Northern Prawn Fishery Resource Assessment Group (NPRAG)

Meeting minutes

11 February 2025

Online – Microsoft Teams

Meeting participants

Position	Participant
Chair	Ian Knuckey, Fishwell Consulting
NPRAG members	Denham Parker, CSIRO, Scientific member Éva Plagányi, CSIRO, Scientific member Rik Buckworth, Scientific member Tom Kompas, Economic member (Agenda Items 1-4) Bryan van Wyk, Industry member Ian Boot, Industry member Phil Robson, Industry member Darci Wallis, AFMA
AFMA Employees	Sarah Kirkcaldie (Executive Officer) Brodie Macdonald Lachlan Baker Ben Liddell Kelvin Montanaro Steve Hall (Agenda Item 5c only)
Invited participant	Annie Jarrett, NPFI
Observers / Presenters	Ian Butler, ABARES Laura Blamey, CSIRO Roy Deng, CSIRO Gary Fry, CSIRO Rob Kenyon, CSIRO Sean Pascoe, CSIRO Brandon Meteyard, NPFI Johanna Marcussen, CSIRO observer
Apologies	
Nil	

Agenda item 1. Preliminaries

a. Welcome and apologies

Ian Knuckey, the Chair, opened the meeting with an Acknowledgement of Country at 9:02 AEDT[1]. The Chair noted that as an online meeting we were meeting from various lands around the country and acknowledged Elders past, present and emerging.

The Chair welcomed members and observers in person and online. Members noted that all interests in the matter being considered, not limited to pecuniary gain, must be declared and that any interests should be disclosed prior to the item relevant to the interest being discussed. After potentially conflicted members leave the meeting, the other NPRAG members should then discuss the nature of the interest, decide if there is any conflict of interest, and what action should be taken when that item is discussed. If an interest arises during the meeting, the member should inform the Chair immediately. The Chair further noted that members will sometimes be receiving information before it is publicly available, and members must respect that this is confidential information.

Members noted that the meeting was being recorded, and that the recording will be deleted once the minutes are finalised.

b. Declarations of interest

The RAG discussed potential conflicts of interest and participation under specific agenda items as outlined in FAP12, noting:

- The register of interest is in Attachment A.
- The RAG agreed that industry members should be involved in discussion of Agenda Item 4 (stock assessment) but should be excluded from the final recommendation if it involved changes to Minimum Effort Threshold (MET).

c. Adoption of agenda

The RAG adopted the draft agenda, where the only change was to address Agenda Item 5c following Agenda Item 4. The final agenda is outlined in Attachment B.

Agenda item 2. Actions arising from previous meetings

The RAG noted the status of action items from previous meetings provided by the Executive Officer, detailed at Attachment C, with specific updates provided on the following actions:

1. **June 2024 (Action 9):** CSIRO to provide an update on the pilot aquaculture project at the Tiwi Islands at future RAG meetings (as available).

   Members noted from CSIRO that no further updates are available on the Tiwi Islands project.

2. **November 2024 (Action 8):** NPFI to distribute to NPRAG the simplified spreadsheet for the annual industry economic survey.

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[1] Australian Eastern Daylight Time

Members noted that this action completed out of session. Distributed via email 10 November.

3. **November 2024 (Action 9):** NPFI and ABARES to discuss difference between the surveys.

Members noted that this action completed out of session.

4. **November 2024 (Action 10**): NPRAG Chair to write to AFMA Commission expressing concerns that the automation process has not resulted in time or cost saving.

Members noted that this action is to be completed for the May 2025 NPRAG meeting.

A list of action items established at this meeting are listed in [Attachment D](#).

Agenda item 3. Tiger MICE Project

Dr Éva Plagányi (CSIRO) provided an update on the project "*Methods to account for climate impacts in fisheries models and management: Case study example of environmental contributors that affect Tiger Prawn population dynamic"*, known as the Tiger Prawn MICE project. Member noted the following key points:

- There are three key papers from this project, with the first paper submitted to *Science* and second and third papers currently under development. Further updates on the status of these papers will be provided at the May NPRAG meeting.
  - o The first paper is an overview, bringing together all the understanding around climate drivers and what this means for gulfs and tropical regions – highlighting the contrast to temperate systems, including environmental factors such as sea level, ENSO, cyclone frequency/intensity, rainfall on habitat and species.
  - o The second paper looks at multi-species dynamics of NPF and different species response to the impacts of climate change.
  - o the third paper is primarily based around MICE modelling where seagrass is to be separated by type (mature, pioneer, etc.).
- Planning on the communication and outreach is underway, although this will occur later in the project once more results are available.
  - o CSIRO intends to present at Australian Society of Fish Biology (ASFB) conference (held in Darwin, August 2025) relating to northern fisheries.
  - o Dr Plagányi is to run regional climate session in March as part of the National Climate Briefing program run by CSIRO.

An update was provided by Rob Kenyon (CSIRO) relating to the recent surveys of Groote Eylandt and Blue Mud Bay inshore habitats in November 2024. Members noted the following key points:

- The November juvenile prawn and seagrass survey was successful, following some challenges around permits and other logistical issues, although the data has yet to be analysed.
- CSIRO noted that anecdotally, sea grass community structure seems to have improved since the 1980s surveys.
  - o For example, shoot density of *Enhalus acoroides* (a climax species) seems to have increased at several sites around Groote Eylandt.
  - o Sea grass community structure has changed appreciably at one other site in Blue Mud Bay where only sparse re-coloniser species were found, a different composition of seagrass speciescompared to the 1980s, possibly relating to recent cyclone impacts.

