



Australian Government

Australian Fisheries Management Authority

Northern Prawn Fishery Resource Assessment Group (NPRAG) Meeting

Teleconference Minutes

Date: 11 March 2020

Time: 10.30 am – 12.30 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
Ian Boot	Industry Member
David Power	AFMA Member
Stephen Eves	Executive Officer - AFMA
Annie Jarrett	Invited Participant - NPFI
Adrienne Laird	Observer - NPFI
Trevor Hutton	Observer – CSIRO
Roy Deng	Observer – CSIRO
Rob Kenyon	Observer – CSIRO
Eva Plaganyi	Observer – CSIRO
Laura Blamey	Observer – CSIRO
Sean Pascoe	Observer – CSIRO
Mahdi Parsa	Observer – ABARES

1 Preliminaries

1.1 Welcome and apologies

The Northern Prawn Fishery Resource Assessment Group (NPRAG) Chair, Ian Knuckey, opened the teleconference at 10.30 am (AEDT) on 11 March 2020 and noted all members were in attendance.

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. Three additional items of business were put forward for discussion: a brief summary of the recent NPF recruitment survey results; a progress update on a Red endeavour prawn project; and re-including a figure that was unintentionally left out of the current NPF Harvest Strategy. These were added to the Other Business agenda item but as it turned out, they were not addressed because time expired before they could be discussed.

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.

No apparent conflicts of interest with the agenda items were identified that would prevent individuals participating in discussions. 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 whilst a decision was made about the appropriate course of action.

1.4 Minutes from previous meetings

It was noted that the minutes from the 7-8 November 2019 meeting were accepted out-of-session via email as a true and accurate record of the meeting.

2 Redleg banana prawn harvest strategy

Redleg banana prawn Harvest Strategy application

The 2019 catch data and assessment results of the Redleg banana prawn fishery were provided to the RAG for review and comment with respect to the Harvest Strategy.

Based on the assessment results, the NPF Harvest Strategy provides clear guidelines for the opening of the fishery for Redleg banana prawns in the first and second season. The Executive Officer provided an overview of key data for the harvest strategy, and explained the series of decision rules that determine if each fishing season will be opened or closed. The RAG noted that in 2019 there were less than 100 fishing days in the Redleg banana prawn fishery. Consequently, the current Harvest Strategy stipulates that, the fishery is opened for both seasons the following year.

It was noted that there has been less than 100 fishing days in the Redleg banana prawn fishery in three out of the last five years.

The RAG noted that 2019 was an interesting year for the Redleg banana prawn fishery due to:

- very few boat-days;
- anomalous fishing pattern – the highest effort usually occurs in the third quarter, but in 2019 there was no effort in the third quarter; and,
- assessment indicates the fishery is above B_{LIM} but below B_{MEY} , but this is based on very little data.

It was suggested the reason for the low effort for Redleg banana prawns during the third quarter in 2019 was due to the high tiger prawn price, which shifted effort from Redleg banana prawns in the Joseph Bonaparte Gulf to tiger prawns in the Gulf of Carpentaria (GoC). It was also noted the Redleg banana prawns caught in the first season were of a large size, indicating to industry the prawns were likely from the previous year's stock and there had been little recruitment in 2019, which was of concern. For this reason, operators chose to fish in the GoC during the third quarter for tiger prawns instead.

The lack of 2019 fishing and the resultant low data levels was discussed by the RAG along with the risk to the Redleg banana prawn stock from the current application of the Harvest Strategy. It was advised that if there had been over 100 fishing days in 2019, then the CPUE in the period August to October would have determined whether the first season in 2020 was opened or closed. As there was very little fishing effort during this period, it was not possible to determine a useable CPUE and therefore no indicator of abundance during the third quarter was available. This scenario again highlighted the limitations of the current Harvest Strategy. The Harvest Strategy was constructed when the fishery was a lot different to what it is today, and it is becoming increasingly difficult to make decisions that reflect the status of the stock. The results of the

management strategy evaluation (MSE) project should enable these issues to be addressed in the Harvest Strategy with subsequent management revisions accounting for all harvest scenarios, including the prospect that future fishing patterns may be different to the past.

The RAG noted the importance of economic data in evaluating the Redleg banana prawn stock and that currently data are provided voluntarily by one operator. The Industry members were asked whether it was possible to include Redleg banana prawn price data in the annual NPF1 run economic survey. Industry suggested it was possible to provide price data through the survey but pointed out that there were certain complications to be aware of. One complication relates to potentially inflated price data when prawns are exported compared to the lower prices when sold on the domestic market. It was noted that, due to the confounding of data between environmental and economic predictors in the stock assessment, the industry price data will allow the robustness of the data to be tested through a sensitivity test. The inflated price data may not be an issue because the effect could be overshadowed by some of the other drivers of low CPUE.

