



Northern Prawn Fishery Resource Assessment Group (NPRAG) Meeting

Teleconference Minutes

Date: 03 February 2021

Time: 10.00 am – 12.40 pm (AEDT)

Date: 08 February 2021

Time: 2.00 pm – 3.00 pm (AEDT)

Attendees

Name	Member type i.e. industry member
Ian Knuckey	Chair
Tom Kompas	Economic Member
Rik Buckworth	Scientific Member
David Brewer	Scientific Member
Phil Robson	Industry Member
Darci Wallis	AFMA Member
Stephen Eves	Executive Officer - AFMA
Steve Bolton	Observer - AFMA
Annie Jarrett	Invited Participant - NPFI
Adrienne Laird	Observer - NPFI
Trevor Hutton	Observer – CSIRO
Roy Deng	Observer – CSIRO
Shijie Zhou	Observer – CSIRO
Judy Upston	Observer – CSIRO
Ian Butler	Observer – ABARES
Robert Curtotti	Observer – ABARES

1 Preliminaries

1.1 Welcome and apologies

The Northern Prawn Fishery Resource Assessment Group (NPRAG) Chair, Ian Knuckey, opened the teleconference at 10.00 am (AEDT) on 03 February 2021 with an Acknowledgement of Country. The Chair noted apologies from Industry member Ian Boot.

1.2 Adoption of agenda

The Chair requested that the NPRAG consider the draft agenda (Attachment 1), identify any required amendments, and adopt the draft agenda for the meeting. NPRAG noted that three research proposals were also being presented for its consideration and the agenda was then adopted without any further changes.

1.3 Declaration of interests

The Chair requested that NPRAG members consider the standing table of declared interests (**Attachment 2**) and individually declare whether the stated interests are accurate, and if not, provide an update on those.

It was noted industry participants had a potential conflict with agenda item 2 – broodstock and agenda item 3 – research, and were asked to leave the meeting while their involvement in these discussions were considered. It was also noted that CSIRO participants had a potential conflict with agenda item 3 – research. It was agreed industry and CSIRO participants would provide a

valuable contribution to the broodstock and research discussions but would be asked to leave the meeting if their participation was considered to be in conflict at any point.

No other apparent conflicts of interest with the agenda items were identified. It was stated that if a particular conflict arose for any participant regarding an agenda item, that the RAG would note this and the relevant party would be asked to leave the teleconference until a decision was made about the appropriate course of action.

1.4 Minutes from previous meetings

It was noted that the minutes from the 30 November and 02 December 2020 meeting were accepted out-of-session via email as a true and accurate record of the meeting.

2 Broodstock

Ms Darci Wallis, AFMA Member, presented the item seeking a recommendation on a sustainable approach for *Penaeus monodon* catches in the NPF. NPRAG noted the key results of the *P. monodon* stock assessment and the high level of uncertainty, as discussed at its previous meeting.

The distribution of *P. monodon* and whether it could be considered one stock or multiple stocks across the fishery was discussed. As the other NPF target species are treated as single stocks across the fishery, it was suggested the default, without additional information to indicate otherwise, is to also treat *P. monodon* as a single stock.

It was questioned how much additional data would be needed to improve the certainty of the CPUE standardisation and stock assessment. It was noted that stock assessment using time series data typically requires data from at least 10 to 15 years of fishing.

It was suggested that *P. monodon* has a life cycle of approximately one to two years and is protected by the management framework designed to protect the juveniles and spawning population of the other target prawn species. Although, it was also suggested that, as *P. monodon* is a byproduct of the commercial fishery, the management framework doesn't necessarily protect its lifecycle in the same way it protects the lifecycles of most other target species. In addition, some of the management arrangements don't apply where *P. monodon* are targeted, such as fishing in areas outside the mid-season closure. NPRAG noted that the *P. monodon* recruitment, similar to other prawn species, likely fluctuates significantly from year-to-year due to changing environmental conditions. Consequently, it is not clear whether variations in catch rates are related to fishing pressure or natural environmental changes. Given the large fluctuations from year-to-year, it was suggested that caution should be applied before overfishing is considered to be occurring based on a spike in catch any one year. It was also suggested that the management framework in place for banana prawns accounts for large inter-annual variations. It may therefore be possible to design a management framework that accounts for the large *P. monodon* fluctuations while also applying a little more precaution given the sparsity of data on the species.

