



Minutes

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| Meeting | Northern Prawn Fishery Resource Assessment Group (NPRAG) | | |
| Meeting Number | March 2026 | Date | 4 th March 2026 |
| Location | Brisbane Airport Conference Centre/Online | Time | 9am-5pm |
| Members | Dr Ian Knuckey (Chair) Dr Rik Buckworth (Scientific Member) Dr Éva Plagányi (Scientific Member) Dr Denham Parker (Scientific Member) Dr Tom Kompas (Economic Member) Mr Bryan van Wyk (Industry Member) Mr Ian Boot (Industry Member) Ms Darci Wallis (AFMA Member) | | |
| Executive Officer | Ms Lauren Crowley (AFMA) | | |
| Apologies | Mr Phil Robson (Industry Member) Mr Beau Anderson Dr Richard Cottrell Mr Michael O'Brien | | |
| Invited Participants | Ms Annie Jarrett (NPFI) (<i>Online</i>) | | |
| Observers/Presenters | Mr Brodie Macdonald (AFMA) Mr Ben Liddell (AFMA) Mr Brandon Meteyard (NPFI) Mr Roy Deng (CSIRO) Mr Rob Kenyon (CSIRO) | Dr Gary Fry (CSIRO) Dr Sean Pascoe (CSIRO) Ms Margaret Miller (CSIRO) (<i>Online</i>) Dr Ian Butler (ABARES) | |

Agenda item 1. Preliminaries

a. Welcome and apologies

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

b. 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. Some updated interested were noted and are recorded in the register at [Attachment A](#).

There were no agenda items that necessitated the exclusion of any meeting attendees based on the grounds of actual or perceived conflicts of interest.

c. Adoption of agenda

The agenda was adopted as final with no changes ([Attachment B](#)).

d. Minutes of previous meetings

AFMA noted that the minutes from the NPRAG meeting held on 12 November 2025 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](#).

e. 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](#):

- May 2025 (Action 3): AFMA to provide a flow diagram of all the NPF data processes for the next NPRAG meeting.
 - Provided as an attachment to Agenda Item 4a.
- November 2025 (Action 11): AFMA to provide costings of alternative observer coverage levels / EM review rates for consideration at the next meeting (March 2026).
 - Mr Macdonald noted that these would not be provided and that the advice of the RAG should focus on specifying the data collection needs requirements in the fishery.
- May 2025 (Action 21): CSIRO to calculate the area of the NPF subject to trawling using grid cells.
 - CSIRO advised an update on this action would be provided as part of the stock assessment to be presented at the May 2026 meeting.
- November 2025 (Action 3): Tom Kompas to present information on the AI dynamic fuel price model at the next NPRAG meeting (March 2026).
 - Presentation to be provided under Agenda Item 5b.
- November 2025 (Action 4): CSIRO to present the latest outcomes on the brown tiger prawn regime shift at the March NPRAG meeting for NPRAG consideration for inclusion to the 2026 assessment (either the base case or as a sensitivity).
 - Presentation to be provided under Agenda Item 5a.

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- November 2025 (Action 5): *CSIRO to follow up on the broader implication of the MSC requirements regarding the implications of the inclusion of a brown tiger prawn regime shift in the NPF stock assessment.*
 - Update to be provided under Agenda Item 5a.
- May 2025 (Action 4): *AFMA to confirm what “percentage of logbook shots observed” refers to in the 2024 NPF Annual Observer Report and whether days would be a more accurate measure.*
 - The 2024 NPF Annual Observer Report refers to the percentage of observed logbook shots (i.e. logbook reported shots against shots observed by AFMA observers). While observer coverage is budgeted based on based on days, as effort levels can vary greatly between days, shots is the metric to calculate annual observer coverage levels.
 - Industry requested that future reporting of observer effort in the annual observer reports includes percentage coverage of both shots and days (as these can differ, especially during the banana season).
 - Industry requested that AFMA review the budgeted number of observer days, as the effort has reduced in the last few years, but there has been no adjustment to the budgeted observer days.
- Nov 2025 (Action 1): *Industry and CSIRO to work together to find new mesh material with a similar physical structure to the current mesh for future NPF surveys.*
 - NPRAG noted collaboration is underway between Rob Kenyon (CSIRO) and Phil Robson (Raptis) on this work, supporting them taking the lead with updates to be provided to as required.
- November 2025 (Action 12): *AFMA to explore options for AI-based automation for EM review and develop a project proposal in consultation with NPF, NPRAG Chair and CSIRO for consideration at the next meeting (March 2026).*
 - A detailed project proposal for AI-based automation for EM review was not developed, because further internal AFMA discussions after the November meeting concluded its development was premature, due to:
 - The need to prioritise the data collection requirements prior to EM implementation on 1 April 2027.
 - Insufficient footage is currently available to undertake this work, with ~12 months of footage across the NPF fleet estimated to be required, which wouldn't be available until late 2027.