The RAG noted the lower level of data from 2019 and were concerned that the Redleg banana prawn stock appears to be slightly reduced with possibly lower recruitment. An Industry member voiced reservation over opening the fishery in the first season, suggesting that the history of the fishery indicates that caution should be applied in the current situation. Although recognising there doesn't appear to be a problem with the stock, it was suggested that closing the first season for a few years may improve the stock abundance and have longer-term benefits. The current MSE work will allow the Harvest Strategy to be modified to account for some of the complications that have been experienced in the last five years due to lack of fishing.

The RAG revisited the discussion on the 2020 Redleg Banana season after considering the results of the MSE. It was noted that although the current harvest control rule (HCR) is not as precautionary as some of the MSE-tested alternative HCRs, the results from the MSE indicate that the current HCR performs well enough to maintain the fishery above B_{LIM} under these circumstances. Noting the concerns raised, the RAG agreed that, based on the scientific information available on stock status and the preliminary results from the MSE, there was no immediate need to stray from the current Harvest Strategy which allows the first season to be open in 2020.

The RAG recommended that both seasons remain open for 2020.

Preliminary results of the Redleg banana prawn Management Strategy Evaluation project

The RAG noted a presentation on the preliminary results of the Redleg banana prawn MSE project and was asked to select the preferred harvest control rules from the list of preliminary rules for further sensitivity testing.

Some key points from the presentation included:

- HCRs 2 and 3 perform best at maintaining the spawning biomass;
- HCR 2 provides the largest average annual catch, but the catch in years with high spikes is reduced;
- HCRs 2,3 and 4 perform best at reducing the risk of the fishery closing for a full year; and,
- The risk of the stock falling below B_{LIM} is lower for HCRs 2, 3 and 4.

Due to unavoidable tight timelines, concern was raised that the RAG had not had enough time to consider the preliminary results to provide a recommendation over which HCRs to choose for further sensitivity testing. It was suggested that the RAG agree on which HCR is the least performing and to remove that rule from further sensitivity testing.

A Scientific Member suggested that HCR 5 performs similar to the current HCR and should therefore be removed from further testing. There is merit in retaining HCR 1 for comparative purposes, and HCRs 3 and 4 appear to perform similarly. Consideration of the operational aspects may separate whether HCR 3 or 4 is the preferred option. It was further advised that HCR 4 performs similar to HCR 1, but compared to HCR 3 the annual catch tends to crash occasionally. HCR 4 relies on CPUE and closing the fishery in-season when certain catch rates aren't met. Monitoring catch rates in-season and closing the fishery early may be logistically more challenging.

It was questioned what the proposed CPUE trigger was used in HCR4. It was advised a trigger value of $0.6B_{MSY}$ was selected based on analysis of historical catch data, and a trigger of $0.6B_{MSY}$ should only close the fishery when necessary. It was advised the trigger may be able to be fine-tuned. However, the trigger was based on nominal CPUE, which may change over time and would result in the need for changes in fishing power to be added. Hence, this is another reason why HCR4 is logistically more involved and is another complexity that needs to be considered when recommending a HCR.

It was further questioned whether the HCRs might adequately capture a change in fishing pattern, i.e. the consequences of fishing effort increasing in the first season and decreasing in the second season. It was advised that a change in fishing pattern had not been comprehensively captured and that more testing would be needed to determine the effect of higher fishing effort in the first season. In order to test a change in fishing pattern, some of the error in the model will need to be increased which can be done with the further sensitivity testing.

A Scientific Member suggested that an analysis of how the HCRs performed under extreme scenarios would be useful, for example high or low rainfall, or a significant increase in effort. It was advised that some of the extreme scenarios were already included in the modelling and sensitivity analyses still being conducted, but it produces a lot of information. Further information, with explanatory text, will help ease understanding of the various data and graphs that are produced.

The Chair suggested that, due to the limited time the RAG had had to consider the HCRs, an explanatory paragraph on each HCR would help members understand each rule, what they achieve, the differences between each rule and the logistical considerations. Further, it was agreed HCR 5 doesn't perform well and doesn't need to be included in further sensitivity testing; additional sensitivity tests should be run on HCRs 2, 3 and 4; and, an explanatory paragraph of HCRs 2, 3 and 4 should be circulated to the RAG for further consideration.

Actions:

- CSIRO to provide the RAG with explanatory paragraphs on the MSE proposed harvest control rules 2,3 and 4, that outline each rule, what they achieve, the differences between each rule and the logistical considerations
- CSIRO to keep harvest control rule 1 for comparative purposes, but remove harvest control rules 1 and 5 from further sensitivity testing.

3 Banana prawn MEY catch trigger

NPRAG noted the banana prawn MEY catch trigger calculations for 2019 and retrospectively reviewed the industry-estimated fuel price and prawn price compared to the actual price data achieved during the year. The industry-estimated fuel price of \$0.913/litre and the prawn price of \$11.50/kg were close to the actual 2019 data, which were \$1.00/litre and \$10.50/kg respectively.