- NPRAG noted that the surveys enabled important collaboration with local rangers, improving their understanding of the NPF and prawn population dynamics.
    - Rangers showed significant commitment to assisting survey efforts, including 2 AM start.
    - The Chair expressed the importance of ongoing collaboration between industry and traditional owners, and members noted the upcoming opportunities for this:
        - NPFI to meet with rangers again this year.
        - Brandon and Darci to attend Laynhapuy IPA dedication.
        - Carpentaria Land Council to join March pre-season briefing (CSIRO can provide scientific fact sheet upon request).

> **Action Item 1:** CSIRO to provide members with an invite to regional climate briefing occurring in March.
>
> **Action Item 2:** CSIRO to provide NPFI/AFMA one-page scientific fact sheet for community consultations.

Agenda item 4. 2025 Stock Assessment

Tiger prawn stock assessment

NPRAG noted the following update provided by AFMA on the recent recommendations on the NPF stock assessment:

- Following consideration of the 2024 stock assessment outcomes, NPRAG supported a potential update of the 2025 stock assessment, acknowledging that if recent fuel price reductions continue, the 2025 TAE estimate may not reflect the economic reality during the upcoming season.
- In November 2024, NPRAG agreed that a full stock assessment should not be run in 2025, with the final decision on the economic inputs to the 2025 'mini' assessment to be made at the February 2025 meeting.
- Three key decisions are required from NPRAG at this meeting, including: current and projected fuel and prawn price inputs, use of 2024 economic vessel data inputs and potential alternatives to the minimum effort threshold (MET).

CSIRO presented additional information on the sensitivity testing presented at the November 2024 meeting, with NPRAG noting the following key points:

- The model assumes participation in the fishery is 100% (52 vessels).
- If there were less boats fishing (i.e., only 48 fished in 2024), it isn't expected that the TAE would increase significantly above the MET level, although profitability at the boat level would increase and remaining boats could fish for longer.
- If less efficient boats chose not to fish, and were therefore not included in the analysis, the costs would also reduce for the modelling, potentially increasing TAE and profitability.
- In order for TAE to exceed MET in 2025 (to 4,004 days), it is estimated that there would need to be around a 50% decrease in fuel price.
- In sensitivities with no MET, anything less than 70% decrease in fuel price still results in an initial TAE decrease in 2024 (the initial TAE "dip") before the recommended TAE increases in subsequent years. The outputs indicate that the model's chosen pathway to MEY is one that substantially reduces effort so as to rapidly increase biomass (as prawns are short-lived species) so that catch rates that result in profits (i.e., overcome operational costs) can be realised as soon as possible.
- A 30% reduction in all costs would result in a TAE at the current MET level in 2025, with a 50% reduction in all costs seeing a 2025 TAE increase to 5,523 days.
- The average tiger price was $27.70 in the 2024 stock assessment.

- For TAE to exceed MET in 2025, prawn price would need to increase by 50%. Doubling in prawn prices would see TAE increase to 4600 days for 2025.

Noting the results presented by CSIRO, NPRAG discussed the following key points:

- There are no obvious quick wins relating to the prawns or fuel price model inputs.
- The economic member raised that the model is surprisingly insensitive to changes in prawn and fuel prices, requiring large changes to these parameters before changes in the short-term TAE is realised. This concern was reflected by other RAG members and observers.
- CSIRO noted that individual profitability should be more sensitive to changes to prawn and fuel prices, but the model does not reflect this because it is based around MEY for the entire fishery (i.e., an "average" vessel).
- Industry members noted that the required reduction in costs/increase in prawn prices to produce a TAE that is above 4,004 days are unrealistic, highlighting the following points:
  - NPFI noted that prawn prices have not ever, and are not likely to increase by the required magnitude.
  - Prawn prices have actually decreased over the last two seasons, in part caused by the volume of stock in cold storage and general global glut of prawns on the market.
  - Industry members reiterated concerns/questions as to whether the stocks could ever physically be rebuilt to the SMEY/SMSY values for grooved and brown tiger prawns of 1.50 and 1.43 respectively (2023 assessment), particularly given climate change concerns.
  - While economic conditions are bad at the moment, not long ago the operators were profitable. Therefore, the model outcomes appear to be overly conservative. Using this current modelling framework, under current conditions, it could be expected TAE recommendations will be around the MET (4,004 days) moving forward.
  - Industry member noted some operators are taking measures to reduce costs of fishing, e.g. purchasing of a mothership, transporting fuel tanks to Karumba and fishing closer to ports to reduce fuel costs, although others are not. The heterogeneity in economic "efficiency" across the NPF fleet was noted on several occasions and is important given that the bioeconomic model assumes an "average" vessel as a proxy for the fleet performance.

