



Australian Government

Australian Fisheries Management Authority

Northern Prawn Fishery Resource Assessment Group (NPRAG)

MINUTES

NPRAG Teleconference

14 February 2013

CHAIR: Dr Ian Knuckey

CONTENTS

CONTENTS	1
AGENDA.....	2
MEETING RECORD	4
Preliminaries	4
Agenda Item 1.1 Chairman’s Opening Remarks.....	4
Agenda Item 1.2 Apologies	4
Agenda Item 1.3 Adoption of Agenda.....	4
Agenda Item 1.4 Declaration of Interest	4
For Discussion.....	7
Agenda Item 2.1 Effort scenarios to apply in the 2013 assessment/prediction of the tiger and endeavour prawn fishery	7
Agenda Item 2.2 Adoption of new method for weighting and characterising length frequency samples.....	9
Agenda Item 2.3 Summary of information for face-to-face RAG meeting	10
Agenda Item 2.4 Process and timing for banana prawn prediction	10
For Noting	10
Agenda Item 3.1 Update on further investigation of ITEs and ITQs with an in- season update for white banana prawns	10
Other Business.....	11
Agenda Item 4.1 Arrangements for future meetings	11

AGENDA

1. Preliminaries

- 1.1. Chairs Opening Remarks
- 1.2. Apologies
- 1.3. Adoption of Agenda
- 1.4. Declaration of Interests

2. For discussion

- 2.1. Effort scenarios to apply in the 2013 assessment/prediction of the tiger and endeavour prawn fishery
- 2.2. Adoption of new method for weighting and characterising length frequency samples
- 2.3. Summary of information for the March 2013 NPRAG meeting
- 2.4. Process and timing for banana prawn prediction

3. For noting

- 3.1. Update on further investigation of a modified Individual Transferable Effort (ITE) management system and Individual Transferable Quotas (ITQs) with an in-season update for white banana prawns

4. Other business

- 4.1. Arrangements for future meetings

Attendance**Members**

Ian Knuckey, Chair

Ian Boot, Industry

Michael O'Brien, Industry

Ron Earle, Industry

Rik Buckworth, Commonwealth
Scientific and Industrial Research
Organisation (CSIRO)

Malcolm Haddon, CSIRO

Norm Hall, Murdoch University

James Woodhams, Australian Bureau
of Agricultural and Resource
Economics and Sciences (ABARES)

Fiona Hill, Australian Fisheries
Management Authority (AFMA)

Observers

Annie Jarrett, NPFI

Trevor Hutton, CSIRO

Charis Burridge, CSIRO

Roy Deng, CSIRO

Karen Dalli, AFMA

Apologies

Tom Kompas, Australian National
University (ANU)

Rodrigo Bustmante, CSIRO

MEETING RECORD

Preliminaries

Agenda Item 1.1 Chairman's Opening Remarks

The Northern Prawn Fishery Resource Assessment Group (NPRAG) Chair Dr Ian Knuckey opened the meeting at 3:10PM, welcoming all members and observers to the meeting. Dr Knuckey advised that the purpose of the teleconference was to cover off on a few key items that needed to be considered to feed information into the 2013 stock assessment models for key target species.

Agenda Item 1.2 Apologies

Apologies were received from Professor Tom Kompas (Australian National University, economist) and Dr Rodrigo Bustamante (CSIRO).

Agenda Item 1.3 Adoption of Agenda

Member adopted the items for the teleconference agenda, with the addition of details of next meeting to be added under *Other Business*.

Agenda Item 1.4 Declaration of Interest

The Chairman drew attention to a renewed focus on conflict of interest declarations at MACs and RAGs. This is to ensure that declarations of interest are recorded in a consistent approach across Commonwealth-managed fisheries.

Due to the similar nature of agenda items 2.1 to 2.4, members declared their interest in relation to those agenda items in the first instance, in accordance with section 55 of the *Fisheries Administration Act 1991*. Declarations are detailed in table 1 below. Where members or observers declared an interest they placed the receiver down while remaining members discussed whether it would be appropriate for the member and/or observer to participate in the discussion and recommendation.

