



Minutes

Meeting	Northern Prawn Fishery Resource Assessment Group (NPRAG)		
Meeting Number	May 2026	Date	5-6 May 2026
Location	Brisbane Airport Conference Centre/Online	Time	Day 1: 9am-5pm Day 2: 9am-1pm
Members	Dr Ian Knuckey (Chair) Dr Rik Buckworth (Scientific Member) Dr Éva Plagányi (Scientific Member) <i>(Day 1)</i> Dr Denham Parker (Scientific Member) Dr Tom Kompas (Economic Member) online Mr Phil Robson (Industry Member) online Mr Bryan van Wyk (Industry Member) Ms Darci Wallis (AFMA Member)		
Executive Officer	Ms Lauren Crowley (AFMA)		
Apologies	Mr Ian Boot (Industry Member)		
Invited Participants	Ms Annie Jarrett (NPFI) <i>(Day 1)</i>		
Observers/Presenters	Mr Brodie Macdonald (AFMA) Mr Ben Liddell (AFMA) Ms Natalie Couchman (AFMA) <i>(Online)</i> Mr Brandon Meteyard (NPFI) Dr Ian Butler (ABARES) Dr Richard Cottrell (ABARES)	Mr Roy Deng (CSIRO) Mr Rob Kenyon (CSIRO) Dr Gary Fry (CSIRO) Dr Sean Pascoe (CSIRO) <i>(Day 1)</i> Dr Steph Brodie (CSIRO) <i>(Day 1)</i> Dr Laura Blamey (CSIRO)	

Agenda item 1. Preliminaries

1a. Welcome and apologies

The Chair, Dr Ian Knuckey, opened the meeting at 9 am with an Acknowledgement of Country and welcomed participants. The Chair also facilitated the introduction of meeting participants and noted apologies, which are recorded in the table above. Meeting participants were informed that the meeting would be recorded only for the purpose of assisting in the preparation of the meeting minutes and would then be deleted.

1b. Declarations of interests

NPRAG noted, in line with Section 4.14 of [Fisheries Administration Paper 12 – Resource Assessment Groups \(FAP12\)](#), the requirement for all meeting participants to declare relevant interests, not limited to pecuniary gain, regarding all agenda items proposed for the May NPRAG Meeting. Meeting participants discussed and agreed how declared interests would be managed. Declared interests and how they were managed at the May NPRAG Meeting are recorded in the register at [Attachment A](#).

Industry

NPRAG noted that there was a separate Agenda Item 7 (Total Allowable Effort [TAE] Setting), allowing industry to be present for discussions under Agenda Item 6 (2026 Stock Assessment). NPRAG **AGREED** that industry members could be present for discussion but not for the TAE recommendation. Members, invited participants and observers representing industry interests left the room at 4:53pm on the 5 May 2026.

Scientific members

NPRAG noted that the Agenda Item 11 (NPF Research) may raise conflicts of interests with scientific members, although there were no specific recommendations relating to approval or funding of specific projects. Therefore, NPRAG **AGREED** that scientific members and observers were not required to be excluded from any discussions unless NPRAG makes any specific recommendations relating to research projects/scopes.

1c. Adoption of agenda

The agenda was adopted as final ([Attachment B](#)).

1d. Minutes of previous meetings

The minutes from the NPRAG meeting held on 04 March 2026 were distributed to NPRAG members for feedback prior to finalisation. Members supported the acceptance of the minutes as a true and accurate record of the meeting, which are available on the [AFMA Website](#).

1e. Correspondence

NPRAG noted the recent RAG correspondence as provided by the Executive Officer.

Agenda item 2. Actions arising from previous meetings

The NPRAG noted the updates for relevant action items from previous meetings, with further details provided in [Attachment C](#).

The following action items were discussed:

- a) Nov 2025 (Action 16): AFMA / NPFI to seek further advice from Toby Patterson (CSIRO) on available population information / estimated fishing and natural mortality estimates for species other than narrow sawfish.
- b) Nov 2025 (Action 19): CSIRO (Toby Patterson) to provide an update on the potential expansion of the close kin mark recapture (CKMR) project to estimate interaction and mortality rates using current biomass and life-history parameters at the next meeting (March 2026).
 - NPRAG noted that the funding for the sawfish CKMR project ends mid-year. This work is important for the continued understanding of sawfish species, while the sawfish mitigation strategy is developed. Discussions between Darci Wallis (AFMA) and Toby Patterson (CSIRO) out of session determined AFMA, NPFI and CSIRO will meet in late June/early July to discuss future extension of the project, once there is more clarity on CSIRO restructuring.
- c) March 2026 (Action 2): Ian Knuckey to confirm with FishSOOP coordinators if early release of NPF data to a specific provider is feasible.
 - Ian Knuckey to raise NPF data being made available to a specific provider at the next FishSOOP meeting, which occurs quarterly.
- d) March 2026 (Action 3): CSIRO to provide NPFI with further details of the purpose of early access to the NPF temperature FishSOOP data.
 - Action not yet progressed, discussions to occur offline when there is capacity.
- e) All other actions updates were taken as read.

Agenda item 3. Update reports

NPRAG noted updates from industry, AFMA, CSIRO and ABARES regarding current management arrangements and activities in the NPF.

3a. Industry update

NPRAG noted the verbal updates provided by industry members:

- There was strong rainfall across the wet season on the bottom end of the Gulf, including late November / December rain. Rivers peaked in January with floods continuing through late March from additional rainfall, with the Flinders River rivalling historical height levels.
- Fuel was difficult to source due to the ongoing conflict in Iran, with particular challenges in Karumba due to flooding. Prices spiked to \$3.21/litre, reducing to ~\$2.30 during the season (compared with \$1.62 pre-conflict).
- The Austal fleet concluded fishing in early May (week 5 of the season), with plenty of prawns left on the fishing grounds; however, they only caught what the company had committed to buyers to reduce the likelihood of having excess product in long-term cold storage.
- Most of the fleet was focused in the southern Gulf, fishing from Bold Point with some operators going to west Mornington or higher, with crew finding multiple one-mile marks per week (usually only a few per season).

OFFICIAL

- Some operators continued to undertake shorter shots, focusing on value over volume, with 10–11 shots completed daily. Prawn size was lower than expected, with more U25, U21 and U20s caught around Bold Point.
- There was less competition between operators for fishing grounds due to the abundance of prawns and the reduced fleet size.
- Raptis was not able to fish but had a previously established plan for fishing this season.

NPRAG also noted the following updates from NPFI:

- There were 30 boats participating in banana prawn season, with catches to date of 3,030 tonnes (from the 26 vessels using e-logs), with roughly 4.5 tonnes caught per day.
- Fuel prices reduced during the season but were still double those of the last banana season. Darwin price (gross) at the time of the meeting was \$2.17.
- 11 Crew Member Observers (CMOs) were deployed in 2025 tiger prawn season, with required observed shot targets met (452 shots). Data is now with Gary Fry (CSIRO) for analysis. Two CMOs were deployed in the 2026 banana prawn season.
- 122 sawfish tissue samples were collected (832 total to date), although due to the reduced fleet size and expected reduced sawfish interactions once gear mitigation is implemented, it will be challenging to reach the estimated 1,700 sample target from the CKMR analysis.
- Satellite tagging of sawfish is ongoing, with four tags deployed in the tiger prawn season and six in the banana prawn season. There were 22 fewer sawfish interactions in the 2025 tiger prawn season than in 2024.
- A total of 3,843 days were fished in the 2025 tiger prawn season, less than the TAE of 4,004 and days fished in 2024.
- There are 8 vessels continuing to trial the SBS-TED-70, with two other vessels trialling thicker grey mesh throat in the 2026 banana prawn season and anticipated to be trialled with additional vessels in the 2026 tiger prawn season.
 - There were no reported sawfish interactions with thicker throat material, although one vessel had smaller sawfish in the codend (the SBS-TED-70 and alternative mesh is not being tested on the same vessels).
- Difficulties for small independent operators were exacerbated this season due to the absence of Raptis' facilities and mothership, with some vessels being reliant on the independent mothership (Torres Express).
- Independent operators often have less capacity to forward sell like the larger companies, potentially causing market disruptions with suppliers struggling to sell to key buyers like Sydney and Melbourne fish markets due to excess products.
- The July 2026 spawning survey had to be delayed until 2027 as the Raptis vessels were not available to charter to undertake the survey. NPFI will go out to tender during 2026 tiger prawn season to find an alternative vessel to undertake the 2027 surveys.
- An alternative catch reporting method was required due to a reduced fleet and absence of Raptis vessels, as the current Harvest Strategy requirements are very stringent and need to be reviewed as more practical options are now available.
- There were some complications with contracting an alternative service provider to undertake observer data collection, with AFMA and NPFI considering different options, including the use of NPFI-contracted observers.
- AFMA advised that options are being assessed with NPFI and the AFMA data and observer teams to identify the most cost-effective and suitable data storage solution for the alternative observer program collected data. Discussions will continue as the new observer program is worked out.

