

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>MEETING ADMINISTRATION</b> Ratification of TSHCWG No. 3 meeting records	Agenda Item No. 1.1 <b>FOR AGREEMENT</b>

**PURPOSE:**

To ratify the minutes from TSHCWG meeting No. 3.

**BACKGROUND:**

The draft minutes from TSHCWG No.3 were distributed to members on 4 November 2009 with a request that all comments were to be received by 3 December 2009. Three minor adjustments were received and the minutes were amended accordingly (see Attachment 1.1A).

**RECOMMENDATION:**

The TSHCWG **AGREE** to ratify the minutes from TSHCWG Meeting No. 3 held on 5-6 August 2009 as a true and correct record of the meeting.

**FINANCIAL IMPLICATIONS:**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>MEETING ADMINISTRATION</b> Action Items from TSHCWG No.3	Agenda Item No. 1.2 <b>FOR NOTING</b>

**PURPOSE:**

To provide the TSHCWG with an update on the progress relating to Action Items from TSHCWG No. 3.

**BACKGROUND:**

No.	Action Item	Tasked to	Agenda Item	Progress
1.	Fisheries Management Paper No. 1 will be redistribute with minutes from HCWG No. 3.	Shaun Ossinger	1.2	Completed with TSHCWG No 4 papers
2.	Shane Fava to redistribute to correspondence to Nyall Ledger regarding his licence and why it is not transferable.	Shaun Fava/ Neville Nakata	1.2	
3.	QDPIF application forms for Indigenous licences in east coast fisheries to be redistributed to CFG's via Neville Nakata.	Shaun Ossinger/ Neville Nakata	1.2	
4.	Members will be contacted out of session by email, to seek their agreement on recommending Mr Kenny Bedford as permanent Chair for the TSHCWG. Neville Nakata distribute the correspondence to all CFG members.	Shaun Ossinger / Neville Nakata	1.3	
5.	AFMA to investigate if the issue of vessels anchoring in the vicinity of the Yorke Island Sponge Farm Project fell within the TOR's of the PZJA.	Shaun Ossinger	2.2	Completed
6.	A formal update on the progress of Okinawa Pearls interest in pearl farms around Erub be tabled at the next TSHCWG meeting.	Executive Officer	6.1.1	Completed

**RECOMMENDATION:**

Members **NOTE** the progress on Action Items and provide comment.

**FINANCIAL IMPLICATIONS:**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27–28 July 2010</b>
<b>RESEARCH</b> Survey of Sandfish on Warrior Reef	Agenda Item No. 2.1 <b>FOR NOTING</b>

### **PURPOSE**

To provide the TSHCWG with an update on progress of the CSIRO Sandfish survey on Warrior Reef, (P.I. Tim Skewes).

### **BACKGROUND**

Following concerns of serious resource depletion and over-exploitation of sandfish (*Holothuria scabra*) stocks on Warrior Reef, five fishery independent surveys have been commissioned to assess the level of reduction in sandfish abundance in 1995/1996, 1998, 2000, 2002 and 2005. A 'zero' TAC was set for this species following the 1998 survey which reported that the remaining stock on Warrior Reef was approximately 80% less than in November 1995. This closure has been maintained as subsequent surveys showed no signs of recovery of the stock. Given the time since the previous survey, recent closure of the fishery in PNG waters, and apparent recovery of black teatfish in the east (Skewes *et al.*, 2010) it was deemed both necessary and timely to conduct a further survey to assess the current state of the sandfish stock at Warrior Reef.

The TSHCWG agreed to support, in principle, a Sea Cucumber survey of Warrior Reef by CSIRO (3.3.2.1) with Tim Skewes at Principle Investigator. The Torres Strait Scientific Advisory Committee (TSSAC) recommended the above mentioned survey for funding by AFMA in November 2008 (TSSAC 50.4.2.1.2). The TSSAC ensured that the project incorporated appropriate community consultation and involvement of Torres Strait Islanders throughout the project. The project also included the participation of a traditional inhabitant from Iama that had completed the benthic sampling training conducted as part of a previous research project (Eastern Torres Strait hand collectables surveys).

### **DISCUSSION**

The survey took place between 22 -26 February 2010 on Warrior and Dungeness Reefs as well as Iama Is and other nearby areas. The survey was designed to assess the status of sandfish and all commercial sea cucumber species. This information will assist in the development of the upcoming Community Based Harvest Strategies (see attachment 2.1A: Warrior Reef Milestone Report May 2010).

### **RECOMENDATION**

That TSHCWG **NOTE** the progress of the CSIRO Sandfish Survey on Warrior Reef, (P.I. Tim Skewes).

