



Australian Government
Australian Fisheries Management Authority



**TORRES STRAIT TROPICAL ROCK LOBSTER
RESOURCE ASSESSMENT GROUP (TRL RAG)**

**MEETING NO. 10
23-24 AUGUST 2011**

NOVOTEL OASIS RESORT, CAIRNS QLD

MINUTES

CHAIR: MR JOHN POLLOCK

These are **DRAFT** minutes and should not be considered final until ratified at the next meeting of the TRL RAG.

Prepared by the Australian Fisheries Management Authority on behalf of the Torres Strait Protected Zone Joint Authority



Queensland
Government



TORRES STRAIT
PZJA
PROTECTED ZONE
JOINT AUTHORITY

FINAL AGENDA

1. Preliminaries (AFMA)
 - 1.1. Apologies/Adoption of agenda
 - 1.2. Correspondence
 - 1.3. Ratification of RAG #9 Minutes
 - 1.4. Action items from RAG #9

2. Update on each jurisdiction
 - 2.1. Torres Strait (verbal - AFMA)
 - 2.2. Queensland (verbal - DEEDI)
 - 2.3. PNG (verbal - NFA)

3. Stock assessment and TAC
 - 3.1. Report of the 2011 mid-year survey (CSIRO)
 - 3.2. Review 2010 Stock Assessment report and 2011 update (CSIRO)
 - 3.3. Preliminary TAC for 2012 (CSIRO)
 - 3.4. Forecast TAC for 2013 (CSIRO)
 - 3.5. Harvest Strategy terms and values (CSIRO)
 - 3.6. Survey cost benefits and TAC estimation (CSIRO)

4. Management Strategy Evaluation Update for Torres Strait (CSIRO)

5. TSSAC SOP – gaps in research priorities (AFMA)

6. Outcomes from PZJA consultative meetings
 - 6.1. TSSAC Meeting #53, #54 and #55 (AFMA)

7. Other business (AFMA)
 - 7.1. Date of next meeting
 - 7.2. Additional Correspondence



DECISION RECORD – TRL RAG NO. 10 (23-24 AUGUST 2011)

- 1.3.1 The TRL RAG agreed to adopt the minutes of TRL RAG No.9 as a true and accurate record of the meeting.
- 3.2.1 The TRL RAG accepted with several revisions (discussed) the 2011 assessment model presented by CSIRO.
- 3.3.1 The TRL RAG agreed to a preliminary TAC recommendation for 2012 of 964t (90%CI, 497-1432 t).
- 5.1.1 The TRL RAG noted the research priorities relevant to the Torres Strait fishery included in the 2011 Annual Operational Plan.
- 5.1.2 The TRL RAG agreed to request the TSSAC to consider an additional research priority relevant to the Torres Strait Fishery being to extend the current Management Strategy Evaluation model to areas of PNG.

DRAFT



The following members and observers were in attendance at TRL RAG No 10:

Members

Name	Role	Declaration of Interest
Mr John Pollock	Chairperson	Nil
Dr Annabel Jones	AFMA representative	Manager, AFMA Thursday Island
Dr Eva Plaganyi-Lloyd	Scientist	CSIRO
Mr Nokome Bentley	Scientist/consultant	Independent scientist
Mr Adam Leatherbarrow	Executive Officer (AFMA)	Senior Management Officer, AFMA Thursday Island
Mr Ian Jacobson	Fisheries Queensland representative	fisheries manager, DEEDI
Mr Brett Arlidge	Industry representative	QRLA President, Manager, M.G.Kailis QLD
Dr Clive Turnbull	Fisheries Queensland representative	DEEDI
Mr Meremi Maina	PNG industry representative	PNG Licence holder and processor
Mr Neville Nakata	TSRA	Fisheries Coordinator TSRA
Mr Philip Polon	PNG National Fisheries Authority representative	Executive manager PNG NFA
Mr Daniel Takai	IFAC representative	Pearl Island Seafoods
Mr Randall Owens	GBRMPA representative	GBRMPA
Mr Cyril Gabi	IFAC representative	Licence holder

