJA has delegated day-to-day management of the fisheries to the Australian Fisheries Management Authority (AFMA) and compliance and licensing in the fisheries to the Queensland Department of Primary Industries and Fisheries (QDPI&F) under a cost sharing arrangement. Five of the fisheries currently being managed are known as Article 22 fisheries and are jointly

managed by PNG and Australia. The two countries share the catches of Article 22 commercial fisheries according to formulae set out in the Torres Strait Treaty.

The PZJA agencies include AFMA, the Queensland Department of Primary Industries and Fisheries (QDPI&F), the Torres Strait Regional Authority (TSRA) and the Department of Agriculture, Fisheries and Forestry (DAFF). Recreational fishing is still managed under Queensland law.

The PZJA is responsible for monitoring the condition of the designated fisheries and for the formulation of policies and plans for their management. The PZJA has regard to the rights and obligations conferred on Australia by the Torres Strait Treaty, in particular the protection of the traditional way of life and livelihood of the traditional inhabitants, including their traditional fishing.

4. CONSULTATIVE STRUCTURE

The consultative structure for Torres Strait fisheries incorporates Australian Traditional Inhabitant commercial and traditional fishers, non-Traditional Inhabitant commercial fishers, Australian and Queensland Government officials, and technical experts.

The PZJA may be advised by Management Advisory Committees (MAC), Scientific Advisory Committees (SAC), and Resource Assessment Groups (RAG) on issues associated with TSPZ fisheries (Figure 1).

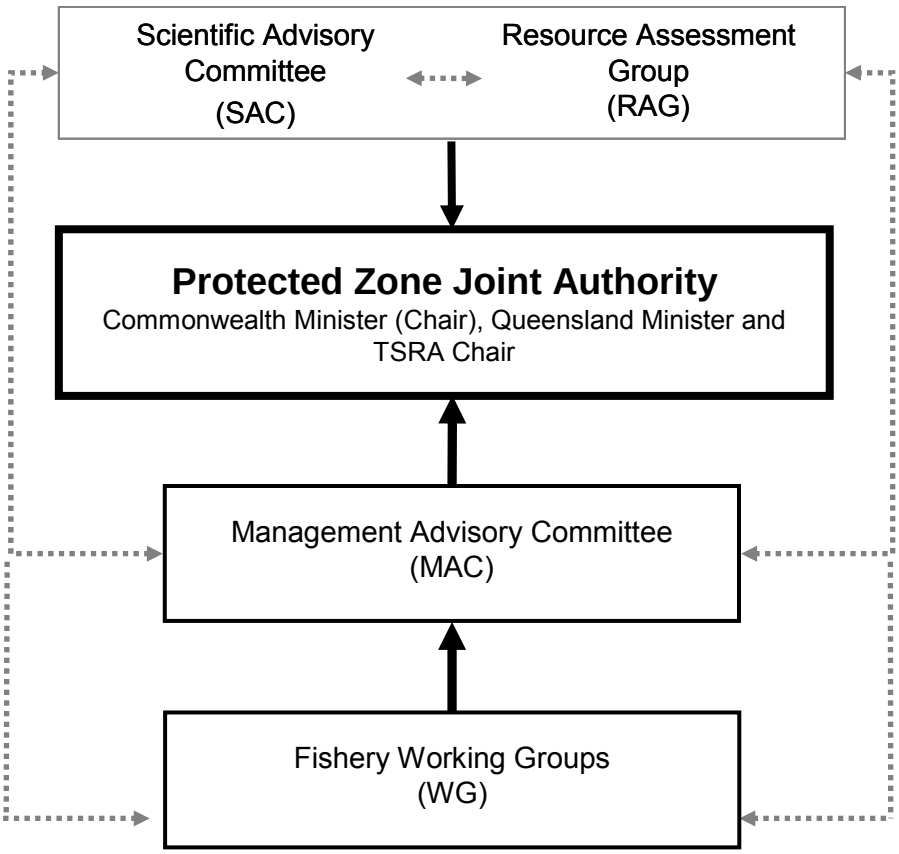


Figure 1. The consultative structure of the Torres Strait Protected Zone Joint Authority (PZJA). Solid lines and dashed lines indicate primary and secondary lines of communication respectively.

Consultation and communication can be difficult across all islands of the Torres Strait, but are important elements in the effective management of the region's fisheries. The consultative committees are, therefore, complemented by meetings between fisheries officers and fishermen in communities around the Torres Strait. These meetings are occasionally supplemented by fisheries programs broadcast on Radio Torres Strait and articles/advertisements in the Torres News.

While the Committee's and Groups outlined in Figure 1 are the main means of the PZJA obtaining advice and information, it is not the only means. The PZJA may seek advice and views from others with relevant expertise or interest. This includes PZJA Agencies, other government agencies, independent consultants, operators in fisheries more broadly and representatives of the broader community.

Key principles that should be observed in relation to the respective committees/groups within the PZJAs decision-making framework are:

i. All committees/groups are advisory rather than decision-making;
ii. Committees/groups should provide expert advice that best pursues PZJAs legislative and policy objectives;
iii. The PZJA seeks, through its consultative processes, to obtain best quality information and advice;
iv. The PZJA will make decisions based on the best advice (and information) available at the time;
v. Committees/groups should have defined roles and there should be minimum overlap in responsibilities; and
vi. Advice and reporting should be a transparent and open process.

4.1 Role and functions of a Management Advisory Committee (MAC)

Management Advisory Committees (MAC) are the principal source of advice for the PZJA on fishery-specific management issues in all Torres Strait fisheries. A MAC and its working group/s have specific functions that support the decision making process.

A MAC advises the PZJA on fishery objectives, strategies, reference points, risk profiles and management arrangements for achieving fishery-specific goals. For the PZJA to be able to make decisions based upon MAC advice, the PZJA has to be confident that a MAC has put in place rigorous processes to determine the best package of measures in pursuit of the PZJA's objectives. Good governance and business efficiency demand that the PZJA is normally able to approve MAC advice without delving into MAC business details, or needing to seek clarification from a MAC.

The role of a MAC is to advise the PZJA on management issues for the fisheries managed under the Act. It provides the forum where issues relating to the fisheries are discussed, problems identified and possible solutions developed. The outcome of these deliberations determines the recommendations a MAC will make to the PZJA concerning the management of relevant fisheries.

All MAC members must be aware of the PZJAs legislative objectives and functions (as contained in Attachment A) and of the continuing need to take these into account in their deliberations.

4.2 Role and functions of a Scientific Advisory Committee (SAC)

A Scientific Advisory Committee's (SAC) main role is to advise the PZJA on the strategic directions, priorities and funding for research relevant to meeting information needs and objectives of the PZJA and its relevant consultative bodies.

The committee normally provides a review process for research conducted by research providers to ensure that milestones are met and that the research outcomes represent good value for money. The committee may also be called upon to make its own assessments of fisheries data and comment on stock assessment advice. The committee may also solicit external review when the questions asked fall outside the committee's area of expertise.

A SAC may also provide advice to the MACs, WGs, and RAGs on scientific and research issues in the Torres Strait Protected Zone (TSPZ).

4.3 Role and functions of Working Groups (WG)

To assist in the operations of a MAC, Working Groups (WG) have been established to provide advice on particular matters relevant to individual fisheries. The task of a WG is to discuss, negotiate and debate issues relevant to individual fisheries. In order to be manageable and cost effective, WGs will be no larger than is necessary to ensure the appropriate blend of knowledge and expertise is available to provide the required advice to a MAC.

Ordinarily the WGs deal with the fishery specific issues, including the specification of management objectives, research priorities for the particular fishery, management issues and strategies, and compliance issues. In addition to these tasks the WGs deal with a range of ad hoc issues. These are reported to a MAC and/or SAC as appropriate.

4.4 Role and functions of a Resource Assessment Group (RAG)

The main role of Resource Assessment Groups (RAG) is to provide advice on the status of fish stocks, sub-stocks, species (target and non-target species) and on the impact of fishing on the marine environment. Advice provided by a RAG should address biological, economic and wider ecological factors impacting on the fishery.

RAGs should also evaluate alternative harvest options proposed by the relevant fishery WG and/or MAC. This includes advising on the impact over time of different harvest strategies (for example, the time required for a particular fish stock to reach a reference point), stock depletion or recovery rates, the confidence levels of the fishery assessments, and risks to the attainment of approved fishery objectives.

A RAG reports to the PZJA. It also informs relevant SACs, MACs or WGs of work on stock assessments in progress or potential issues, but is not restricted by them. This ensures that the potential conflict of interest generated by the assessment roles of RAGs and the management advisory roles of other consultative bodies does not impact on the quality of advice provided to the PZJA. A MAC (including its WGs) and associated RAG are likely to have some common membership, therefore it is essential that members' roles be recognised and differentiated by the respective chairs.

5. TERMS OF REFERENCE

5.1 Management Advisory Committees and Working Groups

The following terms of reference are to be utilised by Management Advisory Committees (MAC) and Working Groups (WG) as operating guidelines.

1. To provide a forum for the discussion of matters relevant to the management of Torres Strait fisheries and to act as a medium for the flow of information between all stakeholders;
2. To provide advice and make recommendations to the PZJA (in the case of a MAC) or MAC (in the case of a WG) with respect to:
    i. the management of the fishery;
    ii. the development of fishery management plans;
    iii. ongoing measures required to manage the fishery in accordance with the provisions of management plans; and
    iv. amendments to management plans as required;
3. To provide advice and make recommendations to the PZJA (in the case of a MAC) or MAC (in the case of a WG) on research priorities and projects for the fishery. MACs and WGs are to ensure that processes are in place for industry and other interested stakeholders to receive advice from researchers in a form that will be easily understood by the audience;
4. To establish sub-committees as required ensuring that the range of management issues is given proper attention;
5. To liaise with PZJA Agency staff and provide assistance as necessary to ensure approved management measures are implemented; and
6. To undertake additional functions on behalf of the PZJA as determined by the Authority.

5.2 Scientific Advisory Committee (SAC)

The following terms of reference are to be utilised by a Scientific Advisory Committee (SAC) as operating guidelines.

1. Identify and document research gaps, needs and priorities for fisheries in the Torres Strait;
2. Provide a forum for expert consideration of scientific issues referred to the SAC by a MAC;
3. Provide a forum for detailed consideration of scientific issues raised by WGs and relevant stakeholder representative bodies and advise WGs and relevant stakeholders on the feasibility and merits of suggested research;
4. Develop and update a strategic plan for Torres Strait Fisheries research;
5. Solicit and review research proposals in line with the strategic plan and recommend proposals for implementation to the AFMA Research Committee (ARC) and/or other relevant funding organisations;
6. Provide other advice to the MACs on matters consistent with SAC functions;
7. Review research / consultancies, stock assessments, and other reports and outputs relevant to Torres Strait fisheries and advise the appropriate MAC and WG, on their technical merit;
8. Advise the MACs and WGs on the management implications identified by the research projects or the SACs own assessment of fisheries data;
9. Convene Fisheries Assessment workshops as appropriate to review and address assessment needs for Torres Strait fisheries and recommend research priorities for future assessments;

10. Provide advice to research providers and the MACs on appropriate mechanisms and protocols for engaging research providers in the Torres Strait fisheries;
11. Provide advice on effective delivery of research results to stakeholders; and
12. Provide advice on a range of issues including stock assessment advice.

5.3 Resource Assessment Groups (RAG)

A Resource Assessment Groups' (RAG) Terms-of-Reference (TOR) should be tailored according to their specific fishery requirements. However, general TOR for RAGs are:

1. Analyse, assess, and report on the fishery status against agreed reference points, including target and non-target stocks, impacts on the marine environment from fishing, and the economic efficiency with which stocks are fished;
2. Identify improvements and refinements to assessment methodology;
3. Evaluate alternative harvest strategies or TAC settings. This includes providing advice on confidence limits or risk levels associated with particular management/harvest strategies;
4. Assist the relevant MAC and/or the WG to develop, test, and refine sustainability reference points and performance indicators for the fishery. Advise on stock status and trends relative to these reference points and indicators;
5. Identify and document fishery assessment and monitoring gaps, needs and priorities. These should be communicated to the SAC so that they can be incorporated in the Torres Strait strategic research plan;
6. Provide advice and recommendations to the SAC on issues consistent with RAG functions;
7. Facilitate peer review of assessment outputs;
8. Facilitate/drive a collaborative stock assessment with adjacent jurisdictions;
9. Maintain awareness of current issues by promoting close links with the MACs, SACs and any other Torres Strait RAGs; and
10. Liaise with other researchers, experts and key industry members.

6. Cost Recovery

Under the existing Australian Government cost-recovery policy, MACs and their subcommittees (WGs) are funded largely by industry levies as their functions are attributable to industry as the principal beneficiary.

In Torres Strait, only the costs of the prawn fishery are attributed to Industry and recovered at the present time. It should be noted however that the PZJA agreed in principle that cost recovery should extend to other Torres Strait fisheries in line with AFMAs Cost Recovery Impact Statement (CRIS). A policy on the cost recovery is being developed for the PZJAs consideration.

7. OPERATIONAL GUIDELINES

7.1 Membership Composition

The PZJA or delegate has final responsibility for determining the actual membership of MACs, SACs, WGs and RAGs and will consider membership in relation to the needs of the Torres Strait Fisheries.

7.1.1 Management Advisory Committee (MAC)

The minimum requirements for MAC membership are as follows:
- 1 x Chair;
- 1 x Executive Officer;
- 2 x Staff members from AFMA;
- 2 x Staff members from QDPI&F;
- 1 x Scientific member;
- 6 x Traditional Inhabitant members*;
- 5 x Non-Traditional Inhabitant Industry members[#];
- 1 x TSRA support member.

* The exact number of Traditional Inhabitant members may vary for each MAC as determined by the PZJA or delegate depending upon the needs of the fisheries (e.g. TSFMAC = 6 rotational from 24 communities; TSPMAC = 3).

[#] The composition of Non-Traditional Inhabitant Industry Members may vary for each MAC as determined by the PZJA or delegate depending upon the needs of the fisheries covered by the MAC (e.g. TSFMAC = 4 x Fishing licence holders, 1 x Industry processor; TSPMAC = 4 x Fishing licence holders, 1 x Industry processor).

7.1.2 Scientific Advisory Committee (SAC)

In view of the special circumstances of the Torres Strait, especially in relation to the multiple jurisdictional arrangements for management and the provisions for economic development favouring Torres Strait Islanders in the Torres Strait Treaty (1985) and the Torres Strait Fisheries Act (1984), the Torres Strait Scientific Advisory Committee (SAC) should reflect a balance between stakeholder representation and research expertise. The SAC might be expected to have a greater representative function than other AFMA Scientific Committees. Accordingly, minimum requirements for a SAC membership are as follows:
- 1 x Chair;
- 1 x Executive Officer;
- 1 x Staff member from AFMA;
- 1 x Staff member from QDPI&F;
- 4x Scientists*;
- 1 x Independent industry member;
- 1 x Community Fisher Representative nominated by the TSRA;
- 1 x Papua New Guinea Representative.

*The exact number of Scientific members may vary for each SAC as determined by the PZJA or delegate depending upon the needs of the committee.

Other experts included on a register of experts maintained by AFMA may be called to attend specific SAC meetings based on their specific areas of expertise as required.

7.1.3 Working Group (WG)

The minimum requirements for WG membership are as follows:
- 1 x Chair;
- 1 x Executive Officer;
- 1 x Staff member from AFMA;
- 1 x Staff member from QDPI&F;

- 1 x Scientific member;
- 6 x Traditional fishing members*;
- 3 x Non-Traditional Inhabitant Industry members#;
- 1 x TSRA support member.

* The exact number of Traditional Inhabitant members may vary for each WG as determined by the PZJA or delegate depending upon the needs of the fishery.

The composition of Non-Traditional Inhabitant Industry Members may vary for each WG as determined by the PZJA or delegate depending upon the needs of the fishery.

7.1.4 Resource Assessment Group (RAG)

A stock assessment that engenders a strong management response may bring the RAG into conflict with sectors of industry or attract political attention. Therefore, members of the RAG must be credible, expert and impartial in undertaking their assessments.

The minimum requirements for RAG membership are as follows:
- 1 x Chair;
- 1 x Executive Officer;
- 1 x Staff member from AFMA;
- 1 x Staff member from QDPI&F;
- 1 x Traditional fishing member;
- 1 x Non-Traditional Inhabitant Industry member;
- 1 x Scientific member;
- 1 x Independent Scientific member;
- 1 x Conservation member;
- 1 x PNG NFA member;
- 1 x TSRA support member.

7.2 Term of appointment

The PZJA or delegate makes all appointments to MACs, SAC, WGs and RAGs, with Members generally appointed for terms of up to three years. In order to ensure continuity, Members will not normally be appointed for a period of less than two years. Subsequent re-appointment may be permitted.

8. Responsibilities and obligations of Members

8.1 Responsibilities of Members

Being appointed to a PZJA consultative committee or group brings with it a number of important responsibilities. Specifically, members must be prepared to meet the following requirements:
- they must be able to put views clearly and concisely and be prepared to negotiate to achieve acceptable outcomes and compromises where necessary;
- they must act in the best interests of the fisheries as a whole, rather than as an advocate for any particular organisation, interest group or regional concern;
- they must be prepared to observe confidentiality and exercise tact and discretion when dealing with sensitive issues;

- they must contribute to discussion in an objective and impartial manner and avoid pursuing personal agendas or self-interest;
- they must be prepared to make the necessary commitment of time to ensure that they are fully across matters which are the subject of consideration by the committee;
- Industry Members must not have commercial interests in the same company as other members on the same MAC, SAC, WG or RAG;
- Industry members must have the wider industry's confidence and authority to undertake their functions as a MAC, SAC, WG or RAG member. They must also be prepared to consult with members of industry through port-level associations, regional associations and peak industry bodies as necessary; and
- Traditional inhabitant members must have the community's confidence and authority to undertake their functions as a MAC, SAC, WG or RAG member. They must also be prepared to consult with members of community through local associations and meetings as necessary.

8.2 Reaching consensus

A co-operative approach to MAC, SAC, WG and RAG discussions is essential. While this does not mean that there won't be disagreements from time to time, it does mean that agreement is ultimately to be reached through reasoned discussion, consultation and negotiation having regard to what is best for the fishery.

A MAC, SAC, WG or RAG should reach agreement through consensus and not use voting as a mechanism for achieving outcomes. Where agreement cannot be reached, members are encouraged to reconsider the issue and seek further information if necessary before making their recommendation. If a deadlock cannot be avoided, the views of members and general discussion should be well documented in the minutes of the meeting and highlighted in recommendations that are put before the PZJA (in the case of a MAC, RAG or the SAC) or MAC (in the case of a WG). MACs and WGs are the best means to achieve agreement on management issues. Ownership of the formal process by its members is vital to successful fisheries management.

8.3 Disclosure of interests

8.3.1 Types of interests

MAC, SAC, WG and RAG members are appointed to provide input based on their knowledge and expertise and as a consequence, it is inevitable that members may face potential or direct conflicts of interest. There may be a conflict of interest where a member:

- has a material personal interest, including a direct or indirect financial or economic interest, in a matter being considered, or about to be considered, by the MAC, SAC, WG or RAG; and
- the interest could conflict with the proper performance of the member's duties in relation to the consideration of the matter.

There may often be a level of general conflict simply because members come from areas of the industry that may be affected as a result of a recommendation. For example, industry members may be participants in the fishery, TSRA members may represent the geographical region under discussion or scientific members may face a conflict related to a research proposal. To assist in identifying areas of potential conflict, a MAC, SAC, WG or RAG may consider it appropriate to maintain registers of members' interests that could possibly lead to conflicts.

Of greater concern is the specific conflict created where a member is in a position to derive direct benefit from a MAC, SAC, WG or RAG recommendation if it is subsequently implemented. In either case, members should recognise the potential for conflict to occur and its possible impact on the operations of the Committee/Group.

8.3.2 Declaring an interest

When a MAC, SAC, WG or RAG member recognises that a real or potential conflict of interest exists, the conflict must be disclosed as soon as possible to other members. Where this relates to an issue on the agenda of a meeting this disclosure can normally wait until that meeting, but where the conflict relates to decisions already made, members must be informed immediately. If there is any doubt, a specific conflict of interest and its nature should be declared and recognised in the discussions of the meeting and recorded in the minutes of the meeting.

8.3.3 Dealing with an interest

To facilitate the smooth operation of meetings, it is suggested that conflicts of interest are dealt with at the start of each meeting. Members receive agenda and associated papers prior to the meeting and should be able to make disclosures of potential conflicts of interest and their nature (including, for example, the type and quantity of fishing concessions held by industry members) at the commencement of meetings.

Where it is determined that a direct conflict of interest exists, the MAC, SAC, WG or RAG may allow the member to continue to participate in the discussions relating to the matter but not in any decision making process. The member or the Committee/Group may also determine that, having made his/her contribution to the discussions, the member should retire from the meeting for the remainder of discussions on that issue.
As a guide, members with a direct conflict of interest should only be excluded from decision making if the matter being considered only affects the individual member rather than all persons involved in the fishery.

Finally, the Chair must ensure that the minutes of the meeting show the disclosure of interest, reflect the meeting's subsequent decision(s) and demonstrate that these are put into effect at the appropriate point in the meeting. If members become aware of a potential conflict of interest during the course of the meeting, they must immediately disclose the conflict of interest and the members present must consider how best to deal with the disclosure at that point.

8.4 Other Obligations of Members

Members must:
- act in good faith in the best interests of the PZJA;
- act honestly and exercise a reasonable degree of care and diligence in the discharge of their duties; and
- not make improper use of inside information to gain an advantage for themselves or someone else or cause harm to the Authority or to another person.

Members must not use their position, or information obtained as a member of a MAC, SAC, WG or RAG, dishonestly or with the intention of directly or indirectly gaining an advantage for themselves or someone else, or with the intention of causing harm to the PZJA or to another person.

8.5 Personal and professional behaviour

MAC, SAC, WG or RAG members should perform all duties associated with their positions diligently, impartially, conscientiously, in a civil manner and to the best of their ability.

In the performance of their duties they should:

- act in such a way, at meetings, in the field and at official functions that will be held in a high regard by the community and by industry;
- treat other members and stakeholders with courtesy and sensitivity; and
- not take, or seek to take, improper advantage of official information gained in the course of their membership.

8.5.1 Fairness and equity

MAC, SAC, WG and RAG members are not permitted to discriminate against or harass any colleague, client or member of the public, particularly on the basis of:

- Race;
- Religion;
- Gender;
- Political or union affiliation;
- Sexual preference;
- Political opinion;
- Marital status;
- Pregnancy;
- Social origin;
- Criminal record;
- Age; or
- Physical, intellectual or mental disability or impairment.

Behaviour, which is shown to be discriminatory, or which constitutes harassment will not be tolerated and may result in the members' appointment to MACs, SACs, WGs and/or RAGs being terminated by the PZJA or delegate.

8.5.2 Public comment

Public comment includes public speaking engagements, comments on radio and television and expressing views in letters to newspapers or in books, journals or notices or where it might be expected that the publication or circulation of the comment would spread to the community at large.

Whilst MAC, SAC, WG and RAG members, as members of the community, have the right to make public comment and to enter into public debate on political and social issues, there are some circumstances in which public comment is inappropriate. These circumstances would be where there is an implication that the public comment, although made in a private capacity, is in some way an official comment of a MAC, SAC, WG or RAG. Members should avoid making private statements about matters relating to a MAC, SAC, WG or RAG unless it is made clear that they are speaking as a private citizen.

9. Confidentiality and Non-Disclosure

9.1 General

Material made available to Members is generally public information. In some instances, members will have access to information that is confidential; however members will be advised accordingly. Members must not publish or communicate to any unauthorised person any fact or document which comes to their knowledge, or possession by virtue of being a MAC, SAC, WG or RAG member.

9.2 Resource Assessment Groups (RAG)

Members of RAGs may sometimes require access to confidential fishery catch and effort data and will have access to draft reports, materials or working papers that are unready or not intended for wider circulation.

The Chair should warn members when matters of a confidential nature are tabled, and ensure that discussion documents are not used for any purpose not related to the business of the RAG. Exceptions should only occur with the written consent of the RAG Chair. However, all members are obliged to maintain standards of confidentiality and non-disclosure relating to data. Note that industry members, non-government organisation personnel (NGO), and other fishery stakeholders may not be given access to confidential data.

Scientific members who are custodians of data for the purposes of analyses must apply best practice to ensure security, confidentiality, and non-disclosure of the data. This includes prevention of loss, theft, corruption and unapproved duplication. Data received from AFMA for the purposes analyses will be subject to the conditions set forth in the contract between the research provider and AFMA. Similar arrangements may exist between other data providers and research providers using data provided by the other party.

It is the responsibility of the Chair to ensure that data contained in all public documents, assessment reports or other publications is aggregated sufficiently to preserve commercial confidentiality and privacy.

10. Role and appointment procedures for Members

On behalf of the PZJA, AFMA administers the overall appointment process. The PZJA or delegate, however, makes the appointments. Nominations for Members are sought from both individuals and associations.

10.1 The Chair

10.1.1 Role

The Chair of a MAC, SAC, WG or RAG plays a key role in ensuring effective and thorough discussion of factors affecting the performance of a particular fishery (e.g. implementation of ecological sustainable development factors, and impacts of management strategies on, the particular fishery) and is the primary communication link between the MAC/SAC/WG/RAG and the PZJA. Accordingly, the Chair must:

- Be independent of commercial or other interests with the particular fishery/fisheries, including industry association(s);

- Have a demonstrated capacity to chair meetings, including a sound understanding of the meeting procedures and practices necessary for the efficient conduct of meetings (including the rules of debate);
- Have an ability to identify strategic goals and objectives and facilitate their achievement through the MAC, SAC, WG or RAG process;
- Have a demonstrated capacity to communicate clearly and concisely to a wide cross-section of people, particularly with respect to acting as the MAC, SAC, WG or RAG spokesperson and representing MAC, SAC, WG or RAG views to the PZJA, industry, Government, the media and the general community in a balanced and rational manner;
- have an understanding of industry and public policy;
- preferably, have some fisheries (or resource management) experience; and
- not be a staff member of the PZJA Agencies, although this is allowed for SACs, WGs and RAGs.

An explanation of the procedural matters relating to the conduct of MAC, SAC, WG and RAG meetings, including the requirement to give notice of a meeting and to circulate papers, is provided at Attachment C.

The roles and responsibilities of a Chair include:
- Ensuring members are aware of their responsibilities under this PZJA FMP No. 1;
- Ensuring members remain aware of and consider the PZJAs legislative objectives in the deliberations of the MAC, SAC, WG or RAG;
- Ensure the timely availability of agenda papers before meetings and the preparation and circulation of minutes and Chair's Summaries after meetings;
- Formally communicating meeting outcomes, recommendations and matters for information to the PZJA (in the case of a MAC, RAG or SAC Chair) or to a MAC (in the case of the WG Chairs) for consideration and to the industry for information. In undertaking this function, the Chair will be assisted by the Executive Officer;
- Summarising outcomes for each agenda item at the end of the discussion for each item and at the end of the meeting. This will assist in the reporting of the outcomes after each meeting;
- Ensuring that meeting minutes, letters and other correspondence to the PZJA Chair (in the case of a MAC, RAG or SAC) or a MAC Chair (in the case of a WG) clearly and accurately describe MAC, SAC, WG or RAG recommendations and alternative options when an agreed position has not been reached; and
- Ensuring that minutes and other material arising from meeting deliberations clearly and accurately describe MAC, SAC, WG or RAG recommendations, including dissenting views where they are expressed.

Chairs are not to allow members who are absent from meetings to have separate notes or views attached to minutes. Absentee members may convey views in writing to the MAC, SAC, WG or RAG prior to the meeting.

10.1.2 Selection/Appointment Procedure

Whenever there is a vacancy in the office of MAC, SAC, WG or RAG Chair, whether created by the resignation of an existing Chair or the expiration of the term of appointment of an existing Chair, a shortlist of nominees considered to have the necessary attributes to fill the vacant position may be drawn from applications for the position or from a *Register of Interest maintained by AFMA*. A selection panel including representatives from the PZJA Agencies will review the nominee's relevant skills and experience and may interview nominees before candidates are submitted to the PZJA or delegate for consideration and approval.

On behalf of the PZJA, AFMA maintains a *Register of Interest* of suitably qualified persons interested in being appointed to the position of Chair of a MAC, SAC, WG or RAG. From time to time AFMA may advertise nationally for nominations to this Register.

10.1.3 Acting Chair

The PZJA or delegate may appoint a person to act as the Chair of a MAC, SAC, WG or RAG during:

- a vacancy in the office of Chair (whether or not an appointment has previously been made to the office); or
- any period, when the Chair is absent from duty or from Australia or is, for any other reason, unable to perform the duties of the office.