3b. *AFMA management update*

NPRAG noted the update provided by AFMA, with the following key points discussed:

- There are ongoing discussions with Department of Climate Change, Energy, the Environment and Water (DCCEEW) on the timeframes of Wildlife Trade Operation (WTO) conditions, with AFMA seeking to extend the current WTO condition timelines to align with other management changes in the fishery and allow sufficient time to undertake the required consultation.
 - The Commission would not be able to formally endorse the sawfish strategy until their meeting in July, and it is important to have time for the NPF Management Advisory Committee (NORMAC) review and external consultation.
 - The Data Strategy is proposed to be delayed until early 2027 to align with the introduction of electronic monitoring (EM).
- The EM trial condition has been met, with ongoing work to improve species identification for seasnakes and sawfish.
- NPRAG noted the following potential NPF tiger prawn stock assessment changes identified, which will be considered further at the November meeting:
 - Incorporation of outputs from the Tiger MICE project.
 - Inclusion of banana prawn economics within the bioeconomic model.
 - Review of the Minimum Effort Threshold (MET) to reflect fleet restructuring.
 - Consideration of fleet heterogeneity as the current model assumes a single 'average' vessel and may not capture differences in fleet structure.
 - Consideration of broader AFMA work to better align management settings with fishery risk (including the Commonwealth Harvest Strategy Policy (CHSP) review).
- Ecological Risk Assessment (ERA)/Ecological Risk Management (ERM) update:
 - Two AFMA/CSIRO workshops were held in September and November 2025, with the following outcomes considered by the Ecological Risk Management Steering Group (ERMSG):
 - Simplifying the presentation of ERA results to better explain changes in risk scores.
 - Review of AFMA's ERA Revised Residual Risk Guidelines (2018).
 - Update to the ERA reassessment checklist to include a new trigger for "substantial shift in fishing area", recognising potential climate change impacts.
 - CSIRO to document how climate change is incorporated into ERA methodology (to be included in Fisheries Management Paper No. 14).
 - FMP 14 has been updated to replace the fixed five-year ERA review cycle with a trigger-based, stepped reassessment process.
 - RAGs and MACs will now periodically assess ERA triggers within a five-year cycle and provide advice to ERMSG.
 - AFMA is developing a standard template to support this process, to be rolled out across fisheries during 2026.
- DAFF has completed its review of the CHSP and Commonwealth Bycatch Policy (CBP). A timeline for release of the revised policies has not yet been announced.

NPRAG discussed the following key points:

- Industry expressed concerns about the implications for delaying the Sawfish Strategy implementation on relationships to external stakeholders, such as Marine Stewardship Council (MSC) and World Wildlife Fund (WWF), who are already critical of gear mitigation methods.
 - AFMA noted the importance of demonstrating that progress has been made toward completing the conditions, despite seeking a revised timeline.

- Further discussions are due to take place between AFMA and DCCEEW after the NPRAG meeting.
- Introducing sub-fleets into the stock assessment could better reflect variability in fishing patterns (fleet heterogeneity), but would increase model complexity and data requirements, and may reduce how representative TAE outputs are.
- A potential transition from a Maximum Economic Yield (MEY) target to a Maximum Sustainable Yield (MSY) target was considered.
 - MEY is expected to remain the primary target under the revised harvest strategy, noting current economic uncertainty in the fishery (fuel and prawn prices).
 - MSY would simplify the model but is unlikely to reflect industry behaviour, as fishing effort is structured around profitability rather than maximising catch. For example, as demonstrated this year, operators may choose to stop fishing early once reaching pre-sold amounts rather than catch as much tonnage as possible.
 - Removing the economic component is unlikely to result in significant cost savings to undertaking the assessment.
 - Investment in modelling and research was supported as contributing to the fishery's social licence.
- Review of the frequency and timing of surveys and assessments, noting potential reduced risk associated with a smaller fleet, to be further discussed under **Agenda Item 11**.

3c. *CSIRO update*

NPRAG noted the update provided by the CSIRO members and observers, with the following key points:

- CSIRO is currently undergoing a restructure, which is predicted to reduce staff by 20% in the environmental research unit.
 - Researchers will advise relevant stakeholders of any impact on delivering research milestones, with more clarity expected by the end of May.
 - Three national research priorities have been identified as the focus after the restructure, including marine livelihoods, threatened species and ecosystem regeneration.
- Mangrove recovery was assessed, comparing photographs from 2026 banana prawn season provided by Bryan van Wyk, with previous aerial photographs. The canopy appears denser in 2026 than 2023.
- A paper on the water development work and Tiger MICE project, focusing on prawns, barramundi, mangroves, sawfish and downstream impacts has been accepted with minor revisions. The paper will be circulated once published.
- The updated NPF calculations of trawl effort (using 6x6 grid cells) indicate a relatively consistent spatial footprint of fishing effort since 2007.
 - 5–6% of the available grid cells are utilised for tiger prawn fishing, with around 11% utilisation across both seasons.
- Denham Parker, Sean Pascoe and Trevor Hutton are currently working on a paper on fleet size impacts and profitability in the banana prawn fishery, modelling efficiency at the individual vessel level.
 - The model incorporates weekly vessel revenue based on stock availability and fishing effort, with a consistent cost structure across vessels.
 - Industry feedback will be incorporated as the model is further refined.
- The collaboration with the Queensland Government on the Gulf Water Plan is ongoing, with project timelines extended beyond June.
- CSIRO will attend the Seafood Directions Conference in Sydney (July) and the Australian Society for Fish Biology in Hobart (December) to present outcomes of the Tiger MICE research.

- Members congratulated NPFI on being finalists in the National Seafood Awards (to be presented at Seafood Directions).

3d. **ABARES update**

NPRAG noted the update provided by ABARES, discussing the following key points:

- The 2026 Fishery Status Reports (FSR) are expected to be published in late July 2026 on the DAFF website.
 - ABARES noted they will be in touch with NPFI around modelling in net economic returns estimations.
- The feasibility to include the most recent stock assessments and the Tiger MICE work in the 2026 NPF chapter:
 - ABARES noted they would prefer to use the most recent reports if there are publications and/or meeting minutes to cite before the internal deadline.
 - CSIRO noted there will not be a published document to reference because they intend to do further checks and internal approval is required to release this information, which would not be possible prior to the ABARES deadlines.
- While it was agreed it was preferable to include the latest assessment results in the FSR, the new timeframes have meant this is not feasible.
 - NPRAG asked whether there was any possibility of adjusting the timeframes to suit the assessment timeframes for each fishery, now that they are published entirely online.
 - ABARES advised the deadlines could not be altered as each chapter must be copy edited and externally reviewed prior to release and it is not currently possible to complete chapters for rolled release.

Agenda item 4. Climate influences

4a. **Tiger MICE Project update**

NPRAG noted the update from Dr Éva Plagányi on the FRDC project Methods to account for climate impacts in fisheries models and management: '*Case study example of environmental contributors that affect tiger prawn population dynamics*' (Tiger MICE Project), including the following key discussion points:

- The paper has been accepted for publication in *Science*, with findings under embargo until then.
- The processing of datasets is slightly behind schedule, with the following progress:
 - Preliminary data checks have been undertaken for juvenile prawns.
 - Seagrass samples have been fully processed however data entry is still ongoing.
 - Seagrass density data is available, though morphometric analysis is not yet complete.
 - Final outputs will be presented to NPRAG at the November 2026 meeting.

Mr Rob Kenyon provided an update on the work to support the Tiger MICE project, noting the following key findings:

- Sampling consisted of two trawls per site (200 metres each) with a 2 mm mesh net and 1 mm codend.
- Preliminary data plots suggest that prawn abundance was similar between the 1980s compared to 2024 at most sites but not all. The distribution of juveniles of the two tiger prawn species was similar at both time windows.
- Minimal seagrass (sparse *Halophila ovalis*) was found at one site in Blue Mud Bay that supported a dense seagrass habitat in the 1980s. Local rangers from the Laynhapuy Homelands suggested that cyclone activity occurred in the region and that cyclonic impact may have removed the seagrasses. However, all other sites within Blue Mud Bay retained seagrass habitats much the same as in the

1980s. The bay with denuded habitat is exposed to seas from the south-east, however, the reason for the loss of seagrass at one site and not others remains unknown. Juvenile tiger prawn catch at this site was low in 2024 compared to the 1980s.