Observers

Mr Trent Butcher	Observer	Licence holder
Dr Matthew Flood	Observer	ABARES
Dr Trevor Hutton	Observer	CSIRO
Mr Shane Fava	Observer	TSRA
Mr Kenny Bedford	Observer	TSRA and TSIRC
Mrs Melissa Brown	Observer	AFMA
Mr Roy Deng	Observer	CSIRO
Mr Darren Dennis	Observer	CSIRO
Dr Robert Campbell	Observer	CSIRO

Apologies

Mr Shaun McAtamney	Observer	Processor – ISP Seafoods
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ACTION ITEMS

#	Action Item	Agenda	Champion	Due Date
1)	The PNG NFA to contact AFMA to seek assistance to develop a project proposal to review the 2002 PNG Tropical Rock Lobster Management Plan.	7.3.3	PNG NFA	TBC
2)	TRL RAG EO to circulate Hilborn (2010) article on behalf of CSIRO.	9.3.2	TRL RAG EO CSIRO	Completed
3)	TRL RAG to discuss an appropriate data cut-off date for use in the stock assessment model and to advise CSIRO prior to the next stock assessment.	9.3.2	TRL RAG	Completed
4)	AFMA to contact DAFF regarding Intellectual Property and access to the economic data included in the TRL five-year business plan for use in the MSE project.	9.4.	AFMA	By TRL RAG 11
5)	TRL RAG EO to circulate the TRL five-year business plan to members when available.	9.7	TRL RAG EO	When available
6)	AFMA to write to all TVH TRL licence holders again seeking nominations for the position of TVH Industry member on the TRL RAG.	9.7.2	TRL RAG EO	Completed
7)	AFMA to post the 'Torres Strait Tropical Rock Lobster Fishery Catch Data & Research Summary 2010' on the PZJA website.	10.2.1	TRL RAG EO	Completed
8)	CSIRO to look into the possible underestimate of CPUE for the TVH sector, currently an input into the stock assessment model.	10.3.2	CSIRO	Completed
9)	AFMA to determine if it would currently be possible to examine individual diver catch rates from TRL04 logbook catch records to support CSIRO in standardising effort for individual diver/s.	10.3.2	AFMA	Completed
10)	AFMA to circulate background information on electronic docketbook project for improved TIB effort information.	10.3.2	TRL RAG EO	1/12/2011
11)	RAG Chair to pen letter to Ian McDonald requesting to include the additional research objective to the 2011 AOP.	10.5	TRL RAG Chair or EO	???
12)	AFMA to distribute additional correspondence presented to the TRL RAG by the Chair on roles and responsibilities of RAGs and MACs.	10.7	TRL RAG EO	1/12/2011

Meeting start: 9:15am.

Agenda Item 1.2 Correspondence



The TRL RAG **NOTED** the incoming correspondence provided in the meeting papers. No further action was requested.

Agenda Item 1.3 Ratification of TRL RAG No.9 minutes

1.3.1 The TRL RAG **AGREED** to adopt the minutes of TRL RAG No.9 as a true and accurate record of the meeting.

Agenda Item 1.4 Action items from TRL RAG No.9

The TRL RAG NOTED the progress towards the action items from TRL RAG Meeting No. 9. The majority of the action items have been completed or are in progress. In addition, the following specific comments are recorded.

Action item 1 – PNG NFA have yet to formally approach AFMA to seek support in reviewing the 2002 PNG Tropical Rock Lobster Management Plan. AFMA expressed their continued offer to provide technical support and advice on a review of the PNG Management Plan if requested and strongly support PNG NFA in their endeavours to review the plan.

Action item 3 – Addressed at Agenda Item 3.2.

Action Item 9 – AFMA had not yet contacted DAFF regarding Intellectual Property and access to the economic data included in the TRL five-year business plan for use in the MSE project. AFMA indicated this would be an Action Item to address before TRL RAG No. 11.

POST MEETING NOTE: DAFF have indicated that meta-data was not provided from the consultant (Marsden-Jacobs) on acceptance of the final report.

