



Australian Government

Australian Fisheries Management Authority

**Torres Strait Scientific Advisory Committee**

# **2014 OPERATIONAL PLAN FOR TORRES STRAIT FISHERIES**

**2014**

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## **BACKGROUND**

This operational plan was developed by the Torres Strait Scientific Advisory Committee (TSSAC) to complement the Strategic Research Plan for Torres Strait Fisheries and describe:

1. The operational aspects of assessment and evaluating research proposals considered by the TSSAC including:
  - a. How the TSSAC prioritise research projects;
  - b. The criteria are used for assessing research proposals.
2. Current research areas identified by the TSSAC, through consultation with stakeholders, as priority areas for research.

The information in this document provides guidance to scientists developing research proposals, and the TSSAC in evaluating proposals. Documentation of these operational processes will also ensure the evaluation process undertaken by the TSSAC is conducted in a transparent and strategic way.

The TSSAC will update this document annually to ensure it remains relevant.

# PART 1

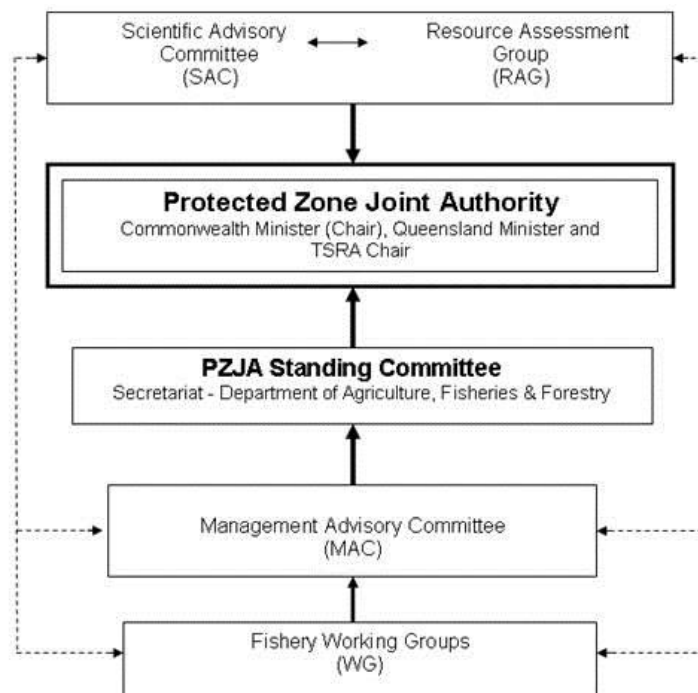
## 1.1 RESEARCH PRIORITISATION AND EVALUATION

The Torres Strait Scientific Advisory Committee (TSSAC) agreed on the following guidelines in assessing if research areas are considered high priority for funding. Priority research areas will:

- address an essential management need such as the threat to sustainability;
- address a fundamental management need such as surveys for stock assessment;
- strengthen and facilitate Torres Strait Islander engagement/development;
- be a strategic project that demonstrates value for money;
- have strong stakeholder support; or
- address areas of uncertainty such as for stock assessments.

Resource Assessment Groups (RAGs), Management Advisory Groups (MACs) and other (Protected Zone Joint Authority (PZJA)) consultative groups play a fundamental role in identifying priority research areas (Figure 1). The TSSAC will take into consideration the views of RAGs and other committees to assess research priorities across competing interests.

Figure 1: **PZJA Consultative Structure**



The TSSAC agreed at meeting No. 48 to assess research proposals against evaluation criteria grouped into two main areas of attractiveness and feasibility (see attachment A).

**Explanatory Note:**

Although all research items in this plan are considered to be priorities, some have more immediate need than others. Therefore, indicative levels of need have been assigned to each research priority. Tactical (T) research has immediate need and should be conducted as soon as practicable. Strategic (S) research should be carried out within the next couple of years. Longer term research priorities have been given an indicative future date. Researchers are encouraged to apply for research priorities with the shorter term T or S ranking.

## Part 2

### 2.1 RESEARCH PRIORITIES

The TSSAC seeks input from PZJA consultative bodies to identify research areas and needs and these will be updated on an annual basis as required. In the absence of a dedicated turtle and dugong consultative body, the Torres Strait Fisheries Management Advisory Committee (TSFMAC) is to be responsible for identifying research priorities in the turtle and dugong fisheries.