- Grooved tiger prawns were more prevalent in sheltered bays in north Blue Mud Bay and sheltered areas within Northwest Bay, and within Deception Bay at Groote Eylandt, showing preference for soft / muddy sediment sites. Brown tiger prawns were less abundant in Blue Mud Bay, but more prevalent on back-reef seagrass habitats of North West Bay and the exposed west coast of Groote Eylandt (they are less abundant in muddy sediment areas overall).
- Seagrass in some areas such as the west coast of Groote Eylandt was damaged by cyclones (especially Cyclone Megan in March 2024) in recent years but has substantially recovered, with brown tiger prawns present in the seagrass habitat as it returns.

4b. Climate and Ecosystem Status Report

NPRAG noted the update from Ms Natalie Couchman on AFMA's Climate Adaptation Program and Climate Risk Framework (CRF):

- The CRF process was approved by the AFMA Commission in September 2025, with the NPF scheduled to be assessed in the second stage of the process.
- The species assessments are currently scheduled to be considered at the expert working group in July (which will include relevant NPF industry, management and researchers). These will then be considered by NPRAG and NORMAC in late 2026 / early 2027 (pending the timing of the Tiger MICE project outcomes being finalised).

Dr Steph Brodie (CSIRO) presented the 2026 Climate and Ecosystem Status Report, with the following key points:

- The report is now a semi-automated format that is easier to produce.
- Global sea surface temperatures have been at record highs over the past three years, with 2026 to date exceeding 2025 levels, with temperatures expected to remain elevated throughout 2026.
- The Southern Oscillation Index (SOI) indicates a transition from La Niña conditions over the 2025/26 summer towards a forecast El Niño event in July 2026, which could potentially be stronger than the 2015–2016 event.
- The Indian Ocean Dipole (IOD), an important climate driver for northern Australia, is currently neutral with some models suggesting possible positive phase beginning in winter.
- Sea surface temperature anomaly mapping over the past year shows cooler-than-average conditions from January to March 2026. Coastal cooling that began in May 2025 persisted through winter, likely driven by dry air over Australia and atmospheric influences on shallow coastal waters.
- Reduced cloud cover, which often occurs during El Niño conditions, can increase solar radiation, leading to greater surface heating and potential ecosystem stress.
- BOM forecasting confidence is higher within 3 months, currently too far out to accurately predict conditions for tiger prawn season.

Considering the updates provided, NPRAG discussed the following key points:

- The last El Niño (2015–2016) produced record-high catches of tiger prawns, but very low catches of banana prawns.
- The report could be produced at a different time of year now that it is semi-automated.
 - Industry suggested that it would be beneficial to produce one in February to provide some insight into the upcoming banana prawn season.

- NPRAG confirms preference to include the Tiger MICE study in the Climate Risk Framework and accepts this may extend the timeline.

Action 1: Dr Steph Brodie to provide a Climate and Ecosystem Status Report for the February 2027 NPRAG to give insight into environmental conditions prior to the Banana prawn season.

Action 2: Natalie Couchman to confirm the industry, management and researchers attending the CRF Expert Working Group in the lead up to the July meeting.

Agenda item 5. Banana Prawn MEY in-season trigger annual review

NPRAG noted the presentation from Sean Pascoe (CSIRO) on the retrospective review of the 2025 banana prawn in season Maximum Economic Yield (MEY) trigger, discussing the following key points:

- The trigger is reviewed retrospectively each year to assess how well forecasts performed, with strong consistency in the estimates until recent years with higher economic uncertainties.
- The 2025 MEY trigger was 425kg/day.
 - The industry estimate of the fuel price in 2025 matched the survey price exactly (\$1.03).
 - Actual prawn prices were better than the estimates in the last two years, with the 2025 survey data at \$13.32 vs \$9.75 forecast.
 - Higher realised prices indicate break-even catch was lower than expected, which would have resulted in the same MEY trigger in 2025, as this was constrained by the lower bound of the 15% buffer range.
- After approximately 10 years of consistent results, with no evidence of bias identified, it was raised whether these reviews could be undertaken less frequently. However, it was agreed there was value in continuing the retrospective review process annually, noting:
 - The review process was originally introduced to validate industry inputs and ensure transparency.
 - CSIRO advised the review requires minimal time and resources to undertake and is therefore within capacity to complete annually.
 - NPRAG agrees the review is a useful validation mechanism and should continue annually based on CSIRO advice.

Agenda item 6. 2026 Stock Assessment

6a. Tiger Prawn stock assessment

NPRAG noted the presentations by CSIRO on the outcomes of the 2026 Tiger Prawn stock assessment, including the following key outcomes:

- As agreed at the March NPRAG meeting, two base cases were undertaken in the assessment: one including the brown prawn regime-shift evidence of changing stock productivity around 2000 (results of the Tiger MICE project), and one model excluding this evidence.
 - The regime-shift was implemented by fitting the stock-recruit relationship to a subset of data (post-2000), compared to the full time series in the non-regime-shift model.
 - NPRAG thanked the CSIRO team for the additional modelling and analysis undertaken.
- The following updated data inputs were also included in the assessment model:
 - Logbook catch and effort data and fishing power series up to 2025.
 - Fishery independent survey indices and length frequency (LF) data from the 2024 & 2025 recruitment surveys and 2024 spawning survey.
 - Economic data based on the latest fishery survey (2025).

- Fleet size was set at 36 (per the March NPRAG agreement), although it was noted that changes in the fishery are ongoing, so there is still some uncertainty around what vessel numbers will be going forward.
- Fishing patterns were based on a 2018–2024 average, as 2025 was considered anomalous and an estimated fishing pattern produced unrealistic results and convergence issues.
- The 2025 catch and effort summary included:
 - Total nominal effort of 3,649 boat days (6% decrease from 2024).
 - Catch was ~21% lower than the 5-year average.
 - Total catch of tiger prawns was 817 tonnes (32% decrease from 2024).
 - Grooved tiger prawn catch was 712 tonnes (30% decrease from 2024 at 1,014 tonnes).
 - Brown tiger prawn catch was the lowest on record at 106 tonnes (~45% decrease from 2024), with an effort of 339 days, in comparison to 468 days the previous year.
 - Total catch of endeavour prawns was 317 tonnes.
 - Blue endeavour prawn catch was 185 tonnes (~35% decrease from 2024 at 286).
 - Red endeavour prawn catch was 132 tonnes, similar to 2024.
- A model estimated fishing pattern approach was tested but not adopted due to long run-times (~9 hours), lack of convergence in some runs, and outputs inconsistent with observed fishing behaviour, especially the substantial tiger effort allocated prior to the opening of the season on the 1st August.
- Economic inputs reflected reduced vessel, labour and repair costs, and lower fuel prices, but increased unit costs per kilogram due to low catch levels.
- The key outputs from the stock assessment model were:
 - The TAE recommendations were not constrained by the minimum effort threshold (MET) of 4,004 days.
 - Excluding the regime-shift produced slightly higher catch projections and net present value overall.
 - Including the regime-shift resulted in lower but more realistic productivity, with projected catch of Brown Tiger prawn being more aligned with the observed long-term averages.
 - The regime-shift model provided a better statistical fit to the data and more closely reflected observed stock behaviour since 2000.
 - Projections indicated positive profits from 2026 onwards under both scenarios, with less effort distributed to grooved tiger prawns in 2027 under the regime-shift scenario, however a large increase to brown tiger prawn effort.
 - Stock status for the two tiger prawn and two endeavour prawn species were assessed as not overfished or not subject to overfishing.
 - The regime-shift scenario had little impact on 2026 endeavour prawn expected catches.

Table 1: Effort projections (no. of fishing days) from the tiger prawn stock assessment model for 2026 and 2027 including and excluding the regime-shift.

Scenario	2026 projected effort (exc. regime-shift)	2027 projected effort (exc. regime-shift)	2026 projected effort (inc. regime-shift)	2027 projected effort (inc. regime-shift)
Grooved tiger prawn	3,429	3,579	3,858	2,825
Brown tiger prawn	885	972	688	1,472
Total	4,314	4,551	4,546	4,297

- All species are above the limit reference point of 0.5S_{MSY} (last 5 year moving average).

- CSIRO recommended reverting the 2028 base case to the 2-year average of fishing pattern as this input is influential to the model outputs and was only altered in this assessment due to 2025 being an anomalous year.
- Recruitment indices showed increases across all species in 2026, while fishing power has remained relatively stable since 2019.
- Sensitivities were input as agreed at the March meetings, as outlined in the table below. It was agreed only three sensitivities would be undertaken due to conducting two base cases.

