



Australian Government

Australian Fisheries Management Authority

 **Northern Prawn Fishery
Resource Assessment Group
(NPRAG) Meeting**

Meeting Minutes

Date: 11

May 2017

Location: Brisbane

Brisbane Riverview Hotel

Attendance

| Name | Membership (type i.e. chair etc.) |
|--------------------|-----------------------------------|
| Ian Knuckey | Chair |
| Phil Robson | Industry Member |
| Ian Boot | Industry Member |
| Malcolm Haddon | Scientific Member - CSIRO |
| Tom Kompas | Economic Member - ANU |
| Rik Buckworth | Scientific Member |
| David Brewer | Scientific Member |
| Shane Fava | AFMA Member |
| Stephen Eves | Executive Officer - AFMA |
| Gabrielle Miller | Observer - AFMA |
| Annie Jarrett | Observer - NPFI |
| Eva Plaganyi-Lloyd | Observer - CSIRO |
| Trevor Hutton | Observer - CSIRO |
| Roy Deng | Observer - CSIRO |
| Sean Pascoe | Observer - CSIRO |
| Rob Kenyon | Observer - CSIRO |
| Robert Curtotti | Observer - ABARES |
| Andrea Bath | Observer - ABARES |
| David Mobsby | Observer - ABARES |

Minutes

Agenda Item 1 - Preliminaries

1.1 Welcome and apologies

The Northern Prawn Fishery Resource Assessment Group (NPRAG) Chair, Ian Knuckey, opened the meeting at 8.30 am (EST) at the Riverview Hotel in Brisbane on 11 May 2017. The Chair noted an apology from NPF Industry Pty Ltd (NPFI) observer Adrienne Laird and welcomed Gabrielle Miller, AFMA, who is the new NORMAC Executive Officer. Andrea Bath and David Mobsby from ABARES were welcomed as observers.

The Chair also advised that it was the NPF manager Shane Fava's final meeting. Shane advised that he has been offered an opportunity in Tasmania and thanked the group for their collaboration and support during his time with the NPF. AFMA are running a recruitment process for Shane's position starting with an EOI for a suitable candidate internally.

The RAG was also informed that current member's appointments expire on 30 June 2017. AFMA has put out a call for the Chair position and are in the process of finalising the selection. A call for RAG members will be going out shortly and all current members will be notified of the recruitment details by email.



The RAG was also notified that there has been a provision passed through parliament to allow Indigenous and recreational members to be statutorily appointed to Management Advisory Committees (MAC). As RAGs are not statutorily appointed, it is not essential to have these representatives on the group. The group discussed whether the NPF would benefit from having an Indigenous or recreational member on the RAG and suggested that it would be more beneficial to invite these representatives on a case by case basis.

1.2 Adoption of Agenda

The Chair updated the agenda to include the addition of a late paper submitted by Annie Jarrett on broodstock collection to be discussed under item 11 – other business. The NPRAG then adopted the revised draft agenda for the meeting (**Attachment 1**).

1.3 Declaration of interests

The RAG followed the conflict of interest declarations as outlined in the revised Fisheries Administration Paper 12 (FAP12).

The Chair called for declarations to be made by the group in relation to any interests relevant to discussions outlined on the agenda (see **Attachment 2**). The Chair declared his interests including his affiliation with one of the companies that have been shortlisted for AFMA's Independent Scientific Monitoring Program (ISMP) tender and his involvement as an agent for an E-log company. Each person proceeded to leave the room while their continued involvement in the meeting was discussed. The RAG discussed the Chairs conflicts and agreed that there were no apparent conflicts with the meeting agenda but noted that should he be successful in the ISMP tender, he would likely need to step down as NPRAG Chair.

The Chair advised that based on Ian Boot's involvement in broodstock collection, he could join discussions about broodstock under agenda item 11 but would be precluded from RAG decisions on the response. CSIRO has a potential conflict regarding future research interests in the fishery and would have to leave the room if any recommendations were to be made. No other apparent conflicts of interest were identified that would prevent individuals participating in discussion but if a particular conflict arose for any agenda item, the relevant party would be asked to leave the meeting at the appropriate time.

1.4 Minutes from previous meeting

It was noted that the minutes from the November 2016 meeting were approved out-of-session and had been published on the AFMA website. A minor error was identified with the final minutes under the section on assessment/improvements. There was some confusion between nominal effort and effective effort. The final minutes were amended to reflect the suggested corrections and then endorsed by the RAG.