### **FINANCIAL IMPLICATIONS**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>RESEARCH</b> 2009 surveys of Hand Collectables in Torres Strait	Agenda Item No. 2.2 <b>FOR DISCUSSION</b>

## **PURPOSE**

To provide the TSHCWG with final results from the 2009 surveys of Hand Collectables in Torres Strait (P.I. Tim Skewes).

## **BACKGROUND**

In November 2008 the Torres Strait Scientific Advisory Committee (TSSAC) recommended a research project for a sea cucumber baseline stock abundance survey for funding by AFMA.

The aim of the projects was to:

1. To assess the size, status and spatial structure of sea cucumber (except sandfish) stocks in Torres Strait which will be utilised in developing adaptive co-management framework, and
2. to develop a decision support tool that can be used for the development of spatial management strategies and for community consultation.

The project also included the training of 12 Torres Strait Islanders, nominated by their respective CFG's, in benthic sampling, in order to assist them in future monitoring of their reefs, and also, for some of the attendees to take part in the upcoming surveys. The training took place over two days at the AFMA Office on Thursday Island and was well received by all trainees. The trainees were paid for their attendance.

The survey took place between 19 to 28 March 2009. Some participants of the workshop (Mer and Erub Islands) also assisted CSIRO researchers during the survey. The survey was designed to assess the status of trochus and all commercial sea cucumber species, with particular interest in the two currently closed species, black teatfish and surf redfish.

The preliminary outcomes of the research surveys were provided to TSHCWG No. 3 on 5-6 August 2009 (3.3.1).

## **DISCUSSION**

A final report has been prepared by the Principal Investigator and has been provided to the TSHCWG members at Attachment 2.2A, 2.2B and 2.3C.

The Torres Strait Scientific Advisory Committee has assessed the final reports from the project at TSSAC No. 52 and overall assessed the research very favourably, especially with regards to the involvement and employment of Torres Strait Islanders and the value it has added to previous research (52.4.1<sup>1</sup>).

The main recommendations from the research are:

### Beche de mer

- 1) Total allowable catches (TACs) are recommended for the following highly targeted species. We also recommend that a trigger limit of 5 t per year be implemented for all species that do not have a species specific TAC. Exceeding the trigger limit will result in a review of the catch data for that species, and a

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<sup>1</sup> Minutes from TSSAC Meeting No. 52 are not ratified at the time of writing this paper and therefore this decision number may change.

recommendation for future exploitation levels and/or data requirements for that species.

Annual TAC recommendations for Torres Strait beche-de-mer species.

Species	Proposed TAC (t)	Current TAC (t)
Black teatfish	25	0
White teatfish	15	15
Prickly redfish	20	20
Deepwater redfish	25	80*
Surf redfish	0	0
Blackfish	5	80*
Other species	80 <sup>†</sup>	80*

\* Currently fished as "other species" TAC = 80 t

<sup>†</sup> But with a 5 t trigger limit that will initiate species review.

- 2) Produce a suitable species guide to facilitate the collection of accurate fishery catch data.
- 3) Implement co-management harvest strategies with Island communities that limit effort pulses, mitigate localised depletion and collect fishery and fishery-independent data.

#### Trochus (for inclusion in a harvest strategy)

##### TAC/catch trigger management strategies:

- Catch below 75 t in a year: current management arrangements (minimum and maximum size limits), stock assessment every 3-5 years.
- Catch exceeds 75 t in year: trigger TAC re-assessment and robust stock assessment.
- TAC above 150 t in a year: prohibitions (increase in minimum size restriction), yearly stock assessment, reduction in fishing effort, shortening of harvest season, closing depleted reefs, restocking.
- or TAC above 150 t in a year: closure of fishery until following year.

##### Other potential management strategies (for localised depletion in particular)

- Closing depleted reefs: overharvested reefs closed to fishing, not opened for 3-5 years to allow recruitment of trochus and growth to maturity.
- Increase in minimum size limit where over harvesting has occurred e.g. Solomon Islands, increase minimum size from 80 mm to 90 mm, improvement in egg production and yields (Foale & Day, 1997).
- Closed seasons: fishing banned during summer months (Dec-Feb) when trochus spawn. The trochus harvest could also be restricted to a short period eg. 2-3 months of the year.
- Marine sanctuaries: source reefs closed to fishing; sink reefs (down current of source reefs) open to fishing. This protects mature trochus on source reefs. Source reefs need to be close enough together to allow for

larval recruitment to sink reefs. Trochus larvae remain planktonic for 3-4 days and can drift up to 10 km during this time (Foale, 1998).