NPRAG discussed the following points regarding the Artificial Intelligence (AI)-based automation for Electronic Monitoring (EM) review:

- NPRAG reiterated the November 2025 suggestion to consider reducing initial NPF EM review rates, with savings reallocated to AI development to support EM review.
- At least 6–12 months of EM footage would be required to support AI model training.
- AI development is a high priority for industry, with significant potential cost savings in the long term.
 - Industry noted EM is already on-board vessels that participated in the trial and expressed willingness to provide footage early to support progressing this action.
 - AFMA confirmed it was happy to consider this, pending any logistical issues (i.e. provision of hard drives to boats with EM installed)
- NPRAG supported exploring broader funding options for AI-EM review, considering this issue is relevant across several AFMA fisheries – unless this approach would unduly slow development for the NPF.
- The RAG agreed AFMA will prepare a scope of work for consideration at the May meeting as part of the 2027/2028 AFMA Research Committee (ARC) funding process.

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NPRAG noted and agreed that the following action items are no longer relevant and should be made redundant:

- May 2022 (Action 14): *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.*
- May 2023 (Action 6): *Members of the MSC condition working group to consider the implications of, and how to meet, the MSC milestone requirement.*
 - These two sawfish items are no longer required due to progresses with the sawfish mitigation strategy.
- May 2025 (Action 10): *Dr Tom Kompas to provide a presentation on his Artificial Intelligence (AI) fuel price model at the next NPRAG meeting.*
 - This item is no longer required as it is a repeat action and received an update under Agenda Item 5b.
- Nov 2025 (Action 13): *AFMA and NPFI to report workshop outcomes to the NPRAG in March for NPRAG endorsement of Data Strategy draft inputs.*
- Nov 2025 (Action 14): *AFMA to organise a Data Workshop in March 2026 to review monitoring priorities and options and develop the NPF Data Strategy.*
 - These two items are no longer required as the data workshop was not held.
- Nov 2024 (Action 10): *NPRAG Chair to write to AFMA Commission expressing concerns that the automation process has not resulted in time or cost saving.*
 - The chair noted, with support from NPRAG, that this item should be made redundant.

NPRAG noted and supported consolidation of the following action items:

- Two relevant Endangered, Threatened, Protected (ETP) species related actions from the May 2025 meeting (action 5 and 6) consolidated into one action:
 - 'AFMA to confirm the internal ETP interaction reporting process (including correction of subsequently identified errors) and the current AFMA external ETP reporting requirements and timeframes'.
- Two relevant data actions (action 1 from May 2022 and action 5 from November 2025 meetings) consolidated into one action:
 - 'AFMA, in consultation with NPFI and the DMWG, to develop a draft NPF Data Strategy for the May 2026 meeting which includes:
 - Key objectives,
 - Relevant spatial and temporal coverage requirements across data collection sources,
 - Key ongoing climate change monitoring needs,
 - Any required changes to reporting fields in logbook and economic surveys, and
 - Automating data quality checks and the rectification of data errors where possible.
- Three relevant action items relating to the development of AI / potential uses in EM review from the May 2025 meeting (actions 13-15) were agreed to be changed into a standing agenda item 'EM update', with AFMA to develop a scope of work for the May meeting.

Action 1: AFMA to develop a research scope for AI-based automation for EM review, in consultation with NPFI, NPRAG Chair and CSIRO as required, for consideration at the May meeting.