In a subsequent presentation, CSIRO outlined the drivers influencing TAE in the model. Members noted the following key points:

- The model attempts to maximise Net Present Value (NPV).
- Using data from 2009-2023, observed effort for tiger prawns was on average only 75% of the projected TAE.
- Using the previous species-split model from the 2022 stock assessment, the observed effort between grooved and brown tiger prawns showed:
  - Grooved tiger prawns – on average the observed effort is 107% of the TAE.
  - Brown tiger prawns – on average the observed effort is 43% of the TAE.
  - Overall effort was on average 75% of the TAE.
  - The proportions of years that the previous species level MET (2,777 fishing days for each species) was 'activated' in model projections indicates that the MET has historically constrained the TAE on several occasions. For grooved tiger prawns the MET was 'activated' for 20% of TAE projections, while for brown tigers prawns the MET was 'activated' more times than not - 53% of TAE projections were constrained to 2,777 fishing days.
- CSIRO noted that all components of the current modelling framework take into account fishing power, except for the setting of the value of MET.

- The MET was set at 5,554 days from 2008 to 2022, while fishing power was increasing year on year. This would mean that the previous 5,554 MET would be equivalent to 3,753 fishing days in 2023, if adjusted for increases in gear/vessel efficiency.
- Projections of the current TAE relative to the base case NPV, show that any increase in TAE will result in a decrease in NPV, and therefore future profits.
  - NPFI noted that at the end of the 2024 tiger season there were good catches, and an extra two weeks would have allowed for operators to make profit. They questioned that, if this is the case, how can NPV decrease when effort is increased.
  - CSIRO noted that the model behaves this way because it assumes there will be more stock to fish in the following years. Effectively, catching more now comes at a cost of future catches.
- Industry members noted that approximately 20% of the fleet may not participate in the 2025 banana prawn season due the current economic conditions. When boats are tied up for long periods of time (6-12 months), further challenges including machinery failure and crew retention arise.
- The purpose of the MET is to avoid significant reduction in effort, allowing a 'minimum' level of operation for the fishery. Therefore, this is determined based on the economic factors, rather than biological, although it must be tested to ensure that the level of effort provided by the MET does not lead to stock collapse.
- CSIRO noted that the model is indicating that although the stocks are sustainable at present, the stocks would need to be remarkably strong for the entire fleet to be profitable.
- If less boats fish in 2025, this would result in more effort days available for the remaining operators (and a longer season) thereby increasing their chances of making profit.
  - NPFI noted that only 41 boats are expected to fish the 2025 banana season.
- It was suggested that reduced vessel number sensitivities be run in the 2025 'mini' assessment, as could easily be the case.
- It was noted that updates and improvements to the 2024 economic survey had occurred (including removing double counting and incorrect counting of costs), which will potentially better account for the economic heterogeneity in the fleet and potentially change the TAE outputs.

NPRAG agreed that two key components should be undertaken for the 2025 'mini' stock assessment: 1) updating economic parameters (2025 version of the correct 2024 fuel/prawn prices and economic survey inputs into the model to better reflect the heterogeneity in the fleet); and, 2) sensitivity testing to determine the influence of fleet size.

- NPRAG supported the inclusion of the 2024 economic data and 2025 fuel/prawn prices into the 2025 'mini' assessment, noting there are no additional costs because this work will be undertaken by CSIRO anyway.
- NPRAG noted that all the economic data must be provided to CSIRO by end of April to allow inclusion in the 2025 model. If this isn't possible, data from the 2024 economic survey will be used.
- The TAE outputs from the model are constrained by MET, so won't reduce below 4,004 days based on the agreed changes to the 2025 assessment.
- NPRAG agreed that the following sensitivity tests be undertaken, with results to be provided at the May 2025 meeting:
  - Potential fleet sizes that may occur in the 2025 season.
  - Different fleet configurations from the 2024 economic data (i.e. exclusion of vessels that didn't fish in 2024, or potentially won't fish in 2025, the 11 vessels that don't provide economic data or a random subset of the fleet).

- o Alternative prawn and fuel prices (i.e. slightly above/below the base case figures), with results provided to the RAG if relevant.
- NPRAG agreed that in the next full assessment, the heterogeneity of economic data between vessels needs to be accounted for. For example, we should no longer extrapolate economic data from 41 to 52 vessels.

NPRAG Recommendations

The following data inputs are used in the 2025 'mini' stock assessment:

- 2024 economic data from 41 vessels extrapolated up to 52 vessels, as per standard methodology.
- 2025 Fuel and prawn price provided by NPFI, per the annual process.

That sensitivity testing of fleet size on the TAE model is undertaken by CSIRO, including the following scenarios:

- 35 vessels.
- 41 vessels (the number currently providing economic data to NPFI).
- 48 vessels (number that fished in 2024 tiger prawn season).

NPRAG will consider the outcomes of this modelling at the May 2025 meeting when setting the TAE for the upcoming tiger prawn season.

Action Item 3: CSIRO to circulate stock assessment presentations to NPRAG members.

Action Item 4: NPFI to provide the agreed 2025 prawn and fuel prices (with input from Tom Kompas as required) to CSIRO by the end of April.

Redleg Banana Prawn Stock Assessment

Members noted that under the harvest strategy, the Redleg Banana Prawn stock assessment requires a minimum of 70 fishing days in order to provide robust outputs. Only 57 days were completed during 2024, so the stock assessment will not take place. CSIRO advised there are expected cost savings due to this.

Agenda item 5a. NPF Data Strategy

Members noted the following points relating to the NPF data strategy:

- Updates have been made to the NPFI Economic surveys to combine and/or clarify the requirements, aiming to avoid data duplication and improve the quality of data collected.
- The NPF Data Strategy will be further developed, with input as required from the Data and Monitoring Working Group (WG), with a draft to be provided at the May 2025 NPRAG.