A person appointed to act during a vacancy must not continue to do so for more than 12 months.

10.2 Protected Zone Joint Authority (PZJA) Agency Members

10.2.1 Roles

The role of an AFMA and QDPI&F member of a MAC, SAC, WG or RAG is to:

- participate in general discussion;
- contribute fisheries management expertise to deliberations;
- provide advice on relevant Government policy and the process required for policy development and change;
- ensure that the MAC, SAC, WG or RAG is aware of, and fully understands, PZJA policy and obligations under its governing legislation; and
- seek and provide additional information on Government policy as necessary.

The views expressed and the policies advocated by AFMA and QDPI&F members are to be considered those of their relevant organisations.

The role of the TSRA member of a MAC, SAC, WG or RAG is to:

- assist and support the traditional inhabitant members and provide fisheries expertise.

10.2.2 Selection/Appointment Procedure

AFMA, QDPI&F and TSRA will nominate officers to a MAC, SAC, RAG and WG at the organisations' discretion.

10.3 Industry Members

10.3.1 Role

The role of an industry member of a MAC, SAC, WG or RAG is to:

- contribute knowledge and experience relevant to the particular fishery and the fishing industry generally;
- contribute fisheries expertise to achieve the best management of the fishery; and
- regularly report to and liaise with other operators in the fishery on the MAC, SAC, WG or RAG activities, including the issues being dealt with and the possible solutions being considered.

10.3.2 Selection/Appointment Procedure

The PZJA considers the selection of the industry members to a MAC, SAC, WG or RAG to be critical to the success of the Committee/Group. These individuals must have

the capacity to put views clearly and concisely and be prepared to negotiate to achieve acceptable compromises when necessary. Industry members should not have commercial interests in the same company as another member/s of the same committee or group. Above all, they must have credibility within the industry and the ability to address issues with the best interests of the fisheries in mind.

Industry members will normally be appointed through the following process:

- all operators in the fishery will be invited to nominate for consideration for appointment as a MAC, SAC, WG or RAG industry member. Relevant industry organisations will also be informed to allow them to canvass within their membership for nominations;
- interested operators will be required to complete a nomination form which is included with the invitation to nominate. This form sets out the nominee's personal details and provides space for nominees to outline the particular skills and expertise they can bring to the MAC, SAC, WG or RAG. Industry organisations can provide statements of support to individuals who nominate themselves; and
- an Assessment and Ranking Panel (the Panel) will be formed to consider nominations and make recommendations to the PZJA or delegate. The Panel will usually comprise the MAC, SAC, WG or RAG Chair, PZJA agency representatives and an industry member of standing in the fishery. The Executive Officer of the MAC, SAC, WG or RAG will act as secretariat to the Panel.

To facilitate the short listing process, the Panel may interview potential appointees, either in person or by telephone. Where candidates are well known to agencies and in the interests of cost-effectiveness, the requirement to conduct interviews may be waived.

The PZJA or delegate will determine industry member appointments on the advice of the Panel.

In considering each nomination, the Panel assesses whether the applicant is a fit and proper person for the purposes of MAC, SAC, WG or RAG membership. If the Panel identifies any issue that is likely to adversely effect:

- the applicant's ability to perform his/her role as an industry member;
- the PZJAs credibility; or
- the applicant's credibility with industry or other stakeholders.

The Panel may advise the PZJA or delegate that the applicant is unsuitable for appointment to the MAC, SAC, WG or RAG. The Panel may also consider that an applicant is not a fit and proper person if the applicant has been convicted of a fisheries offence and if the Panel believes that the conviction may compromise either the PZJA, or the applicant's credibility, or the applicant's ability to perform his/her duties as a member of a MAC, SAC, WG or RAG.

While the PZJA or delegate may consult with industry organisations in the selection of industry members, once appointed, industry members are required to act in accordance with the duties and obligations of MAC, SAC, WG and RAG members as set out in this paper. This means their contribution must be in the best interests of the fishery, rather than as an advocate of the industry sector that nominated them. Industry members are not representatives of particular sectors or interest groups.

10.4 Scientific Member

10.4.1 Role

A Scientific member of a MAC, SAC, WG or RAG should be independent of commercial interests in the fishery. The role of the scientific member is to:

- contribute impartial scientific and/or economic expertise to MAC, SAC, WG or RAG deliberations; and
- provide advice to the MAC, SAC, WG or RAG on the latest scientific or economic developments of relevance to the fishery.

10.4.2 Selection/Appointment Procedure

The scientific member will be appointed on the basis of his/her scientific or economic qualifications, experience and expertise, knowledge of the fishery and the species being managed and therefore must:

- be a person of seniority and standing in the scientific community;
- have experience in liaising with the major Commonwealth and State fisheries research organisations at the highest level; and
- not have, or be employed by an entity with or representing entities with, commercial interests in the fishery.

Scientific members will normally be appointed through the following process:

- relevant research agencies will be invited to submit nominations for membership on a MAC, SAC, WG or RAG. Nominations may also be sought from appropriate individuals; or
- Calls for applications for the position as scientific members on the TSSAC will be advertise nationally by AFMA.

A selection panel that may include the MAC or Working Group Chair will review and may interview applicants from a shortlist of candidates prior to submission of a preferred candidate to the PZJA Board for consideration and approval.
The PZJA or delegate will determine scientific member appointments after considering nominations and any other information sought or obtained in relation to the nomination.

10.5 Traditional Inhabitant Members

10.5.1 Role

The role of the Traditional Inhabitant Members and traditional fishing representatives is to:

- contribute knowledge of fisheries and communities to a MAC, SAC, WG or RAG;
- contribute fisheries expertise to achieve the best management of the fishery;
- regularly report to and liaise with other traditional inhabitants in the community on MAC, SAC, WG or RAG activities, including the issues being dealt with and the possible solutions being considered; and
- consult with members of community through local associations and meetings as necessary.

10.5.2 Selection/Appointment Procedure

The TSRA runs an open process to seek members for their community fishers group. Accordingly nomination traditional inhabitant members and the TSRA support member will be sought from the TSRA. AFMA as the agency administering the MACs, SACs, WGs and RAGs appointment process will liaise with the TSRA when member appointments are required.

10.6 Conservation Member - Optional

The PZJA or delegate may appoint a conservation member to a MAC, SAC, WG or RAG if appropriate.

10.6.1 Role

The role of the conservation member is to:

- Contribute ecological knowledge and expertise to MAC, SAC, WG or RAG deliberations;
- Advise the MAC, SAC, WG or RAG on environmental or conservation developments of relevance to the particular fishery; and
- Advise on any implications that MAC, SAC, WG or RAG deliberations and recommendations may have in relation to ecological considerations.

10.6.2 Selection/Appointment procedure

Appointment of conservation members will be done by the PZJA or delegate. Conservation members will be selected on the basis of their ability to fulfill the role outlined above.

Conservation members are not appointed as representatives of a particular sector/s or interest group/s and, once appointed, must act in the best interest of the fishery.

10.7 Other Members

According to the changing needs of the Torres Strait Fisheries, the PZJA or delegate may appoint other persons to a MAC, SAC, WG or RAG as a member, including persons from the general community. On appointment, these members will have the same rights, and be subject to the same obligations and responsibilities, as other members as set out in this FMP.

11. Termination or resignation – Chair and Members

11.1 Termination of appointment

The PZJA or delegate may terminate the appointment of the Chair or any other MAC, SAC, WG or RAG member for:

- misbehaviour or physical or mental incapacity;
- misconduct or non-performance; or
- inefficiency or incompetence.

Misconduct includes, non-observance of confidentiality (e.g. disclosure of data, results or other materials prior to an agreement to circulate, conflict of interest, misleading or misinforming, and making fraudulent travel or expense claims).

Non-performance includes excessive unexplained absences from meetings, repeated non-performance of assigned tasks or failure to participate in discussions in an objective, impartial and constructive manner.

The PZJA has determined that any action by a Chair or member that demonstrates unwillingness or inability to comply with their obligations and responsibilities may constitute misbehaviour and/or inefficiency. As such, non-compliance with the obligations and responsibilities as outlined in this FMP are grounds for termination of appointment.

In addition, any action by a member which results in his/her conviction for a fisheries or related offence during the term of his/her appointment may be considered as misbehaviour and could constitute grounds for termination of appointment.

Appointment may also be terminated if:

- the Chair or member becomes bankrupt, applies to take the benefit of any law for the relief of bankrupt or insolvent debtors, compounds with his/her creditors of makes an assignment of his or her remuneration for their benefit; or
- the Chair or member has a direct or indirect pecuniary interest in a matter being considered, or about to be considered, and the interest could conflict with the proper performance of the member's duties in relation to consideration of the matter, and he/she fails to disclose the nature of the interest at a meeting of a MAC SAC, WG or RAG; or
- the Chair is absent, except with the leave of the PZJA, from two consecutive meetings of a MAC, SAC, WG or RAG; or
- a Member is absent, except with the leave of the Chair, from two consecutive meetings of a MAC, SAC, WG or RAG.

Termination of appointment under this section will take effect when:

- the member has been warned by the MAC, SAC, WG or RAG Chair, or the PZJA Chair in a case of MAC, SAC, WG or RAG Chair non-compliance, that:
  - they have not complied with one or more of their obligations or responsibilities, and
  - the non-compliance is unacceptable, and
- the PZJA Chair or delegate is satisfied the member has a case to answer of non-compliance with their obligations or responsibilities warranting termination of appointment; and
- the PZJA Chair or delegate has asked the member in writing to show cause why their appointment should not be terminated; and
- after at least 14 days have elapsed, the PZJA or delegate has considered the matter, including any response by the member, and made a decision on the member's continuation in their position.

Cancellation of membership may be appealed. The PZJA or delegate will consider any appeals. These appeals must be addressed to the PZJA Chair and lodged, in writing, within 21 days after receiving notice to stand down.

11.2 Resignation

11.2.1 Chair

A Chair may resign from a MAC, SAC, WG or RAG before the term of his/her appointment has expired by forwarding a signed notice of resignation to the PZJA Chair or delegate with a copy to the relevant Executive Officer (EO).

11.2.2 Members

A member may resign from the MAC, SAC, WG or RAG before the term of his/her appointment has expired by forwarding a signed notice of resignation to the MAC, SAC, WG or RAG Chair with a copy to the relevant EO.

12. Other participants

12.1 Permanent Observers

The PZJA or delegate may also appoint other persons who can be expected to make a meaningful contribution to a MAC, SAC, WG or RAG as a permanent observer. Permanent observers are required to participate in discussions in accordance with the obligations and responsibilities set out under this FMP.

Appointment of permanent observers is generally viewed as a transitionary phase which might be prompted by a requirement for additional expertise and balance which cannot be accommodated within the existing MAC, SAC, WG or RAG due to limitations on the number of members. Accordingly, the PZJAs preferred approach is that there be a general move towards appointing permanent observers as full members where appropriate.

As with members, the contribution of permanent observers to the MAC, SAC, WG or RAG discussions and deliberations will be recorded in the minutes of the meeting. While permanent observer contributions will be recorded in the minutes, in the unlikely event that consensus in the MAC, SAC, WG or RAG cannot be reached, only members' views will be included in recommendations put before the PZJA.

The appointment processes for permanent observers will generally mirror those undertaken for MAC, SAC, WG or RAG members – nominations will be sought in the same way as for members and proposed permanent observers will be required to complete a declaration form before being appointed to the MAC, SAC, WG or RAG. There is nothing to prevent the appointment of a permanent observer covering an area of interest for which a member has been appointed.

As for MAC, SAC, WG and RAG members, a permanent observer may resign from the MAC, SAC, WG or RAG before the term of his/her appointment has expired. A resigning permanent observer must give signed notice of resignation to the PZJA Chair or delegate with a copy to the MAC, SAC, WG or RAG Chair. The appointment of a permanent observer may be terminated on the same grounds as any other member.

12.2 Casual Observers

Casual observers are generally welcome to attend MAC, SAC, WG and RAG meetings. Individuals should seek the agreement of the MAC, SAC, WG or RAG Chair to attend a meeting as a casual observer for a particular agenda item or items – either to provide additional advice and expertise which may be required for that meeting or to observe the proceedings of the MAC, SAC, WG or RAG. This is done via contacting the MAC, SAC, WG or RAG Executive Officer.

Attendance by casual observers is to be on the basis that the presence of the casual observer does not inhibit or disrupt formal members from freely contributing to discussions and decisions. Casual observers must follow any directions made by the MAC, SAC, WG or RAG Chair.

Casual Observers are not formally appointed to a MAC, SAC, WG or RAG and do not participate in the decision-making processes.

Papua New Guinea representatives may be granted observer status on any Torres Strait MAC, SAC, WG or RAG. This is an important opportunity to engage PNG in the management of these stocks.

13. Executive Officers (EO)

13.1 Role of Executive Officers

The role of the Executive Officer (EO) is to provide all the necessary secretariat services to ensure smooth operation of a MAC, SAC, WG or RAG. In performing this role, the EO liaises with, and reports to the MAC, SAC, WG or RAG Chair.

13.2 Duties of Executive Officers

While there may be some variation in the duties undertaken by external and internal Executive Officers (EO), in consultation with the Chair they are generally responsible for:

- making arrangements (including booking venues and catering) for meetings of the MAC, SAC, WG or RAG;
- preparing and circulating meeting notices, agendas and agenda papers to members, ensuring a final agenda and papers are provided to the Chair and members at least **10 working days** prior to all meetings of the MAC, SAC, WG or RAG;
- ensuring a Chair's Summary of the MAC, SAC, WG or RAG meeting is prepared and cleared within **five working days** following the meeting;
- ensuring the Chair's Summary is made available to all operators and others with an interest in Torres Strait fisheries (or in the case of a WG or RAG the relevant individual Torres Strait fishery) as soon as practicable following the MAC, SAC, WG or RAG meeting but no later than **10 working days** after the meeting;
- preparing the draft minutes and action sheets from each meeting and submitting them to the Chair for comment and approval within **14 working days** and distributing them to members within **21 working days** after the meeting;
- maintaining files, correspondence lists and follow-up action arising lists relating to the MAC, SAC, WG or RAG business; and
- ensuring that there is positive two way communication between the MAC, SAC, WG or RAG and the participants in the fishery/fisheries and that decisions or recommendations made by the MAC, SAC, WG or RAG and the reasons for them, are well publicised.

In addition, the EO is available to the MAC, SAC, WG or RAG as a resource to conduct research and investigations into matters affecting Torres Strait fisheries. These may, or may not, be directly related to the management of the fisheries. The EO may also be required to undertake surveys of operators in the fishery so that the MAC, SAC, WG or RAG has a better understanding of industry views on major issues under consideration.

The duties of the EO will be determined in consultation with the MAC, SAC, WG or RAG Chair and in the case of an external EO, will be specified in the relevant employment contract or letter or appointment.

13.3 Selection/Appointment Procedure

The Executive Officer (EO) is appointed by AFMA on behalf of the PZJA, not by the MAC, SAC, WG or RAG. An EO may be either internal or external to the PZJA Agencies.

An EO will generally be a person who is involved in the management of the particular fishery and who will undertake the EO role as part of his/her normal duties as a PZJA Agency employee.

14. Meetings

The procedures to be followed for MAC, SAC, WG and RAG meetings are set out in Attachment C.

15. Communication

15.1 General Communication and Liaison Issues

The Chair and members of a MAC, SAC, WG or RAG are expected to develop effective two way communication with the PZJA and any individuals or organisations that have an interest or are engaged in Torres Strait Fisheries, including PZJA Agencies.

The MAC, SAC, WG and RAG Chair and EO carry the major responsibility for communicating with industry and ensuring the flow of information between industry and the PZJA. However the PZJA and Agencies also have a role to play in the communication process.

15.2 Publication and distribution of MAC, SAC, WG and RAG papers

All MAC, SAC, WG and RAG papers are considered to be public documents unless they contain items of specific commercial confidentiality. As such, the PZJA has agreed that MAC, SAC, WG and RAG agendas, agenda papers (other than commercial-in-confidence) and Chair's Summaries should be made available to all stakeholders to facilitate the flow of information between the PZJA, MACs, SACs, WGs and RAGs and those with an interest in Torres Strait Fisheries.

The preferred means for making such information available is via the PZJA website, rather than providing printed copies of papers to individual fishing concession holders or other stakeholders. In accordance with the Government's Online Strategy, it is the PZJAs intention to publish MAC, SAC, WG and RAG papers on the website at the same time they are printed and made available in hard copy. This will mean that papers will be available on the website before they are considered at the MAC, SAC, WG or RAG meeting.

15.3 Reporting

All MAC, SAC, WG and RAG members are responsible for regularly reporting to their stakeholders on MAC, SAC, WG and RAG activities, the issues and possible solutions

under consideration. The MAC, SAC, WG and RAG Chair's Summary report of meetings is available to assist in this process.

The PZJA expects the MACs, SACs and RAGs to keep it informed about what is happening in Torres Strait fisheries, to develop views on issues affecting the fishery and to recommend changes to make management of the fishery more effective. In making recommendations directly to the PZJA, multiple recommendations from MACs, RAGs and SACs are acceptable for particular issues if considered necessary.

In turn, MACs, RAGs and SACs can expect the PZJA to communicate its decisions and the reasons for them to a MAC, RAG or SAC through the PZJA and MAC, RAG and SAC Chairs.

It is expected that each consultative committee or group report discussions through meeting reports, technical working papers and/or fishery assessment reports. The reporting process should not become onerous and should attempt to balance the reporting costs with the benefits achieved through the process.

i. Meeting reports are minutes or the record of a meeting;
ii. Technical working papers are reports tabled and considered during meetings. These are important resources that underpin an overall assessment of the fishery. Technical working papers may not become public documents, but do need to be retained and archived. These documents should be series numbered identifying the Committee or Assessment Group involved, the year produced and the meeting when they were considered. Copies must be provided to the relevant Committee Secretariat for lodgement in the AFMA research library; and
iii. Assessment reports are PZJA publications that are produced annually or periodically, and provide an assessment of the fishery. These assessment reports should generally adopt a standard reporting format for fishery assessment reports. The reports should carry an AFMA and PZJA logo, be series numbered and be made available for public circulation to stakeholders. Copies must be provided to the relevant Committee Secretariat for lodgement in the AFMA research library.

15.3.1 Chair's summary

The PZJA expects the Chair's of a MAC, RAG and SAC to provide it with a formal report (MAC, RAG or SAC Chair's Summary) after each MAC, RAG and SAC meeting. The Chairs of WGs are required to submit a similar report to the relevant MAC Chair.

It is important that the Chair summarises outcomes for each agenda item after the discussion on that item has concluded and at the end of the meeting to aid in reporting outcomes after meetings. The Chair is to be diligent in ensuring that meeting minutes, letters and other correspondence to the PZJA, MAC, RAG or SAC Chair, clearly and accurately describe MAC, SAC, WG or RAG recommendations and alternative options when an agreed position has not been reached.

15.3.2 Self Assessment

All MACs, SACs, WGs and RAGs are to conduct a self-assessment of their performance at least once a year against the following performance indicators set by the PZJA, reporting the outcome to the PZJA:

1. The performance of the MAC, SAC, WG or RAG as a forum for the discussion of matters relevant to the management of the fishery;

2. Ability of the MAC, SAC, WG or RAG to provide advice and make recommendations to the PZJA (or MAC) as appropriate with respect to the management of the fishery;
3. Ability of the MAC, SAC, WG or RAG to provide advice and make recommendations to the PZJA (or MAC) as appropriate on research priorities and projects for Torres Strait fisheries;
4. Standard of liaison by MACs, RAGs or SACs with the PZJA, or by WGs with MACs to ensure that the range of management issues is given the proper attention;
5. Quality of meeting papers;
6. Quality of Chair's performance;
7. Quality of Executive Officer's support services;
8. Quality of PZJA Agency Members' performance;
9. Level of confidence that the MACs, RAGs or SACs views and recommendations are conveyed effectively to the PZJA, or that WGs views are conveyed to MACs; and
10. Rating the dynamics of the MAC, SAC, WG or RAG when in session over the last year.

16. Financial Management

16.1 Fishery Budgets

All MACs and WGs will be asked to provide comment on the draft annual budget for the fishery for consideration by the PZJA.

The draft budget will show the cost of managing Torres Strait fisheries, including surveillance, logbook collection and processing and general administration costs. It will also include the cost of MAC meetings and other specific activities or projects that have been commissioned by MACs.

Comments received from MACs and WGs will be considered by the PZJA Agencies. Once approved by the Agencies, the budget will be used by the PZJA as the basis for determining levies payable by those in the fisheries.

16.2 Annual work planning and budget preparation for RAGs

RAG members may be required to assist in developing an annual, costed work plan for the RAG. The relevant WG and MAC should be consulted and provide comment on whether the budgeted work plan best meets the assessment needs for the fishery. The PZJA may be required to approve the annual work plans and accompanying budgets. The Chair of a RAG may obtain advice on this from the relevant line agency members and if required obtain an application proforma from AFMAs research administrator.

It is the responsibility of a RAG chair to ensure that annual work plans are developed and that applications for funding, where required, are submitted in an accurate and timely fashion.

16.3 Travel Expenses of Members

The policy concerning the travel allowances to MAC and SAC meetings for members and other participants, and to WG and RAG meetings for members is contained in Attachment D.

16.4 Remuneration for inter-sessional work

It is expected that a significant amount of MAC, SAC, WG or RAG work will be conducted between formal meetings. The PZJA will consider claims for reimbursement of such inter-sessional work where it can be demonstrated that a member's contribution to MAC, SAC, WG or RAG inter-sessional work is outside the normal business of the member's agency providing the services. This is a matter for consideration by the PZJA when determining budgets. Remuneration provision for inter-sessional work will be specified in member contracts at the time of appointment where appropriate.

Claims for inter-sessional work benefiting a MAC, SAC, WG or RAG should be budgeted, and reasonable. Remuneration can be claimed by lodgment of a tax invoice with AFMA and should be supported by a documentary record of the actual staff time inputs to MAC, SAC, WG or RAG work. AFMA, on behalf of the PZJA, reserves the right to inspect such records, before approving payment of claims for inter-sessional work.

16.5 Remuneration for Chairs and SAC/RAG Scientific Members

The PZJA accepts that the duties of Chairs and SAC/RAG scientific members require high-level skills and carry obligation and responsibility. In order to attract and retain suitable people, remuneration for these duties may be considered. The level of remuneration is not fixed, but may be negotiated between AFMA and the chairperson/scientific members. Approved Chair/scientific member remuneration will be specified in the relevant contract at the time of appointment.

16.6 Consultancies

In order to accomplish work plans MACs, SACs, WGs or RAGs may, from time to time, require the specialist skills or services of people not already members of the MAC, SAC, WG or RAG. In these instances and for specific defined tasks, the chairperson may engage consultants. Work plans must anticipate these needs and budgets need to provide for any consultancy fees to be paid.

Consultants should be engaged under an AFMA contract. Preparation of such a contract is the responsibility of the AFMA Research Manager in consultation with the MAC, SAC, WG or RAG chairperson. (For further information on contracts refer to the AFMA Research Manager).

17. Consultative Committees

The PZJA may establish committees, other than a MAC, SAC, WG or RAG to assist it in the performance of its functions.

ATTACHMENT A

Legislative Objectives and Functions

Governing and guiding the PZJAs fisheries related activities are the legislative objectives contained under the provisions of sections 8 and 34 of the *Torres Strait Fisheries Act 1984*.

8 Objectives to be pursued

In the administration of this Act, regard shall be had to the rights and obligations conferred on Australia by the Torres Strait Treaty and in particular to 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.

34 Functions of Joint Authority under this Act

Where there is in force an arrangement under this Part under which the Protected Zone Joint Authority has the management of a fishery and the fishery is to be managed in accordance with the law of the Commonwealth, the Protected Zone Joint Authority has the functions of:

(a) keeping constantly under consideration the condition of the fishery;
(b) formulating policies and plans for the good management of the fishery; and
(c) for the purposes of the management of the fishery:
    (i) exercising the powers conferred on it by this Part; and
    (ii) co-operating and consulting with other authorities (including Joint Authorities established under the *Fisheries Act 1952* or the *Fisheries Management Act 1991*) in matters of common concern.

ATTACHMENT B

EXAMPLE ONLY – NOT FOR USE

Chair
Protected Zone Joint Authority
C/- Communications and Planning Section
Australian Fisheries Management Authority
PO Box 7051
Canberra Business Centre ACT 2610

Dear Chair

I refer to my proposed appointment as the …….. ……. Member/Permanent Observer on the ……MAC/SAC/WG/RAG.

In compliance with the PZJAs requirements prior to appointment to this position, I advise that:

(i) I have read, and understand, PZJAs Fisheries Management Paper covering MACs, SAC, WGs and RAGs; and
(ii) I understand that, if my appointment is confirmed, I must disclose any relevant conflict of interest during the course of all MAC/SAC/WG/RAG meetings at which I am present.

I also give my assurance that I will endeavour to participate in discussion in an objective and impartial manner and that I will serve the best interests of the above mentioned MAC/SAC/WG/RAG and of the fisheries, and hold up the PZJAs legislative objective.

Yours sincerely

Signature ……

Name (please print) ……

Mailing Address ……...

Daytime Telephone No.……

Mobile Telephone No. ……

Daytime Fax No. ……

Email Address ……

Date ……

ATTACHMENT C

Procedural Matters

The Torres Strait MACs, SACs, WGs and RAGs will operate in accordance with the following procedures:

1. Notice of a meeting

Except in exceptional circumstances, notice of a meeting shall be forwarded by the Executive Officer to all members no less than **20 working days** prior to a meeting being held. The notice shall call for agenda items and stipulate:

- the date of the meeting
- the time the meeting will commence
- the venue for the meeting
- the proposed business to be dealt.

The notice shall be sent to every member of the MAC, SAC, WG or RAG whether they are able to attend the meeting or not. The issue of a notice of the meeting to all members before the meeting is held is necessary for the meeting to be correctly constituted.

Full use of the PZJA web page should be made to assist in the communication of papers and other relevant information concerning the MAC, SAC, WG or RAG.

2. Quorum

A quorum is the minimum number of persons who need to be present to constitute a valid meeting. If a meeting is not properly constituted, it cannot conduct business in a valid manner. For resolutions of a meeting to be valid the number of Members necessary to form the quorum must be present throughout the meeting.

A sensible size for a quorum is a sufficient number of members to conduct business with an adequate spread of responsibility, experience and representation. In the case of MACs, SACs, WGs and RAGs, the number shall be two-thirds of the members.

3. Agenda

An agenda is more than a list of items or a guide to matters to be dealt with at a meeting. It provides a program to aid consideration of each item and allow the business of the MAC, SAC, WG or RAG to proceed in a logical, orderly and timely manner. It also provides a basis on which to write the minutes of the meeting.

Members are encouraged to provide input to the development of the draft agenda. Where significant business is proposed by a member, the agenda item supporting papers must be submitted to the EO by the member no less than **15 working days** before the meeting and be accompanied by a brief explanatory note setting out the main points to be considered. Otherwise, special items can only be submitted with the concurrence of the Chair.

All MAC, SAC, WG and RAG papers are to be considered public documents unless they contain items of specific commercial confidentiality.

Irrespective of the time frames specified in this section, it is the responsibility of the MAC, SAC, WG or RAG Chair to ensure the timely availability of agenda and other papers to all members prior to meetings.

The EO shall prepare the agenda in consultation with the Chair which is to be sent out to MAC, SAC, WG or RAG members, with papers and other information **10 working days** prior to the meeting. Papers are also to be sent to the AFMA Web Administrator (webadmin@afma.gov.au) at least 10 working days prior to the meeting to allow posting on the PZJA website.

The agenda should have items listed in the following order:

- **Chair's Opening Remarks**

  Provides the Chair with an opportunity to make any opening remarks to set the tone of the meeting, welcome any visitors etc.

- **Review and adoption of the agenda**

  Provides an opportunity for members to review the agenda and either confirm its adoption or make any necessary adjustments.

- **Declaration of Interests**

  This gives members an opportunity to declare any interest/s they may have in relation to the matters being considered by the MAC, SAC, WG or RAG. Interests may be declared in relation to a specific agenda item or items or be of a standing nature.

- **Apologies**

- **Minutes of the Previous Meeting on (date)**

  This gives those present the opportunity to be satisfied about the correctness of those minutes as a record of the proceedings of that meeting. It also serves as a reminder of decisions made by, and progress reported at, the last meeting and thus of matters which remain pending, decisions still to be made and developments about which reports should be forthcoming.

- **Outcomes of the meeting of the PZJA on (date)**

  The outcomes of the most recent meeting of the PZJA will be reported.