Table 2: 2026 Tiger Prawn Stock Assessment sensitivity tests

Scenario name	Models	Fishing power	Weekly pattern	Max. effort change	Combined low effort threshold	No. of species
Mid-High Fishing Power	SSB	Mid-High	Estimated OR long-term av.	100%	4,004	3
Estimate season	SSB	Low	Estimated	100%	4,004	3
Base case plus red endeavour prawn	SSBB	Low	Estimated OR long-term av.	100%	4,004	4

Noting the outcomes of the 2026 tiger prawn stock assessment, NPRAG discussed the following points:

- Members noted that model selection and model optimisation should be based on which model is more appropriate to reflect reality.
 - Both models attempt to maximise economic profit, however the base case excluding the regime-shift attempted to rebuild stocks to levels not observed in over two decades, which NPRAG considered unrealistic.
 - ABARES noted that there had been concerns about overfishing in the late 1990s for tiger prawns, which could account for the reduced stock status of brown tiger prawns rather than a regime-shift. However, analysis from the Tiger-MICE project suggests that fishing pressure alone does not explain the lack of stock recovery over the following two decades, which may instead be explained by climate-driven shifts.
 - While it was noted that the regime-shift model output suggests a lower net profit, the outputs were considered more consistent with observed productivity and catches. The higher net profit in the model that excludes a regime shift is a result of projected high catches in future, as that model assumes higher productivity.
 - The risks of not implementing the regime-shift model if there has been a regime-shift would result in the model trying to recover Brown Tiger prawn stocks toward unrealistic targets. The risk to industry is consistently low TAEs, as the model continually prioritises recovery to reach these unrealistic targets, whereas the risk to the stock is that its productivity is over-estimated.
 - There was unanimous support to use the best available science in the stock assessment model, with NPRAG agreeing to adopt the regime-shift model as the base case.
- Clarity was sought around why economic inputs were reduced in 2025. NPFI indicated the following reasons for reduction:
 - Lower repair and maintenance costs were likely due to operators delaying undertaking repairs where possible to save costs.
 - 2025 AFMA levies were lower than previous years and shorter season meant reduced labour costs.

- NPRAG discussed the relevance of Dr Laura Blamey's dynamic B_0 paper¹ which compares the theoretical status of the redleg banana prawn stock relative to the beginning of the fishery or relative to a dynamic reference point that is adjusted based on key drivers (i.e. environmental).
 - The dynamic B_0 paper highlights that many fisheries are investigating the need to adjust B_0 in the future as climate change is challenging the assumption that stocks have the same equilibrium reference level since the beginning of the fishery (~50 years). However, the paper shows there are a number of additional considerations and risks associated with use of a dynamic B_0 approach.
 - In the case of the brown tiger prawn, findings of the tiger-MICE project suggests a regime-shift occurred around 25 years ago, and hence a revision of the B_0 is appropriate for this more recent period.
 - Many fisheries do not have 25 (or 50) years of data as is the case for the NPF and thus B_0 is often computed only using more recent data.
 - Industry noted there has been an obvious change in the fishery over time, supporting the idea of reviewing B_0 .
- Due to CSIRO review and publication timeframes, the 2026 assessment results cannot be included in the upcoming ABARES Fishery Status Report, as discussed under Agenda Item 3d.

Recommendation 1: NPRAG supported adopting the regime-shift as the base case model.

Recommendation 2: ABARES to use 2025 data and the 2024 stock assessment results for the upcoming 2026 Fishery Status Report.

6b. Redleg Banana prawn stock assessment

NPRAG noted the presentation from Dr Éva Plagányi on the redleg banana prawn stock assessment results, with the following key points:

- 133 boat days were undertaken in 2025, with a catch of 102 tonnes, triggering an assessment for 2026². The 2025 effort was concentrated in Quarter 3, with limited activity in Quarter 4.
- The January Southern Oscillation Index (SOI) was 9.9 (La Niña), with January and February rainfall above average, resulting in a tentative prediction of a very good CPUE for 2026.
- The spawning biomass is above the limit reference point (B_{LM}), and slightly below the target reference point of B_{MSY} .
- Per the hockey-stick rule in the Harvest Strategy, $B_{SP(2025)}$ is 86% of B_{MSY} , resulting in a redleg banana prawn TAE recommendation of **372 boat days** (~396 tonnes), or 86% of MSY.

NPRAG noted the presentation and discussed the following:

- The stock is considered sustainable, well above the limit reference point although slightly below B_{MSY} . Environmental variability continues to play a significant role in stock size variation, with:
 - Historical low biomass periods linked to El Niño.
 - Anticipated improved recruitment and CPUE in 2026 under La Niña conditions.
- Potential model improvements were discussed, noting that changes to the redleg banana prawn stock assessment model would require a project with dedicated funding that is not currently considered a high priority of the RAG:
 - Scientific observer data (such as length frequency measurements) could potentially be used in the model, however, to move to a length-based model would require major revisions to the stock assessment which is not currently a high priority.

¹ Blamey, L. K., Plagányi, É. E., and Moore, T., 2025. *Exploring dynamic reference points for a short-lived, highly variable species under future climate*. Canadian Journal of Fisheries and Aquatic Sciences. 82: 1-16.

² Per the NPF Harvest Strategy, 70 boat days are needed to undertake a redleg banana prawn stock assessment.

- Anecdotal comments from skippers suggest that there is presently a noticeably reduced area that produces redleg banana prawns until September in comparison with historical catch areas. It was noted that spatial analysis would be difficult as there is limited available data. Broader industry feedback (including from industry member Ian Boot) would be useful for further discussion on spatial changes.

Agenda item 7. 2026/2027 TAE setting

NPRAG discussed the previous presentations by CSIRO on the outcomes of the tiger prawn and redleg banana prawn stock assessments, noting the following:

- While the 2026 stock assessment used an input of 36 vessels, there remains uncertainty about the impacts of the fleet restructure following the 31% gear reduction.
- The outputs from the stock assessment (based on the stock assessment base case including regime-shift) were:
 - The recommended 2026 TAE was 4,546 boat days (a 24.6% increase on the 2025 observed effort of 3,648 days).
 - The recommended 2027 TAE was 4,297 boat days (a 17.8% increase on the 2025 effort).
- The recommended 2026 TAE equates to 126 days per vessel (if 36 vessels fish), which is longer than the total days in the second season (122), while the 2027 TAE equates to 119 days per vessel.
- The redleg banana prawn TAE recommendation for 2026 is a total of 372 boat days, with a total estimated projected catch of 396 tonnes.
- NPRAG agreed the regime-shift is to be included in the stock assessment, as the best available information which best reflects the reality in the fishery, accepting the base case including the regime-shift during the stock assessment discussions under Agenda Item 6a.
- The NPRAG recommendations, along with NORMAC advice will be considered in the AFMA Commission decision on the 2026 and 2027 tiger prawn TAE.

Industry members left the meeting (both in person and online) for the final TAE recommendation-setting discussions at 4:53 pm. NPRAG accepted the outcomes of the 2026 tiger prawn stock assessment base case, including the regime-shift evidence, and the redleg banana prawn stock assessment.

Agenda item 8. JBG Closure Review

NPRAG noted the presentation by AFMA and CSIRO, including the following points:

- The Joseph Bonaparte Gulf (JBG) closure was implemented in 2021, with a formal 5-year review scheduled for 2026 (per the NPF Harvest Strategy review timeframes).
- A formal review of the closure is proposed for the purpose of assessing the effectiveness of the closure, determining whether current arrangements remain fit for purpose, and considering whether any changes to management settings are required.
- Potential elements to consider are the effectiveness of the first season closure on the redleg banana prawn stock and that there is no specified limit to undertake an assessment if effort is less than 70 days.

NPRAG considered the key elements required to review the effectiveness of the JBG closure (to occur at the November 2026 meeting), discussing the following key points:

- Anecdotal advice from industry indicates the closure has been effective, with larger prawn sizes reported in the second season since the closure was implemented. NPRAG requested NPFI seek formal input from skippers for their comments on the closure.

- Analysis options comparing key data prior to and since the closure were considered, including stock assessment outcomes, changes in prawn size, economic indicators and bycatch composition and ETP interactions.
- The level of fishing effort in the JBG is impacted by a range of factors, including economics and tiger prawn catches in the GoC, with higher effort often occurring when catches are poor in other areas of the fishery.
- Environmental modelling indicates the stock remains around $B_{MEY/MSY}$ during average and wet conditions, with lower stock levels during dry years. However, the impacts under prolonged dry conditions are not known as this has not occurred since the introduction of the closure.
- While it is not feasible to undertake another MSE analysis, CSIRO advised that there is potentially other additional analyses being undertaken as part of other projects that may support these discussions.