Agenda Item 2 – Action Items

The Chair addressed the action items listed in **Attachment 3** and updated NPRAG on their progress.

Agenda Item 3 – Update Reports

3.1 Industry Update

Industry provided an update on the start to the 2017 banana season. The RAG noted that the product is smaller than in 2016 but the domestic market is stronger this year and there is a bit of interest from overseas. The average net fuel price is around 67 cents per litre. There has been limited fishing effort in the Joseph Bonaparte Gulf (JBG). Overall it has been the best start to a season since 2007.



The RAG noted an update from Annie Jarrett on White Spot Disease (WSD). There is currently a senate inquiry into WSD with submissions due on 12 May 2017. There is also an Inspector General's inquiry into WSD with submissions closing two weeks ago.

The RAG discussed the adoption of the Kon's Covered Fisheye (KCF) as an approved bycatch reduction device (BRD) in the NPF. The device is currently one of a few devices that can be used in the fishery and its use in the tiger season is voluntary for 2017. Adrienne Laird will undertake further extension and education at the mid-year pre-season briefings to increase uptake of the KCF. The next step is to review the uptake of the KCF in mid-2018 and consider whether the square mesh panel (SMP) along with some other BRDs should be removed from the list of permitted devices.

3.2 AFMA Update

NPRAG noted an update provided by AFMA management including:

- the latest version of the ERA/ERM framework is going to the June Commission meeting for sign off;
- changes to the turtle excluder device (TED) specifications were implemented prior to the 2017 banana prawn season. The main change was for the flap overlap to be no greater than 38 cm when stretched. Compliance officers undertook 30 pre-season inspections and picked up 14 non-compliance activities related to the 38 cm stretched requirement. There was discussion with the skippers of the non-compliant TEDs with the devices being fixed on the spot and no further action taken. Recently, compliance undertook an at sea patrol and inspected 35 vessels. Seven offences were identified with six Commonwealth Fisheries Infringement Notices (CFIN) issued, all related to the 38 cm stretched requirement. This is something that needs to be addressed as the first thing the US inspectors will look at when they visit Australia in 2019 is the compliance reports. In the RAG discussion of this topic, Industry advised that they do not support the ad-hoc way in which the stretch length is being measured. . When industry agreed to the 38 cm stretched specification it was not made clear that the devices would be inspected by "two compliance officers pulling the net as hard as they could with steel hooks". Industry stated that it is likely the CFINs will be challenged in court as there is no consistency or standard practice as to how the stretched mesh is measured. On the east coast, the stretch is measured by placing the gear on a rack with a specified amount of force applied. This is a consistent and transparent method that will hold up in court. The current approach in the NPF needs to be addressed;
- AFMA's 2017 cost recovery implementation statement (CRIS) will be implemented for the first time in the 2017/18 financial year. AFMA have received a comprehensive letter from Industry inquiring about the budget. The AFMA CEO is preparing a formal response that will be delivered to industry shortly;
- the Bycatch Mistreatment Working Group met recently and essentially the outcome is to place a condition on licenses making it an offence to mistreat bycatch as set out in the AFMA Bycatch handling and treatment guide 2016/17. It was pointed out that there did not appear to be as great an issue as in some other fisheries but AFMA reinforced that they have a responsibility to ensure any bycatch handling issues are addressed.

Agenda Item 4 – JBG Red leg banana prawn

The RAG noted that in 2016 there was not enough data to reliably run the red leg stock assessment. It is the second year in a row there has not been enough data to run the assessment. The RAG discussed at its last meeting in November 2016 the possibility of revising the NPF Harvest Strategy (HS) to account for multiple consecutive years when there are less than 100 days fishing effort and the assessment is unable to be run. Eva Plaganyi-Lloyd was asked to analyse historical catch data in place of running the assessment to investigate if some of the catch trends can be explained by other variables, i.e. environmental or oceanographic influences.



The RAG noted Eva's findings, particularly the correlation between the Southern Oscillation Index (SOI), rainfall and red leg catch data. A qualitative model was presented to the RAG that may be used to explain some of the low catches of previous years. The model may also indicate if catches in a particular year are likely to be high based on the SOI and rainfall data from January/February in the respective year. It was suggested that perhaps flow rate data would be a more accurate measure as the location of rainfall, the intensity/period of rainfall, and other events such as the recent overflow of the Lake Argyle dam can influence the availability of red leg stock.