	RESEARCH AREA	RESEARCH NEED	THEME <sup>1</sup>	NEED <sup>2</sup>	PRIORITY
<b>A) Prawn</b>	1) Fishery assessment <sup>3</sup>	1a) Stock assessment, fishing power, development of optimal harvest strategies <sup>4</sup> , economic efficiency. 1b) Improve effort uptake	2, 3	S*	
	2) By-catch reduction and reduced interactions with TEP species <sup>5</sup>	2a) Investigate more efficient bycatch reduction devices.	2	S	
		2b) Assess the impact of trawl harvest on Islander subsistence fisheries. 2c) Assess the impact of trawl harvest on TS marine environment	2, 6, 4	S	
3) Developing economic efficiency	3a) Assess the overall economic environment of the fishery to inform marketing strategies.	3	T		
		3	T		
<b>B) Rock lobster</b>	1) Providing advice for fisheries management	1a) Evaluation of alternative management strategies including harvest control rules and spatial and seasonal management controls	2, 3	S	1
		1b) Development of simulation operating models of the fishery to be used for the evaluation of management strategies.	2, 3, 6	S <sup>6</sup>	2
		1c) Regular updates of stock assessments to provides estimates of stock status and reference points		T	1

<sup>1</sup> These themes relate to those detailed in the Strategic Research Plan.

<sup>2</sup> S = Strategic, T = Tactical. See 'Explanatory Note' above. S\* Relates to effort trigger for harvest strategy of 4000 days

<sup>3</sup> Effort in the prawn fishery is currently less than 2000 days, which is about 1/3 of Australian allocated effort.

<sup>4</sup> Optimal harvesting will increase profitability of the fishery which is a major aim (objective?) for management in this fishery. This also has implications for Papua New Guinea (PNG).

<sup>5</sup> May be a need for further by-catch reduction research to allow Strategic Assessments to be undertaken within the next 5 years.

<sup>6</sup> Potential research providers should note that a currently funded project is investigating this area and new projects should add to this project rather than duplicate it.

		1d) Improved monitoring of catch and effort in all sectors of the fishery. 1e) Understanding the effect of the use of Hookah on: recruitment of stock on shallow reefs;			
	2) Continuation and improvement of data collection	2a) Fishery independent surveys of resource abundance 2b) Improved monitoring of commercial catch and effort in all sectors of the fishery. 2c) Estimate of non-commercial take of rock lobsters 2d) Alternative monitoring techniques of stock status, for example GPS tracking.	3, 6 1, 2	T  T  T  S	1  1  2  3
	3) Understanding fishing behaviour	3a) Understanding the drivers and incentives in determining fishing behaviour in all sectors 3b) Understanding fishing behaviour under output controls: i. the impact of ITQs or competitive quota on the fishery; ii. the extent and impact of discard mortality; iii. the effect of changing market preferences on fishing behaviour under output controls; iv. the extent of value adding eg. moving to live product, targeting different sizes. v. the extent of high grading under output controls	3, 6	S  S	2  2
	4) Movement and recruitment connectivity between areas within Torres Strait and between Torres Strait and neighbouring jurisdictions, including QLD and PNG	4a) Understanding of migration of settled lobster between, and within, jurisdictions. e.g. linkages between deep and shallow and among reefs 4b) Understanding of recruitment connectivity between, and within, jurisdictions. 4c) Management implications of movement and recruitment connectivity between, and within, jurisdictions.	2, 5  2, 5  2, 5	S  S  S	1
	5) Environmental impacts	5a) Collect relevant baseline information to assess environmental change impacts on lobster populations 5b) Analyse the impact of environmental change on the fishery	2, 3	S	
<b>C) Finfish</b>	1) Efficacy of management arrangements	1a) Investigating improvement of efficient, long term monitoring	6	S	