- **Business Arising from the Minutes**

  While the immediate consideration of any business that arises from the minutes of the previous meeting is normal, it may be appropriate for some issues to be

dealt with as individual items later in the agenda.

- **Routine Items**

  Regular business which comes before the MAC, SAC, WG or RAG (such as correspondence etc.) should be dealt with at an early stage in the meeting to enable such items to be dealt with expeditiously, but without undue haste. Reports of the SACs, WGs and RAGs and of each individual fishery will be discussed at this point during a MAC meeting.

- **Business Items to be Dealt With**

  The order in which business is dealt with at a meeting needs to take account of business items arising from the previous meeting and the possible effects on later agenda items. Business items should be structured logically and the sequence of items should not be changed unless to achieve some worthwhile benefit and then only after adequate consideration.

- **Other Business**

  This item provides for the consideration, if only in a preliminary way, of any unexpected or fresh and important business; it also enables up-to-date information on matters of passing interest to be reported and noted at the time rather than wait for the next meeting. As a general rule, items under this agenda heading should not go beyond the scope of the notice for the meeting. At this point the date of the next meeting is discussed.

4. Attendance of Casual Observers

Casual observers are welcome to attend MAC, SAC, WG and RAG meetings. Casual observers may participate at the discretion of the Chair where he or she deems it consistent with the efficient and effective operations of the MAC, SAC, WG or RAG. Casual observers must respect the need for orderly management of the business before the MAC/SAC/WG/RAG and the rights of others in the meeting. Casual observers must follow any directions made by the Chair.

5. Rules of Debate

Rules of debate have no legal authority and it is not necessary to apply such rules at a meeting. However, adherence to conventional rules of debate provides a Chair and others with confidence that a meeting will be conducted in an orderly fashion, with good manners and common decency.

In the case of MAC, SAC, WG and RAG meetings, it is unlikely that the rules of debate will need to be enforced. Rather, issues should be discussed in a co-operative, informal and consultative manner with resolutions being normally arrived at through consensus. At the same time, it is important for members to appreciate that the business of a meeting will be expedited by their personal observance of the general rules of debate and their support for the maintenance of order.

6. The Minutes

Once a MAC, SAC, WG or RAG meeting is completed, the Chair is responsible for formally communicating the outcomes of the meeting, including recommendations and matters for information, to the PZJA Chair (in the case of a MAC or SAC) or to the MAC Chair (in the case of WGs or RAGs) for consideration and to the industry for information. It is a function of the EO to assist the Chair in preparing the minutes of the meeting as well as the Chair's Summary.

Minutes may be defined as the official, permanent, written record of the business transacted at a meeting. They should be accurate, concise and articulate, being free from ambiguity or uncertainty. Where there is, by necessity, substantial and significant detail covered in the MAC, SAC, WG or RAG meeting, the minutes need to reflect this level of detail.

As a general rule, minutes should be expressed in words, phrases and sentences which are free from errors of grammar and syntax. They should preferably be without clichés, jargon, fashionable words or unnecessary detail.

The minutes need to include:

- day and date of meeting
- place of meeting
- names of those present
- apologies
- reference to the minutes of the previous meeting and the signing of them as a correct record of the proceedings of that meeting by the Chair
- record of agenda items discussed, including agreements reached, action required, and the MACs, SACs, WGs or RAGs decision/s in regard to any declared conflict/s of interest
- date and time for the next meeting
- time the meeting closed

Draft minutes are to be written up and submitted to the Chair for comment and approval within **14 working days**, and distributed to members within **21 working days** after the meeting. Minutes are also to be sent electronically to the AFMA Web Administrator (webadmin@afma.gov.au) for posting on the PZJA website.

MAC, SAC, WG or RAG Chairs must not allow members who are absent from meetings to have separate notes or views attached to minutes, however absentee members may convey views in writing to the MAC, SAC, WG or RAG prior to the meeting.

ATTACHMENT D

TRAVEL EXPENSES

Members of travelling on MAC, SAC, WG or RAG business will be paid travel expenses reasonably incurred in connection with RAG business. Normally, this is reimbursement of airfares at the economy class rate, reimbursement of receipted expenditure for accommodation costs, meals and incidental expenses in accordance with AFMAs (as a PZJA Agency) staff travel policy.

To claim reimbursement for expenses incurred while on MAC, SAC, WG or RAG business, members must provide AFMA with a tax invoice with any relevant supporting documentation such as airline tickets, receipts for accommodation, meals, taxis and parking vouchers etc.

No allowance is payable if there is not an overnight stay. However, members may claim reimbursement of any meal expenses incurred by them during the day of a MAC, SAC, WG or RAG meeting not involving an overnight stay. Claims for reimbursement must be accompanied by a valid receipt or tax invoice and approval is at the discretion of PZJA Agency staff.

If a Member would like payment of travel costs to be made to their employer or business, then they must either submit a tax invoice from their employer or business or enter into a signed Recipient Created Tax Invoice (RCTI) agreement with AFMA. An RCTI agreement form can be obtained from AFMAs Finance Manager.

All flights to MAC, SAC, WG and RAG meetings should be booked through AFMAs travel provider. The cost of the flight will be charged directly to AFMA.

Members of a MAC, SAC, WG or RAG who are employed by a Commonwealth or State organisation that has their own discounted travel arrangements, may book flights through their own system. AFMA will reimburse their employer on submission of a valid tax invoice.

The claim form for travel expenses is attached.

Australian Government
Australian Fisheries Management Authority

CLAIM FOR EXPENSES AND ALLOWANCES FOR OFFICIAL ATTENDANCE AT A COMMITTEE (MAC, SAC) OR GROUP (WG or RAG) MEETING

DETAILS OF MEMBER

Name…… ABN*…… Phone No……..…

Address……. Fax No…….

DETAILS OF MEETING

Name of Committee/Group…….…….	Meeting place……..…
Meeting date……..……..…….	Meeting time……..……

DETAILS OF TRAVEL

Start: Place…….……. Time……... Date…..……

End: Place…….…… Time……... Date…..……

Was this travel by the most direct route? Yes ☐ No ☐

If no, please provide comments ..……

……

Method of travel: ☐ Plane (go to section A)
☐ Vehicle (go to section B)

Section A - DETAILS OF FLIGHT (attach tax invoice*)

Outward: Date…….. Depart……..…… Arrive……..…..…
Return: Date…….. Depart……..…… Arrive……..…..…

Are you claiming reimbursement for total cost of the airline ticket?

Yes ☐ No ☐ Comments ….…… .

……

Section B - DETAILS OF VEHICLE

Distance travelled by direct route ……..……km Engine size……..cc

Section C - DETAILS OF EXPENSES (attach tax invoices*)

Taxi $……..……..Parking $……..……..Other $..……

SIGNED ……..……..……INVOICE DATE…….……

ATTENDANCE VERIFIED ……

(AFMA use only)

	No.	$
Complete days		
Less meals provided		
Travel allowance payable (6410)		
Cost of ticket *		$
Deductions		
Net cost (6420)		
Rate…….c/km (6430)		$
Expenses *		$
TOTAL PAYABLE $		

THE TOTAL PAYABLE INCLUDES GST

COST CENTRE ……..……TOTAL PAYABLE APPROVED BY……

*Official MAC/WG/RAG/SAC members do not need to provide an ABN. Costs should be entered including GST, where applicable. AFMA can recover GST on reimbursements where an original tax invoice is attached. If the member's business is paid then the member must provide the business' ABN. AFMA can recover the GST from payments to those members only if they have signed an RCTI agreement or provide their own tax invoice

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
MANAGEMENT **Formalising finfish total allowable catches**	**Agenda Item No. 5.3** **For noting**

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on the formalisation of total allowable catches in the Torres Strait Finfish Fishery in line with the objectives of the *Torres Strait Finfish Fishery Management Plan 2013*.

KEY ISSUES

1. Limiting catches to an agreed total allowable catch (TAC) is important for ensuring the sustainability of the fishery. Sustainability in turn is necessary for maximising the economic return that may be gained from the resource.
2. A reduction in the TAC for Spanish mackerel has been recommended meaning that subject to leasing arrangements, actual catches are likely to mirror the recommended biological catch for the stock.
3. Actual catches comprise both reported (for example based on logbooks returns) and estimated catches (for example for the TIB sector).
4. A plan of management is in place for the Finfish Fishery. Under the *Torres Strait Finfish Fishery Management Plan 2013* (the Plan) TACs may only be determined by the PZJA following the allocation of quota units (or units of fishing capacity). The plan of management allows for the allocation of quota units however this has not yet been undertaken.
5. In the interim, TACs may be implemented by way of licence condition.
6. The objectives of The Plan are as follows;

   Objective 1: To acknowledge and protect the traditional way of life and livelihood of Traditional Inhabitants, including their rights in relation to traditional fishing for finfish.

   Objective 2: To ensure that harvest levels are at, or below, levels that maintain biologically viable stocks of target and non-target species.

   Objective 3: To provide for the use and conservation of Torres Strait finfish resources in a way that minimises impact on the marine environment.

   Objective 4: To optimise economic viability of the fishery.

   Objective 5: To provide for optimal utilisation, cooperative management, and for catch sharing to occur with PNG.
7. Commonwealth and Torres Strait fisheries must be assessed under the *Environment and Protection and Biodiversity Conservation Act 1999* (the EPBC Act). As part of this assessment process the Finfish Fishery was declared an approved Wildlife Trade Operation (WTO). The WTO approval allows export of products. The Finfish Fishery WTO approval is due for re-assessment by 4 August 2017. A condition of the current WTO approval is:

   Operation of the Torres Strait Finfish Fishery will be carried out in accordance with the Torres Strait Finfish Fishery Management Plan 2013 in force under the Torres Strait Fisheries Act 1984.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
MANAGEMENT **Estimates of Traditional Inhabitant commercial catches**	**Agenda Item No. 5.4** **For discussion and advice**

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on a best estimate of the commercial catches likely to be taken by the Traditional Inhabitant fishers for Spanish mackerel and coral trout.

KEY ISSUES

1. In effectively managing a stock, it is important to understand the best estimates of all sources of mortality including all commercial catch, international catch, recreational catch, charter catch etc.
2. For example, at its last meeting, the FWG agreed that the catch figures from the *Busilacchi (2008)* report are our best estimate of the subsistence take of finfish.
3. In line with understanding the sources of mortality taken from different sectors of the fishery, FWG advice is sought on the best available estimate of Spanish mackerel and coral trout catches by the traditional inhabitant commercial sector.

BACKGROUND

4. Since 2004, the TIB sector has been monitored through the voluntary Torres Strait Seafood Buyers and Processors Docket Book (TDB01) via buyers at the community and commercial freezer level.
5. In recent years, the reported catch in TDB01 docket books has become infrequent for the finfish fishery (**Figure 1**) with less than 1 tonne of catch being reported in both the 2014-15 and 2015-16 fishing seasons (**Figure 2**).
6. An increasing number of Traditional Inhabitant Boats are endorsed to fish in the Spanish mackerel or reef-line fisheries (**Table 2**).
7. There are a range of estimates of TIB commercial catch available from previous studies (**Table 1**) and industry advice is expected on likely trends in fishing effort noting a variety of factors that may have impacted TIB fishing effort overtime (e.g. management decisions (10nm closures), changes in market demand for product, the closure of island freezers, fishers leaving the fishery etc).
8. Existing catch estimates are detailed below together with licencing information (**Table 2** below) and number of fishers reporting sales of product (Figure to provide some indication of the level of effort (latent or otherwise) in the fishery.

Table 1. Summary of estimates of TIB commercial take

Study	Method	Time period	Estimate of TIB commercial take
O'Neill & Tobin (2016)	Spanish mackerel stock assessment	2003-2010	**22 t** Spanish mackerel
Bussilachi, Williams, Russ and Begg (2012)	Creel surveys - island based	2004-2006	**9 t** Spanish mackerel **25 t** coral trout **20 t** other species.
Begg & Murchie (2004)	Review of catch records and island freezer data	1988-2003	**29 t** peak reef-line catch of all spp.(2002) **15 t** peak coral trout catch (Mer + Erub, 2002) **7.5 t** peak Spanish mackerel catch (Masig, 1999)

REPORTED TIB COMMERCIAL CATCH

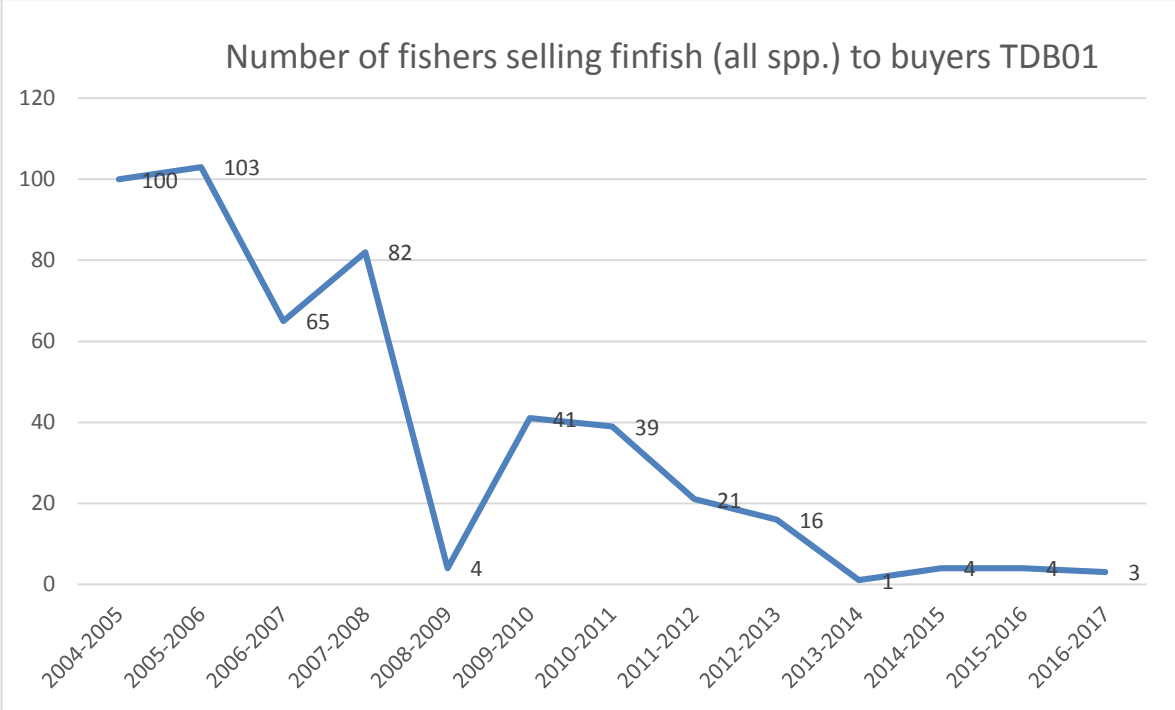


Figure 1. Reported catch in TDB01 docket-books from TIB fishers selling finfish (all species combined) to buyers by financial year.

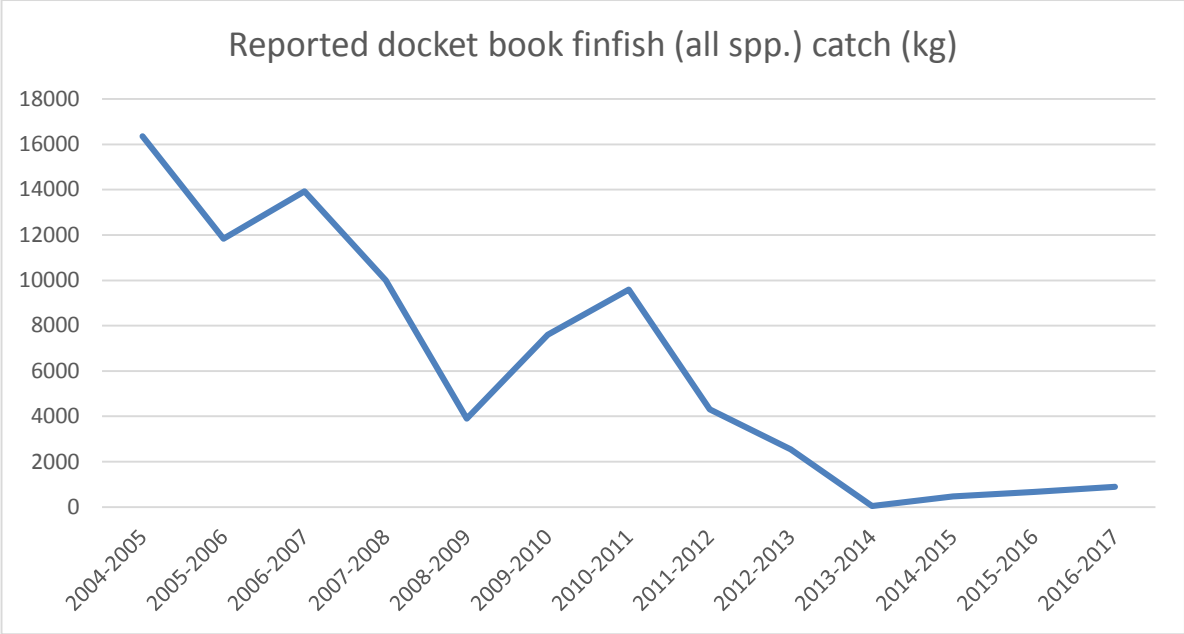


Figure 2. Reported docket book catches (fishers selling to buyers) from TDB01 by financial year.

STUDIES THAT PROVIDE ESTIMATES OF TIB COMMERICAL CATCH

O'Neill & Tobin (November 2016)

9. The most recent assessment for Spanish mackerel (O'Neill & Tobin – November 2016) reports that for the years 2003-2010 the docket (TIB) database corresponds to about **18.5 % (**SD =4.6%) on average **of the Spanish mackerel logbook** (TVH) tonnages per season.

10. The percentage was based on comparing the amount of catch recorded in TIB docket-books and compared what proportion this was of the TVH sector reported in logbooks.

11. This equates to an average of **22 t of Spanish mackerel per season** taken by the TIB sector.

12. This same assumed amount (18.5 %) is extrapolated for two other time periods in the assessment for which full docket data is not-available 1989-2002 and 2011-2014.

Bussilachi, Williams, Russ and Begg (2012)

13. This creel study estimated that between 2004 to 2006 the TIB sector commercial catch for three islands (Mer, Erub, Masig) studied (was 53.5 tonnes in total, **Figure 3**.)

    a. **9 tonnes - Spanish mackerel**
    b. **25 tonnes - coral trout**
    c. **20 tonnes - other species**.

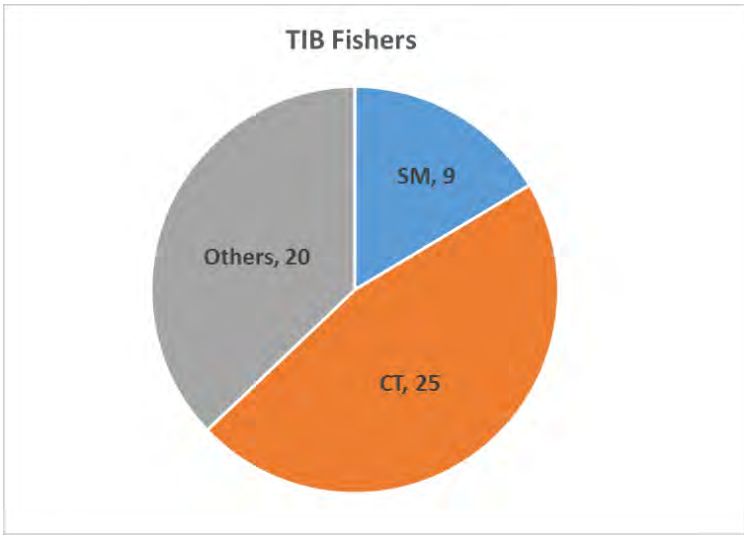


Figure 3. Chart of estimated TIB commercial catch from *Bussalachi et. al* (2012)

Begg & Murchie (2004)

14. The CRC report "*Collation and review of islander commercial catch history (1988-2003) in the Eastern Torres Strait reef line fishery*, Begg & Murchie 2004" provides a summary of traditional catch records from community freezer and commercial catch records (**Figure 4**).

15. The peak reef-line catch of all species combined was 29 tonnes in 2002 from 111 individual fishers and 1064 days of effort.

16. Coral trout was the main species harvested from Mer and Erub Islands and peaked at around 15 tonnes during the studied data.

17. Spanish mackerel was the main species harvested from Masig Island and peaked at around 7.5 tonnes in 1999.

18. **Figure 4** (below) provides an overview of reported catches (total and broken down by island)

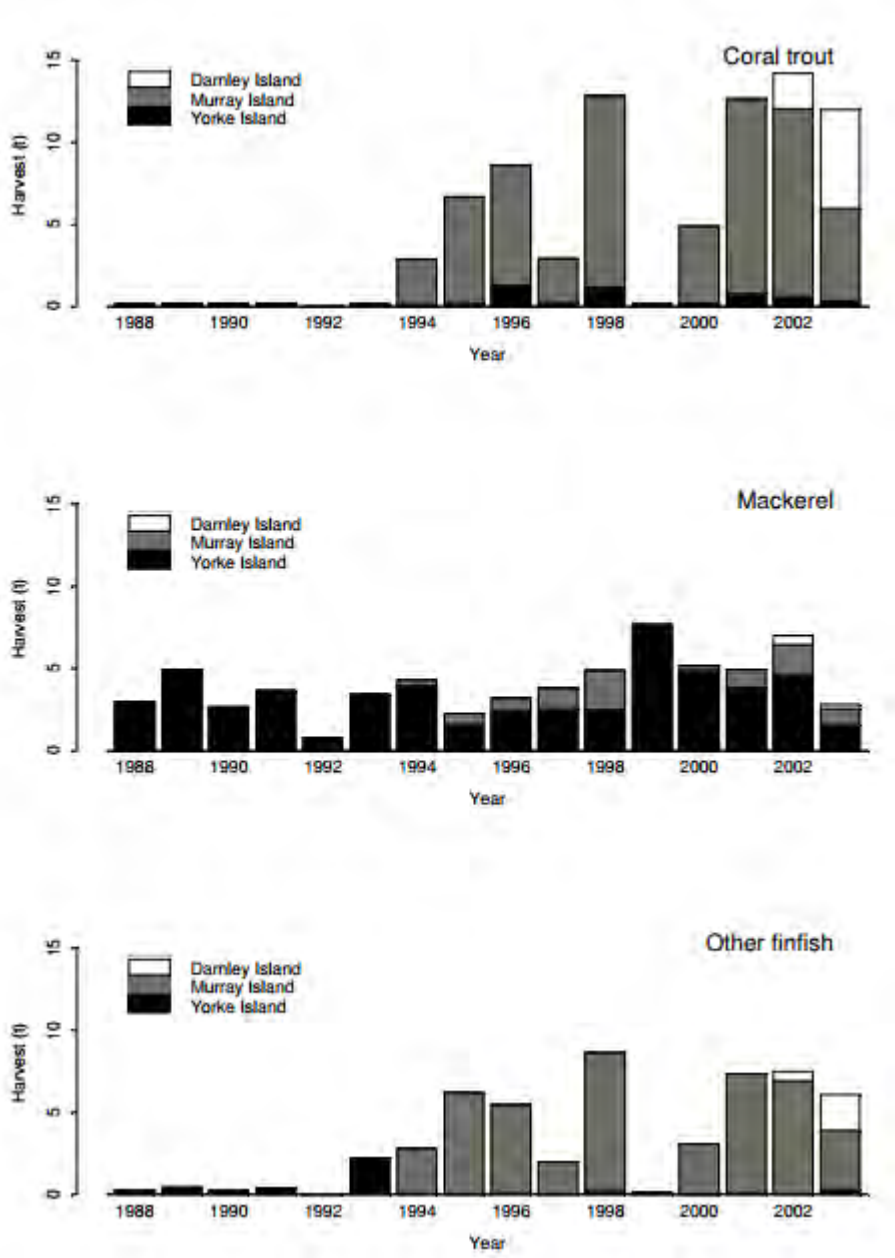


Figure 4. Total annual harvest (t) of Coral trout, Mackerel and Other finfish for Darnley (Erub), Murray (Mer) and Yorke (Masig) Islands. Overall heights of bars indicate the total annual reported harvest for the eastern Torres Strait (all three islands combined).

Table 1. Number of TIB license endorsements by fishing season (Source: ABARES Fishery Status Reports, *AFMA Database.

Season	# TIB licenses (endorsements)
2009-10	161 SM, 145 RL
2010-11	148 SM, 129 RL
2011-12	150 SM, 134 RL
2012-13	135 SM, 122 RL
2013-14	136 SM, 132 RL
2014-15	210 SM, 194 RL
2015-16	270 SM, 227 RL

REFERENCES

Begg G.A., Murchie C.D. (2004). *Collation and review of Islander commercial catch history (1988-2003) in the eastern Torres Strait reef line fishery*. CRC Reef Research Centre Technical Report No. 57, CRC Reef Research Centre, Townsville.

Busilacchi, S., Williams, A.J., Russ, G.R., and Begg, G.A. (2012) *Complexity of applying minimum legal sizes (MLS) of retention in an indigenous coral reef fishery*. Fisheries Management and Ecology 19, 233–244.

O'neill M. and Tobin A. – *Torres Strait Spanish Mackerel Stock Assessment II, 2015 (Update of stock assessment I published in 2006)*. Torres Strait AFMA Project Number RR2014/0823 as accepted by the Finfish Scientific Technical Working Group 10 November 2016.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
MANAGEMENT Public Register of Licence Holders	Agenda Item No. 5.5 For ADVICE

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on the implementation of a Public Register for Fishing & Carrier Licences for all Torres Strait Fisheries.

KEY ISSUES

1. AFMA is seeking Working Group advice on the PZJA making a register (or list) of licence holders across Torres Strait Fisheries available to the public (a public register).

2. A public licence register would allow for:
    a. Fish receivers (Licenced carrier vessels and other buyers) to more easily identify product taken by licenced fishing vessels;
    b. Fishers to more easily identify licenced carrier vessels and, in the event that a mandatory fish receiver system is implemented, fishers to more easily identify licenced fish receivers (land based or vessel based);
    c. Improved voluntary compliance through increased transparency of licence holdings.
    d. Parties interested in buying or leasing licences (or quota / effort units) to verify the ownership status
3. It is proposed to make the following details of each licensee available publicly on a register:
    a. Company or individual's name
    b. Licence type (Fishing licence (TIB, TVH), Sunset, Carrier A, B or C)
    c. Licence Number
    d. Vessel identifying number (the boat mark), or "No Boat" status
    e. Licence expiry date
    f. Fishery endorsements (TRL, CT, SM, Prawn, BDM, Treaty endorsement)
    g. Catch or Effort allocation where applicable (Prawn effort, sunset catch allocation)
4. The register would ***not*** include contact details for licensees.

5. The register would be made available on the PZJA website and updated at least monthly.

6. Public registers are in place for all Commonwealth fisheries managed under plans of management.

BACKGROUND

7. Torres Strait fisheries are governed by the *Torres Strait Fisheries Act 1984* (TSFA). Section 10 of the TSFA empowers the Minister to create a register and to make part or all of the register available to the public (Section 10, p.10). The *Torres Strait Finfish Management Plan 2013* also has provision for a public register Part 6, Section 6.2, p.22), as does the exposure draft of the *Tropical Rock Lobster Management Plan 2017* (Part 4,

Division 2, Section 30 & 31, p.19), and the *Torres Strait Prawn Fishery Management Plan 2009* (Part 6, Section6.1, p.23).

8. The relevant section of the *Torres Strait Finfish Management Plan 2013* is*:*

6.2 Register

(1) As well as the matters mentioned in section 10 of the Act, the Register must show particulars of:

(a) transfers or temporary transfers of TSFF licences, sunset licences and units of fishing capacity; and

(b) boats nominated under section 4.5; and

(c) any other information that the PZJA determines.

TORRES STRAIT FINFISH WORKING GROUP	Meeting No. 2017.1 16 - 17 March 2017
MANAGEMENT **Future Management Priorities**	**Agenda Item No. 5.6** **For discussion and advice**

RECOMMENDATIONS

That the Working Group **DISCUSS** and **PROVIDE ADVICE** on future management priorities for the fishery.

KEY ISSUES

1. This is a standing item for the FWG. Having agreed management priorities (management issues to focus on) and a work plan aims to achieve a more efficient management process.

2. At its last meeting (12-13 July 2016) the FWG recommended a list of management priorities (detailed below).

3. 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.

4. Where necessary, the Working Group should aim to assign an order of priority to items and a desired timeline.

5. Importantly the Working Group will need to have regard for resourcing. AFMA's budget for finfish fisheries is tabled under Agenda Item 5.7 for information.