Members noted changes NPF data collection protocols recommended by the Data and Monitoring WG, including:

- Removing most gear fields collected by observers, with only the following trawl gear details and BRD specification fields retained:
- Retaining the basic TED/BRD gear information currently collected by CMOs.
- Addition of key gear fields in the NPF e-logs, including BRD/TED details and mesh material.
- Either removing or reducing the frequency of (i.e. to once or twice a day) wildlife abundance counts collected by observers.

- Removing recording of marine pollution and weather details from the observer data collection requirements noting the advice from the observer team that this isn't an onerous task, with notes taken as needed during the trip and entered during the steam back to port.
- Retaining a level of collection of commercial prawn samples by observers, due to the potential use in the Tiger MICE project and future stock assessments.

NPRAG provided the following advice on some key elements of the Data and Monitoring WG recommendations:

- Existing gear fields collected by observers should be retained.
  - With the implementation of the e-observer software, AFMA needs to confirm which fields are mandatory across all fisheries. Further advice will be provided at the May meeting.
- Additional gear fields should be implemented in e-logs and how frequency should the system require this information to be entered.
  - NPFI noted that more frequent collection of gear data in e-logs is not necessary given that gear changes mid-season are very rare.
  - This data should be collected through a mid-year gear survey undertaken by NPFI.
- The potential use of prawn grade data recorded in logbooks by industry.
  - NPFI have been doing data analysis of grade data from seasonal landing report (SLR), which could potentially be used by CSIRO. NPFI can provide this data to CSIRO, including the generic grade structure used to standardise different terms used between companies, for further analysis if required.

Noting that some of these decisions are inter-related with other fisheries, NPRAG agreed that these decisions be deferred to the Data and Monitoring WG for further discussion.

> **Action Item 5:** AFMA to confirm mandatory fields in e-observer app and determine extent of possible changes.
>
> **Action Item 6:** Data and Monitoring WG to discuss remaining changes to data collection protocols and make recommendation to NPRAG.

Agenda item 5b. Species Distribution Data Collection

Members noted the options for species distribution sampling that were considered at the November 2024 NPRAG meeting, with 'in-principle' support provided for an ongoing annual sampling approach involving a combination of AFMA Observers and CMOs. NPRAG considered AFMA's refined proposal for a 12-month trial by the AFMA Observer Program to determine the maximum spatial/temporal coverage and number of samples of the program under current coverage levels.

The AFMA Observer Program will arrange deployments (as much as practicable) to maximise the number and spatial/temporal coverage of species distribution samples collected. NPFI noted that CMO contribution to species distribution data collection is not currently feasible due to workload constraints.

NPRAG discussed the following points relating to the proposal:

- As per the November NPRAG discussions, the limitations of the observer data collection is spatial/temporal coverage rather than volume of data collected at the current coverage levels.
- It was agreed that it isn't expected that the species distribution model could be updated with only observer data collection (at current coverage levels), however, the purpose of proposed trial is to identify the expected level of spatial/temporal coverage gaps, to inform the level of supplementation required.

- Due to the dynamic nature of fishing effort and observer deployment, the outcome of the 2025 trial would not necessarily be reflective of future years.
- It is currently not possible to undertake the trial with CMOs due to the current difficulties in recruiting/retaining CMOs which limits the capacity to add additional workloads in the program. NPFI advised that, due to the current uncertainty within the fishery, it supports deferring the final decision of the ongoing species distribution sampling until after the 2025 tiger season.

> **NPRAG Recommendation**
>
> NPRAG supported the proposed 12-month trial to determine the maximum capacity of the observer program to collect species distribution samples, with the AFMA Observer Program to arrange deployments (as much as feasible) to maximise the number and spatial/temporal coverage of samples collected.
>
> The results of the trial will be considered at the November 2025 or February 2026 meeting.

Agenda item 5c. EM Trial Update

NPRAG noted the following update provided by Brodie Macdonald on the 2024 EM Trial and Evaluation Process:

- AFMA thanked the operators for their involvement in the EM trial in 2024.
- AFMA is currently undertaking review of the footage collected for the purpose of verifying ETP interactions.
- ABARES will undertake a review of the congruence between logbook records and the observations of the EM reviewer.
- Further work on the ongoing costs/options for an EM program, including evaluating different types of review, varying audit levels, and ongoing maintenance costs. The cost difference between the EM program and the current data collection structure (observers) will be also assessed.
- The evaluation component of the project is currently expected to be completed for NPRAG consideration in May 2025.

NPRAG discussed the following points regarding the EM Trial update:

- The trials saw some of the highest quality footage seen in any fishery to date, owing to crew's commitment on some vessels to cleaning the camera lenses.
- Following a query from ABARES, AFMA advised that any comparison of CMO and EM trial data was limited because only one of the participating vessels carried a CMO during the trial period.
- Noting the conclusion of the EM funding, AFMA is working towards a Commission decision on EM roll-out in the NPF in July 2025, with NPRAG/NORMAC consideration currently scheduled for May 2025. These timeframes do provide some constraints to the cost evaluation work that can be completed.
- Review of poor quality footage, typically resulting from insufficient cleaning, speeds up review time but increases the risk of missing interactions.
  - The Chair noted that issues with footage quality would ideally need to be fixed before the final data is reported on.
- Industry noted that the capability of the product is as expected, although their greatest concern is the ongoing cost of the program, in particular the maintenance costs and technicians, noting the scarcity of technicians in Northern Australia.
  - AFMA noted that the costs for the life of the program will be accounted for in the cost-benefit assessment.