NPRAG agreed the following key elements should be considered as part of the JBG closure review at the November meeting, pending available resourcing and funding:

- Comparison of key biological and economic indicators prior to and since the closure, including:
 - Stock assessment outcomes
 - Changes in prawn size, with NPFI to provide CSIRO with the different size grading systems to support potential analyses.
 - Economic indicators, with CSIRO to provide advice on what information would be useful and NPFI to provide this if possible.
 - Bycatch composition or ETP interactions, with CSIRO noting it may be possible to analyse using observer data.
- Potential adjustments on environmental indicators in the stock assessment.
 - CSIRO has undertaken some preliminary work on using post-March data to inform the assessment (more feasible with the first-season closure).
 - More reliable information about an El Niño declaration will be available later in 2026, noting there have not been any El Niño events since the first-season closure was implemented.
- Review of key biological inputs in the model, such as natural mortality assumptions. Future work could consider use of LF data (using AFMA observer data) .
 - It was also agreed that finer scale analysis of CPUE data would be useful if this was feasible for CSIRO to undertake.
- Relevant outcomes of more recent MSE testing undertaken by CSIRO as part of the dynamic B_0 and other projects.
- Collated comments from operators that have fished in the JBG over the last few years, co-ordinated by NPFI.

Action 3: CSIRO to advise NPFI of useful data to inform further economic analysis, with NPFI to provide this data if available.

Action 4: NPFI to provide CSIRO with the latest prawn grading data, formatted into simple grades.

Action 5: NPFI to seek feedback from skippers on the JBG closure.

Action 6: To the extent feasible, CSIRO to undertake analysis pre-and post JBG closure introduction, for consideration at the November meeting:

- Stock assessment outcomes.
- Changes in prawn sizes, based on grading data provided by NPFI.
- Bycatch composition and ETP interactions – depending on other priorities.

Action 7: Pending resourcing, CSIRO to review the key biological model inputs (natural mortality assumptions) and undertake finer scale CPUE analysis for presentation at the November meeting.

Agenda item 9. Data Collection and Monitoring

9a. NPF data strategy update

NPRAG noted the presentation from AFMA on the ongoing development of the NPF data strategy, discussing the following key points:

- AFMA is seeking to extend the timeline of the NPF Data Strategy WTO condition, with a meeting scheduled just after the NPRAG meeting, with the following revised timeframes proposed if approved:
 - May NPRAG Meeting: Advice on any final elements of Data Strategy
 - June to October: Development of draft Data Strategy, incorporating advice to date. Consultation with DMWG as required
 - November NPRAG: Endorsement of draft final NPF Data Strategy
 - Late 2026 / early 2027: NORMAC endorsement of final NPF Data Strategy
 - February / March 2027: Final NPF Data Strategy published on AFMA website
- AFMA is meeting with DCCEEW on the day following the NPRAG meeting to discuss changes to the deadlines for WTO conditions.
- Revised NPF Data and Monitoring process flow diagram was provided, per the advice given at the March NPRAG meeting, along with two other flow diagrams focused on the stock assessment data process and the bycatch projects process respectively. NPRAG provided further feedback on the revised flow diagram.
- NPRAG agreed on the following members for the Data Monitoring Working Group (DMWG):
 - AFMA staff: Darci Wallis, Brodie MacDonald and Lauren Crowley (AFMA management) and Ben Liddell (AFMA Observer team)
 - NPFI: Annie Jarrett and Brandon Meteyard.
 - Industry members: NPFI to nominate members, noting the ongoing changes in the fishery.
 - CSIRO: Denham Parker, Margaret Miller, with further members to be confirmed later.
 - AFMA Electronic Monitoring staff member, due to sawfish ID being critical.

Action 8: NPRAG to provide comments to AFMA on the NPF data flow diagrams prior to the November RAG.

Action 9: AFMA to update the NPF flow diagrams to incorporate the following NPRAG suggestions:

- Move AFMA and NPFI boxes next to each other, so that observers can be linked to both (noting possible upcoming changes to observer services).
- Link CSIRO surveys to byproduct.

9b. Ongoing NPF Data Requirements

NPRAG noted the presentation from AFMA, including the following key points:

- It is not possible for a 'voluntary' adoption of the ePRAWN changes prior to their implementation (as suggested at the March meeting), as AFMA cannot operate two systems concurrently. The new system will replace the previous one once in place.
- Following subsequent discussions with NPFI after the last NPRAG meeting, it was agreed the 'mesh type' field will continue to be collected via the annual NPFI gear survey not through NPF logbooks.
- Accurate shot-level reporting for banana prawn catches is not feasible, with two potential alternative reporting options being considered:
 - Option 1: Shot-level reporting across the fishery, with banana catches aggregated within an area and reported as a single "shot" (noting further advice would be required for industry as what constitutes an 'area').
 - Option 2: Daily catch reporting for banana prawns, with shot-level effort reporting, tiger prawns to remain at shot-level reporting.
- Noting the current economic conditions and uncertainty on the outcomes of the restructure, only essential ongoing data, currently used in fishery assessment or management should be prioritised.
- NPRAG advice was requested on the potential removal of or reduced frequency of sample collection including:
 - Removing collection of LF data collection from species distribution (SD) sampling, as this is not currently used in the SD model or stock assessment, which relies only on species and sex data.
 - The impact of reduce frequency of bycatch composition sampling (i.e. to biennially), currently used to support MSC certification and ERA requirements (undertaken every 5 years and 5-10 years respectively).
 - Remove existing bug biological data collection, which has been undertaken since 2012, following the reduction in the minimum legal size to 60 mm.

NPRAG discussed the ongoing data requirements in the NPF, providing the following advice:

- Skippers face operational constraints that make it impractical to undertake shot-by-shot reporting during banana prawn fishing when catches are continuous.
- Current manual inputs while reporting can be inconsistent across fields such as trawl duration and searching time. "Bottom time" is often estimated and may reflect processing time rather than actual fishing time.
 - As calculating swept area and CPUE is the main focus of this data collection, number of shots is less important to collect than "bottom time".
- NPRAG agreed that shot level reporting of banana prawn catches was not required, finer scale reporting of effort would be beneficial even if catches were aggregated and reported at daily level.
 - It was agreed that options to automate the recording of shot locations and time (i.e. through EM) should be explored, with the information ideally able to be directly input into the e-log system.
 - It was noted that ETP interactions can already be recorded at a finer scale, with multiple Wildlife Interaction Reports able to be submitted daily.
- Removing LF data collection would provide greater flexibility in sampling approaches and may enable increased participation from crew or CMOs.
 - The existing 2018–2025 LF time series will remain available for future use if required.
- CSIRO has previously looked at incorporating LF and sex data into the SD model, although this was not feasible due to insufficient sampling data, with recruitment and spawning survey data used in the model instead.
- NPRAG agreed observers will continue collecting species distribution samples including LF and sex data, noting the discussions around potential changes to the frequency of recruitment and spawning surveys, the ongoing collection of LF data becomes more critical.

- To ensure broader spatial and temporal coverage of species sampling for the SD model, CMOs will collect and photograph SD samples, with species ID through photographs undertaken by NPFI.
- It was agreed the ongoing collection of biological bug data was not required.
 - This data was initially collected to assess the impact of this management change on stock sustainability; however, no assessment has been undertaken to date.
 - The existing 2012–2025 time series could be used to support future assessments, if required.
- The impact of reducing bycatch composition sampling frequency during the banana season was considered, noting that this is the primary sampling undertaken as SD sampling only occurs if tiger prawns are targeted towards the end of the season.
- The primary use of the data is as part of the MSC bycatch proportions analysis, undertaken every 5 years as part of the reassessment. It was agreed that CSIRO would assess the impact of reducing sampling during the banana season (i.e. every 2nd year), with this to be re-considered at the November meeting.

Action 10: AFMA and NPFI to work with AFMA data team on shot level reporting details for logbook development.

Action 11: AFMA to explore options to collect finer scale effort data (i.e. no. shots, trawl time) from EM sensors.

Action 12: CSIRO to review banana prawn season bycatch rates and MSC analysis requirements and present at the November meeting.

Recommendation 4:

NPRAG supported the following ongoing NPF data collection requirements:

- Remove bug sampling and commercial prawn sampling from data collection protocols.
- Retain collection of LF and sex data in SD sampling by observers.
- Species only SD sampling to be undertaken through the CMO program.
- The following logbook reporting for the banana prawn season:
 - Daily aggregated catch reporting.
 - Effort recorded through shot start/end times for swept area analysis (subject to confirmation of EM data availability).
 - Industry are encouraged to report ETP interactions by submitting wildlife interaction reports at finer spatial scales (location rather than daily).

NPRAG agreed to defer advice on the frequency of recruitment and spawning surveys and bycatch composition sampling in the banana prawn season until the November meeting, to allow further analysis to be undertaken.

9c. EM implementation/rollout

AFMA provided an update on the implementation of EM in the NPF, with NPRAG discussing the following key points:

- EM will be a standing annual agenda item going forward, in line with RAG agreement at the March 2026 meeting.
- To date, installations have occurred on 26 vessels, with the remainder scheduled after the banana prawn season, noting funding is only available until June 30, 2026.
- There have been some issues identified by operators with camera functionality or location of installation on certain vessels, resulting in some damage to cameras.
- AFMA expressed thanks to industry for taking the initiative to identify issues and providing feedback to AFMA, with the EM team currently working with operators to address these issues.
- NPRAG discussed why damage to cameras had occurred, noting that the intended approach to camera installation had been to tailor camera positions to the individual vessel.