BACKGROUND

6. At its July 2016 meeting the Working Group identified the following future management priorities:
   a. development of a harvest strategy;

   b. progressing issues identified under agenda items 5.2 and 5.3 through the Technical Scientific Working Group; and

   c. improving fishery data (freezer data, possible length frequency and otolith data collection).

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 March 2017
MANAGEMENT **Crewing of Traditional Inhabitant Boats**	**Agenda Item No. 5.7** **For discussion and advice**

RECOMMENDATIONS

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

KEY ISSUES

1. Mr Patrick Mills, Chair of the TSFA wrote (on 25 May 2015) to The Hon. Bill Byrne MP Minister for Agriculture and Fisheries and to the then Senator the Hon. Richard Colbeck Parliamentary Secretary to the Minister for Agriculture **Attachment A**.

2. The letter outlined TSFA concerns with the current condition on TIB licences that vessel must be operated only by traditional inhabitants. The TSFA acknowledge that the restriction was probably put in place to protect employment opportunities for Traditional Inhabitants however advise it has a negative effect on indigenous fishing businesses.

3. The response from The Hon. Bill Byrne MP Minister for Agriculture and Fisheries and the then Hon. Richard Colbeck Parliamentary Secretary to the Minister for Agriculture is provided at **Attachment B** and **Attachment C** respectively**.**

4. AFMA is seeking comment from all PZJA Working Groups on the TSFA proposal. The Tropical Rock Lobster Working Group noted the proposal at its meeting on 27-28 August 2015 and advised:

    - consultation with industry, communities, Traditional Owners and Prescribed Body Corporates will be critical to support any changes; and

    - both the TIB and TVH sector have similar difficulties employing crew.

5. The Working Group should consider its advice in line with objectives of the *Torres Strait Fisheries Act 1984,* in particular to have regard to the management priority to:

    a. manage commercial fisheries for optimum utilisation;

    b. to have regard, in developing and implementing licensing policy, to the desirability of promoting economic development in the Torres Strait area and employment opportunities for traditional inhabitants.

LIST OF ATTACHMENTS

Attachment A – Letter from Patrick Mills to Minister Byrne

Attachment B – Response letter from Minister Byrne

Attachment C – Response letter from Parliamentary Secretary Colbeck

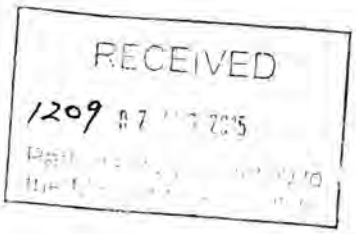
The Hon. Senator Richard Colbeck

Senator for Tasmania

Parliamentary Secretary to the Minister for Agriculture

Parliament of Australia

CANBERRA ACT 2600



Re: Skilled workers for Torres Strait fishery

Dear Sir,

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

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

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

Yours in fishing,

Patrick Mills

Chair – TSFA Inc

Hon Bill Byrne MP

Minister for Agriculture and Fisheries

GPO Box 46

Brisbane QLD 4001

28/07/2015

Dear Minister,

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

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

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

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

Yours in fishing,

Patrick Mills

Chair – Torres Strait Fishers Association

Queensland Government

Hon Bill Byrne MP
Minister for Agriculture and Fisheries and
Minister for Sport and Racing

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

Reference: CTS 11455/15

23 JUN 2015

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

Dear Mr Mills

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

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

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

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

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

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

Yours sincerely

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

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

SENATOR THE HON. RICHARD COLBECK
Parliamentary Secretary to the Minister for Agriculture
Liberal Senator for Tasmania

Ref: MC15-006687

27 AUG 2015

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

Dear ~~Mr Mills~~ Patrick,

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

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

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

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

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

Telephone 02 6277 5814 Parliament House, Canberra ACT 2600 Australia Facsimile 02 6277 5823

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

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

Yours sincerely

Richard Colbeck

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

TORRES STRAIT FINFISH WORKING GROUP	Meeting No. 2017.1 16-17 March 2017
AFMA Finfish Fishery Expenditure 2016/17 and Budget 2017/18	Agenda Item No. 5.8 For Noting

RECOMMENDATIONS

1. That the Working Group **NOTE** AFMA's Finfish Fishery budget for 2016/17.

KEY ISSUES

2. Each year, AFMA's annual operating budget is determined by the Australian Government. AFMA uses part of its budget to provide management services to the Protected Zone Joint Authority. AFMA's Torres Strait budget is apportioned across a range of activities and fisheries.
3. AFMA consults on its budget with all Commonwealth managed fisheries. Consultation with industry provides accountability and assists with driving management efficiency and priority setting. Whilst Torres Strait fisheries management costs are not currently cost recovered, industry and management are likely to benefit in the same way from understanding and discussing AFMA's budgeting arrangements.
4. AFMA's DRAFT budget for the Finfish Fishery, excluding staff costs (direct costs only), is $58 048. The budget primarily covers the convening of two Finfish Working Group meetings. The budget does not include any community visits. A detailed breakdown of the budget is provided in **Attachment A.**
5. In addition to the budgeted costs described above, AFMA is has commissioned the CSIRO funding application to develop a harvest strategy for the Finfish Fishery (refer to Agenda item 5.1).

Attachments

Attachment 1 – Expenditure to date against the 2016/17 budget and breakdown of projected 2017/18 budget for Finfish Fishery.

Expenditure to from 2016/17 budget breakdown of AFMA finfish budget

	31/01/2017			Feb-June	
Natural Account	**YTD Actual**	**YTD Budget**	**Variance**	**remaining budget**	**Total2016/17 Budget**
6313 - Consultants - General	2,792	2,013	(779)	1,234	4,026
6412 - Domestic - Accommodation	3,821	1,760	(2,061)	(301)	3,520
6413 - Domestic - Meals	663	1,216	553	1,769	2,432
6420 - Air Fares - Domestic	12,124	5,494	(6,631)	(1,137)	10,987
6430 - Mileage Allowance	1,098	0	(1,098)	(1,098)	0
6433 - Taxi, train bus costs	389	640	251	891	1,280
6435 - Parking Fees	95	0	(95)	(95)	0
6436 - Booking Fee	169	0	(169)	(169)	0
6451 - Hire of Facilities	0	535	535	1,070	1,070
6453 - Meals Provided	523	154	(368)	(214)	309
7011 - Media Advertisements - Fisheries Meeting	0	222	222	380	380
7111 - General Printing	0	993	993	1,702	1,702
Total (exc. Overheads)	**21,675**	**13,027**	**(8,648)**	**4,031**	**25,706**

Traditional inhabitant industry representation

Budget - travel

Member	**Origin**	**Plane Fare**	**Accommodation**	**Taxi/ferry/parking**	**TA**	
Gudumalulgal	Dauan	4000	440	35	304	
Kaiwalagal/NPA	Horn Island	0	0	35	152	
Kulkalgal	Poruma	856	440	35	304	
Kemer Kermer Meriam	Ugar	4000	440	35	304	
Maluwap Nona	Badu/Mer/Cairns	1142	440	160	304	**Total**
	Total	**9998**	**1760**	**300**	**1368**	**$26,852**

Budget – sitting fees

5 reps budgeted
 # days for FWG
2 meetings @ $549 per day
$5490

Total budget $58,048

Expenditure to date

Member	Origin	Plane Fare	Accommodation	Taxi/ferry/parking	TA	
Gudumalulgal	Dauan	4000	440	35	304	
Kaiwalagal/NPA	Horn Island	0	0			Did not attend
Kulkalgal	Poruma	856	440	35	304	
Kemer Kermer Meriam	Ugar					Did not attend
Maluialgal	Badu/Mer/Cairns	1142	440	160	304	**Total**
	Total	**5998**	**1320**	**230**	**912**	**$8,460**

3 reps attended
 # days for FWG
1 meeting @ $549 per day
$1647

Total expenditure to date is $31,782 (TSRB expenditure to date $10,107, Total FRTF expenditure to date $21, 675)

2017/18 Budget

Draft Finfish Working Group Meeting

FRTF	Member	Origin	Plane Fare	Accom	Taxi/ferry/parking	TA	Venue Hire	Event Dinner (meals provided)	Member cost/meeting		
	Andy Bodsworth (CHAIR)	Canberra	1574.58	440	120	304			2438.58		
	Micheal O'Neil	TBA*	1574.58	440	120	304			2438.58		
	Dave Brewer	TBA*	1574.58	440	120	304			2438.58		
	TVH Permanent observer - Tony Vass	TBA**	770	440	120	304			1634		
	AFMA Executive Officer	TI	0	0	0				0		
	AFMA staff EL	TI	0	0	0				0	FRTF Cost per meeting	Cost for all meetings
		Total	**5493.74**	**1760**	**480**	**1216**	**535**	**250**	**8949.74**	**9734.74**	**19469.48**
TSRB	**Member**	**Origin**	**Plane Fare**	**Accom**	**Taxi/ferry/parking**	**TA**	**Venue Hire**	**Event Dinner**	**Member cost/meeting**		
	Tenny Elisala	Dauan/ Ugar combined		600	52.8	331			6383.8		
	Rocky Stephen		5400	600	52.8	331			983.8		
	Elizah Wasaga	Horn Island	NA	NA	52.8	331			383.8		
	Frank Fauid	Poruma	918	600	52.8	331			1901.8		
	Maluwap Nona	Mer	1250	600	52.8	331			2233.8	TSRB Cost per meeting	Cost for all meetings
	Native Title Rep (TBA)	Mer	1250	600	52.8	331			2233.8		
		Total	**8818**	**3000**	**264**	**1655**	**535**	**250**	**14120.8**	14522	**29044**

Draft budget for industry meeting July 2017

		Origin	Plane Fare	Accom	Taxi/ferry/parking	TA	Venue Hire	Event Dinner	Member cost/meeting		
FRTF	AFMA EL	TI	620	278	120	304			1322		
	AFMA EO	TI	620	278	120	304			1322		no FRTF sitting fees
	FFWF Scientific Member	Brisbane	920	278	120	304			1622		
	FFWF Scientific Member	Brisbane	920	278	120	304			1622	FRTF total	
		Total	**3080**	**1112**	**480**	**1216**	0	0		5888	

		Origin	Plane Fare	Accom	Taxi/ferry/parking	TA	Venue Hire	Event Dinner	Member cost/meeting		
TSRB	Industry Representative	TS somewhere	1000	278	120	**331**	no cost (QDAF building)	N/A	1729	**TSRB total**	
		Total	1000	278	120	**331**			**1729**	1729	sitting fees 549

Please note that this budget does not include AFMA salaries and on-costs, and other AFMA operating costs, including overheads, research administration, logbook programs, data management, or licensing costs.

TORRES STRAIT FINFISH WORKING GROUP	Meeting 2017.1 16 – 17 March 2017
MANAGEMENT **Grant of carrier licenses to non-traditional inhabitants**	**Agenda Item No. 5.9** **For DISCUSSION**

RECOMMENDATIONS

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

KEY ISSUES

1. From time to time the PZJA receives applications from people/companies seeking authorisation to transport (carry) seafood by boat in the Torres Strait. Vessels must hold a carrier licence to carry seafood taken in Torres Strait Fisheries.

2. Recognising the reliance of Torres Strait commercial fishers on having sea-freight services to transport fisheries products from and within the Torres Strait, the PZJA has granted new carrier licences and renewed others for freight vessels. This includes freight vessels owned by non-traditional inhabitant persons/owned entities e.g. sea-freight companies such as *Seaswift Pty Ltd*. These decisions have been consistent with directions from the PZJA.

3. More recently there has been interest from smaller companies to transport seafood that are owned by non-traditional inhabitants.

4. Advice is being sought from the Finfish Working Group as there is some ambiguity in the PZJA "*Guide to management arrangements for Torres Strait Fisheries, June 2004*" (the Guide) which describes the PZJA licencing policy (**Attachment A**) and with previous directions from the PZJA.

5. Having regard for the objectives of the *Torres Strait Fisheries Act* 1984, AFMA is seeking working group advice on any concerns with the grant of new carrier-only licences to non-traditional inhabitants, subject to the conditions set out in paragraphs 6 and 7.

BACKGROUND

6. The Guide states '*carrier licences **may be granted** to boats which are legitimate cargo vessels*' (Carrier vessel licence, pp.19). Another section of the Guide states '*all new fishing licences and carrier licences are **only to be granted to Traditional Inhabitants**'* (tropical rock lobster, Spanish mackerel, pearl shell, finfish, beche-de-mer, trochus and crab fisheries, pp.19).

7. Consistent with directions from the PZJA, the grant of a new carrier licence to a non-traditional inhabitant vessel to carry (transport) seafood, may be considered for vessels that are not also licenced to take fish in a Torres Strait Fishery (meaning the vessel can't be used to fish– it can only transport seafood) provided they are subject to the following minimum licence conditions:

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

b. The carrier boat will not purchase or take on board or carry product from a vessel which is not licenced.

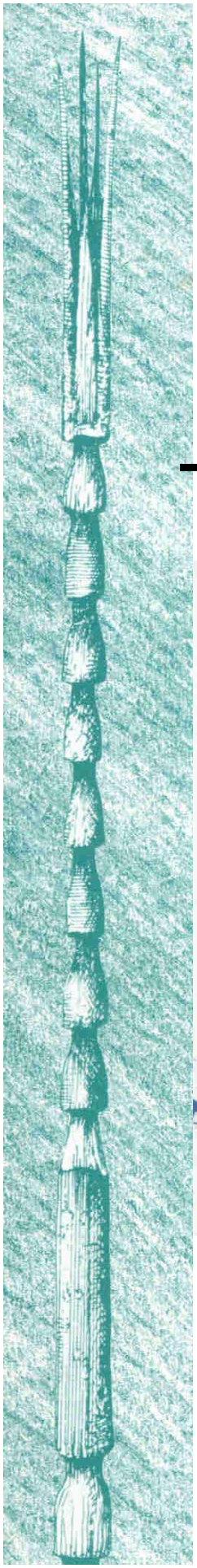
c. The boat shall not be used to take tender boats or dinghies to and from the fishing grounds or be used as accommodation for fishers.

d. The licence is non-transferrable

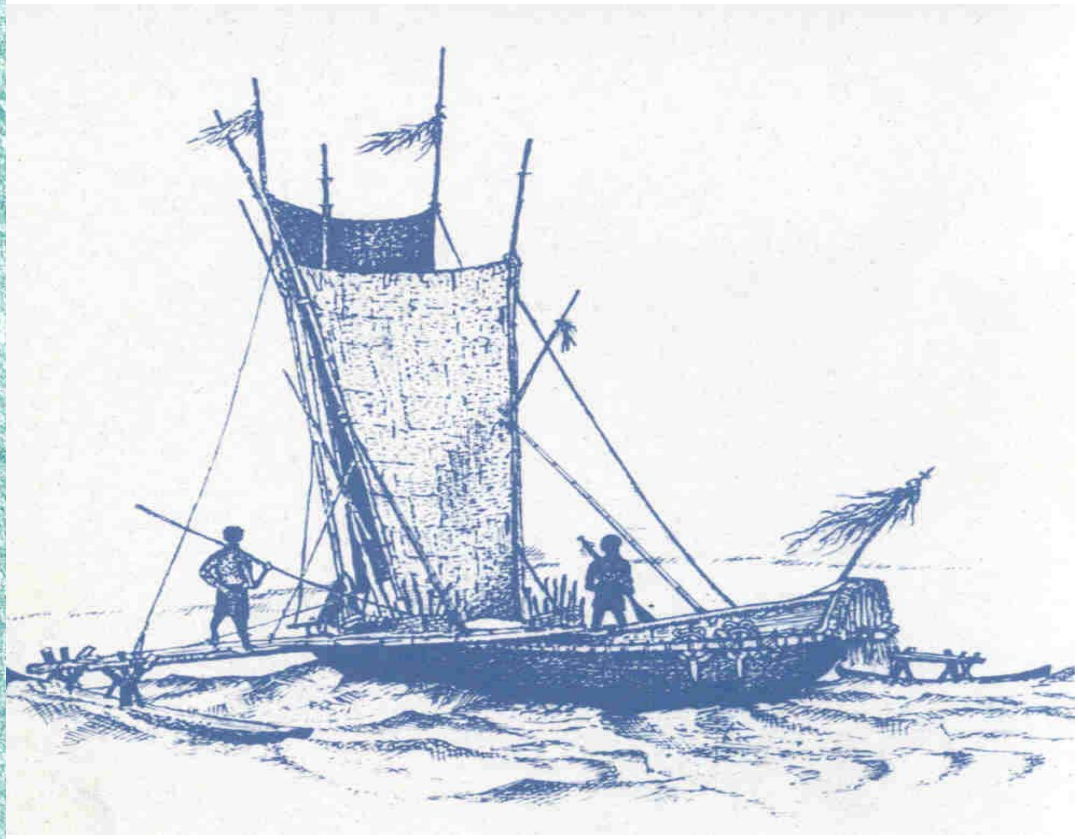
8. Consistent with the PZJA's recent decision, these licences would also be required to have an operating Vessel Monitoring System.

LIST OF ATTACHMENTS

Attachment A – A guide to management arrangements for Torres Strait fisheries June 2004



A GUIDE TO MANAGEMENT ARRANGEMENTS FOR TORRES STRAIT FISHERIES



JUNE 2004

A GUIDE TO MANAGEMENT ARRANGEMENTS FOR TORRES STRAIT FISHERIES

JUNE 2004

Compiled by

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FOREWORD

This guide has been prepared jointly by the Australian Fisheries Management Authority (AFMA) and Queensland Department of Primary Industries and Fisheries (QDPI&F) in collaboration with the Queensland Boating and Fisheries Patrol (QB&FP).

The Torres Strait Treaty was ratified by Australia and Papua New Guinea on 15 February 1985. It is concerned with sovereignty and maritime boundaries in the area between the two countries, the protection of the way of life and livelihood of traditional inhabitants and the protection of the marine environment. The Treaty also establishes the Torres Strait Protected Zone (TSPZ) in which each country exercises sovereign jurisdiction for swimming fish and sedentary species on the respective sides of the agreed jurisdiction lines (Fisheries Jurisdiction Line and Seabed Jurisdiction Line – see Maps, Appendix 3).

The Guide outlines how the Protected Zone Joint Authority (PZJA) manages selected fisheries in the TSPZ under obligations established by the Treaty. It is intended only to provide a general guide to fisheries management arrangements in the Torres Strait and does not replace detailed advice specific to individual circumstances. We trust the information presented will help readers to understand the arrangements and direct them to other appropriate sources of further information.

The information in this Guide in no way limits the powers and decisions of the PZJA in its determinations, or in its considerations of any matters placed before it. Individuals who wish to take part in the Torres Strait fisheries, or who wish to vary the conditions under which they take part, should be aware that the powers are vested with the PZJA to consider each application on its individual merits.

Torres Strait PZJA Protected Zone Joint Authority

Queensland Government

Torres Strait Regional Authority

Australian Government

Australian Fisheries Management Authority

ACRONYMS

AFMA	Australian Fisheries Management Authority
CRC	Cooperative Research Centre - Torres Strait
CSIRO	Commonwealth Scientific and Industrial Research Organisation
DAFF	Department of Agriculture, Fisheries and Forestry
EPBCA	*Environment Protection and Biodiversity Conservation Act* 1999
ICC	Island Co-ordinating Council
PNG	Papua New Guinea
PZJA	Protected Zone Joint Authority
QB&FP	Queensland Boating and Fisheries Patrol
QDPI&F	Queensland Department of Primary Industries and Fisheries
TSFA	*Torres Strait Fisheries Act* 1984
TSFMAC	Torres Strait Fisheries Management Advisory Committee
TSPZ	Torres Strait Protected Zone
TSRA	Torres Strait Regional Authority
TSSAC	Torres Strait Scientific Advisory Committee

BOAT DEFINITIONS

Primary Boat	A principle fishing boat operating either alone or operating in conjunction with a tender boat/s. Primary boats exceed 6 metres in length.
Tender Boat	A boat measuring 6 metres or less in length, has the same licensee as the primary boat and operates in conjunction with a primary boat.
Dinghy	A boat measuring 6 metres or less in length, other than a tender boat.

OTHER DEFINITIONS

Adjacent Coastal Area	In relation to Australia, the coastal area of the Australian mainland, and the Australian islands, near the Protected Zone; and, in relation to Papua New Guinea, the coastal area of the Papua New Guinea mainland, and the Papua New Guinea islands, near the Protected Zone.

Commercial Fisheries	The fisheries resources of present or potential commercial significance within the Protected Zone and, where a stock of such resources belongs substantially to the Protected Zone but extends into an area outside but near it, the part of that stock found in that area within such limits as are agreed from time to time by the responsible authorities of the Parties.
Fisheries Jurisdiction	Sovereign rights for the purpose of exploring and exploiting, conserving and managing fisheries resources other than sedentary species.
Fisheries Resources	All living natural resources of the sea and seabed, including all swimming and sedentary species.
Seabed Jurisdiction	Sovereign rights over the continental shelf in accordance with international law, and includes jurisdiction over low-tide elevations, and the right to exercise such jurisdiction in respect of those elevations, in accordance with international law.
Sedentary Species	Living organisms which, at the harvestable stage, either are immobile on or under the seabed or are unable to move except in constant physical contact with the seabed or the subsoil;
Traditional Activities	Activities performed by the traditional inhabitants in accordance with local tradition, and includes, when so performed activities on water, including traditional fishing, as well as other activities defined by the Treaty
Traditional Fishing	The taking, by traditional inhabitants for their own or their dependants' consumption or for use in the course of other traditional activities, of the living natural resources of the sea, seabed, estuaries and coastal tidal areas, including dugong and turtle;
Traditional Inhabitants	In relation to Australia, persons who are Torres Strait Islanders who live in the Protected Zone or the adjacent coastal area of Australia, are citizens of Australia, and maintain traditional customary associations with areas or features in or in the vicinity of the Protected Zone in relation to their subsistence or livelihood or social, cultural or religious activities; (unless otherwise specified this document generally refers to Australian traditional inhabitants as "traditional inhabitants[1]") and

[1] The PZJA following consultation with Australian traditional inhabitants determined that for the purposes of fisheries management it would extend that definition to also include former PNG nationals who were granted amnesty in 1978 and their descendants, and to aboriginal people living in the adjacent coastal area (Northern Peninsula Area) who are generally the traditional owners of that area.

Traditional Inhabitants — In relation to Papua New Guinea, persons who live in the Protected Zone or the adjacent coastal area of Papua New Guinea, are citizens of Papua New Guinea, and maintain traditional customary associations with areas or features in or in the vicinity of the Protected Zone in relation to their subsistence or livelihood or social, cultural or religious activities.

INTRODUCTION

Fisheries management arrangements in the Torres Strait involve fisheries agencies from the Commonwealth, Queensland and Papua New Guinea (PNG) Governments.

This Guide describes the fisheries management arrangements for the Torres Strait current at the time of publication. More detailed information is contained in the Torres Strait Treaty, *Torres Strait Fisheries Act* 1984, *Torres Strait Fisheries Regulations* 1985, *Fisheries Levy (Torres Strait Prawn Fishery) Regulations* 1995, and fisheries management notices (see Appendix 4 for more details). Fisheries management measures are from time to time altered and new fisheries notices issued. Readers should contact one of the offices listed on page 32 for information on any changes that my have been made.

FISHERIES ASPECTS OF THE TORRES STRAIT TREATY

The jurisdiction and management framework for commercial and traditional fishing in the Torres Strait is governed by the provisions of the Torres Strait Treaty, ratified in 1985, between Australia and PNG and the *Torres Strait Fisheries Act* 1984 (*TSFA*). This Treaty describes an area in the Torres Strait known as the Torres Strait Protected Zone (TSPZ). The TSPZ consists of areas in which Australia and PNG have jurisdiction over certain swimming marine species and sedentary marine species. Treaty Articles 20-28 set out a framework to guide both countries in providing for the management, conservation and sharing of fisheries resources, and inspection and enforcement in the TSPZ. The areas of Australian and PNG jurisdiction for fisheries in the TSPZ are shown in Map 1, Appendix 3.

PURPOSE OF THE PROTECTED ZONE

The principal purpose in establishing the TSPZ was to acknowledge and protect the traditional way of life and livelihood of the traditional inhabitants of the area, including their traditional fishing and traditional right of free movement between the two countries. In addition, the TSPZ was established to enable

the orderly development of the commercial harvesting of fish. The Treaty also requires the Australian and PNG Governments to protect and preserve the marine environment and indigenous fauna and flora of the area.

One of the main objectives of management in the Torres Strait fisheries is to reserve expansion of effort in each fishery for traditional inhabitants. When the current management arrangements for PZJA fisheries first came into place, transferable licences were granted to persons who were able to demonstrate the required prior history and commitment to fishing in Torres Strait. This led to transferable licences being granted principally to non-traditional inhabitants, and a smaller number of traditional inhabitants who operated larger vessels that were required to have a licence. Since then very few new licences have been granted to non-traditional inhabitants to fish, and in most fisheries the number of transferable licences have reduced.

Traditional inhabitants who fished from small boats were able to continue to fish commercially (community fishing) without a licence in the tropical rock lobster, Spanish mackerel, and pearl shell fisheries, while Queensland granted community fishing licences to Community councils for the finfish, beche-de-mer and crab fisheries.

Currently, traditional inhabitants can be granted a Traditional Inhabitant Boat licence (TIB) on application by meeting the working definition of "traditional inhabitant" agreed by the PZJA, and paying a nominal fee. Endorsements to commercially participate in up to eight PZJA fisheries can also be nominated. Boats with these licences must be crewed by traditional inhabitants[2] and these licences are only transferable to other traditional inhabitants (this is explained in more detail on page 17).

AUSTRALIAN AND COOPERATIVE MANAGEMENT OF FISHERIES WITH PNG IN THE TSPZ

Since the Treaty was ratified Australia has entered into formal arrangements with PNG to cooperatively manage six fisheries. These are referred to Article 22 fisheries and include commercial fisheries for prawns, tropical rock lobster, Spanish mackerel, pearl shell, and traditional fisheries for turtles and dugong.

Other fisheries were managed by Queensland and included the beche-de-mer, crab, trochus, and finfish fisheries, however since 1 April 1999 these commercial are also managed by the PZJA. Unlike the Article 22 fisheries there are no formal arrangements made with PNG about their management and there are no catch sharing provisions in place. However, either country could nominate one of these fisheries to also be managed cooperatively under the arrangements outlined by Article 22 of the Treaty.

[2] Boats must be solely owned and operated by traditional inhabitants except under certain circumstances where special conditions can be put on the licensed boats (this is explained in more detail on page 17).

Queensland maintains responsibility for the management of recreational fishing, including the operations of charter boats. Queensland is also responsible for licensing and monitoring seafood buyers in Torres Strait and the management of aquaculture.

This guide is concerned with those fisheries managed by the PZJA. Commercial fishing for any other species or by a different method not incorporated in the above fisheries is treated as developmental fishing by the PZJA.

MANAGEMENT STRUCTURES

The Protected Zone Joint Authority (PZJA), established under the *Torres Strait Fisheries Act* 1984, is responsible for the management of PZJA fisheries. Its membership consists of the Commonwealth and Queensland Ministers responsible for fisheries and the chair of the Torres Strait Regional Authority (TSRA).

To assist in the management of these fisheries, the PZJA has established a structure of advisory bodies with industry, traditional inhabitants and government representatives (Figure 1).

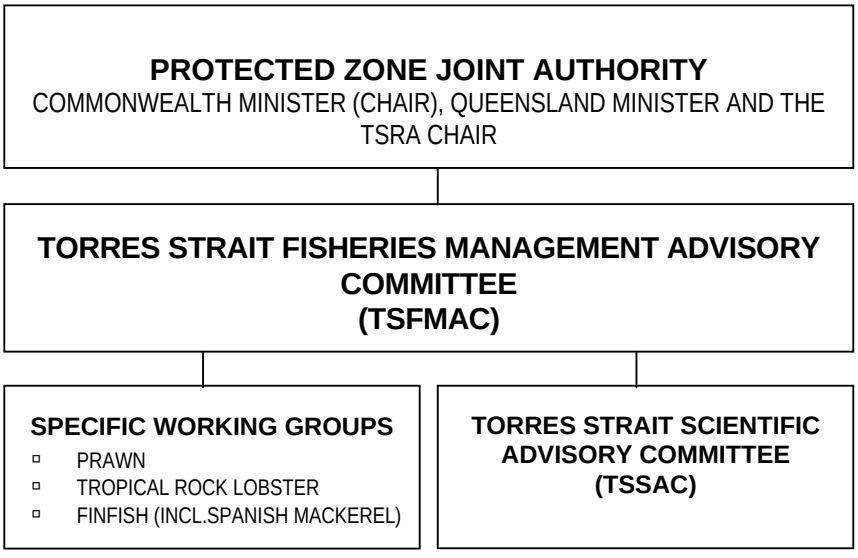

Figure 1. The structure of the Torres Strait Protected Zone Joint Authority and advisory bodies.