- Translocation of brood stock: introduction of mature trochus to depleted areas.
- Restocking: development of aquaculture and re-seeding initiatives, as undertaken in other regions of the Indo Pacific.

### **RECOMMENDATION**

The TSHCWG are invited to consider the final results from the surveys in eastern Torres Strait and discuss the recommendations for beche de mer and trochus listed in the final reports.

### **FINANCIAL IMPLICATIONS**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27–28 July 2010</b>
<b>RESEARCH</b> Proposed Trochus Survey (CSIRO)	Agenda Item No. 2.3 <b>FOR DISCUSSION</b>

### **PURPOSE**

That the TSHCWG consider and make a recommendation on a proposed Trochus survey to be submitted to the TSSAC by CSIRO.

### **BACKGROUND**

The Torres Strait Trochus Fishery (TSTF) is a single species (*Trochus niloticus*) fishery, having both commercial and subsistence aspects.

The main management arrangements for trochus include a minimum legal size and Total Allowable Catch (TAC) of 150t whole weight.

There is no mandatory reporting of catches or mechanism to assess the suitability of the current TAC, or the sustainability of historical catches.

Stock abundance surveys completed in the eastern Torres Strait in 2009 recognise that although the results indicated that trochus populations appear to be at least stable compared to historic data that the survey data most likely underestimates actual density of trochus due to the hidden nature of trochus and the survey techniques (Skewes *et al.*, 2010; discussed at agenda item 2.2). The authors acknowledge that this limitation decreases the application of the research results to management decisions.

### **DISCUSSION**

The proposed research project would carry out a survey of Trochus using amended survey techniques with dedicated searching for trochus thus allowing stock abundance with a greater degree of precision to be estimated. The outputs from this project will aid in the management of the TSTF, in particular assessment of the current TAC and facilitate the move to adaptive co-management in line with aspirations for Torres Strait Traditional communities.

The specific objectives of the proposed project are:

- To assess the size, status and spatial structure of trochus stocks in Torres Strait.
- To determine a sustainable Total Allowable Catch (TAC) for Trochus in Torres Strait based on survey data.
- To record data including shell weight (animals in and out) and shell size, to evaluate and strengthen current trochus stock formulations.

The TSHCWG are requested to consider the proposal (see attachment 2.3A) and provide comment or a recommendation on the project, in particular if the project will provide relevant information of interest to the TSHCWG.

### **FINANCIAL IMPLICATIONS**

Any research costs will be considered against competing research priorities by AFMA following recommendations from the Torres Strait Scientific Advisory Committee.

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 June 2010</b>
<b>RESEARCH</b> Research Priorities for Torres Strait Hand Collectables	Agenda Item No. 2.4 <b>FOR DISCUSSION</b>

**PURPOSE**

That the TSHCWG review and comment on the research priorities listed in the draft 2010 Annual Operational Plan for Torres Strait Fisheries as drafted by the TSSAC.

**BACKGROUND**

At the Torres Strait Scientific Advisory Committee (TSSAC) meeting No. 48 the Committee agreed to develop an Operational Plan (OP) to provide potential researchers with specific research areas identified by the TSSAC as being of high priority. The TSSAC further agreed to review the OP annually to ensure the research priorities remained current.

To establish research priorities for the 2009 Operational Plan, the TSSAC reviewed research priorities provided from relevant working groups and committees.

The 2010 Annual Operational Plan discussed at TSSAC No. 52 will be provided as part of the package distributed to researchers wishing to consider applying for funding through the TSSAC in the 2011/2012 research funding round.

The TSSAC also agreed at TSSAC No. 52 to request relevant PZJA committees and working groups to review the research priorities for individual fisheries and provide feedback to the TSSAC in order to guide the TSSAC on subsequent revisions to the Annual Operational Plan.

**DISCUSSION**

The TSSAC requests the TSHCWG review the Hand Collectables fisheries research priorities for the 2010 Annual Operational Plan as outlined in attachment 2.4A and provide comment to the TSSAC on these priorities.

**FINANCIAL IMPLICATIONS:**

Nil.