The RAG also noted the findings from Sean Pascoe's work on the influence of economic data on red leg banana prawn catch and effort in the JBG. It was pointed out that the 2007 structural adjustment appears to influence Sean's model. The model is currently an investigative, preliminary analysis and could be greatly improved by including price data and moving to an inter-annual model, i.e. using monthly data. Industry advised that they could provide price data to improve the model.

The RAG discussed the need to update the NPF HS to include a condition that accounts for years when the effort for red leg banana prawns is less than 100 days. Currently, if there are less than 100 fishing days, both seasons are opened the following year by default but there is no precaution in case the lack of fishing was due to a depleted stock (or a condition that allows for the RAG to formally note that environmental conditions (via SOI) may have influenced the stock). Therefore, it was suggested that if there are two consecutive years with less than 100 fishing days and Eva's model indicates the environmental cues for both years are in the red, then the first season of the following year is closed. However, it was pointed out that the red zone means the SOI is less than -7 and rainfall is less than the median. If the SOI is less than -7 but the rainfall is above the median then you wouldn't be in the red zone but this is perhaps a higher risk category because you would assume increased rainfall would lead to higher catch rates. Some potential options to improve the HS were discussed at the meeting but the RAG agreed the NPF HS should be carefully reviewed out of session (by RAG Members) to better deal with years with less than 100 days effort. The Chair suggested that draft decision clauses associated with the above suggestions be added to the existing HS and a discussion paper explaining these be prepared by AFMA for the November RAG meeting.

Actions:

- Ian Boot to provide historical red leg price data to CSIRO to improve Sean Pascoe's economic model.
- Review the NPF Harvest Strategy red leg decision rules to include a condition that accounts for years with less than 100 fishing days.
- AFMA to prepare a discussion paper on the proposed red leg banana prawn decision rules for the November 2017 RAG meeting.

Agenda Item 5 – MSC SICA for red endeavour prawn

The RAG noted that due to a lack of a formal stock assessment undertaken for red endeavour prawns, an MSC risk-based framework is to be used to assess the species against the MSC criteria. The MSC Assessment Team requested that the RAG provide additional information on red endeavour prawns via a questionnaire that was distributed during the meeting. A response is required before 7 June 2017.

The RAG noted that there is catch information on red endeavours contained in a database that can be used to answer question number two of the questionnaire. It was suggested that catch data from the last five years be overlaid on the map provided (Pitcher *et al.* 2015). The RAG discussed the questionnaire and responded to each question noting the following key points:

- red endeavours are mainly caught close to land;
- red endeavours are targeted in an area to the south of section 19 around Melville Island;
- there is a hot spot in area 15, east of the JBG in the south western part of the section; and,



- red endeavours are not caught above Arnhem Land or in Cape Van Diemen, but are caught above Melville and Essington.

Based on the RAG discussions, the questionnaire was completed and will be written up by AFMA and submitted to the MSC CAB as required.

Actions:

- AFMA to overlay catch data with the habitat map (Pitcher et al. 2015) in ArcGIS to answer question two of the MSC questionnaire before 7 June 2017.

Agenda Item 6 – White Banana prawn MEY catch trigger

The RAG noted the spreadsheet provided by CSIRO that contains the inputs into the MEY trigger for white banana prawns. NPFI provide the fuel and sale price data that is fed into the spreadsheet and gear costs are calculated from Tom Kompas' (NPRAG economist) work.

The RAG discussed some ways in which the calculations in this spreadsheet might be improved. Previously, there was an assumption that the boats that remained at the end of the season were more efficient than the boats at the start of the season. However, Sean Pascoe's work demonstrated that there isn't a significant change in efficiency between boats within season. This raised the question of whether the current value of 1 used for the two-week scaling factor in the spreadsheet is appropriate or whether it should be increased to 1.25 so the trigger is slightly above MEY so MEY is reached a week later when the fishery closes.

The RAG discussed the merits of updating the catch rate trigger. The RAG economists advised that, in practice, it doesn't matter under current conditions but as an example, if in the future prices collapsed and fuel prices increased significantly it might make a difference. It was pointed out that currently the trigger value is a more conservative value because of the 15% buffer around 500kg/day catch rate and the RAG agreed to leave it as is for the time being. It was noted that consideration should be given to the fact that on average, the bigger boats are those operating at the end of the season and it is plausible that the bigger boats are more expensive to operate. However, as an example, even if running costs of the bigger boats are 50 per cent higher, the current estimates indicate the catch rates would still be within the buffer. Therefore, in practice, updating the catch rate trigger wouldn't make a significant difference. If economic conditions change considerably at a later date, it might be worth revisiting the scaling factor. It was suggested that the inputs into the MEY trigger value should be monitored and presented annually at the May RAG meeting for discussion.