Conflicts related to item 3.1 were discussed separately and a recorded in table 2 below.

Table 1. Participant Interest declared in relation to items 2.1 to 2.4.

Name	Interests declared
Ian Knuckey	Scientific member on the Northern Prawn Fishery Management Advisory Committee (NORMAC). Submitted a tender for the provision of at-sea and data entry services for the NPF Scientific Observer Program. The Chair excused himself while the remaining RAG members discussed his participation in agenda items 2.1 to 2.4. It was agreed that we needed a Chair for these discussions, however if the NPF Scientific Observer Program was being discussed, Ian would be asked to hang up and would be dialled back in once the discussions had finished.
Fiona Hill	AFMA employee, no pecuniary interest.
Rik Buckworth	CSIRO employee, receives funds from projects being discussed at items 2.1 to 2.4, and will be seeking funds in future to undertake similar work. Dr Buckworth excused himself while the remaining RAG members discussed his participation in agenda items 2.1 to 2.4. It was agreed as the presenter of the papers, and the PI on the projects, Dr Buckworth's participation was necessary.
Malcolm Haddon	CSIRO employee. No pecuniary interest.
Norm Hall	Murdoch university employee. No pecuniary interest.
Mike O'Brien	Industry representative. Employee of a company that owns Statutory Fishing Rights (SFRs) in the Northern Prawn Fishery (NPF). Interested in results of the assessments from a commercial view point. Mr O'Brien excused himself while the remaining members discussed his participation in agenda items 2.1 to 2.4. It was agreed that industry participation was vital to ensure transfer of information between industry and scientists.
Ian Boot	Industry representative. Owns licences in the NPF. Mr Boot excused himself while the remaining members discussed his participation in agenda items 2.1 to 2.4. It was agreed that industry participation was vital to ensure transfer of information between industry and scientists.
Ron Earle	Industry representative. SFR holder and boat owner in the NPF. Mr Earle excused himself while the remaining members discussed his participation in agenda items 2.1 to 2.4. It was agreed that industry participation was vital to ensure transfer of information between industry and scientists.
James Woodhams	ABARES employee. No pecuniary interest.
Annie Jarrett	Contractor to NORMAC and the NPF Industry Pty Ltd (NPFi). No pecuniary interest. Ms Jarrett excused herself while the remaining members discussed her participation in agenda items 2.1 to 2.4. It was agreed that industry participation was vital to ensure transfer of information between industry and scientists.
Trevor Hutton	CSIRO employee. Works on projects related to the NPF that currently receive funding and will seek to receive funding in the future. Dr Hutton excused himself while the remaining RAG members discussed his participation in agenda items 2.1 to 2.4. It was agreed that CSIRO staff involvement in the discussion was necessary.
Charis Burridge	CSIRO employee. Works on projects related to the NPF that currently receives funding and will seek to receive funding in the future. Dr Burridge excused herself while the remaining RAG members discussed her participation in agenda items 2.1 to 2.4. It was agreed that CSIRO staff involvement in the discussion was necessary.
Roy Deng	CSIRO employee. Works on projects related to the NPF that currently receives funding and will seek to receive funding in the future. Dr Deng excused himself while the remaining RAG members discussed his participation in agenda items 2.1 to 2.4. It was agreed that CSIRO staff involvement in the discussion was necessary.
Karen Dalli	AFMA employee, no pecuniary interest.

Table 2. Participant Interest declared in relation to item 3.1.