**Attachment 2.4A Draft Research priorities for the Torres Strait Hand Collectable fisheries**

	<b>RESEARCH AREA</b>	<b>RESEARCH NEED</b>	<b>THEME<sup>1</sup></b>	<b>NEED<sup>2</sup></b>
<b>D) Hand Collectable Fisheries</b>	i) Stock abundance/assessment for TAC setting	a) Complete stock assessment and estimate TAC for target species.	2, 3, 6	Strategic (by 2015)
	ii) Efficiency of management arrangements	a) Provide information for community based harvest strategies and/or management plans.	2	In progress
		b) Address uncertainties regarding trochus and Bêche de mer stock status and/or recovery.		In progress
		c) Impact of overfishing on PNG Warrior reef.		Tactical
iii) Knowledge of biology, ecology and distribution of target species	a) Assessment of trochus habitat using Indigenous knowledge or remote sensing to inform stock assessment <sup>3</sup> .	2, 3, 4, 6	Strategic (by 2012)	
iv) Effective recovery strategies	a) Modelling recovery strategies using tools such as Management Strategy Evaluation <sup>4</sup> .	3, 4	Tactical	

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

<sup>2</sup> Strategic need indicates that there is a need for this research, however, this research area is not essential in the next year. Tactical need refers to research that is required in a shorter time frame than strategic research.

<sup>3</sup> Trochus is a small fishery with low effort so research in this area is not seen as urgent.

<sup>4</sup> Given recent reports on BDM stock levels, evaluation of recovery strategies for the stock is essential before TAC for some species is allowed to increase.

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>COMMUNITY BASED HARVEST STRATEGIES</b> Livelihood benefits of co-management of hand collectable fisheries in the Torres Strait (Alifereti Tawake)	Agenda Item No. 3.1 <b>FOR NOTING</b>

### **PURPOSE**

To provide the TSHCWG with the draft results of the research project “Livelihood benefits of co-management of hand collectable fisheries in the Torres Strait” (Principal Investigator: Alifereti Tawake, CSIRO)

### **BACKGROUND**

In late 2008, through the TSRA board, Torres Strait communities were asked if they wanted to become involved in this project. The two communities that have expressed a keen interest in being involved were Erub (Darnley) and Warraber. The first consultation visit was conducted in February 2009 by Vic McGrath and Alifereti to introduce the project.

This project aims to test an adaptive co-management framework approach for trochus and beche-de-mer (i.e. managed by the government and the communities) in two Torres Strait Island communities. The project will test the success of co-management in terms of social, economic, cultural and ecological outcomes for Torres Strait Islanders. The outcomes from this work will provide a basis for other island communities that wish to pursue a co-management approach to fisheries management in the Torres Strait.

Since the project introduction, community interviews followed by community fisheries management planning workshops have been conducted from June 2009-June 2010. The main outcome is the draft HC fisheries management plans for the two islands and are currently in the final stages of its review process.

Alifereti Tawake will give a briefing regarding some of the interim results from the project and co-present with Warraber and Erub working group representatives the draft sea cucumber and trochus fisheries management plans for each islands.

### **RECOMENDATION**

That TSHCWG **NOTE** the interim results from the research project “Livelihood benefits of co-management of hand collectable fisheries in the Torres Strait”.

### **FINANCIAL IMPLICATIONS**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>COMMUNITY BASED HARVEST STRATEGIES</b> Sea cucumber and trochus ranching	Agenda Item No. 3.2 <b>FOR DISCUSSION</b>

### **PURPOSE**

To provide TSHCWG with information regarding sea cucumber and trochus ranching as included in the draft Community Based Hand Collectable Harvest Strategies developed by Warraber and Erub (Darnley) Island communities.

### **BACKGROUND**

Restoring critical densities of adult sea cucumbers is a challenge that cannot be met by conventional management measures alone or suite of measures normally applied to sustain production of fisheries, such as size limits, TAC, closed areas/ seasons and gear restrictions. Once sea cucumbers are too far apart to reproduce, these measures cannot rebuild a population unless it is replenished by recruits from other populations ('sources' within a meta population) that remain at adequate densities.

Once this happens, a different suite of active fisheries management interventions must be considered to restore the spawning biomass of overexploited populations and 'fast track' recovery. These include: (1) restocking no-take zones with hatchery-reared juveniles (very expensive and limited to sandfish only at present); (2) aggregating remnant wild individuals in no-take zones; and (3) development of small enterprises to rear wild-caught sea cucumbers in simple sea pens, or dedicated mudflats and reef areas, to the size above sexual maturity that optimizes earnings (Bell *et al.*, 2008).

Based on this available scientific information, Warraber and Darnley Island communities have identified reef areas and lagoons to set aside as no-take areas referred to locally as '**reef gardens**' to restock wild sea cucumbers and trochus as part of their community based harvest strategies. The assumption is that aggregating multiple groups of spawning adults or mother stocks to enhance reproduction and to supply recruits to nearby reefs can help fast track the recovery of the sea cucumber fishery.