The RAG also noted how well the industry cost and price estimates that feed into the MEY trigger compared with the actual values from the survey. Industry estimated the average 2016 beach price to be \$15 which was slightly higher than the results from the survey at \$14.70. The industry estimates on fuel price were accurate and the same as the survey results. The Chair suggested that the industry estimates compared with the survey results should also be provided to the RAG annually.

Action:

- CSIRO to present the spread sheet with the inputs into the MEY trigger for white banana prawns at the May NPRAG meeting each year.

- CSIRO/Tom Kompas (as Economics member) to present data on how the industry price estimates compare with the survey results at the May NPRAG meeting each year.

Agenda Item 7 – Tiger prawn assessment (non-assessment year)

The RAG noted a summary from CSIRO on the NPF Tiger Prawn catch and effort data and the fishery independent survey data. The RAG also noted that CSIRO will present a series of sensitivity tests at the November RAG meeting for discussion.



Rob Kenyon delivered a presentation to the RAG on the pre-season survey results and gave an update on the mangrove dieback in northern Australia. It was questioned whether the pre-survey rainfall should be factored into the recruitment indices used in the assessments; as a suggestion although formal methods for doing so would have to be established within a specific research initiative.

Action:

- CSIRO (Trevor Hutton) to present the potential sensitivity tests at the November 2017 NPRAG meeting.
- AFMA to distribute Rob Kenyon's PowerPoint presentation to the NPRAG.

Agenda Item 8 – 2016 Bug catch review

The RAG noted that during 2016 a total catch of 110 t of bugs were taken as byproduct in the NPF, exceeding the 100 t trigger limit. The RAG discussed the 100 t trigger and suggested that AFMA do some basic analysis of the catch data to help inform whether the trigger limit is appropriate. If the bug catch is evenly or randomly spread with respect to the spatial catch of the target species then it would have different implications than if there were hot spots where the bugs are being targeted and caught. It was suggested that Adrienne Laird (NPF) can interrogate the bug catch data to identify any trends. The RAG agreed that AFMA should prepare a paper, incorporating the bug catch data analysis, to present at the November RAG meeting.

Action:

- Adrienne Laird to interrogate the bug catch data, including temporal, spatial and operator catch levels to identify any catch trends in the fishery.
- AFMA to present a paper on the bug catch data analysis at the November 2017 NPRAG meeting.

Agenda Item 9 – Research

The RAG noted that the annual research statement is due for consideration by the group in August/September prior to going to the AFMA Research Committee (ARC) in September. This year all four of the NPF research projects need to be reviewed and considered for future funding as they are currently only funded until 2018/19. As the projects are likely to seek a further three years of funding, it is timely to review the projects and consider their effectiveness, relevance and if they can be improved.

The RAG also discussed the project proposals relating to ongoing maintenance of the stock assessment. A number of projects were developed by CSIRO and considered at the November 2016 RAG meeting. The group recommended that priority was for further work to be done on fishing power analysis. The timing of the work was questioned as new boats entering the fishery could impact on the analysis. Thus, if the analysis was undertaken on the current fleet it would be outdated before it was even complete. The AFMA manager advised that the way the funding cycle works means that if a proposal was developed now to go through the ARC in September, the project wouldn't be funded until 2018/19. Therefore, the project would account for any new boats entering the fishery in the next 12 months. The project remained as a priority. Industry also advised that gear information is collected through the annual gear survey. If CSIRO need any additional information it can be collected through the survey. The collection of refrigeration capacity information was highlighted as an important addition to the annual gear survey.

The RAG also noted that the five year research plan is due for renewal next year. Given there will probably be a few policy changes (Commonwealth Fisheries Harvest Strategy/Bycatch policies) the RAG should start thinking about the research plan ahead of discussions starting in the May 2018



NPRAG meeting. It was advised that last time the research plan was considered, a one-day workshop was organised to plan the NPF strategic research priorities. The RAG also suggested that a teleconference should be organised for the end of the month (May 2017) to discuss the draft Commonwealth Fisheries Harvest Strategy and Bycatch policies prior to comments being due to the Department of Agriculture and Water Resources on 9 June 2017. It was also suggested that it would be useful for NORMAC members to be invited to participate in the teleconference should they choose.