Considering the different nature of fishing between broodstock collection and commercial byproduct catches, it was suggested that monitoring catch rates in the targeted broodstock 'hotspots' may be more informative than areas where *P. monodon* is taken as byproduct. Catches may fluctuate with environmental conditions more in areas where *P. monodon* is taken as byproduct compared to the 'hotspot' areas where it is targeted for broodstock.

The accuracy of reporting was discussed and whether improvements in reporting could increase the accuracy of the stock assessment. It was advised that the reporting for targeted broodstock

fishing was fairly thorough, but some complications recording *P. monodon* as byproduct during commercial fishing were identified. As the volume of *P. monodon* caught during commercial fishing is dwarfed by the volume of banana and brown/grooved tiger prawns, the deficiencies in recording *P. monodon* is problematic – some prawns may be added to a box and recorded when the box is full, while others may not be recorded if only a few individuals are caught during a whole day. Clarification was sought as to whether the AFMA Scientific Observers collect data on *P. monodon*. It was advised the data collected by Scientific Observers will be confirmed.

The application of the stock assessment and which model to use was discussed. It was advised that, due to lack of data, it is difficult to determine which of the models provides a more reliable biomass estimate. However, as more data is collected, the catch-rate model will become the more reliable model.

In considering the results of the stock assessment, the RAG agreed that:

- Based on the results of the model (noting there is significant uncertainty within the model) the RAG does not believe that the stock is currently overfished or overfishing is occurring. As with other *Penaeus* species, there is significant annual variability for these stocks due to environmental factors and therefore limit reference points (e.g. tiger prawns) are set based on the moving average of B_Y/B_{MSY} and other indicators to take account of this variability.
- Existing management controls that are in place for banana and tiger prawn fisheries (e.g. seasonal closures, gear restrictions) also provide some protection to *P. monodon* populations.

The NPRAG made the following recommendations in relation to *P. monodon*:

- Maintain status quo for the management of *P. monodon*, noting there is significant variability in the incidental catches of *P. monodon* taken within the commercial fishery, noting that this will allow the continuation (and improvement where possible) of current *P. monodon* data collection and monitoring across the fishery (commercial byproduct and targeted broodstock collection).
- Undertake another stock assessment in 3 years (2024), which will include data up until 2023 (including broodstock collection discard data from 2017-2023).
- In the interim, commence annual monitoring of total catch (5-year running average) against the two estimates of MSY from the model to assess possible risk to stock sustainability. Total catch (including discard mortality) less than MSY is not likely to lead to overfishing.

While the RAG recommended the maintenance of current catch levels, it did not provide any recommendation on sustainable take between the commercial byproduct or targeted broodstock collection as this should be considered by NORMAC.

It was noted that the peak period for broodstock demand is during June to August each year. Considering this, it was suggested that the total *P. monodon* catch could be reviewed after the banana prawn season, as the largest proportion of total *P. monodon* is caught during the start of the banana prawn season in the higher catch years. This could potentially allow the targeted broodstock fishing limit to be reviewed mid-year. It was cautioned, however, that targeted broodstock and *P. monodon* taken as commercial byproduct are caught in different areas and this should also be considered when reviewing any broodstock catch limits.

The RAG was asked to provide CSIRO with any final comments on the *P. monodon* assessment report during the following week out-of-session before the report is finalised.

Actions:

- AFMA to confirm the type of *P. monodon* data collected by Scientific Observers.
- NPRAG to provide CSIRO with any final comments on the *P. monodon* assessment report out-of-session by COB 10/02/2021.

3 Research proposals

Endeavour prawn assessment

NPRAG considered CSIRO's endeavour prawn project proposal and discussed the feasibility of the objectives. The RAG had previously requested that critical milestones be implemented after each objective. It was advised that, in terms of priorities, the CPUE standardisation objective was more important than updating growth data and should potentially be undertaken first. However, it was noted that updating growth data will resolve some of the data deficiencies and might provide the same level of information for both Red and Blue Endeavour Prawns. Red Endeavour Prawns may then be able to be re-included in the stock assessment model. Following this, the CPUE standardisation work is important to improve the stock assessment for both endeavour prawn species.