- Industry expressed concerns around of the current time pressures for the decision on whether EM should be mandated in the fishery, noting that the current economic pressures and uncertainties in the fishery.
- AFMA is considering the costs from an overall AFMA perspective, because the costs of the EM program (i.e. review and administration) are spread across multiple fisheries. Existing EM programs in other fisheries provide a guide for the costs, including overall program administration costs, maintenance costs, and repair costs.
- AFMA advised that one of the significant motivators for EM is independent data verification (especially involving ETP interactions), which is currently being strongly pushed by DCCEEW. AFMA needs to determine the most cost-effective way to provide independent verification of data across all fisheries to ensure future WTO requirements or other external requirements can be met.
- Industry asked about the protocol if an EM system fails during the season and required the vessel returning to port to fix, as most other Commonwealth Fisheries don't have vessels on 3+ month trips.
  - AFMA advised that it does not anticipate that strict requirements where boats must have a working EM system to fish would apply in the NPF. (i.e. in contrast to those applied in the Gillnet, Hook, and Trap Fishery, due to the Australian Sea Lion Management Strategy),
- CSIRO noted that bycatch species identification is very important for the bycatch sustainability report, including the rarer species that are less readily identified.
- AFMA advised that with high resolution footage, around 80% of sea snakes can be identified to species level, although there are a couple of similar-looking sea snakes that would be difficult to differentiate with a high degree of certainty.

Agenda item 6. 2026/27 Research priority identification

NPRAG noted the following update from AFMA on the annual research process:

- At the February meeting, NPRAG is asked to identify any research priorities to be developed into research scopes to be considered at the annual May meeting. Identification of any priorities should be considered alongside the five-year Strategic Research Plan (*NPF Strategic Research Plan 2024-28*).
- Any new approved priorities are incorporated into the NPF annual research statement which are considered by the AFMA Research Committee (ARC) at its annual meeting in August, with ARC-approved research scopes included in the annual call for research proposals in September for potential AFMA funding or Fisheries Research and Development Corporation (FRDC) funding.
- The ARC will be considering the final 2025/26 proposals at its meeting mid-February 2026.

NPRAG identified the following research priorities to be developed into research scopes for consideration at the May 2025 meeting:

- Economic sensitivity testing to analyse the impacts of fleet heterogeneity on bioeconomic modelling.
  - E.g., removing elements of the bioeconomic model that rely on an "average" vessel as a proxy for fleet performance.
  - Further development of the bioeconomic model could involve integrating banana season data into tiger prawn stock assessment.
  - Industry member noted that potential upcoming changes to fleet size/composition may make this research redundant/premature.
- Further investigation of the use of artificial intelligence (AI) for:

- o Automation of species identification, which has broad relevance across fisheries due to the potential to decrease EM review costs.
  - It was noted that the research in this area is common but is currently very fragmented, and would benefit from a more coordinated project to understand the costs and what is achievable.
  - o Investigating the use of AI to determine optimal fishing time and location using a combination of weather data, moon phases, catch data, bycatch data, etc. This could improve fishing efficiency will ultimately increase profits.
- Two potential conflicts of interests were noted in relation to the AI projects, from the Austral industry member (as the company is already investigating this) and CSIRO due to ongoing investigation into these tools.

Industry noted the significant economic challenges currently being faced by operators. Members representing industry wish to preface these recommendations, stating they are currently prioritising short-term viability over long-term research. Considering this, NPFI requested more time to discuss further research and come back out of session.

NPRAG Recommendation

Industry members prefaced this recommendation by stating that future research is not currently their priority due to the challenging economic conditions in the fishery.

NPRAG identified the following research priorities for 2026/27 for development into research scopes for consideration at the May 2025 NPRAG meeting:
- Economic sensitivity testing to analyse the impacts of fleet heterogeneity on bioeconomic modelling.
- Automation of species identification using AI.
- Investigating the use of AI to determine optimal fishing time and location using a combination of weather data, moon phases, catch data, bycatch data, etc.

Action Item 7: AFMA/CSIRO/NPFI to discuss and develop research proposals for NPRAG in May 2025.

Agenda item 7. MSC Conditions/Sawfish Project Update

The RAG noted the following update provided by NPFI on the reporting of sawfish interactions and relevant sawfish research projects:

- NPFI are continuing to educate operators on species identification of both sawfish and sea snakes, resulting in improved reporting accuracy over recent years.
  - o A total of 427 sawfish interactions were recorded in 2024, where only 11% were not identified to species level.
  - o Additional focus will be placed on operators/vessels which are not currently reporting interactions.
- During the 2024 tiger prawn season, 103 sawfish tissue samples were collected for the Close-Kin Mark-Recapture (CKMR) project, bringing the total to 655 samples since the project began in the 2018 banana prawn season.
- During the 2024 tiger prawn season, eight satellite tags were deployed by CMO's and skippers. We have yet to receive the movement and survival data from CSIRO.