- Industry noted that AFMA EM team had not been able to visit all vessels and that installation plans were possibly made based on locations that would be easily accessible for crew to clean.
- NPRAG suggested AFMA consider a general installation plan, which can be tailored to individual vessels with input from industry engineers.
- It was noted that hard drives are globally scarce and difficult to source, delaying installations and potentially impacting any voluntary collection of footage during the tiger prawn season.
- Acquiring more EM footage prior to mandatory implementation in 2027 is an industry focus for the purpose of accelerating the training of AI to identify ETP species.

9d. Broodstock monitoring against MSY

NPRAG noted the presentation from the AFMA member, discussing the following key points:

- The black tiger prawn stock assessment was last conducted in 2021, with NPRAG agreeing to monitor broodstock catches moving forward against sustainable catch estimates.
 - Total estimated catches (kg) of broodstock are currently well below MSY for the past five years.
- An updated assessment has not been undertaken because there is little concern for overfishing risk and current financial pressures in the fishery.
- Retained broodstock catches are allowed under regular SFR permit conditions, although NPFI charter a specific vessel to undertake broodstock fishing under a broodstock permit.
- Observer coverage is currently above 20% on broodstock fishing, which equates to around 1 trip per year on the broodstock vessel. This will still be undertaken by AFMA observers even if NPFI directly contract observers to collect biological data moving forward.

Agenda item 10. Sawfish Mitigation Strategy

NPRAG noted the presentation from AFMA on the draft of the Sawfish Mitigation Strategy (SMS), including the following key updates:

- The SMS is currently being drafted, with NPRAG advice sought on the key elements including objectives, actions, data collection and performance indicators.
- The draft SMS will be provided for NPRAG comment prior to finalisation, along with external feedback from key stakeholders. NORMAC endorsement will be sought at its June meeting, with Commission approval currently intended to be sought at its July meeting.
- The SMS must sufficiently justify why the identified management measures have been prescribed, including why other measures were not taken (i.e. gear mitigation vs. spatial management).

NPRAG discussed the update provided by AFMA, noting the following key points:

- NPFI have some concerns regarding any significant delays to the SMS WTO deadline, noting potential implications with external stakeholders (i.e. e-NGOs / MSC).
- While AFMA acknowledged these concerns, it advised that, as this will be a public document open to scrutiny, it is essential to allow sufficient time to make the final strategy as robust as possible, including undertaking appropriate external consultation.
- It's important to highlight the strategy is a 'living document', which will be reviewed annually and updated as appropriate, as new information is made available through ongoing monitoring, research and gear trials.
- Funding on the CKMR project (CSIRO) is available until mid-2026, with options to extend the project currently being explored.
 - It was noted that with the reduced fleet and introduction of gear mitigation options, it would likely become more difficult to reach the estimated ~1,700 sample target required to reduce uncertainty in the preliminary CKMR population estimates.

- As there is currently no state government representation on NORMAC, NPRAG noted the potential benefits of Queensland or Northern Territory government representation on NORMAC to support information sharing of sawfish handling, management and research.

NPRAG provided the following advice regarding key inclusions into the SMS:

- Objectives
 - Minimise sawfish interactions with trawl gear in the NPF through the implementation of practical, effective mitigation measures.
 - Improve understanding of species level vulnerabilities of sawfish species in the area of the NPF through improved reporting and understanding of populations.
- Actions to achieve objectives need to be practical, tangible and measurable, including:
 - Implementation of effective gear mitigation to reduce sawfish interactions across the fishery and minimise impacts of the NPF on sawfish populations.
 - Continued sample collection and tagging to support ongoing population and post-release survival research on sawfish, improving understanding of population dynamics.
 - Ongoing data collection and monitoring to support further evaluation of the effectiveness of implemented mitigation measures.
 - Ongoing improvement of sawfish mitigation measures and gear technology to reduce fishery impacts on sawfish populations.
 - Development of best practice / sawfish safe handling guidelines.
- Gear mitigation and implementation
 - The reduced bar spacing TED (SBS-TED-70) was identified as the most effective option at the sawfish workshop in November 2025.
 - A phased implementation approach was recommended, with continued trialling of thicker throat mesh.
 - Due to the other ongoing changes in the fishery, it was agreed it is not feasible for mandatory implementation of the SBS-TED-70 across industry by the 2026 tiger prawn season. However, mandatory implementation in 50% of nets was supported and should commence from 1 April 2027, with mandatory implementation in 100% of nets still to occur from 1 August 2027.
- Ongoing data collection and monitoring requirements underpinning SMS
 - ETP reporting in logbooks, with continued focus to improve reporting across industry (including finer scale spatial reporting, noting interactions can be reported at 'shot-level' through logbooks).
 - Ongoing ETP interaction monitoring through CMO program.
 - Ongoing tagging and genetic (CKMR) sample collection by industry to support population and post-release survival research.
 - Independent verification via observers and EM from March 2027.
- Performance indicators
 - Interaction rates, measured by reported sawfish interactions.
 - Ongoing improvements in percentage of skippers reporting ETP reductions and levels of species level reporting of ETP interactions.
 - Effectiveness of new gear mitigation measures in comparison to previous gear configuration.
 - Validation of logbook and CMO data with EM once implemented.
 - Consideration of available abundance estimates and information on post-release survival.
- Strategy review
 - Ongoing annual performance reviews through NPRAG, including more comprehensive initial reviews potentially in mid-2027 and mid-2028 following implementation of the strategy.
 - Ongoing five-yearly review schedule, aligned with the NPF Bycatch Strategy review schedule.
- General Comments

- Acknowledgement of relevant changes in the fishery that would reduce the fishery impacts on Sawfish (i.e. reduced fishery footprint from fleet changes).

Action 13: CSIRO, AFMA and NPFI to set up a meeting in Late June/early July to discuss opportunities to extend the funding for the sawfish tagging and genetic sampling.

Action 14: AFMA and NPFI to collaborate with Qld and NT fisheries where possible on management and research to ensure efficient use of resources, including potential representation on NORMAC.

Agenda item 11. NPF Research

Additional research item – RV Investigator Project

Paula Cartwright (James Cook University) provided a presentation on a proposed research initiative ‘Tracing river flow to marine productivity in the Gulf of Carpentaria (GoC)’, noting the following:

- The project is being developed in partnership with Prof Michelle Burford (Griffith University).
- The RV Investigator research voyage to the GoC is proposed to occur during the 2028/2029 wet season.
- The research focus is wet season river flows and their contribution to broader GoC marine productivity, including investigating in situ ecosystem responses to river flows and an examination of how river discharge drives primary and secondary productivity in the GoC.
- This project may improve understanding of fisheries-relevant ecosystem processes.
- The expected outcomes of this work are to enable:
 - Linking productivity pathways to fisheries-relevant processes.
 - Development of ecosystem indicators (productivity, prey fields).
 - Improved understanding of climate/environmental drivers (including links to productivity).
 - Validation of remote sensing and scaling.
 - Resolution of physical–biological coupling across plume systems.

NPRAG input was requested on the proposed research project, with the following advice provided:

- There has been declining productivity in parts of the eastern GoC, particularly in historically productive areas, such as Mitchell, Edward and Keerweer, where catches have significantly decreased over recent years.
 - This project could provide further insight into the possible factors contributing, which would be very beneficial to the NPF.
- Improved understanding of how nutrient loading follows through to next year, including factors contributing to subsequent good banana/tiger seasons even if lower rainfall years.
- If feasible, expanding the work to a multi-year study could capture potential drivers for recent changes in productivity of some key areas of the fishery (i.e. low productivity in the Mitchell region vs. higher productivity areas like Bold).

NPRAG expressed interest in remaining involved in the process and suggested Paula should return to the November NPRAG meeting to provide an update.

Action 15: AFMA to invite Paula Cartwright to the November RAG for an update on the research application.

11a. Research Scopes

NPRAG noted the presentation from AFMA outlining the four draft research scopes identified at the March NPRAG meeting, including the following key points:

- ‘Advancing Sustainability in the Northern Prawn Fishery’ (NPF Stock Assessments).