NPRAG maintained it would like to review the results of the CPUE standardisation before further work on the stock assessment is undertaken. NPRAG supported the proposal with an amendment to include a critical milestone after the growth data (objective 1) and CPUE standardisation (objective 2) objectives are undertaken to allow the RAG to review the certainty of the results and recommend whether the stock assessment work (objective 3-5) should proceed.

An Integrated Monitoring Program for the Northern Prawn Fishery: 2021-2024

The integrated monitoring program (IMP) proposal was reviewed and the cost structure considered. Although the total cost had reduced compared to the previous three-year project, the cost per survey had increased attributed mainly to an increase in individual CSIRO staff salaries. NPRAG unanimously supported the project.

Updated NPF species distribution data, models and sampling schemes – towards regular ongoing monitoring. Additional year due to COVID19 - Sampling in 2021/2022

It was noted that sampling under the species split project was disrupted during the 2020 banana prawn season due to the operational constraints caused by COVID19. Consequently, a proposal to extend the project was presented for RAG review. An explanation of the activities that were unable to be undertaken and the cost implications was provided. The RAG advised it was unable to provide a recommendation until it had sufficient time to consider the proposal and suggested that a teleconference be organised the following week to finalise its recommendation. In preparation for the teleconference, the RAG requested a breakdown of the costs for the project extension and an acquittal of the funds spent during the 2020 banana prawn season.

On Monday 08 February 2021, NPRAG reconvened to finalise its recommendation on the proposal to extend the species split project. A breakdown of the costs for the project extension and an acquittal of the funds spent during the 2020 banana prawn season was presented as requested. NPRAG considered the proposal, noting the following points:

- Funding has already been invested in the project and the outputs are of importance to the species split model and therefore the broader fishery stock assessment. Without the 12-month project extension, the resulting time series from the project to date would be less

than the necessary two full years (both seasons), therefore compromising the main objectives of the project.

- CSIRO provided additional explanation on the expenditure to date and the reason for the increases in the costs for the additional year of sampling.

Considering this, NPRAG provided in-principle support to extend the species split project and the necessary additional funding, noting the following:

- Industry sought further clarification on some outstanding questions regarding expenditure and proposed costings which it agreed to clarify directly with CSIRO out-of-session.
- While COVID was a significant factor in insufficient sample collection during the 2020 banana prawn season, there is a potential risk that an insufficient number of samples may be collected during a 'normal' banana season, due to the limited number of vessels targeting tiger prawns. Therefore, following the 2021 banana prawn season, NPRAG agreed to review the project progress and the sampling effectiveness and whether changes are required to the project design. If insufficient samples are collected NPRAG may reconsider whether to continue with the additional year sampling.

Actions:

- CSIRO to update the endeavour prawn assessment proposal to ensure a critical milestone is included after objectives one and two to allow the RAG to review the results before the stock assessment work proceeds
- CSIRO to provide Industry with further clarification on some outstanding questions regarding the species split project expenditure and proposed costings out-of-session.

4 Action items

The RAG agreed to review the action items at its next meeting due to time constraints.

5 Other business

No other items of business were discussed.

6 Next meeting

After considering the species split extension project under agenda item 3, NPRAG agreed to conclude for the day and reconvene on Monday 08 February 2021 at 2.00 pm (AEDT).

The Chair advised the next meeting is scheduled for May 2021 and brought the meeting to a close at 3.00 pm on Monday 08 February 2021.

Signed (Chairperson):

Date: 19/03/2021

Attachments

- 1) NPRAG 03 February 2021 Final Agenda
- 2) NPRAG 03 February 2021 Declared conflicts of Interest

Final Agenda

Northern Prawn Fishery Resource Assessment Group (NPRAG)
teleconference

03 February 2021

10.00 am – 12.30 pm (AEDT)

Item	Responsibility	Paper	Expected outcome
1. Introduction / Meeting Management <ul style="list-style-type: none"> Welcome Adoption of agenda Declaration of interests Minutes from previous meetings 	Chair	Yes	
2. Broodstock <ul style="list-style-type: none"> CSIRO presentation on updates to the <i>P. monodon</i> stock assessment project request by NPRAG Review and provide recommendation on current catch limit 	CSIRO/AFMA	Yes	Review the 9000 cap and recommend limit for 2021.
3. Action items	AFMA	Yes	Note progress on action items from previous meetings and provide feedback and comments where appropriate.
4. Other business	NPRAG		