Recommendation:

1. NPRAG supported the following changes to relevant action items (per advice above):
 - a. Data and ETP actions are consolidated:
 - May 2025 (Action 5): *AFMA to confirm the process of correcting erroneous reports following subsequent ETP data becoming available.*
 - May 2025 (Action 6): *AFMA to determine where ETP interactions are being reported and how they are being reported.*
 - May 2022 (Action 1): *AFMA to continue development of a data and monitoring plan for the fishery in consultation with the RAG.*
 - November 2024 (Action 5): *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).*
 - b. No longer relevant actions are marked redundant.
 - May 2022 (Action 14): *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.*
 - May 2023 (Action 6): *Members of the MSC condition working group to consider the implications of, and how to meet, the MSC milestone requirement.*
 - May 2025 (Action 10): *Dr Tom Kompas to provide a presentation on his Artificial Intelligence (AI) fuel price model at the next NPRAG meeting.*
 - Nov 2025 (Action 13): *AFMA and NPFI to report workshop outcomes to the NPRAG in March for NPRAG endorsement of Data Strategy draft inputs.*
 - Nov 2025 (Action 14): *AFMA to organise a Data Workshop in March 2026 to review monitoring priorities and options and develop the NPF Data Strategy.*
 - Nov 2024 (Action 10): *NPRAG Chair to write to AFMA Commission expressing concerns that the automation process has not resulted in time or cost saving.*

Agenda item 3. Outcomes of out-of-session items

NPRAG noted the update from AFMA on the outcomes of the out-of-session AFMA Commission decisions since the November 2025 meeting, with the Commission agreeing to a 31% reduction in the headrope value of NPF gear Statutory Fishing Rights (SFRs). This will be implemented through the new [Northern Prawn Fishery \(Fishing Capacity\) Determination 2025](#) on 16 June, prior to the 2026 tiger prawn fishing season.

Agenda item 4. Data Collection and Monitoring**4a. NPF Data Strategy Development**

NPRAG noted AFMA's presentation on essential ongoing data requirements and previously identified data gaps in the NPF, discussing the following key points:

- The current agreed key data gaps in the fishery include:
 - Finer scale (shot-level) reporting across the fishery, noting potentially operational issues with implementation in the banana prawn season (for discussion under Agenda Item 4b).
 - Less available environmental and habitat monitoring data (i.e. climate and oceanographic data) across northern Australia, although the current Fisheries Research Development Corporation (FRDC) "*Methods to account for climate impacts in fisheries models and management: Case study example of environmental contributors that affect Tiger Prawn population dynamic*" project (Tiger MICE project) led by Dr Éva Plagányi (CSIRO) has been able to partially cover some of the gaps.

- Bycatch weight with representative catch composition.
 - Currently collected by AFMA observers (total bycatch weight and representative catch composition).
 - Crew Member Observers (CMOs) collect total catch and bycatch weight estimates two nights per week (not catch composition). There is currently no capacity to increase CMO workload.
- Spatial / temporal distribution of independent coverage.
- Inclusion of AFMA’s Climate Risk Framework as a core data requirement.
- The priority of current NPF data collected, outlined in Table 1 below, was supported. In the absence of AFMA observers, the particular importance of continuing collection of species distribution and bycatch compositions sampling was highlighted, as these are essential for the NPF stock assessment and MSC certification respectively.
 - Commercial prawn biological sampling is a low priority, as it’s currently not used in any NPF assessments or management.

Table 1: Prioritisation of Current Data Collected in the NPF

| Essential | Potential Future Use | Low Importance |
|--|---------------------------|----------------------------------|
| VMS | Commercial Prawn Sampling | Pollution Reporting |
| Species Distribution Sampling | | Wildlife Abundance Counts |
| Bycatch Catch Composition | | Detailed Gear Fields (observers) |
| CMO ETP/Sol Interactions | | |
| Logbook Catch / Effort Data | | |
| Fishery Dependant and Independent ETP Interaction Data | | |
| Seasonal Landing Returns | | |
| NPFI Surveys (Gear / Economic) | | |
| Independent Monitoring Surveys | | |
| Gear Data (TED/BRD/Mesh) | | |

- AFMA advice that an extension will be sought from DCCEEW for the Data Strategy WTO condition, currently due to be completed by 30 June 2026. This extension would:
 - Align the finalisation of the strategy with the rollout of Electronic Monitoring (EM) on 1 April 2027, ensuring sufficient time to finalise the ongoing data collection and monitoring needs in the fishery.
 - Avoid premature development of a strategy that would likely require review within 6 months because not all elements would be finalised by mid-2026.
 - NPRAG endorsed the revised timeline for the data strategy (if the Wildlife Trade Operation (WTO) condition deadline was extended. If a timeline revision is not agreed to with DCCEEW, AFMA would deliver a data strategy by 30 June, finalised as much as possible, with required revisions made prior to the 2027 banana prawn season.
- The NPF data collection flow diagram provided by AFMA was noted, with the following inclusions suggested:
 - ‘Environmental data sources (e.g., sea temperature, ENSO indices)’ under ‘independent data,’ considered as part of the stock assessment process.
 - ETP interaction reporting pathways for transparency.
- Options to adjust the current timeframes for the release NPF data from the Ships of Opportunity Project (FishSOOP), noting:

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- NPF data is currently public released at the end of each season, as stipulated by NPF to protect real-time fishing data.
- Data is available in real-time for all other fisheries.
- CSIRO indicated real-time availability would be useful for in-season analysis.
- Industry was willing to consider earlier access to the data for research purposes, requesting CSIRO provide further details on the purpose of earlier provision of this data.
 - Ian Knuckey advised he would discuss with the IMOS project team, to confirm that NPF data could be released early to a specific research provider.

Action 2: Ian Knuckey to confirm with FishSOOP coordinators if early release of NPF data to a specific provider is feasible.

Action 3: CSIRO to provide NPF with further details of the purpose of early access to the NPF temperature FishSOOP data.

Action 4: AFMA to seek an extension from DCCEEW to the current data strategy WTO condition, to align the release of the data strategy with the roll out of EM in the fishery.

Action 5: AFMA to update NPF Data process flow chart per RAG agreement.

Recommendations

2. NPRAG supported the prioritisation of current NPF data collection per Table 1 above, specifically noting:
 - a. The importance of the species distribution and bycatch composition sampling (currently collected by AFMA observers).
 - b. Commercial prawn sampling is a very a low priority and can discontinued if necessary.

4b. Ongoing Data Requirements

NPRAG noted the presentation from AFMA on the ongoing data requirements for the NPF, including considerations for species distribution, bycatch composition sampling, ETP species ID and future scientific observer program allocation. Key discussion points are summarised under relevant headings below.

Species Distribution Sampling

The outcomes of the recent lateral-view photo sampling trial was presented, led by Dr Rik Buckworth and Ben Liddell in consultation with the NPF management team. It aimed to assess feasibility of crew/CMO species distribution sampling. NPRAG noted the key outcomes of the trial:

- Reasonable accuracy for length-frequency estimates from photographs.
- Species ID possible with good lighting and high photo quality.
- Sex determination not possible from lateral-view images and using other angles would create much larger workload from double handling and be time consuming to crew.
- Higher error risk if samples deteriorate before processing occurs (i.e. samples not stored appropriately in interim).

Considering the trial outcomes, NPRAG discussed the proposed approach (provided at [Attachment D](#)), including potential issues:

- While the proposed sampling procedure reduced processing time as much as feasible, it would still increase the current substantial crew/CMO workloads.
 - Concern was raised with correct arrangement of prawns on measuring boards (to ensure accurate measurement) and photo quality (i.e. lighting).
- NPF advised that this could not be undertaken by existing CMOs, which would require help from additional crew.

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- Existing issues with crew recruitment / retention reduces feasibility of this option, as any changes to current CMO or crew requirements are likely to exacerbate these issues.
- Randomised sampling is essential (collection pre-sorting), but potentially operationally challenging.
- Software options are available, measuring pixel measurements in a photo, if a measure reference is included in the photo.
 - It was agreed that this option for crew/CMOs would be more feasible if accurate arrangement on the measuring grid wasn't required.
- NPRAG considered an NPFI proposal to contract an external observer provider to undertake current essential data collection at a significantly reduced cost than the AFMA Scientific Observer program, discussing the following key points:
 - NPFI are currently in consultation with an external observer provider to scope feasibility of obtaining a third-party observer service for the NPF. The potential benefits include:
 - Continuity of key elements of the current data collection program.
 - Allowing cross-validation of EM, CMO and external observer data following EM implementation.
 - An external provider should be able to provide equivalent observer coverage at significantly lower costs, compared with AFMA observers, maintaining current (or potentially higher) observer coverage levels without increasing overall fishery monitoring costs.
 - Industry proposed an initially lower EM review rate (e.g. 5%), to offset costs of maintaining equivalent observer coverage levels through an external provider (which would also be independent).
 - The proposed AI-automation of EM review project aims to reduce EM costs, potentially allowing for higher levels of EM review in the future.
 - Whether observer coverage funded directly by industry would be accepted as independent (i.e. to MSC / government departments) was considered, with the following points noted:
 - Providing the external provider was accredited (i.e. CapFish Marine, which are used in international tuna fisheries), any bias regarding the data integrity would be perceived, rather than an actual bias.
 - AFMA advised the funds could be allocated through the co-management agreement, if this potentially reduced any perceived risks / biases.
 - Other AFMA fisheries already have or are implementing industry-based data collection programs, delivered by co-management arrangement frameworks, which lends credibility to this method.
 - NPFI proposed commencing external observer services from the 2026 tiger prawn season, replacing AFMA observers. If this wasn't in place, AFMA observers would operate for the 2026 tiger prawn season.
- NPRAG supported further pursuit of service provision through an external observer provider, noting:
 - Maintaining current species distribution sampling methods is critical to ensure consistency with previous data collection.
 - It was agreed any service provider attends RAG meetings to ensure a good understanding of sampling needs in the fishery.
 - Current AFMA observer protocols (ETP interactions, species distribution and bycatch composition sampling) would be maintained, except for commercial prawn sampling.
 - Spatial / temporal distribution of coverage is key, although as with AFMA observer program it is not possible to direct location or timing of fishing effort.