Name	Interests declared
Ian Knuckey	Scientific member on the Northern Prawn Fishery Management Advisory Committee (NORMAC). Submitted a tender for the provision of at-sea and data entry services for the NPF Scientific Observer Program. The Chair excused himself while the remaining RAG members discussed his participation in agenda items 3.1. It was agreed that as it an update and not for decision Dr Knuckey should be present for the discussions.
Fiona Hill	AFMA employee. Perceived conflict due to Government position on Individual Transferable Quotas. Ms Hill excused herself while the remaining members discussed her participation in agenda item 3.1. It was agreed that AFMA employees should be present for discussions.
Rik Buckworth	CSIRO employee, no conflict.
Malcolm Haddon	CSIRO employee, no conflict.
Norm Hall	Murdoch University employee, no conflict.
Mike O'Brien	Industry representative. Conflict due to preference for an effort based management system in the NPF. Mr O'Brien excused himself while the remaining members discussed his participation in agenda item 3.1. It was agreed that as industry members are the intended recipients of the update, they should be present.
Ian Boot	Industry representative. Conflict due to preference for an effort based management system in the NPF. Mr Boot excused himself while the remaining members discussed his participation in agenda item 3.1. It was agreed that as industry members are the intended recipients of the update, they should be present.
Ron Earle	Industry representative. Conflict due to preference for an effort based management system in the NPF. Mr Earle excused himself while the remaining members discussed his participation in agenda item 3.1. It was agreed that as industry members are the intended recipients of the update, they should be present.
James Woodhams	ABARES employee, no conflict.
Annie Jarrett	Contractor to NORMAC and the NPF Industry Pty Ltd (NPFi). Conflict due to preference for an effort based management system in the NPF. Ms Jarrett excused herself while the remaining members discussed her participation in agenda item 3.1. It was agreed that as industry members are the intended recipients of the update, they should be present.
Trevor Hutton	CSIRO employee, no conflict.
Charise Burridge	CSIRO employee, no conflict.
Roy Deng	CSIRO employee, no conflict.
Karen Dalli	AFMA employee. Perceived conflict due to Government position on Individual Transferable Quotas. Ms Dalli excused herself while the remaining members discussed her participation in agenda item 3.1. It was agreed that AFMA employees should be present for discussions.

For Discussion

Agenda Item 2.1 Effort scenarios to apply in the 2013 assessment/prediction of the tiger and endeavour prawn fishery

It was noted that Dr Buckworth circulated two papers (graphical outputs) for this item. Dr Buckworth outlined that the prediction of a Total Allowable Effort (TAE) or Total Allowable Catch (TAC) for the fishery is dependent on the effort pattern for the coming year. The effort pattern that best matches what is likely to happen in the fishery will provide optimal results for that season.

The RAG heard that the actual effort pattern for the 2012 fishing year was not available as CSIRO were still processing logbook data, in particular the species split work is required to complete this.

Attachment A to the agenda paper had three graphical representations of effort patterns – the average of 1996, 1998 and 1999; the 2011 actual effort pattern; and the RAG effort pattern (see Figure 1). Attachment B to the agenda paper had a graphical representation of historical banana prawn patterns to highlight the average/poor years. It was noted that the poor years are all pre-buyout which is not ideal as fishing behaviour has changed with a reduced fleet. Dr Buckworth advised the RAG that CSIRO were unsure what to expect in 2013 as it is expected to be an average season for banana prawns, unlike recent years.