- Feedback from CSIRO was that majority of the satellite tags deployed are releasing prematurely. The reason for this and alternative satellite tags are being investigated.
- The data and results from the project '*Mitigating sawfish interactions in the Northern Prawn Fishery*' are currently under embargo, with the draft project report to be released to stakeholders in the coming weeks.
- A sawfish workshop is scheduled to be held in conjunction with November 2025 NPRAG.

NPFI extends its gratitude to AFMA, CSIRO and Industry members for their continuous support and assistance in developing all sawfish projects. NPRAG commended the work done by NPFI as well as all those involved in the trials including operators and crew, AFMA observers, and Gary Fry (CSIRO). This work demonstrates a substantial commitment and financial investment in tackling the challenges posed by sawfish and other ETP interactions and will be critical for the fishery to meet future MSC re-certification, EPBC Act WTO accreditation, and maintaining the NPF's social license.

Agenda item 8. Southern Gulf Water Resource Assessment

Due to time constraints, this item was deferred to the May 2025 meeting, noting CSIRO will circulate the presentation for information in the meantime.

Action Item 8: CSIRO to circulate Southern Gulf Water Resource Assessment presentation.

Agenda item 9. Other business

NPRAG noted the advice from ABARES that the 2025 Fisheries Status Reports will be released in July this year instead of October. This will potentially impact the data that is available for reporting in 2025, as the transition year, with only data provided to ABARES by the end of March able to be used in the 2025 report As such, CSIRO has made an effort to collate catch and effort data earlier than usual and has provided ABARES with updated data for 2024.

Agenda item 10. Next meeting

The RAG noted that the next meeting is tentatively booked for 20-21 May 2025.

Close of meeting: 16:12 AEDT

Attachment A – Register of interest

Participants	Declared Interest
Chair	
Ian Knuckey	**Positions:** Director –Fishwell Consulting Pty Ltd Director –Olrac Australia (Electronic logbooks) Chair –Northern Prawn Fishery Resource Assessment Group Chair –Tropical Rock Lobster Resource Assessment Group Chair –Victorian Rock Lobster and Giant Crab Assessment Group Chair –Gulf of St Vincent's Prawn Fishery MAC Research Scientific Committee Chair – Spencer Gulf King Prawn Fishery Economic Sub-committee Scientific Member –Northern Prawn Management Advisory Committee Scientific Member –Gulf of St Vincent's Prawn Fishery Management Advisory Committee Scientific Member –Tropical Tuna Resource Assessment Group Scientific Member – SESSF Resource Assessment Group Member –The Geelong Agri Collective **Fishwell current/recent projects:** AFMA 2022: Annual monitoring, reporting and assessment of SPF marine mammal interactions, including effectiveness of mitigation measures AFMA 2020-0807: Bass Strait Scallop Fishery Survey – 2020-22 FRDC 2018-021: Development and evaluation of SESSF multi-species harvest strategies Traffic Project: Shark Product Traceability Sea Cucumber Assn: Design and implementation of various sea cucumber dive surveys. Australia Bay: Queensland Gulf of Carpentaria Developmental Fin Fish Trawl Fishery Northern Marine Parks Fishwell staff member is analysing the EM footage in the gulf of Carpentaria developmental finfish trawl fishery.
Members	
Rik Buckworth	Scientific Member – NPRAG Director -Sea Sense Australia Pty Ltd Adjunct Professor – Charles Darwin University CSIRO Honorary Fellow Current and pending projects with government agencies, CDU and fishing industry for projects in the NT, Torres Strait and Qld 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 Member – Data Working Group for the GABTF

Tom Kompas	Economic member – NPRAG
	Employed by University of Melbourne. Research provider. Has in the past and may in future seek and receive funding for research in the fishery.
Éva Plagányi	Scientific member – NPRAG
	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
	Research provider involved particularly in stock assessment research in NPF
	Also currently receiving FRDC funding related to development of a GoC ecosystem model.
	Scientific member of TRLRAG and TS HCRAG
Denham Parker	Scientific member – NPRAG & NORMAC
	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
	Research provider involved particularly in stock assessment research in NPF
Phil Robson	Industry member – NPRAG
	Employee of A Raptis and Sons, responsible for managing NPF vessels & an NT demersal fish trawler. Has provided charter for scientific surveys in NPF in the past and may in future
Bryan van Wyk	Industry member – NPRAG
	Employed by Austral Fisheries, a company with SFR holdings in the fishery
Ian Boot	Industry member – NPRAG & NORMAC
	Managing Director of Austfish, a company that operates NPF vessels. Has a commercial interest in the fishery. NPF broodstock permit holder. Participates in scampi fishing
Darci Wallis	AFMA member – NPRAG
	Employed by AFMA, Manager of Northern Prawn Fishery.
	No interest, pecuniary or otherwise
Invited participants	
Annie Jarrett	CEO – NPFI
	Commonwealth Fisheries Association Director
	Chair – Australian Council of Prawn Fisheries (ACPF)
	Member of the FRDC selection panel.
	Invited participant - NORMAC
	No pecuniary interests
	Represents the interests of industry
AFMA	
Sarah Kirkcaldie	Employed by AFMA
	No interest, pecuniary or otherwise
Brodie Macdonald	Employed by AFMA
	No interest, pecuniary or otherwise
Lachlan Baker	Employed by AFMA
	No interest, pecuniary or otherwise

Ben Liddell	Employed by AFMA No interest, pecuniary or otherwise
Observers / Presenters	
Ian Butler	Research interests for ABARES projects, in particular the economic survey of operators in the NPF. No pecuniary interests, personal or otherwise in the fishery.
Roy Deng	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
Gary Fry	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
Rob Kenyon	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
Sean Pascoe	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
Laura Blamey	Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery
Brandon Meteyard	Employed by NPFI. No pecuniary interests. Represents the interests of industry
Johanna Marcussen	CSIRO visiting researcher from Institute of Marine Research Norway. No interest, pecuniary or otherwise.