Agenda item 2.1 Torres Strait update

The TRL RAG **NOTED** the Torres Strait Lobster Fishery update provided by AFMA. In particular the TRL RAG raised the following points regarding the Torres Strait Fishery:

- The 2010 season was reportedly good for both the Traditional and non-Traditional Inhabitant sectors as predicted by the 2009 stock assessment and Total Allowable Catch (TAC) estimation process. Total catch of 470t was reported by Australian fishers.
- A summary of 2010 catch information was provided to the TRL RAG for comment. Amendments were requested by the members to the information sheet. The TRL RAG agreed that the summary sheet was a useful information tool for stakeholders and should be released publicly.
- The 2011 has also been a productive fishing year with 386t of catch recorded by Australian fishers to mid-June. Had a TAC been implemented, the total Australian would have been 71% of the Australian TAC for 2011 at that time.
- PNG vessels cross-endorsed to fish for lobster in Australian waters fished a total of 343 dory days of their allocated 968 days up until 18 August 2011 for an estimated 19t of lobster.

Action item 7	AFMA to post the 'Torres Strait Tropical Rock Lobster Fishery Catch Data & Research Summary 2010' on the PZJA website following incorporation of
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Agenda item 2.2 Queensland update

The TRL RAG noted the Queensland update provided by DEEDI. In particular the TRL RAG raised the following points regarding the Queensland East Coast Fishery:

- The 2010 season in the East Coast TRL fishery was the second year that the fishery operated under a quota system (195t TAC).
- In 2010, 128.8 tonnes of Tropical Rock Lobster were taken in 2010, being well below the TAC. The lowest standardised Catch Per Unit Effort (CPUE) recorded for several years was recorded for 2010.
- Catches are expected to be a little higher in 2011 with 125t recorded to mid-August; however it is unlikely that the allowable quota will be fulfilled and CPUE is expected to be low.
- The downward trend in CPUE in the East coast fishery may be due to dual-endorsed boats opting to fish in Torres Strait where catch rates have been high in 2010 and 2011 and/or habitat loss due to other environmental effects such as Cyclone Yasi.

Agenda item 2.3 PNG update

The TRL RAG noted the PNG update provided by PNG NFA. In particular the TRL RAG raised the following points regarding the PNG fishery.

- The PNG catch for 2010 was estimated at 292.8t from export data provided by PNG NFA.
- Eight licensed vessels operated in the PNG fishery with a total of 59 hookah divers and about 500-600 free divers.
- PNG are currently revising their data collection process and a new database is being developed. It is hoped the database restructure will lead to greater efficiencies in both monitoring and data entry.
- The 2011 catch is expected to be similar to 2010; however effort (number of vessels) in the fishery had declined due to mechanical problems and some vessels being involved in activities other than fishing.

Agenda item 3.1 Report of the 2011 mid-year survey

The TRL RAG noted the update provided by CSIRO on the 2011 mid-year survey conducted in June.

Results from the 2011 mid-season survey indicate that:

- The numbers of recruiting juvenile lobsters (aged 1 year plus (1⁺)) were above the long-term average. As these lobsters make up the fishable stock in 2012, this result indicates that 2012 is expected to also be a good season. The 2011 juvenile lobster (1⁺) abundance results continue an increasing trend in 1⁺ lobster numbers since 2008.
- The numbers of adult (aged 2⁺) lobsters were also significantly higher than the long-term average supporting the high catch reported in 2011.



It was highlighted that higher catch rates are likely to be influenced by lobster distribution and densities, of which the abundance of available food source is thought to be a key factor. TVH Industry member Trent Butcher noted that 2011 catch rates were above average supporting the high abundance of 2+ lobsters observed within the mid-season survey; however, the recorded catch rates may not reflect this due to a tendency for fishers to target tails in the early part of previous seasons. CSIRO noted that the MSE framework will provide a more in-depth look into environmental drivers and their effects on recruitment variability.

Agenda item 3.2 Review 2010 Stock Assessment report and 2011 update

The TRL RAG reviewed the revised stock assessment model presented by CSIRO. The model was an adequate fit to the available data and integrates all available information into a single framework.