- As per previous RAG advice, the Monodon assessment has not been included in these scopes as it is not currently essential.
- *'Integrated fishery-independent data for multispecies Northern Prawn Assessments and Ecosystem Modelling'* (IMP Survey and vessel charter).
 - The 2026 spawning survey has been delayed to 2027 due to no available vessel, with the current project proposed to be extended, with the next project to commence from the February 2028 survey.
 - NPFI will seek expressions of interest from industry to undertake the survey around August.
- *'Integrating long-term catch trend analysis of bycatch species into ecosystem-based sustainability of the Northern Prawn Fishery'* (Bycatch Monitoring Program).
 - The changing data systems and sources with the implementation of EM will need to be considered as part of the ongoing analysis within this project.
- *'Further investigation of the use of artificial intelligence (AI) for automation of large TEP identification in electronic monitoring'* (EM/AI automation project).
 - This type of work is a broader fishery priority, with similar proposals in other Commonwealth fisheries.
 - The primary objective of the project is to support ETP species verification and streamline review processes through a staged approach:
 - Identify interaction events in footage / extract clips (with footage still assessed by EM reviewer).
 - Automated EM review, including species ID of ETP species.
 - A secondary objective of the project would be to assess the feasibility of undertaking biological sampling (bycatch / species distribution sampling) through EM.

Considering the four draft research scopes, NPRAG discussed the following key points:

- Due to industry restructuring/economics, there will potentially be fewer operators to cover management costs in the near future, as a smaller pool of levy payers is probable dependent on the outcomes of the SFR reduction restructure and dissolution of the Raptis fleet.
- Therefore, it was agreed there is a need to critically review ongoing research costs, including identifying components of the current research projects that could be reduced or removed with minimal impact on research or management outcomes.
 - As a cost-saving measure, further advice is sought on the potential to reduce the frequency of the independent surveys and bycatch composition sampling during the banana prawn season, including potential impacts on the NPF stock assessments and bycatch sustainability assessments.
- NPRAG agreed that further analysis to assess the impacts of reducing the frequency of the spawning or recruitment surveys is required before advice can be provided, noting:
 - The recruitment index is a critical stock assessment input because prawns are short-lived species.
 - Sensitivity testing on the 2026 assessment was agreed as the best approach, assessing the impact of difference scenarios where recruitment or spawning indices are removed (i.e. biennial surveys etc.), with CSIRO agreeing to develop a draft proposal to undertake this work.
 - If the survey frequency was to be reduced (i.e. biennially), the timing of surveys needs to be considered, i.e. undertaking the surveys in the same year as assessments or staggering them.
 - There are biological linkages between the recruitment and spawning data, therefore it may be more useful that they occur in the same year.

- NPRAG agreed that the research scopes need to require any project proposal to provide cost breakdowns for the individual pieces of work (i.e. stock assessments or surveys), including any cost-savings resulting from undertaking all components of the projects.
 - This would provide more flexibility to understand the cost implications of adjusting the project components when final proposals are being considered.
- The EM/AI proposal should note that applicants can request access to EM footage samples to assist with development of a proposal.

Action 16: CSIRO to provide a project proposal, including estimated costings, to assess the impact on stock assessment outputs of reducing the frequency of recruitment or spawning surveys.

Action 17: AFMA to incorporate NPRAG comments on the four identified research scopes and NPF Annual Research Statement prior to NORMAC consideration.

Recommendation 5: NPRAG supported the four identified research scopes as key priorities for inclusion in the 2027-28 Annual Research Statement, with NPRAG comments above incorporated.

11b. 2027/28 Annual Research Statement

NPRAG noted the update from AFMA on the draft 2027-28 Annual Research Statement, discussing the following key points:

- The four key research priorities identified under **Agenda Item 11a** will be included in the 2027-2028 Annual Research Statement.
 - The ARC will consider the identified research priorities for all fisheries at its August meeting, with the annual AFMA research call to be released in September.
- The following projects are due for completion before 30 June 2026 and therefore it was agreed these should be removed from the 2027-28 statement:
 - Estimating Narrow Sawfish (*Anoxypristis cuspidata*) abundance using close kin mark recapture (scheduled for completion in 2026).
 - Methods to account for climate impacts in fishery models and management: case study example of environmental contributors that affect tiger prawn population dynamics [Tiger MIC project] (scheduled for completion in 2026).
 - Multi- fishery collaboration to assess population abundances and post release survival of threatened sawfish in northern Australia (scheduled for completion June 2026).
- The following project was identified at the March NPRAG meeting and should be included in the table titled *Research projects identified for inclusion in future research statements*:
 - Formal appraisal of management changes (including gear SFR adjustments and fleet restructuring) to understand implications of major structural changes in the NPF.
- The 2027-28 NPF Annual Research Statement will be provided to NORMAC for endorsement prior to providing this to the ARC.

Recommendation 6: NPRAG endorsed the 2027-28 Annual Research Statement (incorporating the above changes), including the four identified research scopes.

11c. Research projects update

NPRAG noted the written updates provided by Rob Kenyon and Gary Fry (CSIRO) on their research, with the following key points:

NPF integrated fishery-independent data program

- The third survey of the 2024–27 program was completed in February 2026, with 304 sites sampled across five regions by two vessels under favourable weather.

- Banana prawns
 - The Gulf-wide abundance index in 2026 was ~20% lower than in 2025, but still relatively high compared with most years since 2013.
 - NPRAG noted the disconnect between the survey index and commercial catch (2025 was a low-catch year despite a high index, while 2026 catch was expected to increase despite a lower index), as the survey was not designed to predict the upcoming banana prawn season, but rather to provide an opportunity to collect fishery-independent tiger prawn abundance data.
- Tiger prawns
 - Brown tiger prawns: Gulf-wide index increased strongly (doubled) from very low 2025 levels, notably around Mornington Island.
 - Grooved tiger prawns: Gulf-wide index also improved from 2025 with notable increases in Vanderlins and Weipa, and to a lesser extent at Mornington, though Karumba remained low.
 - NPRAG noted that grooved tiger prawn 2025/26 recruits were evident in the catch at Vanderlins in February 2026, a good sign compared to the lack of 2024/25 recruits in 2025.
 - The regional indices for both tiger prawn species in the Groote region remained at near-series-lows.
- Blue endeavour prawns
 - Gulf-wide index doubled from 2025, the highest since 2016, with strong recruitment at Mornington Island. The regional index in the Groote region remained at near-series-lows.

Integrating long-term catch trend analysis of bycatch species into ecosystem-based sustainability of the northern prawn fishery: 2023 – 2025

- The processing and analysis of the following data will commence shortly and is on track to meet the November 2026 milestone:
 - 2025 CMO data
 - 2025 AFMA Scientific Observer data
 - ETP and bycatch data from the IMP surveys in 2025

Agenda item 12. NPF Bycatch Strategy Review

NPRAG noted the presentation by the AFMA member on the review of the NPF Bycatch Strategy:

- In late 2024, the NPF Bycatch Strategy was extended to 2026 to line up with the development of the SMS, which will be finalised in mid-2026 (see discussion under **Agenda Item 10**).
- The following timeline to undertake the review was agreed:
 - **July – September 2026:** NPFI / AFMA to review the current strategy, noting sawfish research outcomes / Sawfish Mitigation Strategy.
 - **October 2026:** Bycatch Working Group consideration of the draft strategy.
 - **November 2026:** NPRAG consideration / endorsement of the revised Bycatch Strategy.
 - **Late 2026 / early 2027:** NORMAC endorsement of the final draft NPF Bycatch Strategy.

The methods currently used to monitor these species (CMO and SO data) will change with the introduction of EM in the fishery, which may have implications for data collection under the review.

Action 18: AFMA to organise the bycatch working group to review the NPF bycatch strategy in October 2026, with recommendations to be considered at the November NPRAG meeting.

Recommendation 7: NPRAG supported the bycatch working group having the same membership as sawfish working group.

Agenda item 13. Other Business/Next meeting

NPRAG noted the following items raised under Other Business:

- Clarification on the replacement observer program timeline was sought by the AFMA observer team, with NPFI anticipating that the outsourced observer service would be in place by 2026 Tiger Prawn season. NPFI and AFMA management agree to engage in further discussions with the AFMA observer team out of session.
- The Northern marine parks are currently under review, with the IUCN categorisation of species and special impact activities (including trawling) likely to be considered as part of any rezoning. It is expected this will be communicated to AFMA and may have future implications for the NPF.
- Availability was sought from NORMAC members in the room for an online meeting in June. Based on availability provided, the first two weeks of June were not suitable with AFMA to set up a NORMAC meeting in late June.

A specific date was not set for the November NPRAG meeting, with AFMA to confirm the date once members availability was confirmed.

Action 19: AFMA management, NPFI and AFMA observer team to discuss alternative observer program for tiger prawn season 2026.

Action 20: AFMA to send out poll to gauge availability for the June 2026 NORMAC meeting and the November 2026 NPRAG meeting.

End of Meeting

The Chair closed the meeting at 12:57pm on 6th May 2026.