Actions:

- NPF to include a field in the annual gear survey to collect refrigeration data including snap size, kilowatts, and holding/freezing capacity per day.
- CSIRO (Trevor Hutton) to develop a pre-proposal for the fishing power analysis to be circulated to the RAG out-of-session prior to going to the ARC in September 2017.
- NPRAG Executive Officer to distribute the draft Commonwealth Fisheries Harvest Strategy and Bycatch policies to the NPRAG.
- AFMA to organise a teleconference for the end of May 2017 to discuss the draft Commonwealth Fisheries Harvest Strategy and Bycatch policies.

Agenda Item 10 – Autonomous adjustment

The RAG noted an update from NPF on the progress of developing autonomous adjustment indicators. A small working group was established at the NORMAC meeting in February 2017 comprising of Ron Earle, David Carter, Arthur Raptis and Sean Pascoe. Due to the start of the banana season and some personal issues, the group has not been able to convene as yet. However, Ron and David met in Cairns to discuss some potential indicators and captured some of their ideas on paper. Annie Jarrett has been invited to coordinate the group and is meeting with Arthur in the next week before distributing some potential indicators to the wider industry. Once industry have agreed on some useful indicators they will be sent to Sean for input and refinement. The RAG noted that an update is due to be given to the Commission in June.

Agenda Item 11 – Other business

Additional red leg banana prawn data

The RAG noted some additional data presented by Eva Plaganyi-Lloyd on red leg banana prawns. The CPUE was plotted in 2014 for the months August to November and indicates the catch levels are maintained at a consistent rate across the period. This suggests the stock was in a good state when fishing ended at the end of the 2014 season. It added further confidence that the low effort in 2015/16 could be attributed to a combination of fleet dynamics and environmental factors.

The RAG also discussed the CPUE from the last two years in relation to the 390 kg trigger limit. If data from the assessment is used it may appear the CPUE is above the 390 kg trigger, but this is based on less than 100 boat-days effort which may provide an unreliable assessment of CPUE. The NPF Harvest Strategy relies on more than 100 boat days of fishing effort to have any confidence in the assessment. The relevance of the 100 boat-day limit was questioned as it was established pre 2007 when the structure of the fishery was very different. It was suggested that the variability of previous years with low data could be analysed to determine how appropriate the 100 day limit is, i.e. is there any difference in the reliability of the data from 100 boat days compared to 150 boat days. The catch values or catch per day could be analysed to see how nicely distributed they are. You could expect the values to be reasonably distributed in a log normal way. If 90 boat days, for example, were distributed approximately log normal, that would be an indication of reliability. Alternatively, if the data was skewed, broken, or clumped, then that would indicate the number of boats or fishing days is too few to be reliable.

Broodstock collection

The RAG noted the late paper added to the agenda by NPF on broodstock collection. The Chair advised that Ian Boot had a conflict of interest in broodstock collection and when it came to the RAG making a recommendation he would need to step out of the room. NPF advised that the industry had discussed broodstock collection in March 2017 and, considering the increase in demand and the



devastation of white spot disease, agreed to an increase in the total number of individuals approved to be caught from 4000 to 9000 (4500 each of male and female) individuals per year. The RAG discussed this increase in the number of broodstock permitted to be collected. If 10,000 animals were caught at the average weight of 200 g that's still only two tonne which is a relatively small amount. The level of prawn discards to catch two tonne of broodstock was questioned. It was advised that the level of discards varies but over the whole season would be somewhere between 15-20 per cent. The amount of bycatch was also raised, in terms of bycatch of target species and other species including threatened, endangered, and protected species (TEPS). The RAG suggested that it would be good to see some data on catch, bycatch and TEPS to make an informed recommendation. It was also noted that some industry members are concerned that observers have been used to police some of the operations in the JBG. The boats have to report every time they return to port and it would be much more economical to check the boats then. However it was noted that observer coverage was primarily in place to ascertain interactions with TEPs and other bycatch and target species discards. Ian Boot was requested to step out of the room while the RAG made a recommendation on the total number of broodstock permitted to be collected.

The Chair advised that it is really difficult for the RAG to make an informed recommendation without any operational data or information on catch, bycatch and TEPS. It was suggested that two tonnes of *Penaeus monodon* is not a lot in terms of sustainability unless the animals are all caught in the same area. Advice was provided that the species is widely distributed in the Indo-west Pacific region. The level of observer coverage was also raised and it was suggested that it would be good to have a recommendation from the RAG on what sort of observer coverage, depending on the broodstock operations, would be appropriate. The RAG recommended that the number of individuals permitted to be caught could be increased to 9000 as a one-off for 2017 with the condition that catch, bycatch and TEPS data is provided for RAG consideration before the end of the year. It was suggested that the information could be provided to the RAG out-of-session and discussed at the teleconference at the end of the month.