(reef line, Spanish mackerel)		for all sectors of the fishery. 1b) Developing efficient harvest strategies for the fishery	2, 6	S	
	2) Fisheries assessment	2a) Development of an efficient stock status/abundance assessment. 2b) Development of operational management objectives, performance measures and decision rules to inform future management strategy evaluation. 2c) Understanding PNG cross jurisdictional finfish migration.	2, 6 2, 6 2, 5	S S S	
	3) Biology, ecology, distribution of target species	3a) Understanding of growth maturity, fecundity and spawning characteristics of Spanish mackerel and Coral trout.	2,6	S	
<b>D) Hand Collectable Fisheries</b>	1) Stock abundance/assessment for TAC setting	1a) Complete stock assessment and estimate TAC for target species. 1b) Improved monitoring of catch and effort in all sectors of the fishery.	2, 3, 6 2, 3, 6	S (Yr 2013)	
	2) Efficacy of management arrangements	2a) Impact of overfishing on PNG Warrior Reef. 2b) MSE looking at the use of hookah for white teatfish. 2c) A study to look at the possibility of reducing the minimum size limit of the gold-lipped pearl oyster	2	T <sup>7</sup>	
	3) Knowledge of biology, ecology and distribution of target species	3a) Assessment of trochus habitat using Indigenous knowledge or remote sensing to inform stock assessment <sup>8</sup> .	2, 3, 4, 6	S	
<b>E) Turtle and Dugong fisheries</b>	1) Interactions between habitat and turtle and dugong fisheries	1a) Estimate of catch by PNG and Cape York communities.	1, 2	N/A	
<b>F) Torres Strait Islander development</b>	1) Capacity building for Torres Strait Islanders in Torres Strait fisheries	1a) Identification of parallels with other fisheries internationally and learning opportunities for Torres Strait peoples.	4	S	
	2) Improved profitability for Torres Strait Islanders from fisheries	2a) Marketing opportunities within existing fisheries. 2b) Identification of alternate sustainable fishing opportunities. 2c) Business feasibility study for live coral trout and/or premium fresh fish on ice.	3, 4 3, 4 3, 4	S S T	

<sup>7</sup> The TSSAC will liaise with the PNG National Fisheries Authority regarding this research priority.

<sup>8</sup> Trochus is a small fishery with low effort so research in this area is not seen as urgent.

<b>G) Engagement with Papua New Guinea</b>	1) Collaborative research and data collection	1a) Review of areas where opportunities exist for collaborative research on shared fisheries stocks between PNG and Australia <sup>9</sup> .	5	T	
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<sup>9</sup> Funds for this more appropriately sourced from agencies such as DAFF, ACIAR and not AFMA, given the diplomatic and cross-border nature.



## 2.2 INDIVIDUAL FISHERY OBJECTIVES<sup>10</sup>

FISHERY	OBJECTIVE
<b>Prawns</b>	<ul style="list-style-type: none"> <li>i) Ensure the optimum utilisation of the fishery resources within the TSPF is consistent with the principles of ecologically sustainable development and the exercise of the precautionary principle</li> <li>ii) Promote economic efficiency in the utilisation of the fisheries resources within the TSPF</li> <li>iii) Ensure cooperative, efficient and cost effective management of the Fishery</li> <li>iv) Manage the fishery's interaction with the marine environment including the incidental capture of non-target species and impacts on demersal habitats</li> </ul>
<b>Rock lobster</b>	<ul style="list-style-type: none"> <li>i) Maintain the spawning stock at levels that meet or exceed the level required to produce the maximum sustainable yield</li> <li>ii) In accordance with the Torres Strait Treaty, to protect the traditional way of life and livelihood of traditional inhabitants, in particular in relation to their traditional fishing for Tropical Rock Lobster</li> <li>iii) Provide for the optimal utilisation, co-operative management with Queensland and Papua New Guinea and for catch sharing to occur with Papua New Guinea</li> <li>iv) Monitor interactions between the prawn and lobster fisheries</li> <li>v) Maintain appropriate controls on fishing gear allowed in the fishery so as to minimise impacts on the environment</li> <li>vi) Promote economic development in the Torres Strait area with an emphasis on providing the framework for commercial opportunities for traditional inhabitants. To ensure that commercial opportunities available to all stakeholders are socially and culturally appropriate for the Torres Strait and the wider Queensland and Australian community</li> <li>vii) Optimise the value of the fishery, ensure cooperative, efficient and cost effective management of the Fishery</li> </ul>
<b>Finfish</b> (reef line and Spanish mackerel)	<ul style="list-style-type: none"> <li>i) To manage the resource to achieve its optimal utilisation</li> <li>ii) To maximise the opportunities for Traditional Inhabitants of both Australia and PNG to participate in the commercial fishery</li> <li>iii) To promote the fishery as a line fishery</li> </ul>