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- It was confirmed that observer coverage targets (i.e. 2%) should be adjusted based on annual fishing effort, not a set number of days. Due to the current uncertainty in the composition of the future fleet, some flexibility in targets would be required.

Bycatch Composition Sampling

- It was noted that collection of bycatch species composition through observers was the most viable option, if an external provider is contracted.
 - Crew/CMO-based sampling wasn't considered feasible due to required expertise in species ID and processing time.
 - Onshore processing of frozen samples presents logistical and compliance risks (e.g. landing prohibited species).
 - Photo-based alternatives cannot produce sufficient taxonomic resolution.
- NPRAG supported ongoing bycatch composition sampling through qualified observers.

ETP Species Identification

- There is currently very high species-level accuracy (~100%) of ETP interactions through AFMA observers and CMO program (though CSIRO photo verification).
- While EM has higher review rates than observers, it currently can't achieve equivalent accuracy for ETP species other than sawfish.
- Additional analysis of EM footage / snipped images could occur (i.e. by AFMA or CSIRO) to improve ETP species ID, it would be more time-intensive for smaller species (i.e. seasnakes).
 - Higher total footage volume will increase review effort unless AI is developed.
- NPRAG strongly supported continued observer coverage (including potentially through an external provider) until EM species ID improves.

Action 6: NPFI to explore external observer provider options, in consultation with AFMA, with an update to be provided at the May meeting.

Recommendations

3. Further pursuit of service provision through an external observer provider by NPFI, in consultation with AFMA, including:
 - Retaining current observer sampling protocols for ETP interactions, species distribution and bycatch composition sampling, excluding commercial prawn sampling.
 - Considering spatial / temporal distribution of coverage (noting can't direct fishing effort).
 - Observer coverage targets (i.e. 2%) are based on annual fishing effort.
 - Any external provider attends NPRAG discussions as required.
4. Maintaining AFMA observer coverage for the 2026 banana prawn season, with external observer services to commence from 2026 tiger prawn season if possible.

4c. Shot-level Reporting / Logbook Updates

AFMA outlined the shot-level reporting proposal, including benefits, implementation considerations and transitional arrangements. Noting shot-level reporting is required for any broodstock fishing (eTRAWL platform), its implementation across the NPF would:

- Provide finer spatial and temporal effort data, improving future stock assessments, bycatch and ETP species analyses.
- Improve spatial / temporal coverage of EM review (avoiding need to review all shots from a day/night) and streamline required review processes (potentially reducing review time).

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- Not result in additional management costs, with only minor logbook updates required (Start Haul / End Haul fields), which fall under BAU work.

NPRAG confirmed its previous advice to include key gear fields (TED, BRD, mesh type) to the ePRAWN system, noting:

- Prompts for these fields should only occur at the start of the season, with option to change them mid-season if required.
- AFMA / NPFI agreed to further discuss the best approach to implement this through the AFMA and Catchlog systems.