NPRAG Declared Conflicts of Interest

Participant	Membership	Interest Declared
Ian Knuckey	Chair	<p>Director - Fishwell Consulting Pty Ltd</p> <p>Director - Olrac Australia – a company associated with electronic logbooks.</p> <p>Scientific member – NORMAC</p> <p>Member – North Marine Parks Advisory Committee</p> <p>Chair - Tropical Rock Lobster RAG</p> <p>Chair - Victorian Rock Lobster RAG</p> <p>Scientific member - SESSF shark RAG</p> <p>Scientific member – GABRAG</p> <p>Works with Indigenous communities in capacity building activities</p> <p>Chair - South Australia's Gulf of St Vincent prawn fishery's research committee</p> <p>Scientific member - South Australia's Gulf of St Vincent prawn fishery's management advisory committee</p> <p>Current consultancy with NT Fisheries designing a snapper species survey</p> <p>Has a son working on a vessel in the NPF</p> <p>Various research interests in other Commonwealth and State fisheries.</p>
Rik Buckworth	Scientific Member	<p>Scientific Member - Torres Strait Finfish RAG</p> <p>Director - Aquatic Remote Biopsy Pty Ltd</p> <p>Director - Sea Sense Australia Pty Ltd</p> <p>University Professorial Fellow – Charles Darwin University</p> <p>Appointed as a CSIRO Fellow in 2020</p> <p>Current consultancy contract with NPF to review Red Endeavour Prawns</p> <p>Chair of the NT Aquarium Fishery Management Advisory Committee</p> <p>Various consultancy work with NT Fisheries</p> <p>Current consultancy contract with AFMA and QDAF for a project in the Torres Strait</p> <p>Researcher involved particularly in stock assessment research in NPF. Has in the past and may in future seek and receive funding for research in the fishery.</p>

David Brewer	Scientific Member	Director – Upwelling P/L (David Brewer Consulting) Honorary Fellow – CSIRO Scientific member – NPRAG Scientific member – Torres Strait Fin Fish Working Group Chair - Torres Strait Fin Fish RAG Current consultancy work with AFMA, Torres Strait and the Quandamooka Yoolooburrabee Aboriginal Corporation, Moreton Bay.
Tom Kompas	Economic Member – University of Melbourne	Research provider. Has in the past and may in future seek and receive funding for research in the fishery.
Phil Robson	Industry Member	Employee of A Raptis and Sons, responsible for managing NPF vessels & an NT demersal fish trawler. Has provided charter for scientific surveys in NPF (none of which are in JBG) in the past and may in future.
Darci Wallis	AFMA Member	AFMA employee, no pecuniary interest in the fishery.
Stephen Eves	Executive Officer (AFMA)	AFMA employee, no pecuniary interest in the fishery.
Steve Bolton	Observer - AFMA	AFMA employee, no pecuniary interest in the fishery.
Annie Jarrett	Observer - NPFI	CEO- NPFI Chair - Australian Council of Prawn Fisheries (ACPF). Director – Commonwealth Fisheries Association (CFA). Member – National Fisheries Advisory Committee (NFAC). Some research items are of relevance to NPFI.
Adrienne Laird	Observer - NPFI	Employed as a contractor by NPFI. Some research items are of relevance to NPFI.
Trevor Hutton	Observer - CSIRO	Research provider involved particularly in stock assessment research in NPF. Has in the past and may in future seek and receive funding for research in the fishery.
Roy Deng	Observer - CSIRO	Research provider involved particularly in stock assessment research in NPF. Has in the past and may in future seek and receive funding for research in the fishery.
Judy Upston	Observer - CSIRO	Research provider. Has in the past and may in future seek and receive funding for research in the fishery.
Robert Curtotti	Observer - ABARES	Economics research provider. No current pecuniary interest in fishery. Potential to seek and receive funding for research in the fishery in future.

Ian Butler	Observer - ABARES	Economics research provider. No current pecuniary interest in fishery. Potential to seek and receive funding for research in the fishery in future.
Shijie Zhou	Observer - CSIRO	Research provider. Has in the past and may in future seek and receive funding for research in the fishery.