The proposal which is included in the developed draft HC fisheries community-based harvest strategies for Warraber and Darnley Island is:

1. To set aside 'Bet reef' as reef gardens for Warraber Island and trial restocking high value species such as sandfish from surrounding reefs.
2. To set aside 'Gasir lagoons and Patened reef' as reef gardens for Darnley Island and trial restocking high value species from nearby areas.

#### *References*

*Bell J.D., Purcell S.W., Nash W.J. (2008) Restoring small-scale fisheries for tropical sea cucumbers. Ocean & Coastal Management 51:589-593.*

### **RECOMMENDATION**

That the TSHCWG consider support trialling 'reef garden' concept as part of the community-based harvest strategies.

### **FINANCIAL IMPLICATIONS**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27- 28 July 2010</b>
<b>COMPLIANCE</b> Foreign Compliance Update	Agenda Item No. 4.1 <b>FOR NOTING</b>

#### **PURPOSE**

To provide the TSHCWG with a report on foreign compliance activities in Torres Strait with relation to Torres Strait Hand Collectable Fisheries.

#### **BACKGROUND**

On 1 October 2009 PNGs National Fisheries Authority introduced a three year nationwide closure of its sea cucumber fisheries. This was put into effect through the suspension of all PNG sea cucumber licences for a three year period.

Since the commencement of the closure AFMA has closely monitored the activities of fishers on the PNG side of Warrior Reef. To date there has been no evidence of any sea cucumber harvesting taking place. Recent communications with Daru based fisheries officers also supports that no large scale harvesting has taken place on the PNG side.

In addition to regular surface patrols being undertaken in the Warrior Reef area, AFMA will continue to monitor fishing activity on PNG's side of the Fisheries Jurisdiction Line.

#### **RECOMENDATION**

That the TSHCWG **NOTE** the report on foreign compliance activities in Torres Strait with relation to Torres Strait Hand Collectable Fisheries.

#### **FINANCIAL IMPLICATIONS**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>REPORTS</b> TSSAC Update	Agenda Item No. 5.1 <b>FOR NOTING</b>

#### **PURPOSE**

To provide the TSHCWG with an update on the activities of the Torres Strait Scientific Advisory Committee (TSSAC).

#### **BACKGROUND**

The Torres Strait Scientific Advisory Committee's (TSSAC) main role is to advise the PZJA on strategic direction, priorities and funding for research to meet the information needs and objectives of the PZJA and its relevant consultative bodies.

The last meetings of the TSSAC were held on the 12 April 2010 (TSSAC 51) and June 16 2010 (TSSAC 52).

The major outcome from TSSAC no.51 was to recommend a full research proposal being *An Integrated Management Strategy Evaluation (MSE) for the Torres Strait tropical rock lobster population* to AFMA for funding, subject to a revised proposal being developed that address concerns raised by TSSAC. The research proposal has been developed by CSIRO.

The major outcome from TSSAC No.52 were:

1. a review of the Annual Operational Plan for Torres Strait Fisheries<sup>6</sup>.
2. a review of draft report on cultural protocols for the Torres Strait and agreement to release the draft report for public comment, as well as to develop a stand-alone operational guide for researchers, based on the draft protocols.
3. an assessment the outcomes of the completed research '*Sustainable harvest strategies for the Torres Strait Hand Collectables Fisheries*' (PI: Mr Tim Skewes, CSIRO).
4. agreement on the process to call for pre-proposals for research starting in the 2011/2012 financial year.

Chair's summaries and minutes from these meetings are provided on the PZJA website at [www.pzja.gov.au/committees/working/tssac](http://www.pzja.gov.au/committees/working/tssac).

#### **RECOMMENDATION:**

The TSHCWG **NOTE** the update on the current activities of the Torres Strait Scientific Committee.

#### **FINANCIAL IMPLICATIONS:**

Nil

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<sup>6</sup> Research priorities for the Hand Collectable fisheries included in the 2010 Annual Operational Plan were discussed at agenda item 2.4

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>REPORTS</b> Yorke Island Sponge Farm update	Agenda Item No. 5.2 <b>FOR NOTING</b>

### **PURPOSE**

That the TSHCWG is provided with the current status of the Yorke Island Sponge Farm.

### **BACKGROUND**

Over the past four years a collaborative research study involving the Australian Institute of Marine Science (AIMS) and Masig community undertook research on the sponge. Funding was provided through Marine and Tropical Research Facility (MTSRF) and TSRA.

The research has pivoted around the ecological and commercial importance of sponges in the Torres Strait (including the bath sponge *Coscinoderma mathewsii*). The resulting data has provided information on sponge aquaculture (bath sponge market) for Torres Strait island communities. In addition, key ecological data important to sustainably manage this resource has been established. For the proposed aquaculture of *C. mathewsii* the supply of seed stock will initially rely on wild sponge collections.