Attachment B – Final meeting agenda

FINAL AGENDA - Day 1: Tuesday 11 February 2025 / Time: 900 to 1540 AEDT

Time	Item	Purpose	Presenter
9:00	**1. Preliminaries** a. Welcome and apologies b. Declarations of interest c. Adoption of Agenda	For action	Chair (20 mins)
9:20	**2. Actions arising from previous meetings**	For information/discussion	AFMA (10 mins)
9:30	**3. Tiger MICE Project**	For information	CSIRO (30 mins)
10:00	**4. 2025 NPF Stock Assessment**	For decision	CSIRO/AFMA (2 hours)
12:00	**Lunch**		(1 hour)
13:00	**5. Data collection in the NPF** c. EM trial update a. NPF data strategy b. Species Distribution Data Collection		AFMA (1 hour)
14:00	**b. 2026/27 Research priority identification**	For discussion	AFMA (30 mins)
14:30	**c. MSC Conditions/Sawfish Project Update**	For information	NPFI/CSIRO (30 mins)
15:00	**d. Southern Gulf Water Resource Assessment**	For information	CSIRO (30 mins)
15:30	**e. Other business**		EO (10 mins)
15:40	**f. Next meeting**	For decision	EO (5 mins)
	End of Meeting		

Attachment C – NPRAG action items

Table 1: Status of action items from previous NPRAG meetings

Complete	Redundant	Underway	Need NPRAG advice	Not yet started

No.	Mtg Date	Action Item	Agency / Person	Timeframe	Progress
3	8-9 February 2022	AFMA, CSIRO and NPFI to develop a proposal to review the information on squid to support updating the NPF harvest strategy. Need to ensure that the protection of spawning aggregations and the experience from other squid fisheries (including pre-season surveys) are considered. An update to be provided to the NPRAG in May 2022, with further consideration to occur at the October/November 2022 if required.	AFMA, CSIRO and NPFI	As soon as practicable	**Pending** – When resources are available to direct to this task, likely to be during next update of the Harvest Strategy for tiger prawns.
1	17-18 May 2022	AFMA to continue development of a data and monitoring plan for the fishery in consultation with the RAG. The following items to be considered: • Refining the objectives of the data and monitoring plan including updating the drivers of data needs by considering habitat and communities, social licence / values and acceptability, market access, animal welfare and indigenous interests; • Determining the temporal and spatial observer needs of the fishery, taking into consideration the scientific report that originally established the program; • Consider setting and monitoring of observer program targets on an annual basis; • Determining the worth of continuing to collect species abundance counts and, if retained, whether the current protocols are suitable; • Exploring options for validating the CMO and Scientific Observer eyeball estimates of total bycatch; • Automating data quality checks and the rectification of data errors; • Consider if there are any required changes to byproduct species data collection and monitoring; and • Consider the feasibility (including costs) and options of introducing finer scale reporting (shot level) for tiger prawn fishing and, potentially, banana prawn fishing.	AFMA	During development of the data plan	**Underway** – See agenda item 5a.

4	17-18 May 2022	NPFI to consider the importance and cost/benefit of maintaining MSC certification for red Endeavour prawns.	NPFI	As soon as practicable	**Redundant.** NPFI have retained MSC certification for red Endeavour prawns during the last re-certification process in 2023.
14	17-18 May 2022	Annie Jarrett and Toby Patterson to discuss the development of processes that will enable appropriate management responses to occur in parallel with [sawfish] research, rather than needing to wait until the completion of research projects.	NPFI / CSIRO	As soon as practicable	**Pending** – Lack of available resources. *Note: Sawfish gear mitigation trials are currently underway.*
6	24-25 May 2023	Members of the MSC condition working group to consider the implications of, and how to meet, the MSC milestone requirement: *By September 2027, demonstrate that systems are in place that allow >80% certainty that the tiger prawn and the white banana prawn sub-fisheries do not hinder recovery of the sawfish species* Membership: Toby Patterson, Rich Pillans, Darci Wallis, Dave Brewer, Bryan van Wyk, Brandon Meteyard	MSC condition working group	As soon as practicable	**Not yet started**
12	24-25 May 2023	Annie Jarrett to provide AFMA her fishery history document. AFMA to consider collating the history.	NPFI / AFMA	As soon as practicable	**Pending** – lack of available resources.
3	27 November 2023	Tom Kompas and Sean Pascoe to consult with industry to enable a better understanding of the economics of the fishery as a whole to assist in the development of breakeven scenarios, ensuring that both variable and fixed costs are being considered appropriately.	Tom Kompas and Sean Pascoe	As soon as practicable	**Complete** – Discussions have occurred between NPFI, AFMA, CSIRO and Tom on the key economic data, which was discussed at the November meeting.
2	21 February 2024	AFMA to report back to June meeting regarding using alternative sources (such as electronic monitoring) for geolocation data.	AFMA	NPRAG meeting in May 2024	**Complete.** Update provided at the November 2024 NPRAG meeting.
1	4-5 June 2024	Tom Kompas, Brandon Meteyard and Michael Dylewski to review data collected to understand inconsistencies between ABARES information and economic data.	Tom Kompas, Brandon Meteyard and Michael Dylewski	As soon as practicable	**Complete.** NPFI received ABARES economic survey questionnaire. ABARE's economic data is collected by financial year whereas the NPFI survey includes a combination of calendar and financial year data, which would explain some inconsistencies. NPFI has been working with Tom Kompas to improve the NPFI survey design to provide better consistency in data collected.
2	4-5 June 2024	CSIRO to discuss the 'on water' observations with industry, with a further update on the status report to be provided at the November NPRAG meeting.	CSIRO/Industry	As soon as practicable	**Complete.** NPRAG agreed in June that 'on water' industry observations are included in the climate and ecosystem status report produced by CSIRO. Further feedback will be sought by CSIRO prior to the next report being due.
4	4-5 June 2024	NPFI to include the mid-year prawn prices and fuel costs in the economic survey.	NPFI		**Complete**