Attachment A – Member, invited participant and observer declarations 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 – 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 Chair – Impacts of algal bloom on SA fisheries 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 Involved in Fish for All Campaign Western Australia
Members	
Rik Buckworth	Director - Sea Sense Australia Pty Ltd Scientific Member – NPRAG Chair - SharkRAG Member – Data Working Group for the GABTF Adjunct Professor – Charles Darwin University Current or anticipated 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.
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. GABIA – Member
Bryan van Wyk	Industry member – NPRAG

	Employed by Austral Fisheries, a company with SFR holdings in the fishery.
Ian Boot (Apology)	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	
Lauren Crowley	Employed by AFMA No interest, pecuniary or otherwise
Brodie MacDonald	Employed by AFMA No interest, pecuniary or otherwise
Ben Liddell	Employed by AFMA No interest, pecuniary or otherwise
Natalie Couchman	Employed by AFMA No interest, pecuniary or otherwise
Observers / Presenters	
Brandon Meteyard	Employed by NPFI. No pecuniary interests. Represents the interests of industry.
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
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
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
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
Steph Brodie	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
Ian Butler	Employed by ABARES. No pecuniary interests, personal or otherwise in the fishery.
Richard Cottrell	Employed by ABARES. No pecuniary interests, personal or otherwise in the fishery.

Attachment B: Adopted Agenda

NPRAG May 2026 meeting

DRAFT AGENDA – Day 1: 5 May 2026 / Time: TBC 0900 – 1700 AEST

Time	Item	Purpose	Presenter
0900	1. Preliminaries a. Acknowledgement of Country b. Welcome and apologies c. Declarations of interest d. Adoption of Agenda e. Minutes from previous meeting f. Correspondence	For action	Chair (30 mins)
0930	2. Actions arising from previous meetings	For information / discussion	AFMA (10 mins)
0940	3. Outcomes of out-of-session items	For information	AFMA (5 mins)
0945	4. Update reports a. Industry update b. AFMA management update c. CSIRO update d. ABARES update	For information	a. Industry/NPFI b. Darci c. CSIRO d. ABARES (1.25 hrs)
1100	<i>Morning Tea</i>		15 mins
1115	5. Climate Influences a. Tiger MICE Project Update b. Climate and Ecosystem Status Report	For information	CSIRO (1.5 hrs)
1245	6. Banana Prawn MEY in-season trigger annual review	For information	NPFI / CSIRO (15 mins)
1300	<i>Lunch</i>		30 mins
1330	7. 2026 Stock Assessment a. Tiger Prawn stock assessment b. Redleg Banana prawn stock assessment	For discussion	CSIRO (2 hrs)
1530	<i>Afternoon tea</i>		15 mins
1545	8. 2026/2027 TAE setting	For decision	AFMA (45 mins)
1630	9. JBG closure review	For discussion	AFMA / NPFI (30 mins)
1700	<i>End of Day 1</i>		

DRAFT AGENDA – Day 2: 6 May 2026 / Time: TBC 0815 – 1500 AEST

Time	Item	Purpose	Presenter
0815	10. Data Collection and Monitoring a. NPF Data Strategy Update b. Ongoing NPF Data Requirements c. EM implementation / rollout d. Broodstock Monitoring against MEY	For action	AFMA (2 hrs)
1015	<i>Morning tea</i>		15 mins
1030	11. Sawfish Mitigation Strategy Endorsement	For advice	AFMA (1 hr)
1130	12. NPF Research a. Research Scopes b. 2027/28 Annual Research Statement c. Research projects update	For endorsement	AFMA (1.25 hr)
1245	<i>Lunch</i>		30 mins
1315	13. Future NPF Stock Assessment Process a. Incorporation Tiger MICE Outcomes b. Inclusion of Banana Prawns in bio-economic model c. MET Adjustment	For discussion	AFMA / CSIRO (45 mins)
1400	14. NPF Bycatch Strategy Review	For discussion	AFMA (45 mins)
1445	15. Other business / Next meeting	For decision	EO (15 mins)
1500	<i>End of Day 2</i>		

Attachment C: Actions and Recommendations

Agenda no.	Action item.	Action	Responsible party
4b	1	Dr Steph Brodie to provide a Climate and Ecosystem Status Report for the February 2027 NPRAG to give insight into environmental conditions prior to the Banana prawn season.	CSIRO (Steph Brodie)
4b	2	Natalie Couchman to confirm the industry, management and researchers attending the CRF Expert Working Group in the lead up to the July meeting.	AFMA (Natalie Couchman)
8	3	CSIRO to advise NPFI of useful data to inform further economic analysis, with NPFI to provide this data if available.	CSIRO/NPFI
8	4	NPFI to provide CSIRO with the latest prawn grading data, formatted into simple grades.	NPFI
8	5	NPFI to seek feedback from skippers on the JBG closure.	NPFI
8	6	To the extent feasible CSIRO to undertake analysis pre-and post JBG closure introduction, for consideration at the November meeting: • Stock assessment outcomes. • Changes in prawn sizes, based on grading data provided by NPFI. • Bycatch composition and ETP interactions.	CSIRO
8	7	Pending resourcing, CSIRO to review the key biological model inputs (LF data and natural mortality assumptions) and undertake finer scale CPUE analysis for presentation at the November meeting.	CSIRO
9a	8	NPRAG to provide comments to AFMA on the NPF data flow diagrams prior to the November RAG.	NPRAG
9a	9	AFMA to update the NPF flow diagrams to incorporate the following NPRAG suggestions: • Move AFMA and NPFI boxes next to each other, so that observers can be linked to both (noting possible upcoming changes to observer services). • Link CSIRO surveys to byproduct.	AFMA
9b	10	AFMA and NPFI to work with AFMA data team on shot level reporting details for logbook development.	AFMA/NPFI

OFFICIAL

9b	11	AFMA to explore options to collect finer scale effort data (i.e. no. shots, trawl time) from EM sensors.	AFMA
9b	12	CSIRO to review banana prawn season bycatch rates and MSC analysis requirements and present at the November meeting.	CSIRO
10	13	CSIRO, AFMA and NPFI to set up a meeting in Late June/early July to discuss opportunities to extend the funding for the sawfish tagging and genetic sampling.	CSIRO, AFMA, NPFI
10	14	AFMA and NPFI to collaborate with Qld and NT fisheries where possible on management and research to ensure efficient use of resources, including potential representation on NORMAC.	AFMA/NPFI
11	15	AFMA to invite Paula Cartwright to the November RAG for an update on the research application.	AFMA
11a	16	CSIRO to provide a project proposal, including estimated costings, to assess the impact on stock assessment outputs of reducing the frequency of recruitment or spawning surveys.	CSIRO
11a	17	AFMA to incorporate NPRAG comments on the four identified research scopes and NPF Annual Research Statement prior to NORMAC consideration.	AFMA
12	18	AFMA to organise the bycatch working group to review the NPF bycatch strategy in October 2026, with recommendations to be considered at the November NPRAG meeting.	AFMA
13	19	AFMA management, NPFI and AFMA observer team to discuss alternative observer program for tiger prawn season 2026.	AFMA/NPFI
13	20	AFMA to send out poll to gauge availability for the June 2026 NORMAC meeting and the November 2026 NPRAG meeting.	AFMA

Agenda no.	Recommendation no.	Recommendation
------------	--------------------	----------------

6a	1	NPRAG supported adopting the regime-shift as the base case model.
6b	2	ABARES to use 2025 data and the 2024 stock assessment results for the upcoming 2026 Fishery Status Report.
7	3	NPRAG accepted the outcomes of the 2026 tiger prawn stock assessment (base case including the regime-shift) and redleg banana prawn stock assessment, recommending the following TAEs: • A 2026 TAE of 4,546 boat days in the tiger prawn fishery. • A 2027 TAE of 4,297 boat days in the tiger prawn fishery. • A 2026 TAE of 372 boat days in the redleg banana prawn fishery.
9b	4	NPRAG supported the following ongoing NPF data collection requirements: • Remove bug sampling and commercial prawn sampling from data collection protocols. • Retain collection of LF and sex data in SD sampling by observers. • Species only SD sampling to be undertaken through the CMO program. • The following logbook reporting for the banana prawn season: ○ Daily aggregated catch reporting. ○ Effort recorded through shot start/end times for swept area analysis (subject to confirmation of EM data availability). ○ Industry are encouraged to report ETP interactions by submitting wildlife interaction reports at finer spatial scales (location rather than daily). NPRAG agreed to defer advice on the frequency of recruitment and spawning surveys and bycatch composition sampling in the banana prawn season until the November meeting, to allow further analysis to be undertaken.
11a	5	NPRAG supported the four identified research scopes as key priorities for inclusion in the 2027-28 Annual Research Statement, with NPRAG comments above incorporated.
11b	6	NPRAG endorsed the 2027-28 Annual Research Statement (incorporating the above changes), including the four identified research scopes.
12	7	NPRAG supported the bycatch working group having the same membership as sawfish working group.