Concurrently a business planning exercise was undertaken identifying business opportunities for the Masig community to harvest these sponges as a viable industry. This exercise involved a number of stakeholders including the Masig community, state and Australian Governments, TSRA, research institutions and independent specialists.

The business plan was approved after addressing a number of issues which were triggered by *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) requirements. In particular, how Hawksbill turtles may be impacted by the farm.

A MTSRF project is currently underway to address these concerns. Key objectives of the project include:

- training the Masig Turtle and Dugong officer and any other interested Masig community members in turtle capture, diet assessment, turtle monitoring techniques, data analysis and report writing;
- estimating the population size and population structure of marine turtles that reside at Masig and Kodall reefs (three species: hawksbill, green and loggerhead turtles);
- determining the diet of hawksbill turtles that reside at Masig and Kodall reefs. With a particular reference to whether they forage on *C. mathewsii* a species of sponge in the order Dictyoceratida; and
- quantifying the movements and home range of hawksbill turtles in the vicinity of the Masig sponge farm.

At the local level, Kailag Enterprises Pty Ltd was formed, led by a local a Board of Directors, to implement the commercial aquaculture sponge farm business plan. In early 2009 the initial stage of a commercial sponge farm was established at Masig (Yorke) Island where species of *Coscinoderma* sponges are now grown for trial harvesting.

The farm is currently stocked with about 7,500 to 8,000 sponges, with the expectation of about 12,000 sponges in the water by December 2009 and the potential for a further 75,000 by 2011. The recent monthly report to Kailag Enterprises is in Attachment 5.2A.

Research continues to investigate the number and distribution of sponges, in addition to factors that influence sponge populations, including disease. Overall this information will assist Torres Strait communities to sustainably farm bath sponges. Further research is proposed to fill the gaps in knowledge. Funding is still being negotiated.

## **DISCUSSION**

### *Other matters*

The area adjacent to the sponge farm is regularly frequented by commercial vessel traffic. With the substantial amount of investment in the water around Masig (Yorke) and potential new aquaculture sites yet to be surveyed in the region, there is a risk of marine traffic causing significant damage to the sponge farm sites and surrounding environment.

Kailag Enterprises Pty Ltd have already placed a number of navigational aids, as required by the initial business proposal.

### *Further research*

AIMS are proposing future research to address issues regarding larval recruits. Whilst the current estimate of *C. Mathewsii* biomass at Masig Island is thought to be sustainable for the initial collection to establish a farm, the ideal management of this resource would be geared to producing supply stock from larval recruits. "Closing the life cycle" of a targeted culture organism to supply seed stock is a key goal of any sustainable aquaculture venture. Producing stock from larval recruitment improves economic efficiency by streamlining production methods, and reduces the pressure of sourcing brood stock from wild harvest.

The proposed research project would aim to identify the reproductive (spawning cycle) season of *C. mathewsii* and establish the cues implicated in larval settlement and metamorphosis for *C. mathewsii*. Post settlement survival and initial growth would also be quantified. Overall, this information would provide a significant leap forward in the culture of this sponge, potentially allowing eventual removal of pressure linked to wild stock collection. Capitalising on the remarkable reproductive capacity peculiar to many sponges, spawning thousands of larvae over several weeks, would potentially reduce the effort to maintain the supply of seed stock. Moreover, manipulating larvae to recruit to custom made panels, which can then be directly deployed on the culture infrastructure, would remove the need to maintain explants during the grow out phase to control the "branding effect" associated with growing sponge explants in mesh panels.

## **RECOMMENDATION**

The TSHCWG **NOTE** the update on the current activities of the Masig Sponge Farm.

## **FINANCIAL IMPLICATIONS**

Nil

<b>TORRES STRAIT HAND COLLECTABLE WORKING GROUP</b>	<b>Meeting No. 4 27-28 July 2010</b>
<b>REPORTS</b> Strategic Assessments of Torres Strait Beche de mer and Trochus Fisheries	Agenda Item No. 5.3 <b>FOR NOTING</b>

#### **PURPOSE**

To inform the TSHCWG of the current progress towards meeting DEWHA Strategic Assessment recommendations on the Torres Strait Beche de mer and Trochus Fisheries.

#### **BACKGROUND**

Strategic Assessment of all export fisheries are a requirement for World Trade Organisation (WTO) endorsement. Without this WTO endorsement export of fishery product is not permitted.