The TRL RAG accepted the following changes to the previous stock assessment model:

- A hyper-stable relationship is assumed between catch rate and lobster abundance
- Lower bound of 0.25 set for the variance associated with the Catch Per Unit Effort (CPUE) data as it is less reliable than the survey data;
- The stock recruit variance parameter was increased from 0.3 to 0.5 to capture larger fluctuations in recruitment;
- Selectivity for the 1973-1988 period is different to the later years;
- Reference spawning biomass is set at the annual biomass of mature lobsters on 1 November each year i.e. at the start of the annual migration period; and
- Inclusion of forecasted 2011 catch at the TAC for that year i.e. 803t in 2011.
- Overall the 2010 TRL stock assessment indicated that the lobster resource is in good condition with spawning stock biomass in 2011 (B_{sp}) estimated to be above the target level and the long term average.

Members questioned the CPUE figures presented at the meeting and included in the stock assessment model, believing the current calculation appeared to be underestimated. CSIRO were requested to review their CPUE figures. Subsequently, it was determined that there had been miscalculation of effort resulting in lower than expected CPUE. CSIRO undertook to recalculate CPUE for inclusion in the model but recommended that the stock assessment outcomes be adopted with the outcomes presented at this meeting as the CPUE data has low weighting in the model and therefore changes to the CPUE will not change the outcomes significantly.

Action item 8	CSIRO to re-evaluate CPUE for the TVH sector correcting for the effort in the fishery and include the updated CPUE data for future stock assessments.
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3.2.1 The TRL RAG **AGREED** to accept the outcomes of the 2010 Stock Assessment report as presented at the TRL RAG Meeting No. 10.

The TRL RAG discussed a range of issues associated with the use of CPUE data in the stock assessment and options for improving the accuracy. Issues discussed included options for standardising CPUE data to increase the usefulness of this data. CSIRO in partnership with



AFMA agreed to investigate options for standardising CPUE by individual divers acknowledging individual diver's skill level played a key factor in catch rates.

Action item 9	AFMA to investigate if individual diver's are identified in database records from TRL04 logbook catch records to support CSIRO in standardising CPUE for individual diver/s.
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It was also noted by the TRL RAG that there are many issues with the accuracy of TIB sector data arising from the voluntary docket-book system. AFMA informed the TRL RAG of an electronic docket-book trial currently underway investigating the potential for a new catch reporting system that may improve the accuracy and timeliness of catch reporting from the non-islander sector. Further information on the outcomes of this project will be provided to the TRL RAG.

Action item 10	AFMA to provide outcomes from the electronic docket-book reporting trials to the TRL RAG on completion.
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CSIRO raised concerns around timeliness of finalising data such as catch history included in the stock assessment model, including PNG and Australian data. CSIRO expressed that catch data from AFMA is required six weeks prior to a TRL RAG to allow CSIRO sufficient time to undertake the stock assessment.

Agenda item 3.3 Preliminary TAC for 2012

As per the agreement to accept the outcomes from the 2010 stock assessment with the current CPUE estimates (see Recommendation 3.2.1), the TRL RAG agreed to accept the recommended preliminary TAC acknowledging the associated level of uncertainty.

The preliminary TAC recommendation for 2012. The preliminary TAC for 2012 is higher than those from the previous five years. As there will not be a pre-season survey in 2011, the TRL RAG agreed to accept this TAC as the final 2012 TAC to monitor the fishery, noting that there is large uncertainty around the TAC as evident from the 90%CI.

3.3.1 The TRL RAG **AGREED** to accept the recommended preliminary 2012 TAC of 964t (90%CI, 497-1432 t) as a final TAC to monitor the TRL fishery.

The TRL RAG discussed the likely consequences if the TAC was overfished in a single season, particularly in view of the characteristics of the Torres Strait fishery which fishes a single age group (2+). A precautionary approach when setting TAC's should be considered if the fishery moves to quota to account for events such as adverse environmental conditions.

Agenda item 3.4 Forecast TAC for 2013

The forecast TAC for 2013 was recommended at 769t (90%CI; 485–1053 t), to be refined in 2012 following the mid-season survey.