The RAG noted the industry-estimated prices were again close to the actual prices and supported the same process for setting the 2020 banana prawn MEY catch trigger. It was also noted that fuel prices and prawn prices during 2020 were likely to be more volatile than usual, but as the MEY model restricts the trigger to 425 kg/boat/day when the variance is more than 15 per cent compared to the previous year, the RAG remained supportive of the current approach.

CSIRO suggested that the use of a fleet-level fuel calculation (L/day) to determine the MEY trigger should be reevaluated, as the current method for reviewing the fuel price does not accurately reflect the fuel price at the boat level. It was recommended that a paper outlining the issue and potential solutions be presented at the May NPRAG meeting.

It was questioned whether dramatic changes to prices within season would adversely affect the application of the MEY trigger and whether there was benefit in applying a rolling trigger that is monitored through the season. The RAG noted that, in the past, boats have generally stopped fishing as soon as the catch rate dropped off, before the MEY trigger closed the fishery. Nonetheless, the Economic member suggested there are potentially benefits in having a rolling trigger throughout the season.

Action:

- CSIRO to present a paper at the May 2020 meeting outlining the issues with the current banana prawn MEY calculation and potential solutions.

4 Next meeting

The Chair advised the next meeting scheduled is a face-to-face meeting on 20-22 May, but a teleconference will be organised in the coming weeks if necessary to revisit the Redleg banana prawn harvest strategy discussion. The meeting was brought to a close at 12.30 pm.

Signed (Chairperson):



Date: 17/04/2020

Attachments

- 1) NPRAG 11 March 2020 Final Agenda
- 2) NPRAG 11 March 2020 Declared conflicts of Interest

Final Agenda

Northern Prawn Fishery Resource Assessment Group (NPRAG)
teleconference

11 March 2020 10.30 am – 12.30 pm (AEDT)

Item	Responsibility	Paper
<p>1. Introduction/ Meeting Management</p> <ul style="list-style-type: none"> Welcome Adoption of agenda Declaration of interests Minutes from previous meetings 	Chair	Yes
<p>2. Redleg banana prawn harvest strategy</p> <ul style="list-style-type: none"> Harvest strategy (HS) conditions and decision to be made based on review of OM (Operating Models – 6 of them), HS outputs (5 - options) and performance metrics (6 at least, PMs) Choice of sub-set of HS options – which will lead to CSIRO running sensitivity tests on these alone – to then present at May NPRAG meeting <p><i>Outcomes: RAG to review the Redleg banana prawn harvest control rules and recommend a preliminary preference for an additional harvest control rule (with final choice once sensitivity tests complete for May meeting).</i></p>	AFMA/CSIRO	Yes – Presentation by CSIRO with PPT to be provided on day
<p>3. Banana prawn MEY catch trigger</p> <ul style="list-style-type: none"> In-season trigger review <p><i>Outcomes: The RAG to review the 2019 industry estimated inputs to the MEY trigger and compare to the actual prices.</i></p>	CSIRO	Yes

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>Various research interests in other Commonwealth and State fisheries.</p>
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.

Participant	Membership	Interest Declared
Rik Buckworth	Scientific Member	<p>Scientific Member - Torres Strait Finfish RAG</p> <p>Chair - NT Research Advisory Committee (FRDC)</p> <p>Director - Aquatic Remote Biopsy Pty Ltd</p> <p>Director - Sea Sense Australia Pty Ltd</p> <p>University Professional Fellow – Charles Darwin University</p> <p>Current consultancy contract with NPMI to review Red Endeavour Prawns</p> <p>Various consultancy work with NT Fisheries</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	<p>Director – Upwelling P/L (David Brewer Consulting)</p> <p>Honorary Fellow – CSIRO</p> <p>Scientific member – NPRAG</p> <p>Scientific member – Torres Strait Fin Fish Working Group</p> <p>Chair - Torres Strait Fin Fish RAG</p> <p>Current consultancy work with AFMA.</p>
Phil Robson	Industry Member	<p>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.</p>
Ian Boot	Industry Member	<p>Managing Director of Austfish, a company which operates NPF vessels. Has a commercial interest in the fishery. NPF broodstock permit holder. Participates in scampi fishing.</p>
David Power	AFMA Member	<p>AFMA employee, no pecuniary interest in the fishery.</p>
Stephen Eves	Executive Officer (AFMA)	<p>AFMA employee, no pecuniary interest in the fishery.</p>

Participant	Membership	Interest Declared
Annie Jarrett	Invited participant - NPFI	CEO- NPFI Member of the MSC Stakeholder Council Chair - Australian Council of Prawn Fisheries (ACPF). 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.
Rob Kenyon	Observer – CSIRO	Research provider. Has in the past and may in future seek and receive funding for research in the fishery.
Eva Plaganyi	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.
Laura Blamey	Observer – CSIRO	Research provider. Has in the past and may in future seek and receive funding for research in the fishery.
Sean Pascoe	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.
Mahdi Parsa	Observer – ABARES	Economics research provider. No current pecuniary interest in fishery. Potential to seek and receive funding for research in the fishery in future.