Strategic Assessment are carried out by the Department of Environment, Water, Heritage and Arts (DEWHA) every three years. Both the Torres Strait Beche de mer (TSBDMF) and Trochus Fisheries (TSTF) WTO endorsements expire in November 2011.

DEWHA has made a number of recommendations for the two fisheries following the 2008 strategic assessments.

Continuation of WTO endorsement will be assessed based on the extent to which the DEWHA recommendations have been met.

AFMA has drafted progress report for DEWHA with respect to the current progress against meeting the DEWHA strategic assessment recommendations for the TSBDMF and the TSTF (Attachment 5.3A and B respectively).

#### **RECOMMENDATION**

The TSHCWG **NOTE** the progress towards meeting DEWHA Strategic Assessment for TSTF and TSBDMF

#### **FINANCIAL IMPLICATIONS**

Nil

<b>DEWHA Recommendation</b>	<b>Progress to March 30 2010</b>	<b>Due Date</b>
<p><b>Recommendation 1:</b> <i>PZJA to develop and finalise the harvest strategy for the TSBDMF with objectives, performance indicators and performance measures appropriate to the fishery by 30 June 2010. The harvest strategy should also implement measures to prevent localised depletion and incorporate a rebuilding strategy for overfished species.</i></p> <p><i>In the interim, PZJA to closely monitor catch levels in the TSBDMF until the harvest strategy is formally implemented. PZJA to take immediate action if the total catch is likely to be higher than the TAC for any target species.</i></p> <p><b>[continuation of 2005 recommendations 3, 9 and 11]</b></p>	<p>A CSIRO project currently underway in Torres Strait is investigating livelihood benefits to communities of community based harvest strategies. This research project is working with two communities to record their aspirations for community-based hand collectable harvest strategies.</p> <p>AFMA and TSRA are working with the researchers to integrate the outcomes from this research into community based harvest strategies for BDM in the Torres Strait.</p> <p>Development of the community based harvest strategies will have commenced by 30 June 2010.</p> <p>AFMA continues to monitor catch levels of beche de mer harvested in Torres Strait through docket books and through talking to fishers about current levels of activity. There is currently some interest being shown in the fishery and AFMA is working with fishers to ensure good catch information is provided.</p>	<p>30 June 2010</p>
<p><b>Recommendation 2:</b> <i>PZJA to undertake appropriate research on target species in the TSBDMF to inform the setting of sustainable catch levels through the harvest strategy. Research should focus on providing reliable biomass estimates and, where possible, also:</i></p> <ul style="list-style-type: none"> <li>• <i>address key gaps in the understanding of the biology and ecology of bêche-de-mer; ; and</i></li> <li>• <i>provide an assessment of the ecosystem impacts of the fishery in the Torres Strait.</i></li> </ul> <p><b>[continuation of 2005 recommendations 6 and 7]</b></p>	<p>CSIRO conducted a stock abundance survey of beche de mer species in eastern Torres Strait in March 2009 and central Torres Strait (Warrior Reef) in February 2010. CSIRO is also developing a decision support tool for use by the communities in managing their harvest strategies.</p> <p>AFMA has been provided with a draft report from the March 2009 surveys that indicate that black teatfish (a species with a zero Total Allowable Catch) shows signs of recovery from earlier over exploitation. Other species of beche de mer are also stable or showing signs of recovery. CSIRO may recommend reconsideration of current TAC's with a view of increasing these for some species based on the information from this survey.</p> <p>The final report will be completed by June 30 2010. The PZJA will exercise caution in considering any amendments to TAC's.</p>	<p>On-going</p>

	The abundance information from this research will be fundamental in developing the harvest strategies with communities for hand collectable fisheries (including beche de mer).	
<p><b>Recommendation 3:</b>  <i>PZJA to develop and implement measures to address compliance risks in the TSBDMF. This should include improvements in domestic compliance and reliable recording of catch from all sectors (commercial, recreational, indigenous and illegal).</i></p> <p><b>[continuation of 2005 recommendations 4 and 5]</b></p> <p><b>Recommendation 4:</b> <i>PZJA to continue to cooperate with other relevant jurisdictions to pursue</i></p>	<p>Community based harvest strategies will address some domestic compliance risks. In addition, TSRA is initiating a Ranger Programme which will result in increased monitoring throughout the Torres Straits. Routine compliance monitoring of IUU fishing is ongoing and is conducted on the basis of risk assessments. AFMA retains a strong focus on responding to IUU fishing.</p> <p>There has been additional surveillance activities in the Warrior Reef area in response to concerns about IUU. There has been a significant decrease in apprehensions of foreign fishers in the 6 months to November 30 2009 indicating that increased surveillance in 2008/2009 had the desired effect. In addition, PNG closed its beche de mer fishery in September 2009 and it is anticipated that this will remove some of the motivation for PNG fishers to come into Australian waters to fish illegally.</p> <p>Three PNG vessels were apprehended in 2006–07, fifteen in 2007–08, and nine in 2008–09. Eight of the apprehensions that took place in 2008–09 occurred on or in proximity to Warrior Reef.</p> <p>Monitoring of catch and effort in the fishery is an ongoing through collection of daily fishing records from non-Islander fishers and records of sales of catch from Islander commercial fishers. The introduction of Fish Receivers licences, currently being pursued, will strengthen data collection through mandatory reporting of all sales of catch from Torres Strait fisheries.</p> <p>Queensland Boating and Fisheries Patrol report no domestic compliance offences for the TSBDMF for 6 months from March 2009 to September 2009.</p> <p>The PZJA continues to engage PNG which is the only other relevant</p>	<p>On-going</p> <p>On-going</p>