Agenda item 3.5 Harvest Strategy terms and values



CSIRO outlined their intention to use the Management Strategy Evaluation (MSE) tool currently in development to review the current harvest control rules and test alternatives. A review of the current harvest control rules has been recommended by the TRL RAG (decision number 3.5.1). The review would allow for the current reference points in the harvest strategy to be assessed for appropriateness under various scenarios, and potential options for additional reference points. For example, the trigger point for B_{sp} , below which fishing mortality rates (F) would decrease, will be reviewed to determine an appropriate level that would account for the highly variable but productive nature of the stock. The MSE will be used to test and provide information on the choice of suitable reference levels that form the harvest control strategy for the lobster fishery.

Agenda item 3.6 Survey cost benefits and TAC estimation

CSIRO presented some preliminary outcomes from a cost/benefit analysis of visual surveys (pre-season and/or mid-season surveys) against the benefit of a more or less conservative TAC being set, and associated potential loss of catch.

The preliminary results from this analysis indicate that the costs of a pre-season survey were outweighed by the revenue derived from the catch taken with a less conservative TAC set based on the pre-season surveys (if quota was implemented). Industry members strongly supported the view that less conservative TAC's (if quota is implemented) set through conducting visual surveys were beneficial to industry based on the potential increased catch to be derived.

The evidence for either or both the mid-season and pre-season surveys being of most benefit were less clear from the cost/benefit analysis as both surveys provide different types of information.

Further, if a quota management scheme was implemented and pre-season survey was not conducted, that a TAC should be set at a conservative (lower) level to reduce the risk of overfishing given the variability in the preliminary TAC estimates. CSIRO will provide further information on the cost-benefit

Agenda item 4 Management Strategy Evaluation Update for Torres Strait

CSIRO provided a comprehensive overview of the current progress on the MSE project to assess the potential impacts of current and alternative management arrangements on the fishers and the fishery in Torres Strait. The project commenced in July 2010 and is due to be completed by March 2012. The project has collated a wide range of biological, economic, social and cultural data and information. The CSIRO team has developed a spatial MSE operating model incorporating this information. The next step is use the MSE model to test a range of management scenarios and present the results to a MSE Steering Committee at a workshop in Brisbane in November 2011.

The TRL RAG commented on the appeal and usefulness of analysing this type of information spatially. Further information on the outcomes of this project will be provided to the TRL RAG in 2012.

Agenda item 5 TSSAC research priorities

AFMA presented the research priorities to the TRL RAG identified in the 2011 Annual Operational Plan as requested by the Torres Strait Scientific Advisory Committee. The Annual Operational Plan is developed by the TSSAC annual to clearly identify the research priorities



that the TSSAC believes are of high need in the short term. The TRL RAG accepted the research priorities including:

1. Fishery assessment
2. Efficacy of management arrangements
3. Impact of changed market preferences on fishing behaviour under output controls
4. Connectivity between stocks in the Torres strait and neighbouring jurisdictions including QLD and PNG

The TRL RAG agreed to extend the MSE results post March 2012 to provide outcomes for PNG. The TRL RAG noted that the TSSAC would only be able to incorporate the additional research priority in the 2012 Annual Operational Plan.

Action item 11	TRL RAG Chair to write to the TSSAC requesting addition of a research priority to extend the current Management Strategy Evaluation model to areas of PNG.
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5.1.1 The TRL RAG **NOTED** the research priorities relevant to the Torres Strait fishery included in the 2011 Annual Operational Plan.

5.1.2 The TRL RAG **AGREED** to request the TSSAC to consider an additional research priority relevant to the Torres Strait Fishery being to extend the current Management Strategy Evaluation model to areas of PNG.

Agenda Item 6.1 Outcomes from TSSAC No.53, No.54 and No.55

TRL RAG noted the major outcomes from TSSAC No.53, No.54 and No.55 as provided in the meeting papers.

Agenda item 7 Other business

The TRL RAG Chair presented a letter outlining key outcomes from the MAC / RAG workshop held in Canberra on 5 July 2011 for your information. The letter details the objectives of the RAG/MAC process along with their roles and responsibilities to inform sound fisheries management.

Action item 12	AFMA to distribute the correspondence regarding the roles and responsibilities of RAGs and MACs to the TRL RAG members
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Agenda Item 7.1 Next Meeting

The next TRL RAG meeting will be held in the second half of 2012 in Cairns; dates yet to be confirmed.

Meeting finished at 12.35 pm.