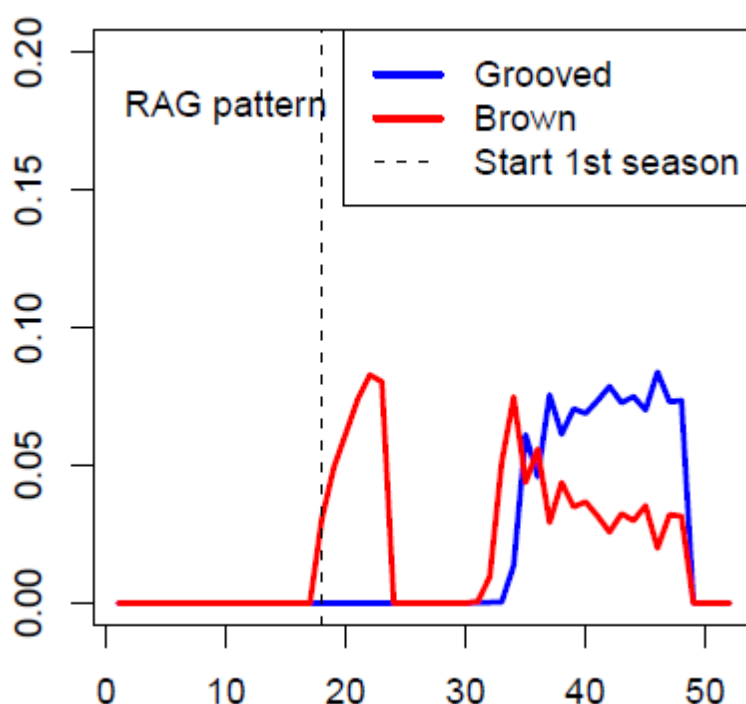


Figure 1: Previous NPRAG agreed effort pattern by week, with relative fishing effort on the y-axis and fishing week on the x-axis. Red line is effort on brown tiger prawns, blue is effort on grooved tiger prawns and the dotted line is at 1 May (source: CSIRO).

Dr Buckworth sought input from industry members on the expectation that it will be an average season for banana prawns. All three industry members agreed that 2013 is likely to be an average to poor banana prawn season.

The RAG heard that the 'RAG effort pattern' used in previous years did not match the actual effort in recent years, largely due to the above average banana prawn years experienced.

The following suggestions around amendments to the 'RAG effort pattern' were discussed:

1. effort on grooved tiger prawns should start earlier;
2. from week 38 onwards reduce effort on brown tiger prawns (similar to 2011 actual); and
3. use the RAG effort pattern for the first season and the 2011 actual effort for second season.

Dr Knuckey circulated an image summarising the discussion around the expected effort pattern for 2013, provided at Figure 2 below.