FISHERIES MANAGEMENT MEASURES IN THE TSPZ

CONSULTATIVE PROCESS

To manage fisheries within the Australian jurisdiction of the TSPZ, the PZJA has developed a consultative process which incorporates Australian traditional inhabitant commercial and traditional fishers, non-traditional inhabitant commercial fishers (industry), Australian Government and Queensland officials, and technical experts. The PZJA is advised by a Torres Strait Fisheries Management Advisory Committee (TSFMAC).

The Torres Strait Scientific Advisory Committee (TSSAC), which is comprised of representatives from research organisations, fisheries managers, traditional inhabitants and industry, advises the TSFMAC and working groups on scientific issues associated with TSPZ fisheries. The TSSAC has a second role of advising the board of the Cooperative Research Centre (CRC Torres Strait) Incorporated.

Management agency officers, on behalf of the PZJA, also participate in and contribute to bilateral (Australia/PNG) meetings of:

- the Treaty Liaison Committee;
- the Joint Advisory Council (established by the Treaty to oversee Treaty issues); and
- the Environmental Management Committee.

These committees discuss among other things, fisheries issues in a general sense where they affect the smooth operation of the bilateral arrangements of the Treaty. They may refer issues to the fisheries committees where specialised advice is required to resolve an issue.

The policies outlined in this Guide have been adopted by the PZJA as a result of this consultative process.

MANAGEMENT ARRANGEMENTS FOR PZJA FISHERIES

TRADITIONAL FISHING

Traditional fishing is the taking, by traditional inhabitants for their own, or their dependants' consumption, or for use in the course of other traditional activities, of the living natural resources of the sea (including turtles and dugongs), seabed, estuaries and coastal tidal areas.

Torres Strait traditional inhabitants of both PNG and Australia may undertake traditional fishing activities in both the Australian and PNG waters of the TSPZ. In line with a policy of placing few restrictions on traditional fishing, traditional inhabitants may in the course of traditional fishing be exempt from size

restrictions, a prohibition on the taking of female crabs and some other restrictions that may apply to either commercial or recreational fishing. However, some restrictions are currently in place on traditional fishing include:

- that product taken in the course of traditional fishing can not be for sale.; and
- bag limits, and take and carry prohibitions for some species. You may find these below under the specific fisheries.

ARTICLE 22 FISHERIES

Article 22 fisheries include PZJA fisheries which are jointly managed by Australia and PNG and are subject to catch sharing arrangements (this is explained in more detail on page 28). Fisheries for which catch sharing arrangements have been negotiated are:

Prawn fishery

The Torres Strait prawn fishery is a multi-species (endeavour, tiger and king) prawn fishery which operates in the eastern part of the Torres Strait (see Map 2, Appendix 3). It is the most valuable commercial fishery in the Torres Strait with some 76 vessels licensed to operate in 2004. There is an extensive set of management measures in place for the prawn fishery and over half of the TSPZ is permanently closed to trawling.

In 1993, management arrangements were introduced into the fishery to cap fishing effort by limiting the number of days access each vessel may spend in the fishery. Under these arrangements, vessels are allocated a number of fishing days based on their fishing history. In February 1994, the PZJA approved more flexible provisions for the transfer of access days within the fleet.

Management Regulations: Regulations currently in force in the Torres Strait prawn fishery include:

- a closure of the entire fishery between 1 December and 1 March of the following year;
- possession ban for prawns in the entire fishery between 15 December and 1 March of the following year;
- closure of an area east of Warrior Reef between 1 March and 31 July each year;
- a permanent closure of the area west of Warrior Reef and an area around Murray and Darnley Islands;
- restrictions on the carriage of equipment in closures and through the Thursday Island-Cape York transit corridor;
- restrictions on deployment of fishing gear for a limited period immediately before the opening and after the closure of the prawn fishery;

- restrictions on boat length, net length and size of mesh, and ground chain size;
- a requirement to complete logbooks;
- bycatch restrictions on shark species;
- a prohibition on the retention of pearl shell;
- the compulsory use of Turtle exclusion Devices (TED's) an approved Bycatch Reduction Devices (BRD's); and
- the compulsory carriage of a operational Vessel Monitoring System (VMS).

Tropical rock lobster (crayfish) fishery

The Torres Strait tropical rock lobster fishery is the second most valuable commercial fishery in Torres Strait and very important to many Torres Strait Islanders (see Map 3, Appendix 3). The fishery is based on a single species, the ornate or tropical rock lobster (*Panulirus ornatus*). Lobsters, *kaiar* and *kaier* in the traditional languages, are taken by hand, scoop net or a short hand spear by divers working from dinghies. Most divers free dive on shallow reef tops but others use hookah (surface air supplied) to dive the large areas of open bottom in Torres Strait. Most fishing occurs during neap tides when currents are slower and the water is clearer. Some fishers also fish by night with lights and spear or net lobsters that are active in shallow reef areas. Commercial fishing occurs from December to September, inclusive, with a peak during March-August. Management arrangements are designed to conserve the stock, promote the fishery as a dive fishery and maximise the opportunities for traditional inhabitants.

Management Regulations: Regulations currently implemented in the Torres Strait tropical rock lobster fishery include:

- limiting the method of taking of lobster to either hand or with the use of a hand held implement, such as a spear, snare or scoop net;
- an 01 October – 31 January ban on the use of hookah gear;
- a total closure for all forms of commercial lobster fishing covering the period 01 October – 30 November;
- a minimum tail size of 115 mm or minimum carapace length of 90 mm for all commercial fishing;
- a prohibition on the possession or carrying of lobster meat that has been removed from the shell on any commercial boat; and
- a bag limit of 3 lobsters per person or 6 lobsters per dinghy applies to traditional fishing in the area of the fishery (Queensland has implemented the same bag limits in its recreational fishery).

Spanish mackerel fishery

The Torres Strait Spanish mackerel fishery operates predominantly in eastern Torres Strait, targeting the narrow-barred Spanish mackerel (*Scomberomorus*

commerson) (see Map 4, Appendix 3). In 1999, the fishery was expanded to include the mackerel species - school mackerel (*Scomberomorus queenslandicus),* grey mackerel *(Scomberomorus semifasciatus),* spotted mackerel *(Scomberomorus munroi)* and shark mackerel (*Grammatorcynus bicarinatus)*. This is an all-year round fishery in which Spanish mackerel, *dhuboy* and *dabor* in the traditional languages, are fished by trolling from dories/dinghies operating either to a mothership or by themselves. The majority of the catch is taken by a small number of non-traditional commercial fishers as the level of traditional inhabitants participating in the fishery remains low due to other fisheries, such as tropical rock lobster, being relatively more profitable.

Management Regulations: Regulations currently implemented in the Torres Strait Spanish mackerel fishery include:

- the taking of mackerel is restricted to trolling, hand-lining and drop-lining fishing methods only;
- for all commercial fishing operators, the following legal minimum size limits measured from the snout to caudal fin tip are applicable –

Spanish mackerel (*Scomberomorus commerson*)	750 mm
Spotted mackerel (*Scomberomorus munroi*)	600 mm
School mackerel (*Scomberomorus queenslandicus*)	500 mm
Grey mackerel (*Scomberomorus semifasciatus*)	500 mm
Shark mackerel (*Grammatorcynus bicarinatus*)	500 mm

- commercial mackerel operators are permitted to take bait for their own use - using a general purpose bait net; and
- an allowance of up to 20kgs of Spanish mackerel and/or reef fish may be carried at any one time by all holders of a Torres Strait fishing licence granted under section 19(2) or 19(3) of the *TSFA*.

Dugong and Turtle fisheries

Hunting for dugong (*dangal and deger*) and turtle (*waru* and *nam* in the traditional languages) is important in Torres Strait traditional inhabitant culture as well as being a major source of protein in Islanders' diets (see Maps 5 and 6, Appendix 3).

Management Regulations: Regulations currently implemented in the traditional Torres Strait dugong and turtle fishery include:

- dugong and turtle may only be taken in the course of traditional fishing and used for traditional purposes (eg. subsistence food or for special occasions such as weddings, funerals and tombstone openings);
- dugongs may only be taken using the traditional spear (*wap*) thrown by hand. Nets, firearms etc. are banned when taking dugongs or turtles;
- a large area in south-western Torres Strait is set aside as a dugong

sanctuary (see map 5, Appendix 3). Dugong hunting is totally banned in this area; and

- the taking or carrying of dugong or turtle on a commercial fishing boat is strictly prohibited. A person is exempt from this prohibition if a current Traditional Inhabitant Boat (TIB) licence is held where the nominated boat is less than or equal to 6 metres in length.

Pearl shell collecting fishery

The gold-lipped pearl shell (*Pinctada maxima*) and to a lesser extent the black-lipped pearl shell (*Pinctada margaritifera*) are the main species targeted in the Torres Strait (see Map 7, Appendix 3). Pearl shell is collected live for pearl culture farms by divers free diving or using hookah diving equipment. The majority of the catch is taken by a small number of dedicated vessels, particularly between the months of October and March. Pearl farming is regulated by the Queensland Department of Primary Industries and Fisheries (QDPI&F).

Management Regulations: Restrictions in the Torres Strait pearl shell fishery are aimed at promoting the taking of live pearl shell for farming purposes and currently include:

- a prohibition on the taking of dead gold-lipped pearl shell, black lipped pearl shell or any other pearl shell species;
- minimum and maximum size limits for gold and pearl shells (not less than 130 mm or greater than 230 mm length; and greater than 90 mm length, respectively), which are aimed at ensuring the most suitable shells are taken for farming while protecting young shell and spawning stocks; and
- banning the taking of shell by any method other than diving or collecting by hand.

COMMERCIAL FISHERIES THAT ARE NOT ARTICLE 22 FISHERIES

Finfish fishery

The Torres Strait finfish fishery is a multi-species, multi-gear fishery targeting a range of reef and inshore fish. The line sector focuses on a handful of species, in particular, coral trout (*Plectropomus* spp.), mixed reef fish (*Lutjanus* spp. and *Lethrinus* spp.), and numerous species of rock cods (*Epinephelus* spp.) (see Map 8, Appendix 3). Finfish in the reef-line sector are mainly taken by hand lines.

The level of traditional inhabitants participating in the line sector is expected to grow in future due to the continued demand for these well regarded food fish. The practice of retaining fish live (live reef fish fishery) is currently banned in the fishery pending future development of appropriate management arrangements for this fishery.

There is also a net sector in the Torres Strait finfish fishery, in which only traditional inhabitants may participate. Currently there are few active fishers in this sector of the fishery.

Management Regulations: Regulations in the Torres Strait finfish fishery include that:

- all line fishing methods must have no more than 6 hooks attached to each line;
- no more than 3 fishing apparatus can be used per boat;
- minimum size limits apply to all species taken commercially and maximum size limits apply to some species;
- retaining, storing or the carrying of live finfish is prohibited;
- a seasonal barramundi closure (for commercial fishing) commencing on midday 01 November to midday 01 February the following year;
- specific length, drop and mesh size restrictions for each net fishing method;
- specific restrictions on net markings, including size, number and colour of floats and lights when net fishing;
- a permanent area closure by net fishing methods in that part of the finfish fishery west of 142°09', and in part of the fishery east of 142°09' and north of 10°28';
- a permanent closure by line fishing methods in that part of the finfish fishery west of 142°31'49" (except in the course of traditional fishing); and
- vessels must be less than 20 metres in length.
- It is also expected that there will be a prohibition on the take of some species for commercial purposes in the near future but at the time of publication no there are no prohibitions in place. The TSFMAC has recommended five species that should be prohibited including the Red Bass, Potato Cod, Queensland Groper, Chinaman Fish and Paddletail.
- New size limits are have also been recommended by the TSFMAC as follows: minimum and maximum size limit for Maori Wrasse of 750mm minimum and 1200mm maximum, respectively; and 450mm minimum size for Barramundi Cod. Again these new sizes have not been legislated at time of publication but are expected to be soon after.

Bêche-de-mer (sea cucumber) fishery

The Torres Strait bêche-de-mer fishery is an important commercial fishery to traditional inhabitants (see Map 9, Appendix 3). The fishery was based primarily on sandfish (*Holothuria scabra*) in the past, however harvesting of this species has been stopped while stocks recover. Current fishing effort focuses on white teatfish (*Holothuria fuscogilva*), prickly redfish (*Thelenota ananas*) and to a lesser extent, several lower value species.

Fishing for sea cucumbers in Torres Strait is mainly by free diving from dinghies crewed by 2-3 fishers or by hand collection along reefs at low tide.

Once collected, the animal is gutted, graded, cleaned, boiled, smoked and dried into the final product commonly referred to as bêche-de-mer or *aber* in the traditional language of eastern Torres Strait. This is a labour intensive process usually carried out on processing vessels or at shore based facilities. This fishery is particularly vulnerable to over-harvesting and is therefore subject to a range of stringent output and input controls. These controls aim to prevent overfishing but also allow Islanders to benefit from the use of sea cucumber stocks. All sandfish, black teatfish and surf redfish fisheries are presently closed.

Management Regulations: Regulations currently implemented in the Torres Strait bêche-de-mer fishery include:

- a competitive Total Allowable Catch (measured in wet weight gutted) for:

Sandfish	0 tonnes
Black teatfish	0 tonnes
Surf redfish	0 tonnes
White teatfish	260 tonnes
Prickly redfish	260 tonnes
All other species of sea cucumbers (collectively)	80 tonnes;

- minimum size limits for the following species:

Sandfish (*Holothuria scabra*)	180 mm
Lollyfish (*Holothuria atra*)	150 mm
Black teatfish (*Holothuria whitmaei*)	250 mm
White teatfish (*Holothuria nobilis*)	320 mm
Elephant's trunk fish (*Holothuria fuscopunctata*)	240 mm
Prickly redfish (*Thelenota ananas*)	300 mm
Surf redfish (*Actinopyga mauritiana*)	220 mm
Black fish (*Actinopyga miliaris*)	220 mm
Curry fish (*Stichopus hermanni*)	270 mm
Deepwater redfish (*Holothuria echinites*)	120 mm

- limiting the method of taking sea cucumbers to either hand or hand held non-mechanical implements;
- a ban on the use of hookah gear or SCUBA gear;
- a bag limit of 3 bêche-de-mer (sea cucumber) per person or 6 bêche-de-mer (sea cucumber) per dinghy applies to traditional fishing in the area of the fishery;
- restricting Islander dinghies to less than 7 metres in length; and
- limiting the activities of the one non-Islander licensed operator to primarily involve the participation of Islanders in those activities.

Trochus fishery

The Torres Strait trochus (*Trochus niloticus*) fishery is a small, single-species commercial and subsistence fishery (see Map 10, Appendix 3). The fishery is sometimes an important source of income for some traditional inhabitants, especially women and children. The level of participation in the fishery is relatively low at present, largely due to a recent decline in overseas market demand for shells in button manufacture. There is no non-traditional involvement in the commercial take of trochus in the Torres Strait. Trochus is usually taken by free-diving, although SCUBA and hookah may also be used. Fishers operate from dories/dinghies crewed by 2-3 Islanders. Reef top collection of trochus is also possible at low tide.

Management Regulations: Regulations currently implemented in the Torres Strait trochus fishery include:

- limiting the method of taking of trochus to hand collection or by hand held non-mechanical implements;
- the use of underwater breathing apparatus is permitted;
- a minimum size limit of 80 mm and maximum size limit of 125 mm (when measured in their original form as fished, at the widest part of the base of the shell) applies to all fishing, except traditional fishing; and
- a competitive Total Allowable Catch (measured in tonnes with animal in shell) of 150 tonnes.

Crab fishery

The Torres Strait crab fishery (see Map 11, Appendix 3) primarily targets mud crab (*Scylla* spp.) although a small quantity of blue-swimmer crab (*Portunus pelagicus*) which are incidentally caught may also be retained. The level of participation in the commercial fishery is low due to the limited nature of the resource.

Management Regulations: Regulations currently implemented in the Torres Strait crab fishery include:

- a prohibition on the take or possession of female crabs;
- a minimum carapace width of 150 mm;
- prohibition on the take or possession of spanner crab (*Ranina ranina*);
- restricting the number of prescribed crab apparatus to less than 50;
- specific restrictions on crab apparatus markings, including size and colour of floats; and
- no vessels greater than 14 metres in length;

OTHER FISHERIES AND AQUACULTURE

Recreational fishing and aquaculture (including pearl farming) is managed under Queensland law. For further information on aquaculture contact QDPI&F (see page 32 for contact details).

MANAGEMENT OF FISHERY STOCKS WHICH EXTEND OUTSIDE THE TSPZ – 'OUTSIDE BUT NEAR AREAS'

When part of a fisheries stock belongs substantially to the TSPZ but also extends outside but near the Zone, the *TSFA*, consistent with the definition in Article 1 of the Treaty, provides for such areas to be proclaimed under certain conditions. These areas are referred to as the 'outside but near areas'. The outside but near areas for the fisheries are shown in Maps 2 - 11, (Appendix 3). Papua New Guinea has similar provisions in its *Torres Strait Fisheries Act* 1985, and has also declared outside but near areas in respect of its Article 22 fisheries. Catch sharing arrangements explained on page 28 do not apply to outside but near areas.

LICENSING ARRANGEMENTS IN THE TSPZ

LICENSING PROVISIONS OF THE *TORRES STRAIT FISHERIES ACT*

Commercial fishing activity in the Torres Strait is licensed under a Torres Strait Fishing Boat Licence (TVH) or a Traditional Inhabitant Boat (TIB) Licence - often referred to as a community licence. All non-traditional inhabitant commercial and community fishermen are required to be licensed under the *TSFA* in order to fish in PZJA commercial fisheries, i.e. to take fish for sale. In the case of TVH licences a Torres Strait Master fisherman must be in control of the boat (see below), however in the case of TIB licences no master fisherman licence is required. Licences must be produced when instructed by a fisheries officer.

Additional licences are required for processing and marketing/buying operations that are land or sea based. These arrangements are explained on page 17. The PZJA has delegated powers for licensing in the Torres Strait fisheries to Queensland and the licensing section of QDPI&F performs this function.

Prior to applying for any licensing transaction, licence holders or prospective licence transferees are strongly encouraged to seek advice on any management arrangements, existing or proposed, that could affect the use of the fishing licence. Licensing enquiries can be directed to QDI&F.

TORRES STRAIT MASTER FISHERMAN'S LICENCES

A person in charge of a boat with a TVH licence fishing commercially in a PZJA fishery must hold a Torres Strait Master Fisherman's Licence (TMJ) endorsed for the relevant fishery. This applies whether the licensed boat is a primary boat, a tender or a dinghy.

Conditions for the grant of a TMJ to non-traditional inhabitants vary between fisheries. Details of these conditions are presented in the following sections. Traditional inhabitants are entitled to apply for and be granted Torres Strait Master Fisherman's licenses endorsed for any fishery.

PRAWN FISHERY MASTER FISHERMAN'S LICENCE

Masters of licensed prawn vessels in the TSPZ are required to hold a prawn fishery Master Fisherman's Licence.

TROPICAL ROCK LOBSTER FISHERY MASTER FISHERMAN'S LICENCE

Licences may be granted to Australian traditional inhabitants of Torres Strait or, to a person not being an Australian traditional inhabitant (or to a nominee of that person) who purchased an existing primary vessel and tender boat licence package provided that the licence transfer took place on or after 01 January 1988. A Master Fisherman's licence should only be issued to a person who is not an Australian traditional inhabitant if that person (or nominee of that person) to which an existing primary vessel has been transferred, remains the licensee of that vessel and that the person (or nominee of that person) remains in charge of that vessel or any other vessel of which that person is the licensee.

Additionally, a temporary Master Fisherman's licence may be issued for a limited period for compassionate and extenuating reasons to a person, nominated by the owner of the licence, who is not an Australian traditional inhabitant of Torres Strait to operate an existing licensed primary vessel.

For non-traditional inhabitants, there are various conditions and restrictions upon this licence and its transfer (see page 21).

SPANISH MACKEREL, LINE AND PEARL SHELL FISHERIES MASTER FISHERMAN'S LICENCE

Master Fisherman's licences for the Spanish mackerel, line and pearl shell fisheries may be issued either to:

- an Australian traditional inhabitant; or
- to a non-traditional inhabitant (or to their nominee) who holds an existing primary vessel and/or tender boat licence package provided that the transfer of the vessel licences took place on or after 01 January 1988. There are restrictive conditions on such a transfer (see page 21).

TORRES STRAIT TRADITIONAL INHABITANT BOAT LICENCE

The new Traditional Inhabitant Boat (TIB) licence system was introduced on a trial basis in April 2000 to replace the community licensing arrangements that had existed up to that date. The introduction of the new licensing system allows traditional inhabitants of the TSPZ to fish commercially in PZJA fisheries however, there are a number of restrictions that apply to a TIB licence including:

- applicants must be traditional inhabitants of the TSPZ or adjacent coastal area of Australia (see Appendix 2 for Torres Strait Islander/Aboriginal identification criteria);
- the nominated boat must be fully owned by the applicant;
- only traditional inhabitants are allowed to commercial fish from the boat;
- the licence is only valid for the TSPZ fisheries, including their 'outside but near areas'; and
- boats cannot exceed 20 metres in length.

To assist traditional inhabitants in achieving greater participation in the Torres Strait fisheries, the PZJA provided some flexibility in relation to TIB licences by allowing non-islanders[3] on board TIB licensed vessels on the condition that the non-islander provides training to the islanders on the vessel. This type of TIB licence is known as a 'Training Licence'. For further information on obtaining a Training licence please contact AFMA at the Thursday Island office (see page 32).

VESSEL LICENCES IN THE AUSTRALIAN PART OF THE TSPZ

Australian boats fishing commercially in the Australian part of the TSPZ must be licensed with the relevant TVH or TIB licence and the appropriate endorsements. In the case of Papua New Guinea boats they must have a current licence endorsed by Australia. A reciprocal arrangement would apply to an Australian boat being used to fish in the PNG area of jurisdiction.

Four types of licences are issued by the QDPI&F on behalf of the PZJA for vessels operating in the Australian part of the TSPZ:

1. a Fishing vessel licence which authorises use of the vessel for taking fish, in the fishery or fisheries for which it is valid, and for carrying and processing (eg. filleting or freezing) its own catch – can be a TVH or TIB licence;

[3] A person who is not an Australian traditional inhabitant should not be employed where there is a suitably qualified Australian traditional inhabitant reasonably available to carry out that function.

2. a Processor/Carrier boat licence (TPC-A) which authorises the use of the boat for carrying and processing the catch from tenders included in the licence package;
3. a Carrier boat licence (TPC-B) which authorises the use of the boat to carry (without changing the nature of the product) the catches of other vessels in the fishery or fisheries for which it is appropriately endorsed; and
4. a Processor (mothership) boat licence (TPC-C) which authorises the use of the boat for processing the catches of other vessels in the fishery or fisheries for which it is appropriately endorsed.

   NOTE: (1) To purchase product in the TSPZ from a vessel with a TPC-C licence a Queensland Buyers licence is also required, (2) the vessel may not take on board product from a PNG boat and (3) no new TPC-C licences will be granted to non-traditional inhabitants.

DISTINGUISHING SYMBOL ON A VESSEL

The distinguishing symbol allocated to a vessel licence for fishing under the *TSFA* must be clearly displayed on the vessel in contrasting tones (black letters or figures on a yellow background) in strokes between 10 - 45 cm long and 01 – 07cm wide (for specific requirements relating to a distinguishing symbol on a vessel please contact AFMA Thursday Island or QB&FP on page 32). The letter 'T' must be removed if the vessel ceases to be licensed for a Torres Strait fishery.

CONDITIONS OF LICENCE

Licences are issued subject to a number of conditions. New conditions may be imposed at any time on licences already in force, subject to written notice being given to the licensee.

Prawn fishery

Licensed Australian prawn vessels may not hold a concurrent PNG prawn vessel licence. PNG licensed prawn vessels endorsed by Australia to fish in the Australian waters of the TSPZ prawn fishery must comply with all Australian Torres Strait fisheries legislation when fishing in the Australian area of jurisdiction.

Prawn vessel licences issued to Australian traditional inhabitants of the Torres Strait under special management provisions should at all times remain wholly owned, operated and crewed by Australian traditional inhabitants, except for training purposes approved by the PZJA.

Tropical rock lobster, Spanish mackerel and line fisheries

Tender vessels (i.e. dinghies or dories working with a larger primary vessel as part of a licence package) are authorised only to take catch for the purpose of trans-shipping onto the primary vessel specified in the licence package, being a vessel which has the same licensee and bears the same distinguishing symbols. In such cases the primary vessel will also need a processor/carrier vessel licence to entitle it to receive product from its own tenders.

Bêche-de-mer and trochus fisheries

A competitive *Total Allowable Catch* (TAC) exists for both the bêche-de-mer and trochus fisheries.

ENTRIES IN VESSEL LICENCES

The *TSFA* provides for making two kinds of entries in licences:

1. exempting vessels from prohibitions in notices; and
2. extending the validity of a licence to one or more additional PZJA fisheries.

POLICY ON GRANT OF VESSEL LICENCES

PZJA policy is that in the interests of proper management of fisheries in the TSPZ there should be certain pre-requisites to the grant of vessel licences and that it is undesirable that no new vessel licences be granted in the PZJA fisheries except under special circumstances. The present policy on the grant of licences is as follows:

Prawn fishery

No new licences are issued for the Torres Strait prawn fishery. The only exception is that the PZJA have agreed that three licences, for vessels up to a length of 20 metres, may be granted to traditional inhabitants of the Torres Strait.

Tropical rock lobster, Spanish mackerel, pearl shell, finfish, bêche-de-mer, trochus and crab fisheries

New vessel licences for these fisheries are currently only granted to vessels owned and operated by Australian traditional inhabitants of Torres Strait. These licences are either TIB or TPC licences and may not be transferred to a non-traditional inhabitant.

Processor / carrier vessel licence

To accept product from their registered tender vessels, primary vessels in PZJA fisheries are required to have processor/carrier vessel licences.

Carrier vessel licence

PZJA carrier vessel licences only apply to operations in and product caught in PZJA fisheries. Operations in fisheries under Queensland jurisdiction and/or in Queensland waters require appropriate Queensland licences (see page 30).

Licences for vessels for the purpose of carrying product (but not for processing product) caught by either vessels licensed to fish in the PZJA fisheries or community fishing vessels will normally only be issued to licensed fishing vessels in the Torres Strait or boats which are legitimate cargo vessels (i.e.. meeting cargo vessel survey certificate requirements). The one exception is for pearl shell where new carrier licences are still issued.

Processor (mothership) vessel licence

PZJA processor (mothership) vessel licences only apply to operations in and product caught in PZJA fisheries. Operations in fisheries under Queensland jurisdiction and/or in Queensland waters require appropriate Queensland licences (see page 30).

The number of PZJA processor/carrier vessel licences issued to vessels that do not fish is limited. These licences allow vessels to carry and process product caught by licensed fishing vessels. These vessels may not be used to:

- transport fishing vessels to and from fishing grounds; or
- accommodate fishers.

PZJA processor/carrier and State buyers licensed vessels cannot buy product within ten nautical miles of a community in the TSPZ without written permission from the community's chairperson.

It is advisable that applicants for these licences seek advice from the fisheries management authorities regarding the present policy before proceeding with an application.

APPLYING FOR LICENCES

It is essential that application forms for licences are fully and correctly completed. Application forms may be obtained from QDPI&F in Brisbane or the QB&FP Office on Thursday Island.

Torres Strait Fishing Boat Licences (TVH)

Applications for Fishing Boat licences cover:

- the grant of a new licence;
- renewal of current licences; and
- making an entry in a licence.

Torres Strait Master Fisherman's Licence (TMJ)

Applications for Master Fisherman's licences cover both the granting of new licences and renewal of current licences. Applications for new licences must list under Schedule 1 of the form, the names of each PZJA fishery in which the applicant wishes to be licensed as a Master Fisherman.

Torres Strait Traditional Inhabitant Boat Licence (TIB)

Applications for Traditional Inhabitant Boat licences cover both the granting of new licences and renewal of current licences. Applications for new licences must list in the space under Schedule 2 of the form, the names of each PZJA fishery in which the applicant wishes to be endorsed. These endorsements include tropical rock lobster, Spanish mackerel, reef line, net, bêche-de-mer, trochus, pearl shell and crab fisheries.

Processor/carrier vessel, carrier vessel and processor (mothership) vessel licences (TPC)

The application for either of these licences is similar to that of a fishing vessel licence.