*complementary management and research of shared stocks for all target species, which may be affected by cross-jurisdictional issues.*

jurisdiction. We continue to address issues related to illegal PNG fishing of stocks on Warrior Reef. PNG NFA has announced a closure to the BDM fishery as of the 1 October 2009 following requests from the AFMA at bi-laterals to match closures for high value species of BDM in the Australian jurisdiction. PNG NFA are members of the Torres Strait Scientific Advisory Committee. The aim of this forum is to improve on a collaborative approach to research.

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Attachment 5.3B

Performance Criteria	Level of Achievement to 30 March 2010	Deadline
<p><b>1:</b> DEWR to be informed of any proposed amendment to the management regime for the TSTF to enable DEWR to evaluate any impact on the ecological sustainability of the fishery.</p>	<p>There have been no amendments to the management regime for the TSTF.</p>	<p>Ongoing</p>
<p><b>2:</b> PZJA, within 2 years, to develop fishery specific objectives linked to performance indicators and performance measures for the target species. The performance of the fishery to be reviewed annually against these measures and the outcomes published.</p>	<p>CSIRO has undertaken research to provide stock abundance information and development of a decision support tool to facilitate the community based harvest strategies. Further development of harvest strategies will be investigated with participating communities in 2010/2011.</p>	<p>June 2010</p>
<p><b>3:</b> PZJA, within 2 years, to review stock assessment process and existing TAC levels to ensure that methods used to estimate potential yield and TACs are sufficiently precautionary, and recognise the level of risk.</p> <p><b>4:</b> PZJA to continue to work with Torres Strait communities, fishers and processors to ensure that adequate and reliable data, appropriate to the scale of the fishery, are collected from all sectors to ensure sustainable management of the Torres Strait trochus resource. Initial priority should be given to the docket book system for commercial sectors of the fishery. Options for the collection of non-commercial and illegal take will be evaluated, taking account of outcomes of recent research and compliance programs, and appropriate options progressively</p>	<p>The current TAC is 150 tonnes, based on a catch per community (10t for 15 communities). The 2009 CSIRO surveys of hand collectable species including trochus in eastern Torres Strait will provide recommendations on the appropriateness of the current TAC for trochus. These recommendations will be considered by the PZJA. A final report from the research surveys will be available by 30 June 2010.</p> <p>AFMA continues to collect trochus information through the docket book system. A data summary of trochus catch data obtained from docket books was distributed to stakeholders in July 2007. Legislative amendments to the TSF Act will lead to arrangements that make it compulsory for all buyers to hold a commonwealth fish receiver permit and to complete catch documentation. These measures will lead to a significant improvement in collection of catch data and monitoring of the fishery.</p>	<p>Ongoing</p> <p>Ongoing 2010</p>

Performance Criteria	Level of Achievement to 30 March 2010	Deadline
developed and implemented to improve estimates of all removals used in stock assessments and management controls.		
<b>5:</b> PZJA to continue to cooperate with other management agencies, research institutions, Torres Strait communities and the industry in efforts to identify and undertake research and monitoring projects to address future sustainability of the Torres Strait trochus fishery.	A trochus and bêche-de-mer survey training workshop was held on Thursday Island in March 2009 and involved 12 Torres Strait Islanders from several Communities. The workshop provided training to Community members to assist in monitoring of resources and the reef ecosystem. Several of the trained community members have assisted with research surveys in 2009 and 2010.	Ongoing
<b>6:</b> PZJA to investigate and, if necessary, progressively implement measures to minimise potential localised depletion in the fishery.	The PZJA is working with communities to investigate the feasibility of community based harvest strategies to prevent localised depletion.	30 June 2009