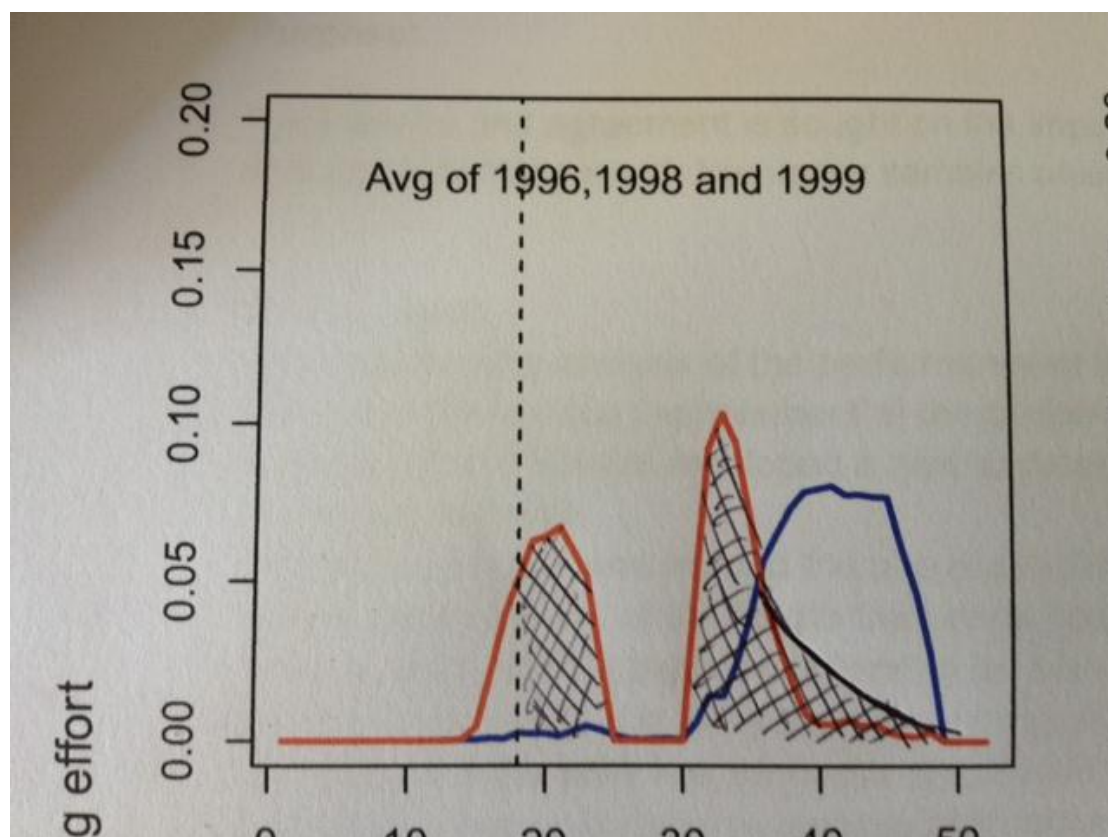


Figure 2: 2013 NPRAG effort pattern, with relative fishing effort on the y-axis and fishing week on the x-axis. Red line is effort on brown tiger prawns, blue is effort on grooved tiger prawns and the dotted line is at 1 May.

NPRAG unanimously agreed to use the revised NPRAG effort pattern for the 2013 assessment.

ACTION: CSIRO to distribute a formalised 2013 NPRAG effort pattern to RAG members.

Agenda Item 2.2 Adoption of new method for weighting and characterising length frequency samples

Dr Charis Burridge (CSIRO) introduced the second agenda item which was consideration of a new method for weighting and characterising length frequency samples.

RAG members heard that the new method had the potential to improve the performance of the NPF assessment by adopting a different statistical technique to that used in the past. There is a component of the NPF assessment model which processes the length/frequency using a multinomial distribution. The challenge with using this distribution is that the actual variation seen in length frequency data is greater, so a parameter called 'effective sample size' has been introduced to account for this, as well as the clustered nature of length frequency samples of prawns.

The new method influences the effective sample size being used by the model, and as such it is not a radical change to the model. The change is important, however, as it characterises the uncertainty with length frequency data being used in the model. CSIRO believe that the current method is overly precautionary and the change in methods would provide more certainty around the outputs of the model.

The RAG heard that the new approach performs well, and CSIRO were seeking RAG advice on including this method for 2013 rather than the existing approach.

Dr Haddon, supported by Dr Hall and industry members, raised concern with making a straight change to the model, and suggested it would be more appropriate to take a step-wise approach so the RAG are able to review a comparison of the two approaches and the performance of the outputs in the relevant year.

It was agreed that the final decision regarding which method to use should be appropriately considered. As such the current approach will continue as base-case with the new approach modelled as a separate scenario for comparison by the RAG. It was noted that it may not be possible to prepare this information for the face-to-face meeting, however it was agreed that a comparison would be included in the report submitted to AFMA in June.

ACTION: CSIRO to run model using existing approach for face-to-face meeting, and if possible provide a comparison between the new approach and the existing approach.

ACTION: CSIRO to prepare a summary of whether the outcome using the new method is either more or less certain than the existing method for RAG consideration.

The RAG also discussed what would be the other 'base case' scenarios incorporated into the model for the 2013 tiger and blue endeavour prawn assessments. The RAG noted that for the last few years, for brown and grooved tiger prawns we have used the full Size Structure assessment model and for blue endeavour prawns the Hierarchical Bayesian approach. For sensitivity analysis CSIRO have also run the Delay Difference model and changes to fishing power estimates. The RAG agreed that this approach, together with the same base-case assumptions and parameters should be taken in 2013. The only exception to this would be the use of the new effort pattern described above.

ACTION: CSIRO to use same base case as the 2012 assessment but with the revised RAG effort pattern.

Agenda Item 2.3 Summary of information for face-to-face RAG meeting

Dr Buckworth gave a summary of the information intended to be provided at the face-to-face RAG meeting, as described in the agenda item paper.

The RAG noted there were time constraints about when the banana prawn assessment could be undertaken due to the availability of rainfall data to feed into the model. It was noted that the banana prawn component would not only predict a TAC for the 2013 season, but would also run the analysis outlined in the Management Strategy Evaluation project to determine a Maximum Economic Yield (MEY)-based trigger (kg/boat/day).