TRANSFER OF LICENCES

Torres Strait Fishing Boat Licences (TVH)

TVH licences for an existing primary vessel and tender boats can only be transferred as a package; they cannot be split up and attached to a number of vessels working separately.

The transfer policies in the Torres Strait take into consideration the present need to contain effort in specific fisheries and to recognise the objective of promoting Australian traditional inhabitants' participation in PZJA commercial fisheries. The specific policies for the PZJA fisheries are as follows:

Prawn licence

Under the management arrangements introduced in 1994, prawn trawlers can sell their days (in 10-day blocks) to other boats holding Torres Strait prawn licences. Entitlement holders are permitted to trade nights but they must hold a minimum of 50 nights to operate in the fishery[4]. In October 2001, the PZJA approved a boat replacement policy for the replacement of smaller vessel with larger vessels and the transfer of fishing days from a smaller vessel to a larger vessel, as defined by vessel length. In these situations, a 20 per cent reduction in the number of days transferred will apply. For detailed information regarding the transfer of days, please contact AFMA or QDPI&F (see page 32).

Tropical rock lobster, Spanish mackerel and pearl shell licences

Where a TVH licence was granted before 01 January 1988, it may be transferred to any person. Licences granted after 01 January 1988 should only be transferred to an Australian traditional inhabitant.

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

RENEWAL OF LICENCES

Renewal should only be considered when all the particulars in the original licence continue to apply. Renewal of licences are considered upon application.

[4] Excluding those operators who hold less than 50 nights prior to introduction of this policy.

LICENCE FEES

Licence application fees under the *TSFA* as at June 2004 are:

Grant or renewal of a 1 year Master Fisherman's Licence	$ 50
Grant or renewal of a 5 year Master Fisherman's Licence	$ 100
Grant or renewal of a Fishing Boat Licence	$ 100

For each endorsement on a 1 year Fishing Boat Licence:

Boat less than 6 metres in length	$ 10
Boat at least 6 metres but less than 10 metres in length	$ 20
Boat at least 10 metres but less than 15 metres in length	$ 40
Boat at least 15 metres in length	$ 80

For each endorsement on a 5 year[5] Fishing Boat Licence:

Boat less than 6 metres in length	$ 50
Boat at least 6 metres but less than 10 metres in length	$ 100
Boat at least 10 metres but less than 15 metres in length	$ 200
Boat at least 15 metres in length	$ 400

Processor/carrier vessel licence (TPC-A)	$ 20
Carrier vessel licence (TPC-B)	$ 80
Processor (mothership) vessel Licence (TPC-C)	$ 100
Transfer of Fishing Boat Licence	$ 10
Entry to add a PZJA fishery to a licence	$ 10

The fee must be tendered with the application. The amount of fee may be amended from time to time.

SURRENDER OF LICENCES

PZJA licence holders may surrender their licences by written notice to the PZJA, GPO Box 2764, Brisbane, Queensland, 4001.

COST RECOVERY

In October 1996, the PZJA determined that the Torres Strait prawn fishery be subject to cost recovery[6] and costs will be recovered using the same method of calculation as for other Commonwealth fisheries.

[5] 5-year Fishing Boat licences are currently **NOT** being issued.

[6] Cost recovery is the recovery of some or all of the costs of a particular activity (i.e. fisheries management).

These associated costs are continually reviewed and open to scrutiny by the Prawn Working Group members, with the view to achieve the most cost effective management arrangements.

VESSEL REPLACEMENT IN THE PZJA FISHERIES

The vessel replacement policies for individual fisheries are listed below. Fishermen should consult with the QDPI&F prior to any vessel replacement commitments being entered into. Rules vary from fishery to fishery and licence holders for vessels also endorsed in fisheries outside the TSPZ should acquaint themselves with the rules applying in that fishery eg. the prawn fishery.

Prawn fishery

A boat replacement policy currently exists in the Torres Strait Prawn Fishery that entails a 20% reduction in nights on vessel upgrade (from a smaller to a larger vessel, as defined by vessel length) and for the transfer of nights from smaller to a larger vessel. Similarly, vessels also licensed to fish in Northern Prawn Fishery or Queensland Otter Trawl Fishery would be subject to the vessel replacement requirements for those fisheries.

Tropical rock lobster fishery

Vessel replacement in this fishery is subject to the following conditions:

- a vessel measuring six metres or less should be replaced by a vessel measuring six metres or less;
- a vessel measuring between six metres and 10 metres in length should be replaced by a vessel measuring 10 metres or less;
- a vessel greater than 10 metres and less than 14 metres in length may be replaced by a vessel of 14 metres or less; and
- where the existing vessel is greater than 14 metres in length and prior approval has been given for a replacement vessel, as far as practicable, the replacement vessel should be of the same size as the existing vessel or less.

Spanish mackerel fishery

The replacement of a vessel in this fishery is subject to the following conditions:

- a vessel measuring six metres or less may be replaced by a vessel measuring six metres or less;
- a vessel greater than six metres in length but less than 14 metres in length may be replaced by a vessel less than 14 metres in length; and
- where the existing vessel is greater than 14 metres in length and prior approval has been given for replacement, the approval should be for, as far as practicable, a replacement vessel of the same size or less.

Pearl fishery

A vessel operating in the pearl shell fishery may be replaced under the following conditions:

- a vessel measuring six metres or less may be replaced by a vessel measuring six metres or less;
- where the existing vessel is greater than six metres in length and prior approval has been given for replacement, the approval should be for, as far as practicable, a replacement vessel of the same size or less.

Finfish line fishery

The replacement of a vessel in this fishery is subject to the following conditions:

- a vessel measuring six metres or less may be replaced by a vessel measuring six metres or less;
- a vessel greater than six metres in length but less than 14 metres in length may be replaced by a vessel less than 14 metres in length; and
- where the existing vessel is greater than 14 metres in length and prior approval has been given for replacement, the approval should be for, as far as practicable, a replacement vessel of the same size or less.

CATCH REPORTING

Logbook reporting in the TSPZ for prawn, tropical rock lobster, Spanish mackerel and finfish fisheries is compulsory for most TVH endorsed operators where it is likely to be condition of the licence to complete a logbook. The exception to the rule is for licence holders operating a from a primary boat less than 7 metres in length.

Logbooks are supplied by officers of AFMA. Except for the NP14 (prawn logbook), new logbooks can be supplied by contacting the AFMA office in Thursday Island – be sure not to leave this to the last minute. Contact details are provided on page 32. Prawn logbooks are supplied from the Canberra office. Contact details for the office are found in the logbook and on page 32.

Each logbook contains general information and full instructions on how it should be completed. Master Fishermen are required to complete the logbook by no later than one day after the day on which the fishing activities in each entry took place. In order to have the most up to date information on catch trends, fishermen are required to send in their completed logsheets by the 14th day of the following month. Envelopes have been provided for this purpose. If you require additional envelopes please contact the AFMA office in Thursday Island, or in the case of the prawn fishery the Canberra office.

Current reporting requirements for each fishery are detailed in the following:

PRAWN FISHERY

A new logbook, the Northern and Torres Strait Prawn Fisheries Daily Fishing Log - NP14, was introduced for the 2004 season. Licence holders who had pages left in their NP13 logbook are allowed to continue to submit these, however all licence holders are encouraged to complete the new NP14 logbook and to voluntarily provide accurate size grade information[7]. While it is not generally possible to weigh catches at sea all fishers area encouraged to estimate the weights as accurately as possible. Catches are recorded by species in kilograms whole weight. Fishermen keep the duplicate pink copy of logsheets for personal use and send in the original white copy to AFMA. Interactions with protected species must be recorded accurately - it is in the interest of the fishery to do this. For more information see page 27 (where we have protected species information).

TROPICAL ROCK LOBSTER

Tropical rock lobster fishermen are required to fill out the Torres Strait Tropical Rock Lobster Daily Fishing Log – TRL04. The information sought includes daily catch and fishing effort. Every day of the season should be accounted for in the logbook by completing the "extended non-fishing and "trip detail" parts of the form. Incidental catches of pearl shell, Spanish mackerel and mixed reef fish can also be recorded in this logbook. Original logsheets must be sent to the AFMA office on Thursday Island and the duplicate copies retained by the fisher.

SPANISH MACKEREL AND FINFISH FISHERIES

Spanish mackerel and finfish fishermen are required to fill out the Torres Strait Finfish Daily Fishing Log – TSF01, introduced in 2003. A daily fishing record of the number of each mackerel species caught, total number of mackerel, total number of trays/cartons and average weight and level of processing is recorded.

Catches for finfish species are recorded by total fresh weight (whole weight) in kilograms and total finfish species caught. Specifically for coral trout species the total number of cartons, average weight and number of fish per carton is recorded. Also estimated is the percentage species split by number for coral trout. Original logsheets must be sent to the AFMA office on Thursday Island and the duplicate copies retained by the fisher.

TORRES STRAIT SEAFOOD BUYERS AND PROCESSORS DOCKET BOOK

In late 2003, a new docket book was introduced to Torres Strait seafood buyers and processors in an attempt to improve catch and effort data for day-to-day fisheries management in Torres Strait and, to facilitate the PZJA in pursuit of its legislative objectives in managing Torres Strait Fisheries. The Torres Strait Seafood Buyers and Processors Docket Book – TDB01 are basically modified receipt books that are used by seafood buyers to replace existing receipt/tax invoice paperwork.

[7] The completion of the Northern and Torres Strait Prawn Fisheries Daily Fishing Log - NP14 and the provision of grade information is mandatory in the Northern Prawn Fishery (NPF).

Key elements of the docket book system include:

- capture of all catch and some effort data (from the indigenous commercial sector) at the point of sale in the Torres Strait;
- coverage of fish receivers in Torres Strait and those receivers in Cairns who purchase seafood direct from fishers in Torres Strait;
- education and increased awareness of fishers and fish receivers of the need to provide catch and effort data for the sustainable management of fish stocks in the Torres Strait;
- a docket book management system to distribute docket books, receive completed returns and follow upon non-returns or poor data; and
- a database and data entry system in for capturing and managing the docket book data.

The Torres Strait Seafood Buyers and Processors Docket Book requests buyers and processors to voluntarily provide true and correct monthly information to AFMA on catch, effort and catch disposal data including: sellers name, (ABN) Australian Business Number, licence number and address. Furthermore, each logsheet requires either the Traditional Inhabitant Boat (TIB) or the Non Traditional Inhabitant Boat (TIB) sections including details of catch being sold to be filled out.

Fishing effort and boat details recorded for Traditional Inhabitant Boat (TIB) licensed fishers section of the docket book include: boat symbol, days fishing, number of divers /fishers, area fished[8] and methods used. For Non Traditional Inhabitant Boat (TIB) licensed fishers and buyers of PNG and QLD East coast produce, information recorded in this section of the docket includes: region fished and whether catch information is recorded elsewhere in another logbook. Information details of catch being sold include: species being sold, processing code, grade, weight (kg), dollars paid per kilo and/or total price paid.

The fisher/seller retains original logsheets (white), duplicate copies (yellow) must be sent to the AFMA office on Thursday Island and the triplicate copies (pink) are retained by the buyer. Torres Strait Seafood Buyers and Processors Docket Books are available from the AFMA logbook officer in Thursday Island (see page 32 for contact details).

ALL INFORMATION GATHERED FROM FISHING INDUSTRY LOGBOOKS AND CATCH REPORTS IS **CONFIDENTIAL**.

HOW LOGBOOK INFORMATION IS USED

Logbooks provide the primary source of information for researchers and managers on the fishing effort and catches in the fisheries. This information is

[8] In establishment of the "area fished" section of the Torres Strait Seafood Buyers and Processors Docket Book – TDB01, management sought advice from CSIRO on appropriate bioregions by which to partition the TSPZ. Map 12 (Appendix 3) illustrates the bioregions as advised by CSIRO.

used to assess the state of fish stocks and the condition of fisheries. Data from all logbooks is processed and entered in Canberra into AFMA's secure database. Information from fishing logbooks is confidential and its use is governed by strict legislative guidelines.

INTERACTIONS WITH COMMONWEALTH PROTECTED MARINE SPECIES

Under the *Environment Protection and Biodiversity Conservation Act 1999* (*EBPCA*), it is an offence to intentionally kill, injure, trade, keep or move any protected species in a Commonwealth area without a permit.

The Commonwealth area includes marine areas beyond the coastal waters of each State and the Northern Territory and includes all of Australia 's Exclusive Economic Zone (EEZ). The EEZ generally extends to 200 nautical miles (approximately 350 kilometres) from the coast. The Commonwealth area extends further in some areas to cover the continental shelf and continental slope. It also includes the waters in the EEZ around the Australian Antarctic Territory and Australia 's External Territories, such as Norfolk, Christmas, Heard and Macdonald Islands.

It is not an offence to kill, injure, trade, keep, or move a protected species in a Commonwealth area if you do so as a result of an unavoidable accident, but you are legally required to report it to the Department of the Environment and Heritage (DEH) within seven days or you could face a fine.

To report an accidental interaction with, or if you witness someone intentionally interfering with, a protected species in a Commonwealth area:

Call 1800 803 772, or

Email epbcwild@deh.gov.au, or

Write to The Secretary
Department of the Environment and Heritage
GPO Box 787
Canberra ACT 2601

When reporting interactions please include if possible:

- time and date
- species name
- number of animals
- location (latitude and longitude coordinates if possible)
- incident type (eg. dead catch, live catch and release, collision, sighting etc)
- gear or bait type used (if catch)

For accidental interactions that occur as part of normal fishing you are requested to report these to the regulating fisheries agency such as AFMA or QDPI&F. In most instances this should be done through normal reporting

mechanisms such as logbooks or catch documentation schemes.

IF YOU ARE IN ANY DOUBT – REPORT IT.

For more information on notification of interactions with a protected marine species visit
www.deh.gov.au/epbc/permits/species/notifications/index.html

For more information on the *EBPCA* visit
www.deh.gov.au/epbc/index.html

OUR MARINE LIFE CAN DIE FROM GETTING TANGLED, OR CONSUMING DISCARDED FISHING GEAR AND BAIT STRAPS. PLEASE DON 'T THROW FISHING GEAR AND BAIT STRAPS OVERBOARD.

SHARING THE COMMERCIAL FISH CATCH OF THE TSPZ WITH PAPUA NEW GUINEA

Australia and PNG exercise fisheries jurisdiction in the TSPZ, on their respective sides of the fisheries and seabed jurisdiction lines (Map 1, Appendix 3). That jurisdiction is exclusive. That is, vessels of one country break the other country's law if they fish commercially in the other country's jurisdiction without specific authorisation from the other country.

The Torres Strait Treaty recognises the rights of both countries to the commercial fisheries of the TSPZ. This recognition is implemented via the catch sharing provisions of Article 23 of the Treaty. Australia and PNG have agreed to share catches by apportioning fishing effort to the other country to provide the other country with the capacity to harvest its share of the allowable catch. In practice, this has been a process whereby each country nominates an agreed number of vessels to fish in the other country's waters.

Australia has generally not nominated Australian boats to have their licences endorsed by PNG for operation in that fishery in the PNG area of the TSPZ. However, in return PNG has accepted a proportionately smaller allocation of effort in the Australian area, ie it does not nominate as many vessels to fish in the Australian area.

PNG licence holders are not required to hold a Torres Strait Master Fisherman's licence to fish in the Australian area of jurisdiction nor does PNG have a requirement for an Australian master to hold a Master Fisherman's licence or equivalent in the PNG area of jurisdiction. Australian vessels can not be licensed in both PNG and Australia concurrently. This is distinct from being licensed by one country and have that licence endorsed by the other country.
Australia and PNG have agreed not to accept applications directly from fishermen in the other country and to refer any such applications received directly from a licence holder to the appropriate authorities in the country of the

applicant's residence.

Decisions regarding the nomination of any particular Australian vessel for endorsement by PNG will be taken in the light of the management arrangements for the fishery in which the vessel operates. Fishermen should seek advice from either the QDPI&F or AFMA if they wish to consider fishing in the Torres Strait waters under PNG jurisdiction.

It is illegal for Australian fishermen to operate in the PNG part of the TSPZ without proper authorisation from PNG and without notifying Australian authorities and vice-versa.

Customs, Quarantine, and Immigration laws of both countries may apply to activities undertaken and information and advice on the requirements of these authorities should be obtained from those departments.

FISHERIES RESEARCH IN THE TSPZ

Research into PZJA fisheries is co-ordinated through the Torres Strait Scientific Advisory Committee (TSSAC). The Australian Government (AFMA) has committed $450K per year to the Torres Strait Cooperative Research Centre (CRC) for research into the marine environment, major commercial fisheries and traditional fishing in Torres Strait. At June 2003 this arrangement will apply to the end of the 2005/06 financial year.

Research has concentrated on the most valuable fisheries, prawn, tropical rock lobster and finfish, with environmental impacts and traditional fishing also being studied. Research programs in the Torres Strait tend to be long term and aimed at providing resource or fish stock assessment advice.

The Torres Strait research program is complemented by an education and extension program, which is coordinated by the Torres Strait Cooperative Research Centre (CRC). The new role of the CRC Marine Research Liaison Officer (see page 32 for contact details) position is to provide an extension service in the Torres Strait.

Information on recent research and a list of resulting publications and reports can be found in the annual report of the PZJA which is available from AFMA or QDPI&F.

ENFORCEMENT IN THE AUSTRALIAN PART OF THE TSPZ

The QB&FP undertakes fisheries enforcement and surveillance for all fisheries in the Australian part of the TSPZ on behalf of the PZJA.

CONTROLS ON FISHING OPERATIONS

Controls on fishing operations in PZJA fisheries are effected through the gazettal of Fisheries Management Notices. Details of these Notices currently in force are at Appendix 1.

'ACROSS-THE-LINE' ENFORCEMENT

The Treaty provides for the enforcement of Australian and PNG laws in cases where fishermen of one country operate in the part of the TSPZ, or in the areas declared 'outside but near' the TSPZ, that are under the other country's jurisdiction, without authorisation from the other country or in breach of that country's laws.

Offences against PNG law by Australian vessels licensed for particular Article 22 fisheries, committed in the PNG part of the TSPZ, are heard in Australian courts as offences against the *TSFA* if they relate to the fishery for which the vessel is licensed. PNG enforcement officials may detain the vessel concerned for investigation of the offence, including the assembly of evidence, following which they must either release the vessel or hand it over to Australian enforcement officials unless there is some other ground for continuing detention (eg. Customs offences).

For all other offences involving Australian vessels in waters under PNG jurisdiction, whether in the TSPZ, in areas agreed to be 'outside but near' under an Article 22 arrangement or beyond either of these, the courts of PNG have jurisdiction to hear and determine the case, including ordering fines, forfeitures and imprisonment in PNG.

FISHERIES MANAGEMENT UNDER QUEENSLAND LEGISLATION

The *Queensland Fisheries Act 1994* applies in all waters in the Australian part of the TSPZ including the 'outside but near areas' to all fishing activities which the Torres Strait PZJA does not manage.

Queensland fisheries law also applies in the whole of the Australian part of the TSPZ to recreational fishing, ie. fishing that is not traditional fishing (subsistence fishing by traditional inhabitants) or commercial fishing (which includes community fishing). Queensland fisheries law also applies to fishing by persons on foreign vessels in TSPZ other than in relation to PZJA fisheries.
Queensland also retains responsibility for aquaculture and fisheries marketing in the TSPZ. Further information on these activities can be obtained from the (see page 32 for details).

CONTACTS

Should you require further information about management of fisheries in the TSPZ, contact:

MANAGEMENT

Australian Fisheries Management Authority

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Manager – Torres Strait Fisheries
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QDPI and Fisheries

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Tropical rock lobster, Spanish mackerel and docket book

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Enforcement

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CONTACTS

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Torres Strait Regional Authority
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Torres Strait Regional Authority
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Torres Strait Prawn Entitlement Holders Association
Mark Millward
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Torres Strait Cooperative Research Centre
Toshio Nakata
Marine Research Liaison Officer
Torres Strait Regional Authority
PO Box 261
THURSDAY ISLAND QLD 4875
Phone: (07) 4069-0700
Fax: (07) 4069-1879

APPENDIX 1

FISHERIES NOTICES IN FORCE AS OF 30 JUNE 2004

No. 18: 08 July 1987, TORRES STRAIT BARRAMUNDI FISHERY

PROHIBITION RELATING TO THE TAKING OF BARRAMUNDI IN THE TORRES STRAIT PROTECTED ZONE

Prohibits commercial fishing for barramundi in the PZJA barramundi fishery except in the course of community fishing.

No. 19: 09 March 1988, TORRES STRAIT PRAWN FISHERY

PROHIBITION RELATING TO THE INCIDENTAL TAKING OF TROPICAL ROCK LOBSTER BY PRAWN TRAWLERS IN THE TORRES STRAIT PROTECTED ZONE AND IN CERTAIN WATERS OUTSIDE BUT NEAR THE ZONE

Prohibits the incidental taking and carrying of tropical rock lobster by prawn trawlers in the Torres Strait prawn fishery.

No. 29: 14 April 1989, TORRES STRAIT PRAWN FISHERY

PROHIBITION ON TAKING OF PRAWNS BY PAPUA NEW GUINEA BOATS

Prohibits licensed PNG prawn vessels from taking prawns in the Australian area of the Torres Strait prawn fishery unless endorsed under catch sharing arrangements. Licensed PNG vessels may carry equipment capable of being used for taking prawns (eg. otter trawl nets and boards) provided the equipment is stowed and secured.

No. 40: 24 February 1994, TORRES STRAIT PRAWN FISHERY

PROHIBITION ON TAKING PRAWNS AND CARRYING FISHING EQUIPMENT

Prohibits the taking of prawns and carrying of fishing equipment in the following areas:

i. permanently in the area west of Warrior Reef;

ii. permanently in the area around Darnley Island;

iii. in the Thursday Island and Cape York transit corridor unless equipment is stowed and secured;

iv. in the area of the prawn fishery from 01 December until 01 March the following year; and

v. in an area east of Warrior Reef from 01 March until 31 July each year.

APPENDIX 1

No. 47: 10 September 1997, TORRES STRAIT FISHERIES

RESTRICTION ON SIZE OF BOATS

Prohibits the taking, carrying or processing of fish in any fishery under the jurisdiction of the Torres Strait PZJA, with the use of a boat longer than 20 metres.

No. 49: 16 April 1998, TORRES STRAIT PRAWN FISHERY

PROHIBITION ON TAKING PRAWNS

Amends Fisheries Management Notice No. 40. Prohibits the carrying of prawns in the area of the prawn fishery from 15 December until 01 March the following year.

No. 50: 29 March 1999, TORRES STRAIT CRAB FISHERY

PROHIBITION ON THE TAKING OF CRAB (GEAR, SIZE, AREA AND BOAT LENGTH RESTRICTIONS)

Prohibits the taking or carrying in the area of the crab fishery, of crabs of less than 150 millimetres when measured across the widest part of the carapace. If the carapace is missing the crab, when measured across the underside of the body on one side from the notch at the junction of the last leg with the body, must not be less than:

i. blue swimmer crabs – 37 millimetres in length

ii. mud crabs – 46 millimetres in length.

Prohibits the taking, carrying or processing of crabs in the area of the crab fishery with the use of a boat longer than 14 metres, with the use of not more than 50 crab apparatus. Requires crab apparatus used to take crabs to have an affixed tag with the owner's name and a light coloured float of at least 150 millimetres on which is recorded the registration number of the owner's boat.

No. 51: 29 March 1999, TORRES STRAIT FINFISH FISHERY

PROHIBITION ON THE TAKING OF FINFISH (GEAR, SIZE, AND AREA RESTRICTIONS)

Prohibits the taking, processing or carrying of finfish in the area of the finfish fishery by any method other than the use of a mesh, seine, bait or set mesh net not including a ring net.

Provides restrictions on length, drop and mesh size as well as restrictions on net markings, size, number and colour of floats and lights when fishing at night.

APPENDIX 1

Prohibits the taking, processing or carrying in the area of the finfish fishery, of finfish of less than the length set out in column 2 of the minimum and maximum length schedules.

No. 52: 29 March 1999, TORRES STRAIT TROCHUS FISHERY

PROHIBITION ON THE TAKING OF TROCHUS (GEAR AND SIZE RESTRICTIONS)

Prohibits the taking of trochus in the area of the trochus fishery except by hand collection, either with or without the use of underwater breathing apparatus or by using a hand held non-mechanical implement.

Prohibits the taking of trochus that, when measured in their original form as fished, at the widest part of the base of the shell, are less than 80 millimetres or more than 125 millimetres.

No. 55: 10 July 1999, TORRES STRAIT FINFISH FISHERY

PROHIBITION ON THE TAKING OF FINFISH (AMENDMENT TO FMN NO. 51)

Amends Fisheries Management Notice No. 51. Addition to the exemptions from prohibitions on taking finfish in the area of the Torres Strait finfish fishery.

No. 56: 04 May 2001, TORRES STRAIT PRAWN FISHERY

PROHIBITION ON TAKING MORETON BAY BUGS (SIZE RESTRICTION)

Prohibits the taking, processing and carrying of Moreton Bay bugs in the area of the prawn fishery with a carapace width of less than 75 millimetres.

No. 58: 22 November 2001, TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY

PROHIBITIONS RELATING TO THE TAKING, PROCESSING OR CARRYING OF TROPICAL ROCK LOBSTER (SIZE RESTRICTIONS, CLOSED SEASONS, GEAR RESTRICTIONS AND BAG LIMITS

Prohibits the taking, processing or carrying of tropical rock lobster which have a carapace length of less than 90 millimetres and where the carapace length is not available for measurement, a tail length of less than 115 millimetres. Lobster taken in the course of traditional fishing are exempt from this provision.

Prohibits the taking of tropical rock lobster during the months of October and November each year.

APPENDIX 1

Prohibits a person in the course of traditional fishing from taking or carrying more than three tropical rock lobster or where two or more people are on board a limit of six per boat applies.

Prohibits the taking of tropical rock lobster by any method other than diving and collecting by hand, with the use of a spear held in the diver's hand at all times during the diving operation, and also prohibits the use of any type of breathing apparatus other than surface supplied (hookah) equipment or the use of any form of mechanical underwater propulsion.

Prohibits taking, processing or carrying of tropical rock lobster by the use of hookah gear during the months from 01 October until 31 January the following year.

No. 60: 21 February 2002, TORRES STRAIT PRAWN FISHERY

REQUIREMENT FOR USE OF TURTLE EXCLUDER DEVICE

The use or possession of otter trawl equipment in the area of the Torres Strait prawn fishery is prohibited unless each net that is used is fitted with a Turtle Excluder Device. Try-nets need not be fitted with a Turtle Excluder Device.

No. 61: 21 February 2002, TORRES STRAIT PRAWN FISHERY

SHARK BYCATCH RESTRICTION AND SHARK FINNING PROHIBITION

Prohibits the taking, processing or carrying of sharks in excess of the maximum limit set. The maximum limit is the lesser of 5 sharks or 30 kilograms of shark.

Prohibits the processing or carrying of shark fins that are not attached to the trunk of the shark.

No. 62: 24 December 2002, TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY

PROHIBITION ON THE PROCESSING OR CARRYING OF TROPICAL ROCK LOBSTER MEAT

Prohibits the processing or carrying of tropical rock lobster meat that has been removed from any part of a tropical rock lobster on any boat. Lobster taken in the course of traditional fishing are exempt from this provision.

APPENDIX 1

No. 63: 24 December 2002, TORRES STRAIT FINFISH FISHERY

PROHIBITION ON THE RETAINING, STORING OR CARRYING OF LIVE FINFISH

Prohibits the retaining, storage or carrying of live finfish on any boat. Live finfish taking in the course of traditional fishing are exempt from this provision.

No. 64: 24 December 2002, TORRES STRAIT BÊCHE-DE-MER (SEA CUCUMBER) FISHERY

PROHIBITION ON TAKING SEA CUCUMBERS (GEAR AND SIZE RESTRICTIONS)

Prohibits the taking of sea cucumbers in the area of the sea cucumber fishery with the use of any underwater breathing apparatus or by any other method other than collection by hand.

Prohibits the taking of sea cucumbers that, when measured in their original form as fished at their longest point, are less than the length set out in column 2 of the minimum length schedule, in respect of each species in the schedule.

No. 65: 23 February 2004, TORRES STRAIT DUGONG FISHERY

PROHIBITIONS ON THE TAKING OF DUGONGS (AREA, GEAR AND METHOD RESTRICTIONS)

Prohibits the taking or carrying of dugong on commercial fishing boats. Traditional Inhabitant Boat (TIB) licensed boats six metres or less are exempt from this prohibition.