Actions:

- AFMA to provide broodstock catch, bycatch and TEPS data to the RAG out-of-session for discussion at the teleconference at the end of the month.

Next Meeting

The Chair thanked Shane Fava for his contribution to the NPF over the last two years and wished him luck on his new endeavours. The Chair advised the next meeting will be a teleconference at the end of the month and then closed the meeting at 4.50 pm.

References

Pitcher, C. R., Ellis, N., Althaus, F., Williams, A., McLeod, I., Bustamante, R., Kenyon, R., and Fuller, M. 2016. Implications of current spatial management measures for AFMA ERAs for habitats. Commonwealth Scientific and Industrial Research Organisation. Brisbane, Australia.

List of Attachments

- 1) NPRAG 11 May 2017 – Final Agenda
- 2) NPRAG 11 May2017 – Declared Conflicts of Interest
- 3) NPRAG 11 May 2017 – Updated action items



Northern Prawn Fishery Resource Assessment Group
Agenda

Brisbane Riverview Hotel
(Corner Kingsford Smith Drive and Hunt Street, Hamilton
Queensland, Australia, 4007)

11 May 2017 (08:30 am start)

| Item | Responsibility | Paper |
|---|-----------------|-------|
| 1. Introduction/ Meeting Management <ul style="list-style-type: none"> • Welcome • Adoption of agenda • Declaration of interests • Minutes from previous meetings | Chair | Yes |
| 2. Action Items <i>Outcomes: RAG to note progress on action items from previous meetings and provide feedback and comments where appropriate.</i> | AFMA | Yes |
| 3. Update Reports <ul style="list-style-type: none"> • Industry <ul style="list-style-type: none"> ○ MSC Update ○ KCF trials/Update from ICES Conference ○ Sawfish research proposal • AFMA <ul style="list-style-type: none"> ○ Pre-season TED Inspections ○ Implementation of CRIS 2017 ○ Bycatch mistreatment update <i>Outcomes: The RAG notes the various update reports.</i> | NPFI/CSIRO/AFMA | Yes |
| 4. JBG Red leg banana prawn <ul style="list-style-type: none"> • Eva Plaganyi-Lloyd update on analysis of historical data • Discuss the Harvest Strategy approach • Next steps <i>Outcomes: That the RAG note the results of Eva's red leg assessment and discusses the next steps.</i> | CSIRO | Yes |



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| <p>5. MSC SICA for red endeavour prawn</p> <ul style="list-style-type: none"> • Discuss the current assessment of red endeavours • Discuss alternative Harvest Strategy approaches • RAG to make recommendations to strengthen the red endeavour assessment <p><i>Outcomes: That the RAG note that it is likely the NPF will have to do an MSC SICA on red endeavours and discuss/recommend an alternative assessment approach.</i></p> | NPMI | Yes |
| <p>6. White Banana prawn MEY catch trigger</p> <ul style="list-style-type: none"> • In-season trigger review <p><i>Outcomes: RAG to assess the in-season banana prawn trigger and advise on updated data that feeds into the trigger calculation.</i></p> | NPRAG | Update spreadsheet |
| <p>7. Tiger Prawn Assessment (non-assessment year)</p> <ul style="list-style-type: none"> • Catch and effort data • Survey data (Rob Kenyon) • Economic data <p><i>Outcomes: RAG to note the information provided on the 2016 tiger prawn fishery including catch and effort data, economic data collected and survey data.</i></p> | CSIRO | Yes |
| <p>8. 2016 Bug catch review</p> <ul style="list-style-type: none"> • Consider the possible reasons for exceeding the 100 t trigger limit • Discuss the catch levels and an appropriate management response • Discuss the reliability of the trigger limit <p><i>Outcomes: That the RAG discusses the possible reasons for exceeding the 100 t bug trigger limit and responds appropriately.</i></p> | AFMA | Yes |
| <p>9. Research</p> <ul style="list-style-type: none"> • Annual Research Statement Update • Review of 5 Year Strategic Plan • Next steps – ARC dates/ComRAC dates • CSIRO update on current research project/Northern waters project • Fishing Power Project Proposal (CSIRO) • Finalisation of Boat Level MEY Project (CSIRO) <p><i>Outcomes: RAG to note the status of 5 year strategic plan, the need to update the annual research statement in August 2017 and the progress of current NPF related research projects.</i></p> | CSIRO/AFMA | Yes |