There was some discussion amongst members around the MEY based trigger given that the RAG hasn't seen the methodology before. Dr Buckworth noted there were some concerns with the MEY-trigger as it relies on the Venables model, but the methodology used in the MSE project was not overly sensitive to the data coming from the Venables model, so shouldn't be a cause for much concern.

ACTION: Dr Buckworth to provide a summary of the MEY-trigger approach at the face-to-face meeting when presenting outputs of analysis.

ACTION: CSIRO to provide a list of what will be included in base case for future meetings so a review of what is included and what is not can be undertaken by the RAG.

Agenda Item 2.4 Process and timing for banana prawn prediction

The RAG noted that the TAC and MEY trigger predictions won't be available until after 18 March. It was also noted that if the management of the fishery changes to rely on either of these methods, we will be faced with these timing challenges every year.

Discussion around timing of the face-to-face meeting followed on from these discussions and are summarised at agenda item 4.1.

For Noting

Agenda Item 3.1 Update on further investigation of ITEs and ITQs with an in-season update for white banana prawns

Ms Hill advised the RAG that at its December Commission meeting, the Commission had made a decision that as of 2014, the current management system for the NPF would no longer be in place. Ms Hill advised the RAG that the Commission were very appreciative of the research work and advice that was provided for the December meeting, and noted that all involved were under great time pressure.

The Commission also made a recommendation that additional analysis be undertaken on the following two options:

1. Modified ITE system;
2. ITQ system with an in-season update for white banana prawns

Ms Hill advised that AFMA were in the process of preparing a project plan, which would be distributed to NPF in the first instance for comment, and following this

would be provided to NPRAG and NORMAC. It was noted that the work in the coming months would focus more on risks associated with the two approaches, not only in terms of potential economic loss to industry but also risk to Government.

It was also noted that further work around developing the modified ITE system was needed in terms of setting decision rules around the SFR surrender provisions, looking into the MEY-trigger for banana prawns and generally operationalising the proposals in the alternative paper provided to the AFMA Commission in December 2012. It was agreed that RAG input into this work was very important.

In relation to the ITQ option, it was noted that further work around how an in-season update would be operationalised would be required, also needing RAG input.

Ms Hill advised that the RAG would be kept in the loop over the coming weeks as more information comes to hand.

Industry members raised concern with the requirement to provide advice back to the AFMA Commission in June this year, stating that it would be very undesirable to be in a similar situation to December last year where people are under a lot of pressure to provide advice in a short amount of time. Industry members also raised concerns in relation to the costs associated with the additional work. Ms Hill noted that this information would be included in the project plan, and that it would be provided to industry as soon as possible.

Miss Hill advised that AFMA Management would go back to the Commission seeking additional time for the work to be undertaken if the June deadline can't be achieved.

Other Business

Agenda Item 4.1 Arrangements for future meetings

The RAG discussed arrangements for future meetings to discuss outputs of the models for the key target species. A face-to-face RAG meeting had been pencilled in for early March 2013. However given the fishery is to remain under effort-based management controls in 2013 and industry members are under a lot of pressure in March leading up to the Banana prawn season, the RAG agreed to hold the face-to-face meeting in late April. This will also provide CSIRO with additional time to run the two statistical methods for the length frequency data for consideration by RAG members.

It was noted that early advice on the red-legged banana prawn fishery would be required to input into the model and to assess the decision rules outlined in the Harvest Strategy. RAG members agreed that a teleconference be held in mid-March to discuss this item.

NPRAG teleconference to be held on 12 March 2013 at 3PM (CBR/MEL); 2PM (QLD); 12PM (WA); 1:30PM (NT)
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NPRAG meeting to be held in Brisbane on 30 April 2013

ACTION: AFMA to distribute RAG membership renewal timing to RAG members

Dr Ian Knuckey
NPRAG Chair
12 March 2013