No. 66: 23 February 2004, TORRES STRAIT TURTLE FISHERY

PROHIBITION ON THE TAKING OF TURTLE (GEAR RESTRICTIONS)

Prohibits the taking or carrying of turtle on commercial fishing boats. Traditional Inhabitant Boat (TIB) licensed boats six metres or less are exempt from this prohibition.

No. 67: 23 February 2004, TORRES STRAIT SPANISH MACKEREL FISHERY

PROHIBITION ON THE TAKING, PROCESSING AND CARRYING OF SPANISH MACKEREL (GEAR AND SIZE RESTRICTIONS AND TAKE AND CARRY LIMIT)

Replaces FMN Nos. 45 and 54 and specifies the new size limits for Spanish and spotted mackerels. The taking of mackerel by any method other than trolling, handlining or droplining is prohibited

APPENDIX 1

No. 68: 23 February 2004, TORRES STRAIT PRAWN FISHERY

PROHIBITION ON THE CARRIAGE OF EQUIPMENT (AMENDMENT TO FISHERIES MANAGEMENT NOTICE NO. 40)

Allows the deployment of fishing gear for a limited period immediately before the opening and a limited period immediately after the closing of the Torres Strait prawn fishery.

No. 69: 23 February 2004, TORRES STRAIT PEARL SHELL FISHERY

PROHIBITION ON TAKING, PROCESSING AND CARRYING OF PEARL SHELL (GEAR AND SIZE RESTRICTIONS)

Prohibits the taking of pearl shell (when measured in their original form across the shell overall from the butt or hinge to the opposite edge of the lip) of gold lip, silver lip or white shell of less than 130 millimetres in length or greater than 230 millimetres in length. Prohibits the taking of black lip pearl shell of less than 90 millimetres in length.

Prohibits the taking of pearl shell by any method other than diving or collecting by hand.

Replaces FMN No. 46 and removes the provision allowing prawn trawlers to retain up to four pearl shells.

No. 70: 23 February 2004, TORRES STRAIT PRAWN FISHERY

REQUIREMENT FOR USE OF BY-CATCH REDUCTION DEVICES

The use or possession of otter trawl equipment in the area of the Torres Strait prawn fishery is prohibited unless each net that is rigged for fishing is fitted with an approved By-catch Reduction Device.

No. 71: 23 February 2004, TORRES STRAIT PRAWN FISHERY

RESTRICTIONS ON NET SIZE

Replaces FMN No. 59 and prohibits the taking of prawns in the area of the prawn fishery with the use of or possession of:

i. an otter trawl net, or two or more otter trawl nets where the combined head and footrope length exceeds 88 metres including the try net;

ii. otter trawl nets the meshes of which are less than 38 millimetres in the codend; and

iii. less than 45 millimetres in any other part of the net;

iv. there are more than 150 meshes when measures in the vertical plane from the drawstring; or

v. there is more than 1 line of ground chain across the mouth of each net; or

vi. the diameter of the links of the ground chain exceed 10 millimetres; or

APPENDIX 1

vii. the chain is used with a weight or an attachment, other than attachment for joining the chain to the net.

No. 72: 23 February 2004, TORRES STRAIT PRAWN FISHERY

PROHIBITION ON TAKING PRAWNS (TIME ALLOCATION) AND AMENDMENT TO FMN NO. 40

Replaces FMN No. 43 and specifies the calculation of fishing days utilising a Vessel Monitoring System (VMS).

APPENDIX 1

COMMUNITY FISHING NOTICES IN FORCE AS OF 30 JUNE 2004

No. 1: 29 March 1999, COMMUNITY FISHING IN THE TORRES STRAIT

PROHIBITION ON TAKING FISH WITHOUT A LICENCE

Prohibits the taking, processing or carrying of fish in the area of Australian jurisdiction by persons engaged in community fishing, other than those licensed to take, process or carry fish in the course of community fishing.

CATCH REPORTING NOTICES IN FORCE AS OF 30 JUNE 2004

No. 8: 11 July 1985, TORRES STRAIT PRAWN FISHERY

REQUIREMENT TO FURNISH INFORMATION RELATING TO THE TAKING OF PRAWNS IN THE COURSE OF COMMERCIAL FISHING

Describes the requirement for reporting commercial catches of prawns taken in the Torres Strait fishery.

No. 12: 12 September 1989, TORRES STRAIT SPANISH MACKEREL FISHERY

REQUIREMENT TO FURNISH INFORMATION RELATING TO THE DELIVERY OF SPANISH OR NARROW-BARRED MACKEREL

Describes the requirement for reporting commercial and community catches of Spanish mackerel caught in the Torres Strait fishery.

No. 13: 12 September 1989, TORRES STRAIT TROPICAL ROCK LOBSTER FISHERY

REQUIREMENT TO FURNISH INFORMATION RELATING TO THE DELIVERY OF TROPICAL ROCK LOBSTER

Describes the requirement for reporting commercial and community catches of tropical rock lobster caught in the Torres Strait fishery.

APPENDIX 2

QUICK REFERENCE GUIDE TO DIFFERENCES BETWEEN TORRES STRAIT FISHING BOAT LICENCES (TVH) AND TRADITIONAL INHABITANT BOAT (TIB) LICENCES

Issues/Conditions	Torres Fishing Boat Licence	Traditional Inhabitant Boat Licence
Eligibility	A "person"	A traditional inhabitant or a former PNG national who would have qualified to be on the "amnesty list"
Registers a boat/vessel	Yes	Yes
Can be used for commercial fishing	Yes	Yes
Requires a Master Fisherman's licence while commercially fishing	Yes	No
Can be used for traditional fishing	Hunting for dugong and turtle is **not** permitted from a commercial fishing boat (ie. TVH licensed boat). However, the boat can be used for traditional fishing for other species provided that only traditional inhabitants participate in the traditional fishing activity. Bag limits apply for sea cucumbers (bêche-de-mer) and rock lobsters. Size limits do not apply for traditional fishing.	Hunting for dugong and turtle is **not** permitted from a TIB licensed boat over 6 metres in length. However, the boat can be used for traditional fishing for other species provided that only traditional inhabitants participate in the traditional fishing activity. Bag limits apply for sea cucumbers (bêche-de-mer) and rock lobsters. Size limits do not apply for traditional fishing.
Can be used for recreation or general transport	Yes, the boat can be used for transport and recreational fishing. Bag and size limits for recreational species must be followed.	Yes, the boat can be used for transport and recreational fishing. Bag and size limits apply. There is a fine and often blurred line between traditional fishing and recreational fishing. An example of recreational fishing is where a traditional inhabitant registers or fishes with the intention of being part of a fishing competition.

APPENDIX 2

Issues/Conditions	Torres Fishing Boat Licence	Traditional Inhabitant Boat Licence
Boat replacement policy	Yes	No
Maximum boat size (subject to replacement policy)	20 metres	20 metres (fisheries specific eg. maximum of 7 metres for sea cucumber fishery).
Transferable	There are three "classes" of fishing boat licences: 1. Non transferable dinghy licence (few in number); 2. Fully transferable boat licences and attendant tenders; and 3. "Islander transferable only" which as the name indicates can only be transferred from one traditional inhabitant to another.	There has been no need to transfer a TIB licence, as there has been no limit put on the number of licences that would be granted.
Licence Fee Structure	The current fee structure for Master Fisherman's licences and Torres Strait Fishing Boat licences was introduced for all Torres Strait fisheries following the introduction of single jurisdiction on 1 April 1999.	
Grant of licences	No new licences are granted to non-traditional inhabitants. Most licences granted in 1985 immediately following ratification of Torres Strait Treaty and enactment of the *Torres Strait Fisheries Act*	New licences granted to eligible persons
Renewal of licences	A licence comes into effect on the day of issue and remains valid for the period specified on the licence. Although licences are now only issued for a maximum period of 12 months, TS Fisheries Regulations allow for licences to be issued for up to five years.	
Surrender of licence	Licence holders may surrender their licence(s) by written notice to the PZJA	

APPENDIX 2

Issues/Conditions	Torres Fishing Boat Licence	Traditional Inhabitant Boat Licence
Suspension/cancellation/amend conditions	The Minister may suspend or cancel a licence depending on the circumstances, or amend conditions on a licence	The Minister may suspend or cancel a licence depending on the circumstances, or amend conditions on a licence
The terms used above have the same definition as appears in the Torres Strait Treaty and the *Torres Strait Fisheries Act 1984.*		

APPENDIX 2

TORRES STRAIT ISLANDER/ABORIGINAL IDENTIFICATION CRITERIA

To determine bonafide status of a new Traditional Inhabitant Boat (TIB) licence application, Torres Strait Islanders/Aboriginals must identify to at least one of the three following criteria.

☐ **A Torres Strait Islander who lives in the Protected Zone or adjacent coastal area of Australia and is an Australian citizen who maintains traditional customary associations with the area in relation to subsistence or livelihood or social, cultural or religious activities.**

- The applicant is a Torres Strait Islander and is resident in your community (ie in the Protected Zone or Bamaga and Seisia on the NPA); and
- The applicant is an Australian citizen; and
- To the best of your knowledge, the applicant has maintained traditional associations in the Protected Zone in relation to their subsistence or livelihood or social, cultural or religious activities.

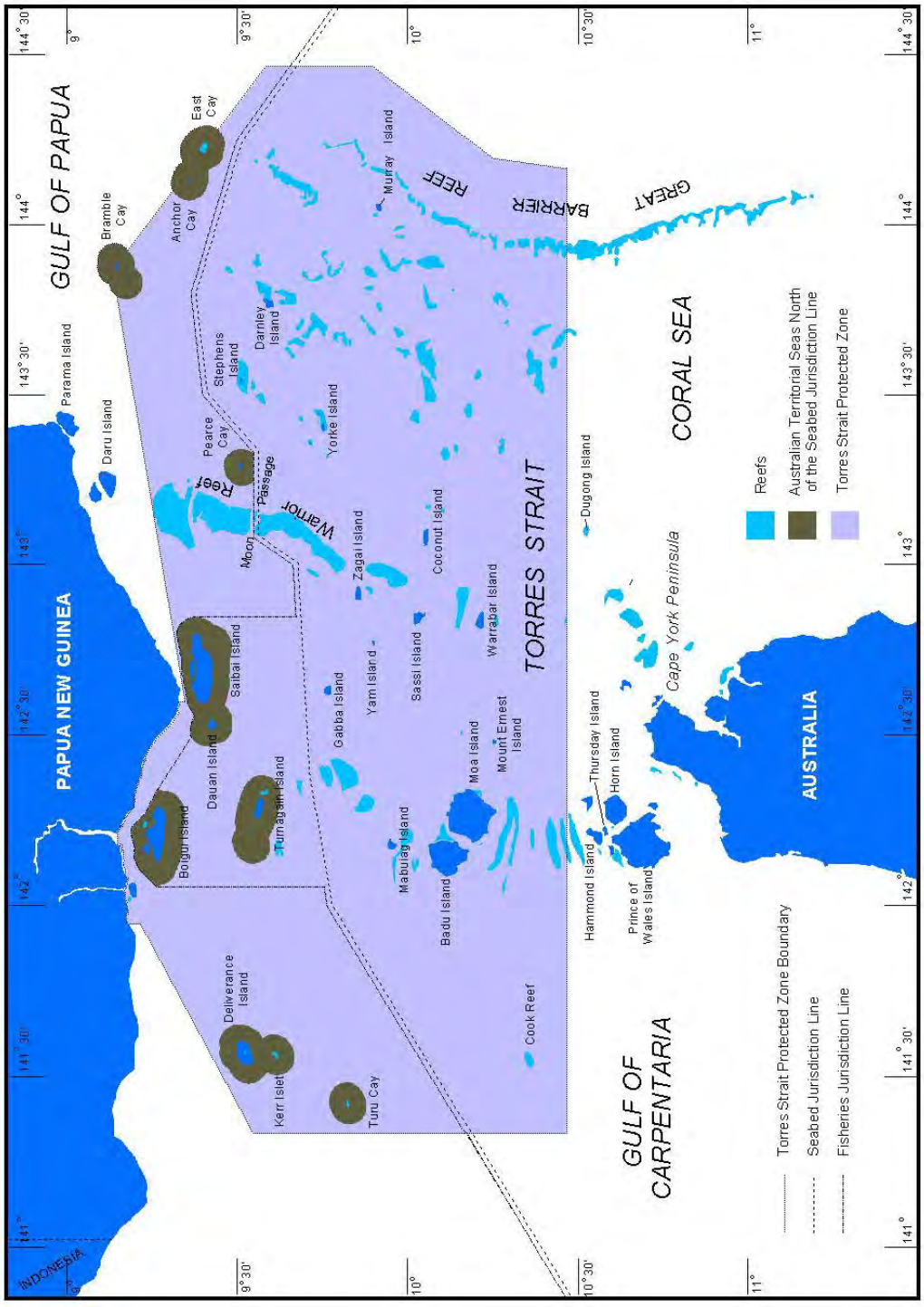
☐ **An Aboriginal traditional inhabitant of the Torres Strait or the Northern Peninsula Area as defined under the Torres Strait Treaty and who is resident in that area.**

- The applicant is Aboriginal and resident in the one of the following Aboriginal NPA communities (Umagico, New Mapoon, or Injinoo) or is resident in the Torres Strait in your community; and
- The applicant is an Australian citizen; and
- To the best of your knowledge, the applicant has maintained traditional associations in the Protected Zone in relation to their subsistence or livelihood or social, cultural or religious activities.

☐ **A Papua New Guinea traditional inhabitant from the PNG area of jurisdiction of the Protected Zone who is now an Australian citizen and resides in the Protected Zone or adjacent coastal area of Australia and who was granted permanent residency status under the 1978/79 Immigration Taskforce Amnesty List.**

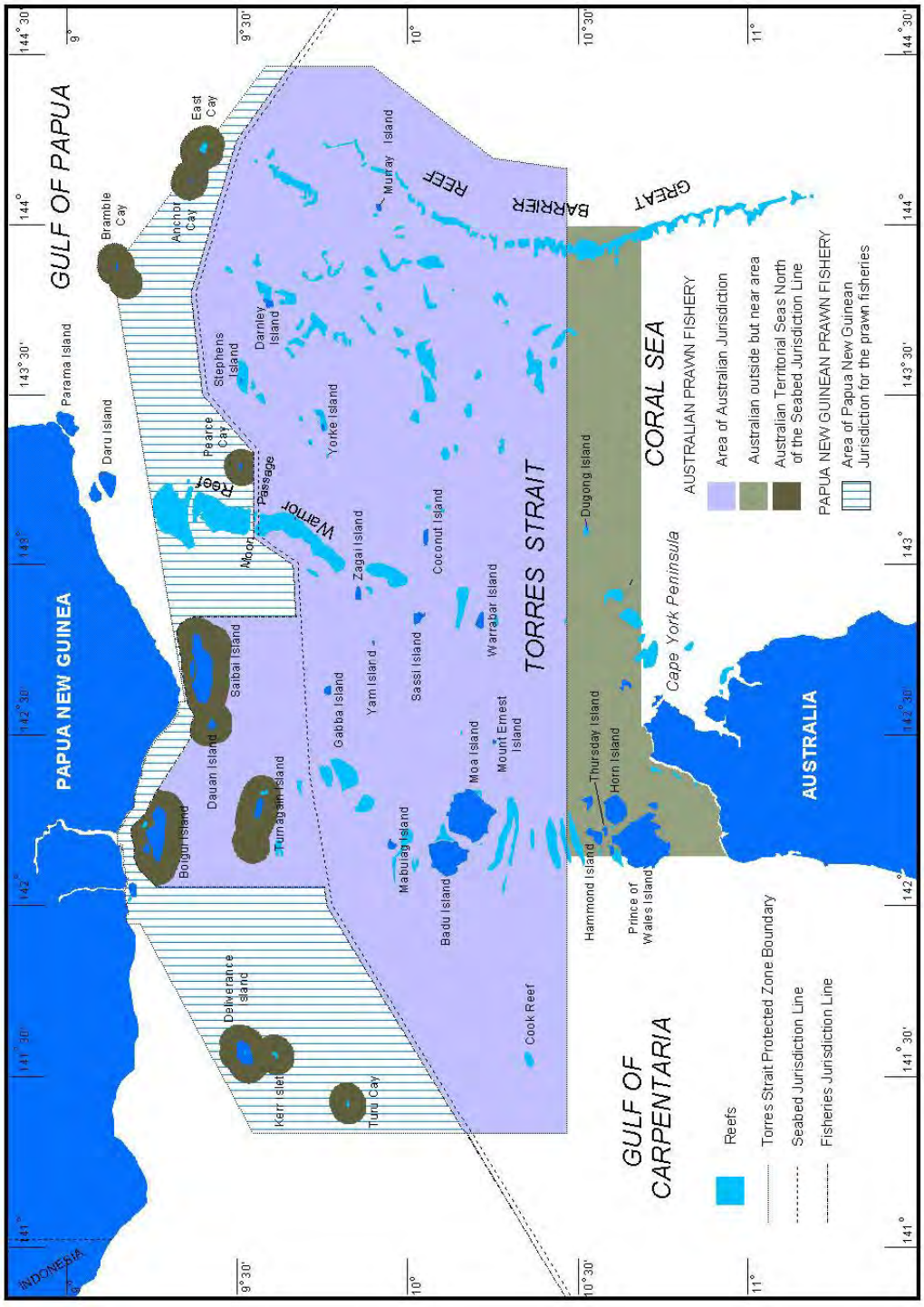
- The applicant has attached a letter from the Department of Immigration, Multicultural and Indigenous Affairs (DIMIA) confirming that the application was a former Traditional Inhabitant from Papua New Guinea and has satisfied the amnesty criteria and was subsequently granted permanent residency in Australia (or is a son or daughter of); and
- The applicant is now an Australian citizen; and
- The applicant is resident in your community; and
- To the best of your knowledge, the applicant has maintained traditional associations in the Protected Zone in relation to their subsistence or livelihood or social, cultural or religious activities.

APPENDIX 3



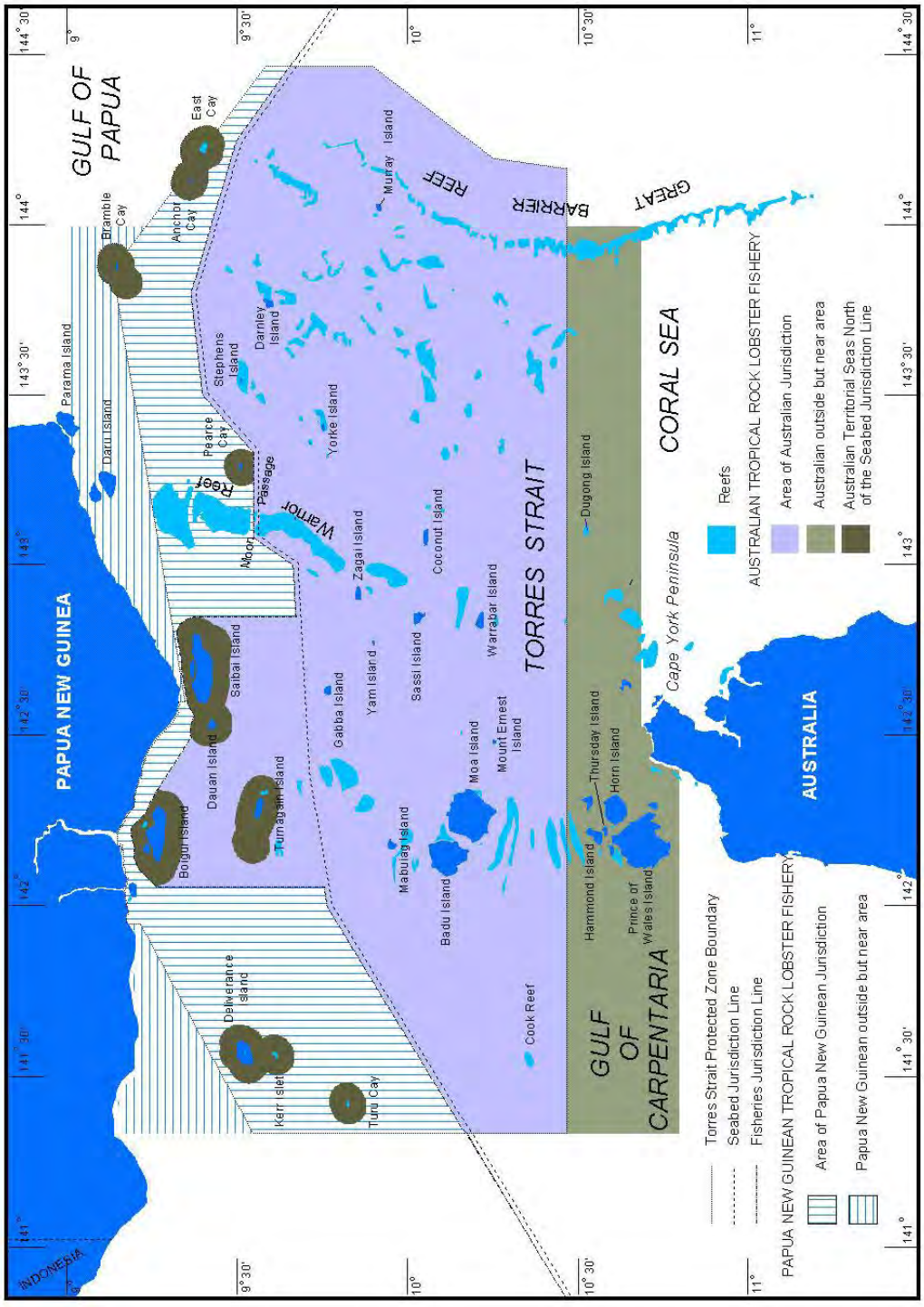
Map 1. Area of the Torres Strait Protected Zone.

APPENDIX 3



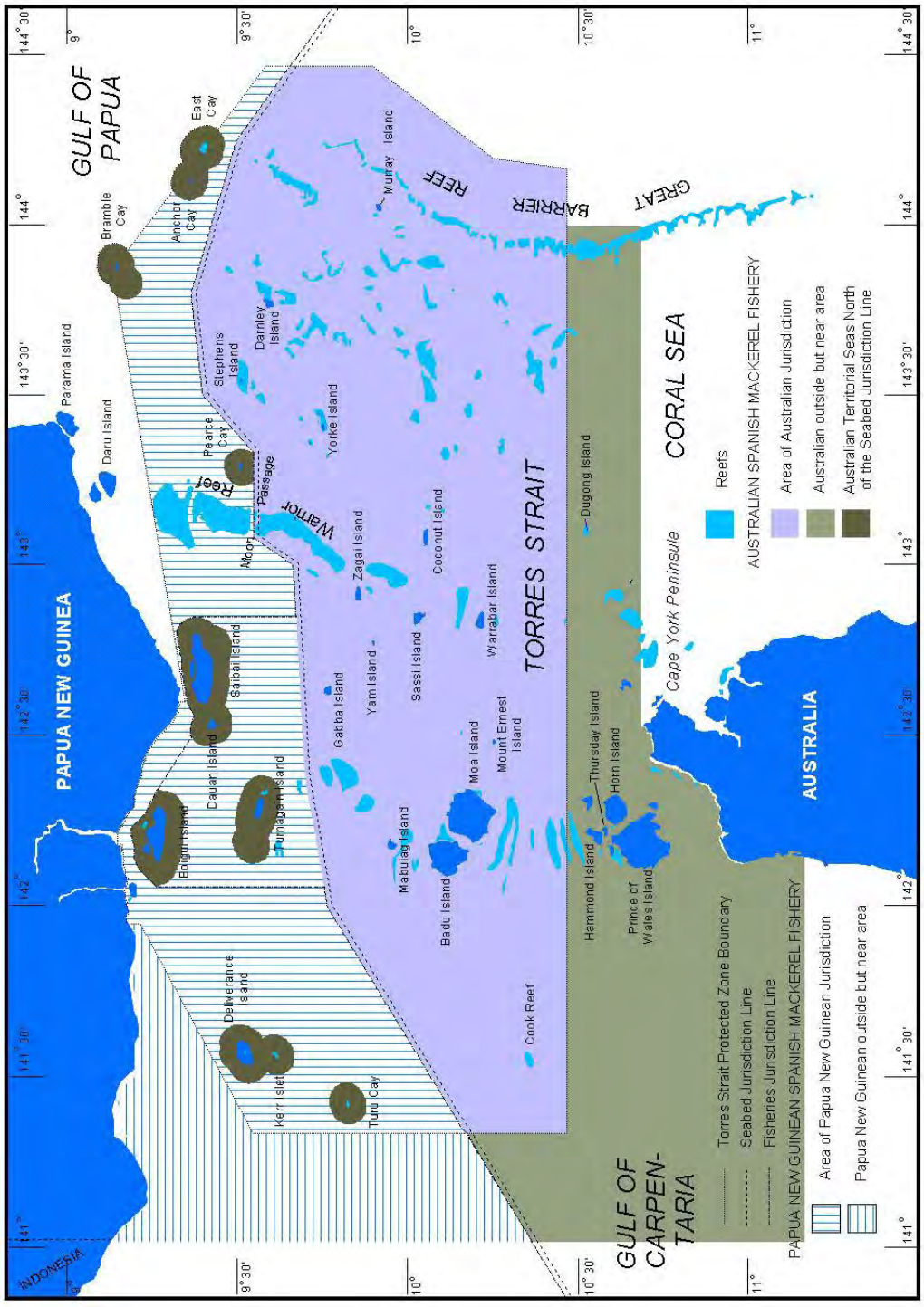
Map 2. Area of jurisdiction for the Torres Strait prawn fishery.

APPENDIX 3



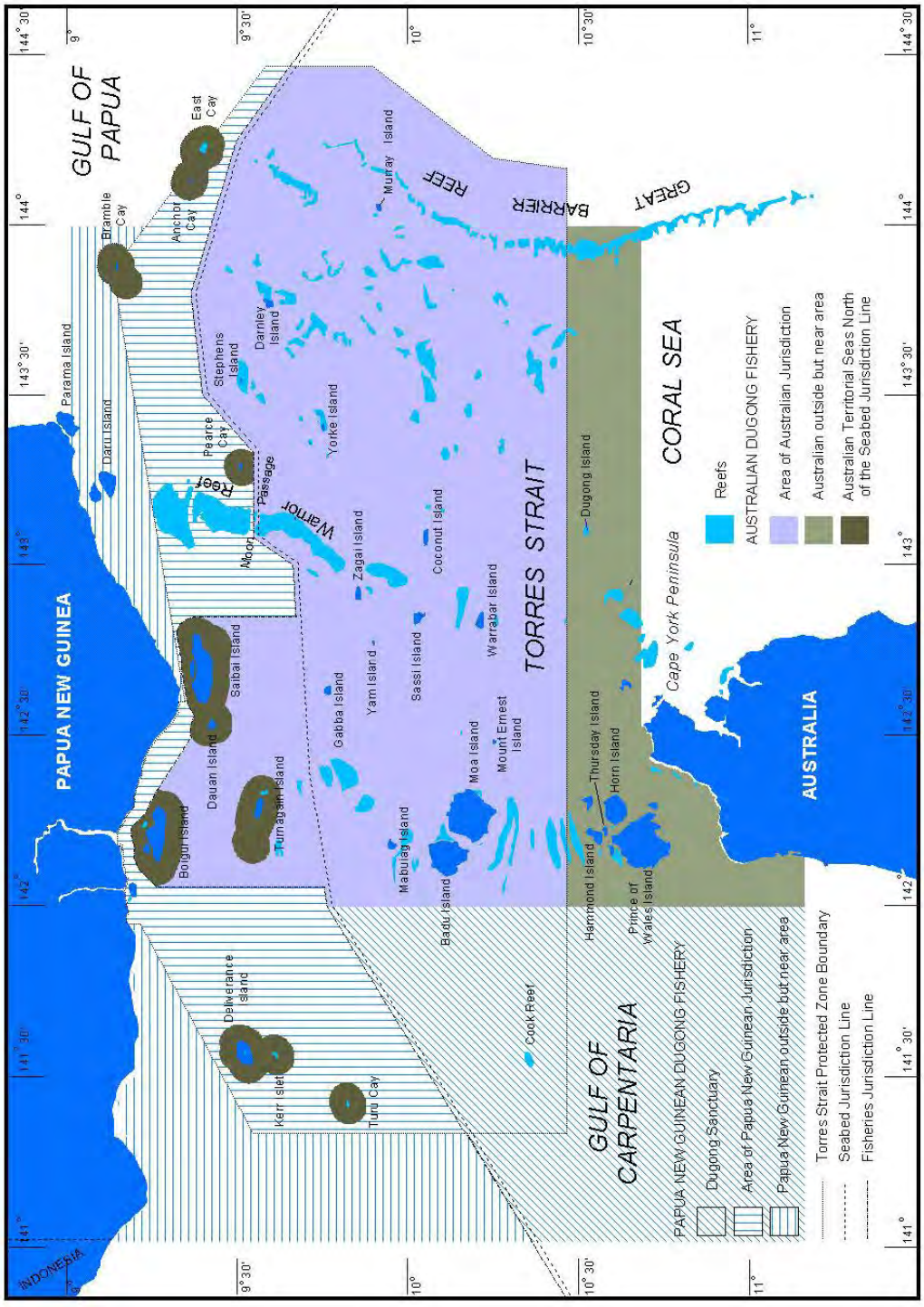
Map 3. Area of jurisdiction for the Torres Strait tropical rock lobster fishery.