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| <p>10. Autonomous Adjustment</p> <ul style="list-style-type: none"> • Update on the development of indicators from Industry/CSIRO meeting • Discuss meeting outcomes • NPRAG to develop recommendations to be progressed to NORMAC <p><i>Outcomes: That the RAG discusses the indicators identified as most useful to industry and how these indicators may be analysed to signal the need for autonomous adjustment.</i></p> | NPMI | Verbal |
| <p>11. Other business</p> <ul style="list-style-type: none"> • Additional red leg banana prawn analysis • Broodstock collection | NPRAG | Verbal/Paper |



NPRAG Declared Conflicts of Interest

| Name | Membership | Interest Declared |
|----------------------|-----------------------|--|
| Ian Knuckey | Chair | <p>Director - Fishwell Consulting</p> <p>Fishwell Consulting has been short-listed to provide a tender to run the Commonwealth observer program. Will review role as Chair should tender be successful.</p> <p>Director - Olrac Australia – a company associated with electronic logbooks.</p> <p>Various research interests in other Commonwealth and State fisheries.</p> <p>NORMAC Scientific member</p> <p>Chair Tropical Rock Lobster RAG</p> <p>Chair Victorian Rock Lobster RAG</p> |
| Rik Buckworth | Scientific Member | <p>South East RAG Scientific Member</p> <p>NT Research Advisory Committee (FRDC), Chair</p> <p>Aquatic Remote Biopsy Pty Ltd, Director</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>Researcher. Has in the past and may in future seek and receive funding for research in the fishery.</p> |
| Ian Boot | Industry Member | <p>Managing Director of Austfish, a company which operates NPF vessels. Has a commercial interest in the fishery and in broodstock collection.</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> |
| Tom Kompas | Economic Member - ANU | <p>Research provider. Has in the past and may in future seek and receive funding for research in the fishery.</p> |



| Name | Membership | Interest Declared |
|---------------------------|---------------------------|---|
| Shane Fava | AFMA Member | AFMA employee, no pecuniary interest in the fishery |
| Malcolm Haddon | Scientific Member - CSIRO | Employed by CSIRO, which is a research provider, however, does not undertake research in the NPF, and has no pecuniary interest in the fishery. Is also a scientific member of both the GAB RAG and Sub-Antarctic RAGs; also a scientific member of the South MAC. |
| Stephen Eves | Executive Officer (AFMA) | AFMA employee, no pecuniary interest in the fishery |
| Gabrielle Miller | Observer - AFMA | AFMA employee, no pecuniary interest in the fishery |
| Annie Jarrett | Observer - NPFI | CEO NPFI and a member of the MSC Stakeholder Council and Chair of the Australian Council of Prawn Fisheries (ACPF). Some research items are of relevance to NPFI |
| Trevor Hutton | Observer - CSIRO | Research provider. Has in the past and may in future seek and receive funding for research in the fishery. |
| Eva Plaganyi-Lloyd | 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. |
| 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. |
| Andrea Bath | Observer - ABARES | ABARES employee, no pecuniary interest in the fishery |
| David Mobsby | Observer - ABARES | ABARES employee, no pecuniary interest in the fishery |



Action Items

| Item | Person responsible | Description of ACTION item | Progress |
|------------------------------------|----------------------|--|--|
| 3-4 March 2015 Meeting | | | |
| 1 | CSIRO | Sean Pascoe to explore the potential to run the MEY calculation without including fixed costs. | Complete – CSIRO (Trevor Hutton) to present the results in next year's assessment |
| 12-13 November 2015 Meeting | | | |
| 2 | NPRAG | NPRAG to examine further the question of consistent bias in boats upon completion of Sean Pascoe's students research into boat level MEY factors | Complete – presented at the November 2016 meeting. |
| 18 May 2016 Meeting | | | |
| 3 | AFMA/CSIRO/Sea Sense | Upload research reports relevant to the NPF to the Govdex site. | Ongoing – EO to liaise with Rik Buckworth and upload the reports relevant to the NPF. |
| 4 | AFMA | Provide a written annual summary of observer monitoring that provides methods, results and spatial distribution (use SESSF report as a template). | Ongoing – will be distributed out-of-session when finalised. |
| 5 | AFMA | Notify NPRAG when NPF shapefiles are available online for downloading directly to vessels. | Complete – shapefiles now available on AFMA website. |
| 6 | NPRAG | Review the NPF Harvest Strategy before the 2017 season to advise on inputs and decision rules ahead of making recommendations for the 2017 tiger prawn fishery season. | Complete |