<sup>10</sup> Fisheries Objectives were correct at the time of writing. Sources: Prawns – Draft Torres Strait Prawn Fishery Management Plan; Rock Lobster – PZJA 19: Finfish - Strategic and Export Reassessment Report, Torres Strait Finfish Fishery, AFMA 2008; Trochus - Strategic and Export Reassessment Report, Torres Strait Trochus Fishery, AFMA June 2008; Beche-de-mer - Strategic and Export Reassessment Report, Torres Strait Beche-de-mer Fishery, AFMA April 2008; Dugong and Turtle – PZJA website, February 2009 (these in turn being stated in subsidiary conservation and management arrangements agreed between Australia and Papua New Guinea); Pearl Shell, Crab and Barramundi –PZJA website, February 2009.

### Individual Fishery Objectives (cont...)

FISHERY	OBJECTIVE
<b>Finfish</b> (reef line and Spanish mackerel)	iv) To continue monitoring of the fishery and enter into a catch sharing agreement with PNG.
<b>Trochus</b>	<ul style="list-style-type: none"> <li>i) Manage the resource so as to achieve optimum utilisation</li> <li>ii) Maximise opportunities for traditional inhabitants of Australia</li> <li>iii) Encourage traditional inhabitants to participate in the fishery</li> </ul>
<b>Bêche-de-mer</b>	<ul style="list-style-type: none"> <li>i) Ensure the sustainable use of all sea cucumber in Torres Strait</li> <li>ii) Ensure that utilisation of the sea cucumber resources is for the direct benefit of the Australian traditional inhabitants of the Torres Strait</li> <li>iii) Ensure increased involvement in the management and control of all aspects of the fishery by the Australian traditional inhabitants of the Torres Strait</li> <li>iv) Promote a cooperative approach to management with Papua New Guinea</li> <li>v) In consultation with industry and traditional fishers, to ensure the recovery of the sandfish stock on Warrior Reef by adopting a precautionary approach when setting catch levels in the early years of rebuilding the fishery</li> </ul>
<b>Dugong and turtle</b>	<ul style="list-style-type: none"> <li>i) Conserve the stock</li> <li>vi) Manage the fishery as a traditional fishery</li> </ul>
<b>Pearl shell, crab and barramundi</b>	<ul style="list-style-type: none"> <li>i) Manage the resource so as to achieve optimum utilisation</li> <li>ii) Maximise opportunities for Traditional Inhabitants of Australia and PNG to participate in the commercial fishery</li> </ul>

## Attachment A.

### Torres Strait Scientific Advisory Committee Research Proposal Evaluation

<b>Research Title</b>	<b>Organisation:</b>
<b>Research Themes:</b>	<b>Date:</b>
<b>Principal Investigator:</b>	

Attractiveness	Strongly <b>DISAGREE</b> → Strongly <b>AGREE</b>										
	n/a	1	2	3	4	5	6	7	8	9	10
1. Is there a priority need for the research?											
2. Is/are the end-user/s identified?											
3. Do the outcomes have relevance and are they appropriate to the end-users?											
4. Should the outputs contribute towards outcomes and are they measureable?											
5. Cost Benefit Analysis. Is the anticipated benefit appropriate to the investment?											
6. Is there collaboration between stakeholders (i.e. between community and/or industry, researcher and management)?											
7. Are there links to previous research?											
8. Does the project add value to previous research?											
9. Does the project involve capacity development for Communities?											
10. Is there collaborative funding (cash and/or in-kind contributions)?											
11. Does the proposal actively engage Traditional Inhabitants and Torres Strait Islanders in the research?											
12. Are there employment opportunities for Traditional Inhabitants and Torres Strait Islanders?											
13. Are extension and communication well developed and appropriate; in particular to Traditional Inhabitants and Torres Strait Islanders?											
14. Is there a path to uptake and impact relevant to fisheries management?											

Feasibility	Strongly <b>DISAGREE</b> → Strongly <b>AGREE</b>										
	n/a	1	2	3	4	5	6	7	8	9	10
1. Are the methods well described and consistent with the objectives?											
2. Are the methods scientifically sound?											
3. Will the project be carried out in a culturally appropriate way?											
4. Does the applicant have the capacity to produce the outputs?											
5. Is the budget appropriate to meet the outputs and outcomes?											
6. Is there appropriate data management?											