APPENDIX 3



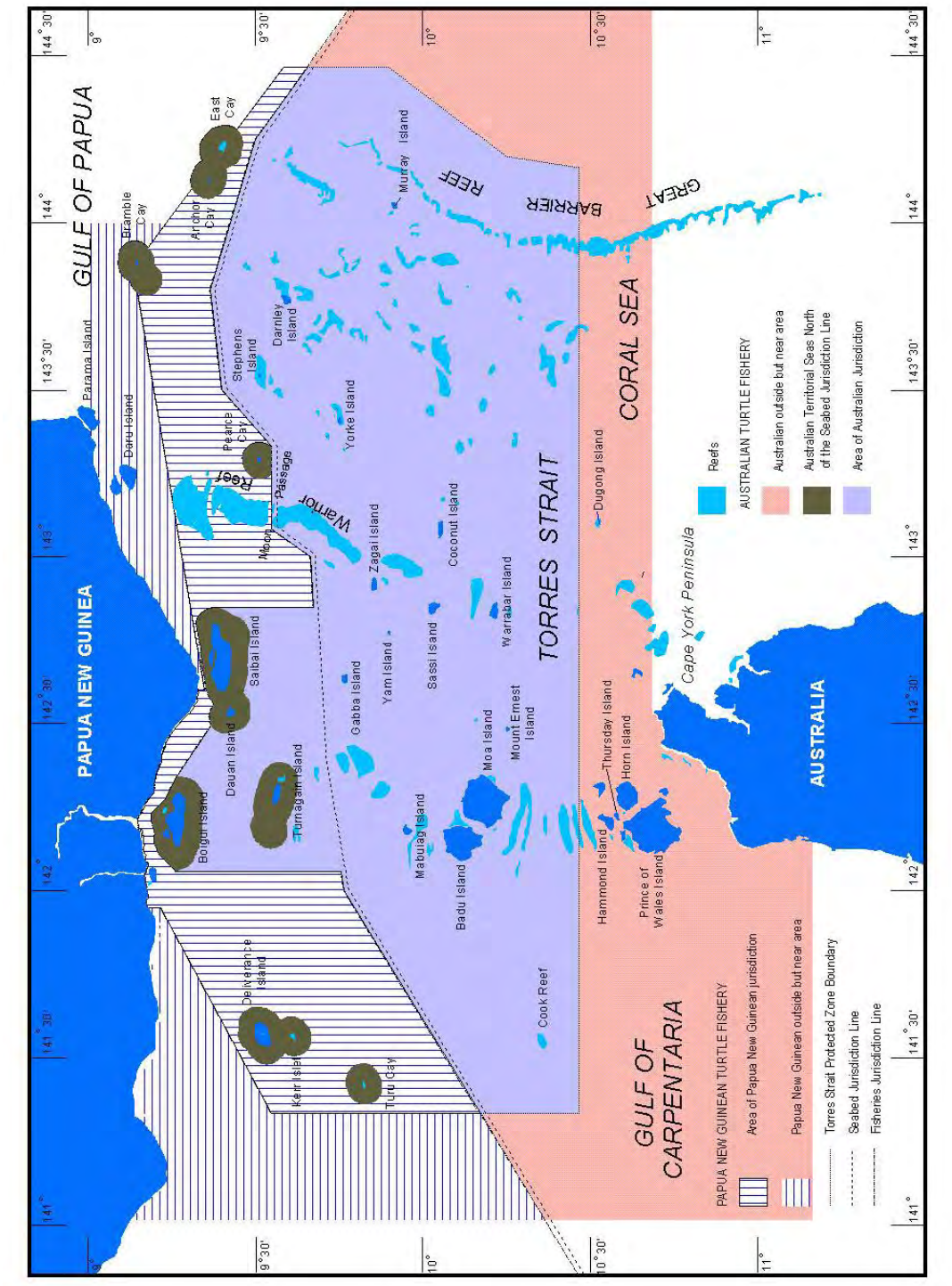
Map 4. Area of jurisdiction for the Torres Strait Spanish mackerel fishery.

APPENDIX 3



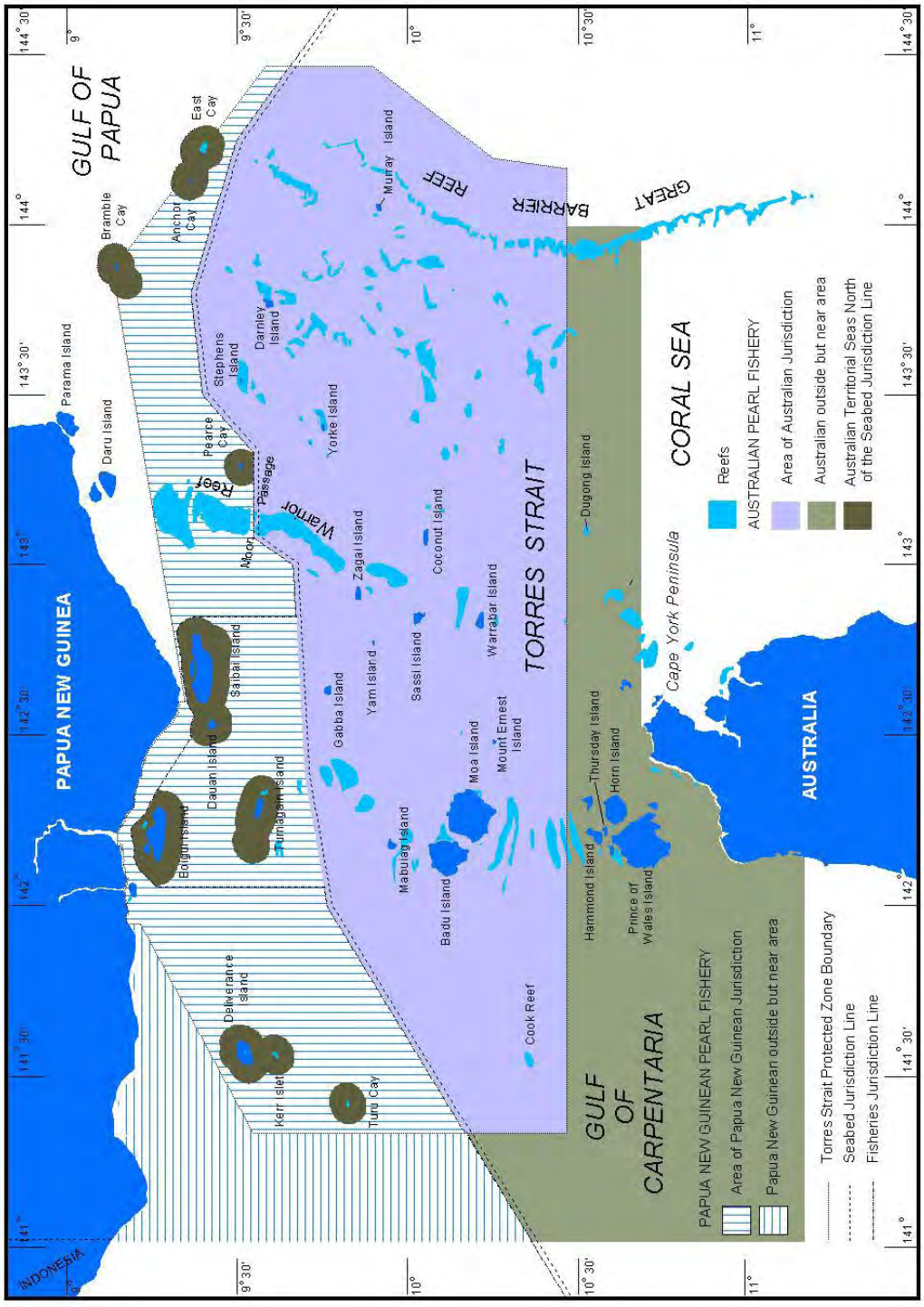
Map 5. Area of jurisdiction for the Torres Strait traditional dugong fishery.

APPENDIX 3



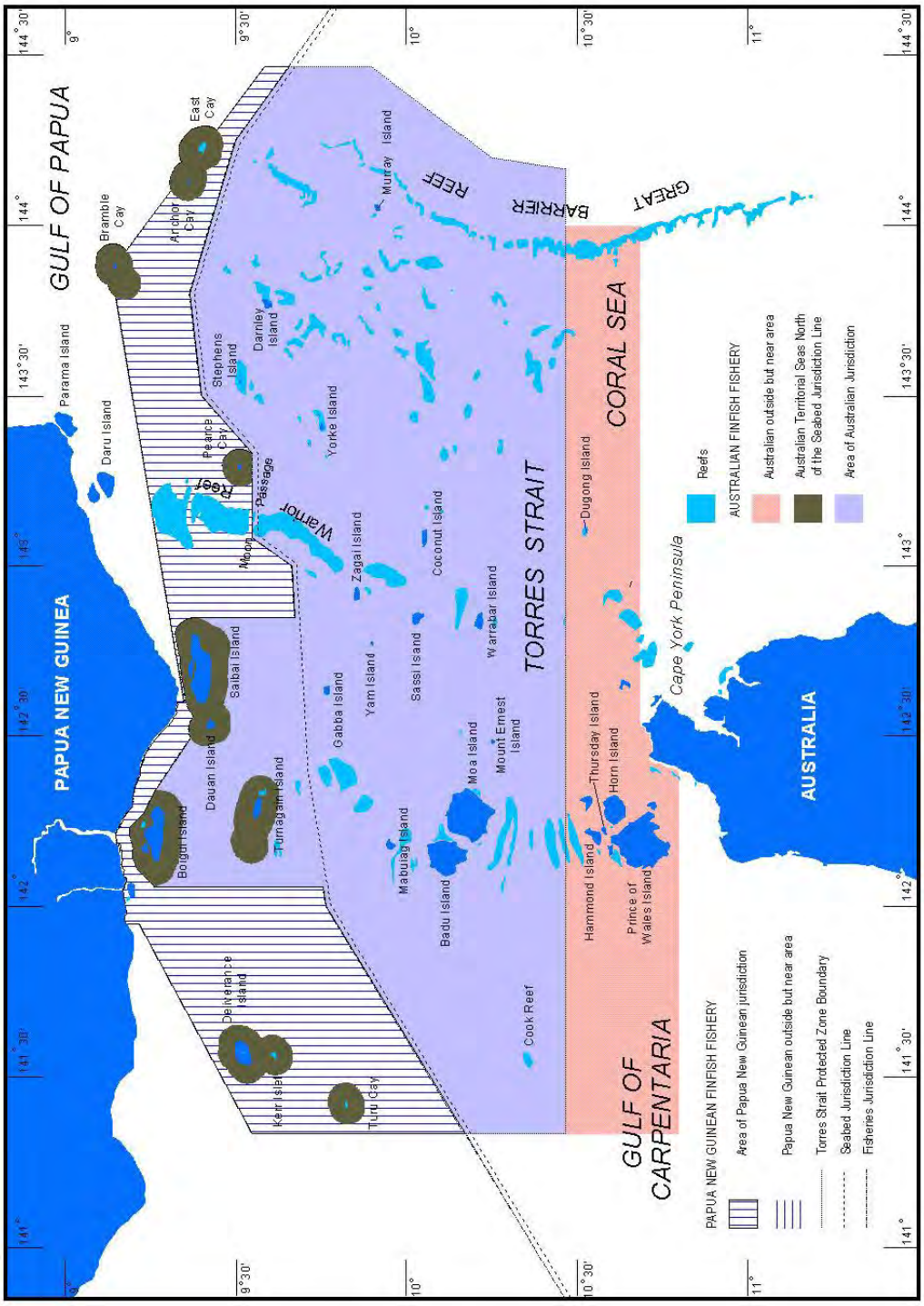
Map 6. Area of jurisdiction for the Torres Strait traditional turtle fishery.

APPENDIX 3



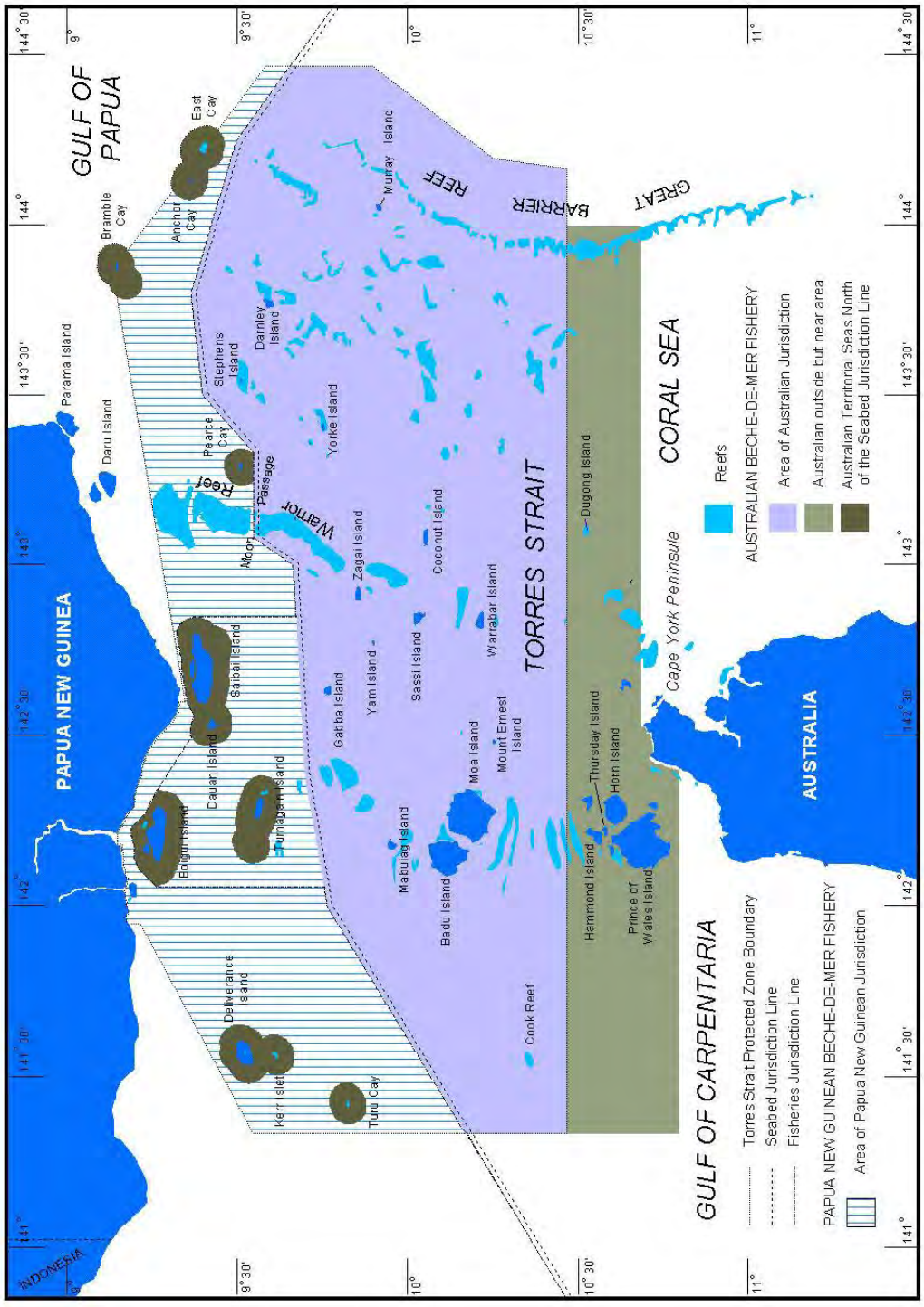
Map 7. Area of jurisdiction for the Torres Strait pearl shell-collecting fishery.

APPENDIX 3



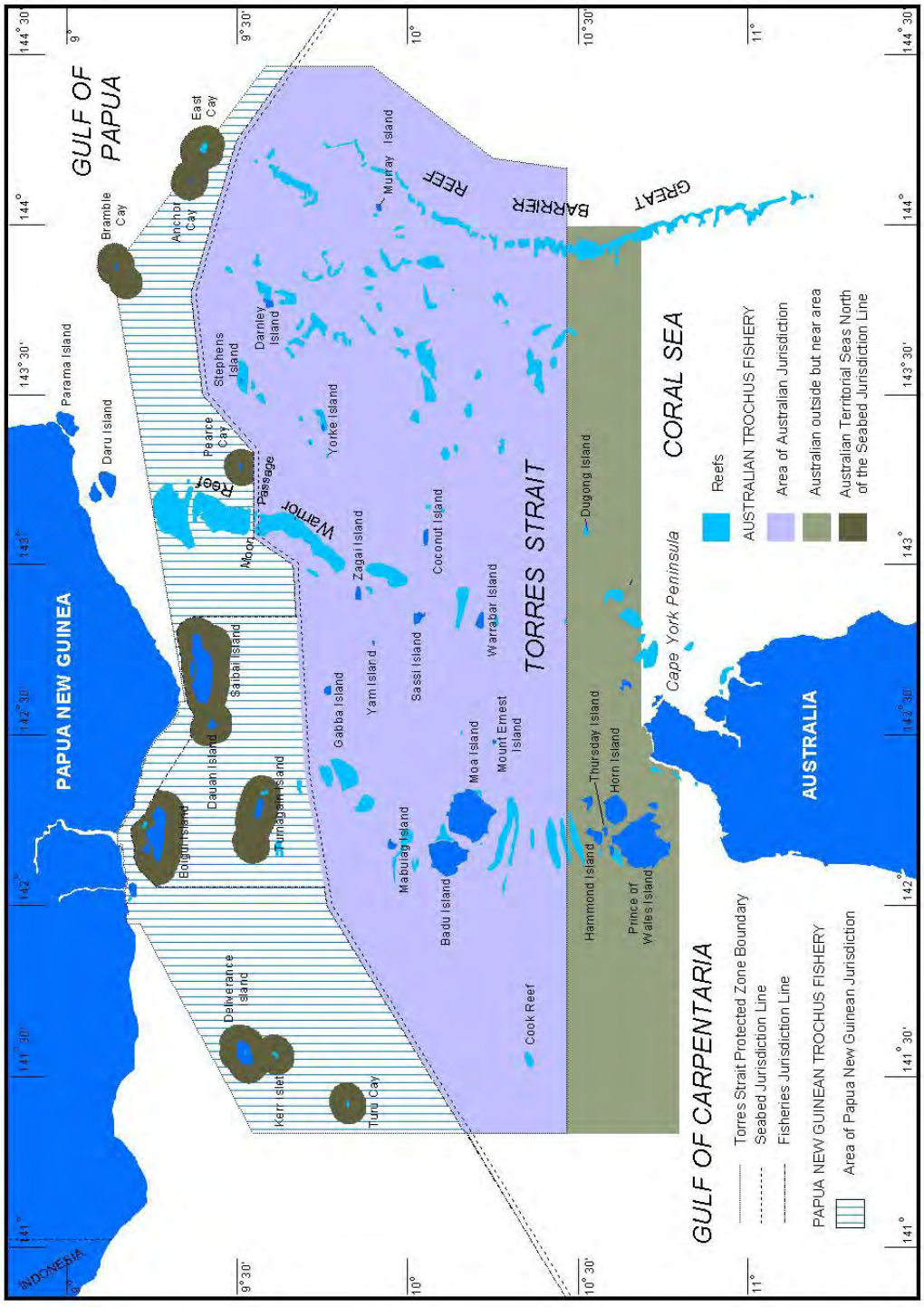
Map 8. Area of jurisdiction for the Torres Strait finfish fishery.

APPENDIX 3



Map 9. Area of jurisdiction for the Torres Strait bêche-de-mer (sea cucumber) fishery.

APPENDIX 3



Map 10. Area of jurisdiction for the Torres Strait trochus fishery.

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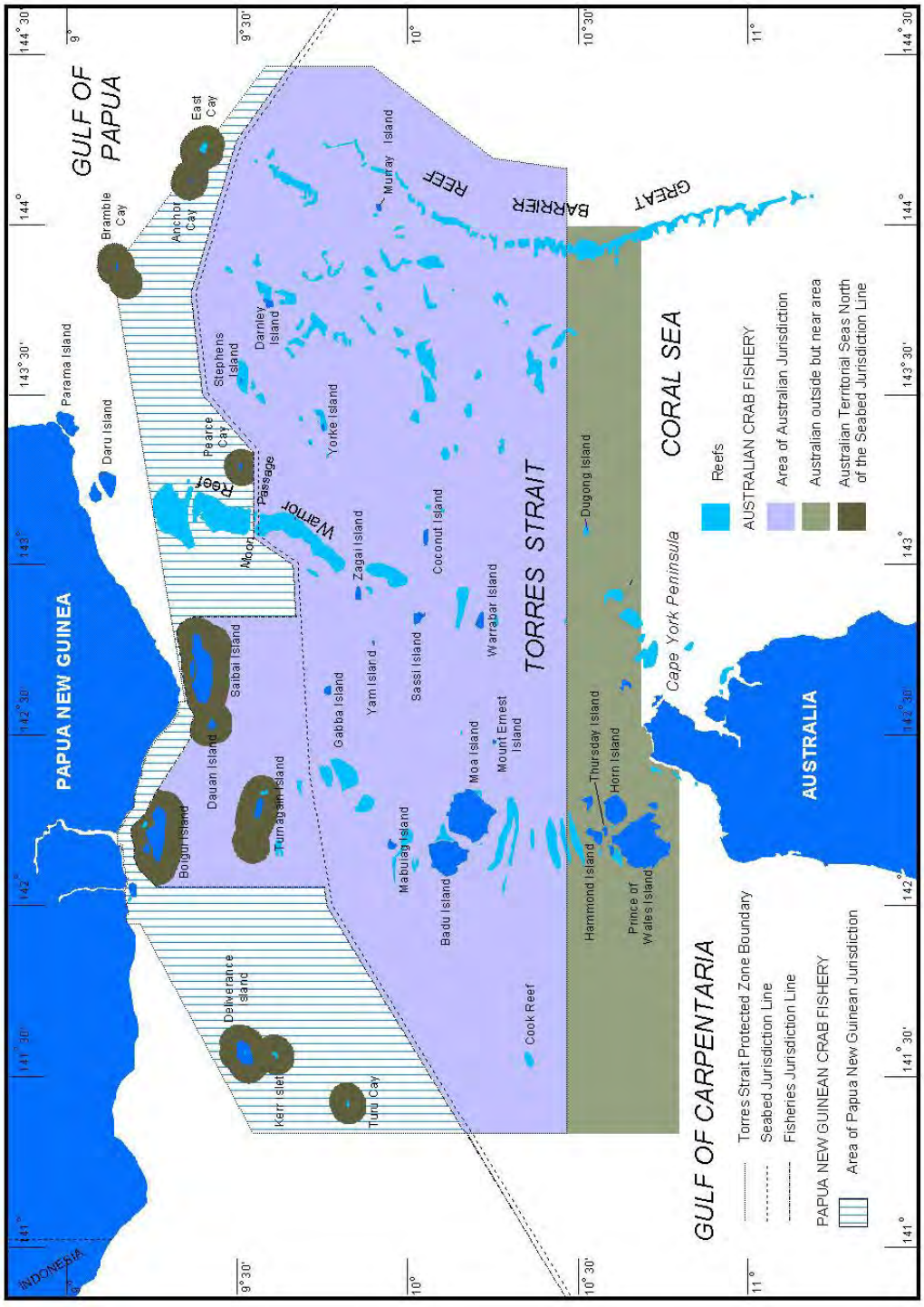
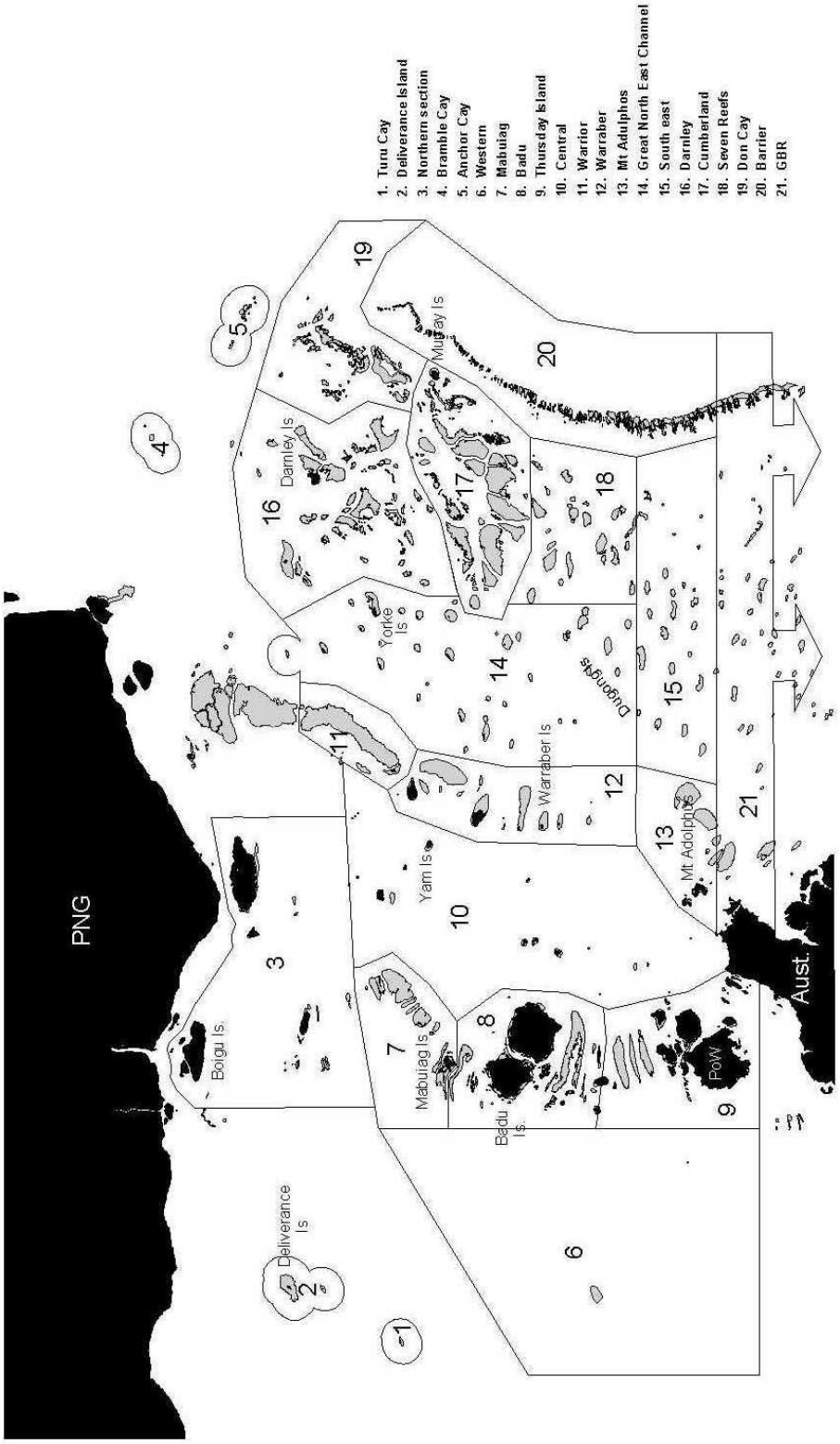


Map 11. Area of jurisdiction for the Torres Strait crab fishery.

APPENDIX 3



Map 12. Areas (bioregions as advised by CSIRO) for the Torres Strait docket book.

APPENDIX 4

CURRENT LEGISLATION RELEVANT TO TORRES STRAIT FISHERIES

- ***Environment Protection and Biodiversity Conservation Act 1999***
  http://scaleplus.law.gov.au/html/pasteact/3/3295/top.htm

- ***Fisheries Levy (Torres Strait Prawn Fisheries) Regulations 1998***
  http://scaleplus.law.gov.au/html/pastereg/2/1437/top.htm

- ***Native Title Act 1993***
  http://scaleplus.law.gov.au/html/pasteact/2/1142/top.htm

- ***Torres Strait Fisheries Act 1984***
  http://scaleplus.law.gov.au/html/pasteact/0/98/top.htm

- ***Torres Strait Fisheries Regulations 1985***
  http://scaleplus.law.gov.au/html/pastereg/0/44/top.htm

NOTES