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|------|-----------------------|---|---|
| 7 | CSIRO/Tom Kompas | Conduct a sensitivity analysis of the 2016 model predictions using actual economic prawn price and fuel cost data which is collected during November 2016, with new economic information provided in March. | Complete |
| 8 | AFMA | Update observer manual to include most up-to-date handling and data collection techniques and send updated list of items recorded to NPRAG. | Ongoing – information has been finalised, waiting for the manual to be updated before distributing to the RAG. |
| 9 | NPFI/CSIRO/Tom Kompas | Complete retrospective analysis of banana prawn trigger in Feb/March 2017 and present to NPRAG. | Complete |
| 10 | NPRAG | Reassess the research priorities at the next face-to-face meeting to establish a schedule of improvements to be made to the stock assessment. | Ongoing |
| 11 | AFMA | Discuss the mangrove die-off with the Department of Agriculture and Water Resources and Premier and Cabinet. Confirm to whom it has been reported. Contact the Australian Mangrove and Saltmarsh Network of the James Cook University to see what results they got from the March/April 2016 testing they conducted and report back to NPRAG. | Ongoing – to be discussed at each meeting. |
| 12 | NPRAG Chair | Send link for shark handling guide video to NPRAG. | Ongoing – link will be sent before next meeting. |



| Item | Person responsible | Description of ACTION item | Progress |
|------------------------------------|------------------------------|---|--|
| 13 | CSIRO (David Brewer)/NPFI | Identify the top 3 bycatch reduction devices to be further tested for effectiveness. NPFI to lead this project and Austfish to test 1 or 2 of these devices. CSIRO to send results from the PNG bycatch trials when finalised. | Complete – the final report will be distributed when publicly available. |
| 17-18 November 2016 Meeting | | | |
| 14 | NPFI | Circulate the bibliography of all relevant NPF research papers to NPRAG. | Complete – to be completed under action item 3. |
| 15 | NPRAG | Identify the research papers in the bibliography that would be useful to upload onto GovDex. | Complete – to be completed under action item 3. |
| 16 | AFMA | Upload the research papers identified by the NPRAG to GovDex. | Complete – to be completed under action item 3. |
| 17 | NPFI | Report on industry's appetite to move toward MEY and some available options. | Complete – no industry appetite to increase effort to move closer to MEY. |
| 18 | AFMA | Draft a paper outlining the review of the current season dates. | Complete – no industry appetite to review season dates. |
| 19 | CSIRO | Review/update the assessment inputs to consider the influence of price elasticity. | Ongoing – Tom Kompas to follow up and investigate whether this can be done and coordinate with the AFMA working group to ensure resources looking into price elasticity are not being doubled up. |
| 20 | NPRAG Chair | Send a thank you letter to the crews involved in the operational testing of the BRD. | Ongoing – letters with Chair for signing. |
| 21 | NPF Industry | Provide an out of session response to AFMA regarding the US TED wording that was distributed during the NPRAG meeting. | Complete |



| Item | Person responsible | Description of ACTION item | Progress |
|------|--------------------|---|---|
| 22 | AFMA | Update the draft ERM Guide to clearly distinguish between the bSAFE and PSA assessment methods. | Complete |
| 23 | AFMA | Provide NPFI with a draft autonomous adjustment discussion paper based on the RAG's discussion. | Complete |
| 24 | NPFI | Confirm which indicators would be useful to industry. | Complete |
| 25 | CSIRO | Confirm the cost of developing each indicator. | Complete |
| 26 | NPRAG | Prioritise indicators based on cost and importance. | Complete |
| 27 | Rob Kenyon | Circulate a copy of the powerpoint presentation from the NPRAG meeting. | Complete |
| 28 | AFMA | Circulate the draft CSIRO boat level MEY analysis paper to the NPRAG. | Complete |
| 29 | Eva Plaganyi-Lloyd | Analyse historical data and present findings to the NPRAG in March 2017. | Complete |
| 30 | CSIRO | Develop a full project proposal for the fishing power project by the end of January 2017. | Ongoing – Trevor Hutton to develop a pre-proposal for the fishing power analysis to be circulated to the RAG out-of-session prior to going to the ARC in September 2017. |
| 31 | CSIRO | Conduct an initial investigation into species split by analysing the survey data. | Ongoing – method proposed by Malcolm Haddon (member) to be sent to CSIRO (Trevor Hutton) for completion. |