5	4-5 June 2024	NPFI/AFMA/NPRAG to confirm the approach to calculate fuel price for the MEY trigger in the future.	NPFI/AFMA/NPRAG		**Underway –** See agenda item 4.
9	4-5 June 2024	CSIRO to provide an update on the pilot aquaculture project at the Tiwi Islands at future RAG meetings (as available).	CSIRO	As available.	**Ongoing**. CSIRO advised that no further updates were available on the Tiwi Islands project at the time of the meeting.
1	11-12 November 2024	ABARES to circulate link to the concept/methodology of survey to NPFI.	ABARES		**Complete.** Brooke D'Alberto emailed this to NPRAG members on 12 November 2024.
2	11-12 November 2024	CSIRO to further investigate the inputs and modelling to better understand the reasons behind the model response in TAE levels.	CSIRO		**Complete.** For discussion under agenda item 4.
3	11-12 November 2024	Industry, CSIRO and the economics member to discuss re-visiting the MET level, including a potential MET range, providing feedback at the February 2025 NPRAG meeting. NPRAG noted the MET discussions would be conditional on CSIRO capacity/resourcing.	Industry, CSIRO and the economics member		**Complete.** For discussion under agenda item 4.
4	11-12 November 2024	NPFI/AFMA and CSIRO to work together to refine options for CMO sampling (1-2 samples per week per CMO - 100-200 samples of 100 prawns/week).	NPFI, AFMA ad CSIRO		**Complete.** For discussion under agenda item 5b.
5	11-12 November 2024	AFMA to revise the draft NPF data strategy to include the need for ongoing monitoring (due to climate change impacts), economic data and an additional reporting requirements field (WTO and data to support MSC conditions).	AFMA		**Ongoing.** AFMA is in the process of implementing the proposed updates to the Data Strategy. A revised draft will be provided to the May 2025 NPRAG meeting. For discussion under agenda item 5a.
6	11-12 November 2024	AFMA to confirm whether there are any other external or AFMA requirements that require wildlife abundance counts are mandatory.	AFMA		**Complete.** AFMA has confirmed through the Observer team and Policy, Environment, Economics and Research (PEER) team that there is no explicit requirement to maintain the wildlife abundance data collection in the NPF. For discussion under agenda item 5a.
7	11-12 November 2024	AFMA to confirm what tracking information is being used by Parkes Australia, which may have higher levels of polling.	AFMA		**Complete.** Following discussions with VMS team, it has been confirmed that Parks do not have access to more frequent polling, as they are currently using the same system as AFMA. For discussion under agenda item 5a.
8	11-12 November 2024	NPFI to distribute to NPRAG the simplified spreadsheet for the annual industry economic survey.	NPFI		**Complete.** NPFI distributed to NPRAG via email on 10 November.

| 9 | 11-12 November 2024 | NPFI and ABARES to discuss difference between the surveys. | NPFI and ABARES | | **Complete.** Action completed out of session. |
| 10 | 11-12 November 2024 | NPRAG Chair to write to AFMA Commission expressing concerns that the automation process has not resulted in time or cost saving. | NPRAG Chair | | **Ongoing.** To be completed for the May 2025 NPRAG meeting. |

Attachment D – Action items arising from the meeting

No.	Action Item	Agency / Person	Timeframe
1	CSIRO to provide members with an invite to regional climate briefing occurring in March.	CSIRO	
2	CSIRO to provide NPFI/AFMA one-page scientific fact sheet for community consultations.	CSIRO	
3	CSIRO to circulate stock assessment presentations to NPRAG members.	CSIRO	
4	NPFI to provide the agreed 2025 prawn and fuel prices (with input from Tom Kompas as required) to CSIRO by the end of April.	NPFI/Economic member	
5	AFMA to confirm mandatory fields in e-observer app and determine extent of possible changes.	AFMA	
6	Data and Monitoring Working Group to discuss remaining changes to data collection protocols and make recommendation to NPRAG.	AFMA/CSIRO/NPFI	
7	AFMA/CSIRO/NPFI to discuss and develop research proposals for NPRAG in May 2025.	AFMA/CSIRO/NPFI	
8	CSIRO to circulate Southern Gulf Water Resource Assessment presentation.	CSIRO	