NPRAG considered the proposed changes to the ePRAWN logbooks, shot-level reporting and additional gear fields, noting the following key points:

- Electronic monitoring will be implemented in the fishery from April 2027, with the review rate to be set based on days instead of shots in line with the NPF's current reporting method.
- Shot level reporting had previously been implemented in the fishery until around 1997, when the current daily logs were implemented. Industry noted it had advised AFMA against moving to daily logs at the time due to the loss of fine-scale data.
- The scientific benefits of the proposal were highlighted, including:
 - Improved resolution for ETP/bycatch CPUE indices.
 - Potential fuel-use efficiency analysis when combined with VMS data and swept-area estimates.
 - Higher data accuracy for logbook–EM comparison (EM is conducted at the shot level).
- Industry broadly supported its implementation, noting:
 - Shot-level data is already recorded by most skippers, although the e-log system needs some flexibility to allow individual shot information to be entered later.
 - The accuracy of individual shot data would potentially be an issue during the banana prawn season, due to high shot frequency (15–20 per day), as the previous shot may not be processed when the next is unloaded. However, the benefits of shot-level reporting (bycatch CPUE, EM comparison) are particularly important during the tiger prawn season.
 - A 'soft launch' is preferred to allow skippers time to adjust before compliance applies.
- Potential technology linkages / software processes were considered:
 - AFMA would investigate whether EM winch-sensor data could be used / linked to e-logs to automate start/stop times.
 - VMS/GPS location data can already feed directly into Catchlog, avoiding manual input.
 - Gear fields (TED, BRD, mesh type) can be pre-filled or prompted periodically.
- The inclusion gear (TED, BRD, mesh type) and 'start Haul' and 'end haul' fields to the ePRAWN logbook is scheduled from April/May 2026, expected to be ready for the 2026 tiger prawn season.
- The inclusion gear fields (TED, BRD, mesh type) to the ePRAWN logbook and shot level reporting was supported, through a staged implementation approach:
 - Voluntary trial during the 2026 tiger prawn season, with mandatory implementation in the 2027 banana prawn, pending assessment of tiger prawn trial outcomes.
 - Mandatory implementation from the 2027 tiger prawn season.
 - Some leniency from compliance was requested in the first season of mandatory use (i.e. no penalties).
- AFMA and NPFI agreed further refinement of the details / logistics would occur out of session.

Action 7: AFMA and NPFI, in consultation with Catchlog, to develop the implementation approach for shot-level reporting and additional gear fields, ensuring the process is as simple as possible for operators.

Recommendations

5. Inclusion of additional gear fields in the ePRAWN logbook.
6. Introduction of shot-level reporting with a voluntary trial in the 2026 tiger prawn season and mandatory implementation in 2027, noting the:
 - a. Benefits of finer scale data to improve future stock assessments, bycatch and ETP species analyses.
 - b. Streamlining of EM review / data processes and increased spatial and temporal coverage of EM review.

Agenda item 5. Tiger Prawn Stock Assessment

5a. Tiger MICE Project (Regime Shift)

CSIRO presented the latest outcomes of the Tiger MICE FRDC Project, with NPRAG noting the following key points:

- Environmental drivers including temperature, seagrass condition, river flows, cyclone intensity, and large-scale climate oscillations were analysed.
- Multiple lines of evidence support the hypothesis that an environmentally induced change in productivity has occurred for brown tiger prawns, around 1999 (i.e. a regime shift).
 - A dip in seagrass population around 1999 caused by increased cyclone intensity reduced the carrying capacity of the habitat, resulting in environmental induced decreased productivity of brown tiger prawns.
 - The brown tiger prawn regime shift is primarily driven by environmental change, not fishing pressure.
- There is no evidence of a grooved tiger prawn regime shift, as they have higher temperature and salinity tolerances, making them less susceptible to environmental changes of this nature.
- A future productivity shift cannot be ruled out, but it would be unlikely to go back to pre-2000 conditions because environmental factors have changed too significantly (e.g. continually rising temperatures).
- The FRDC project has been extended to allow for a later publication timeline. The Final Report is expected in August. Updates will be presented to the NPRAG at the May meeting.
 - The full technical details to support these analyses are currently under embargo as the scientific paper is still in review with the journal Science.

NPRAG noted the following key points on the CSIRO presentation with respect to implications for the 2024 stock assessment model outputs, with the inclusion of the regime shift:

- Allowing a post-2000 stock-recruitment shift improves model fit.
- The Maximum Economic Yield (MEY) reference points and projected catches are lower with the inclusion of the regime-shift in the model, but the model projections better reflect observed reality:
 - More accurately align with recent observed brown tiger prawn catches (average of ~500t annually).
 - Stocks are aligned more closely with the reference points.
 - Projected lower economic returns due to lower long-term Brown Tiger Prawn productivity.

Noting the CSIRO presentations, NPRAG discussed the following key points:

- Acknowledging the fishery has been operating below the MEY reference points for many years, with the regime shift clearly being a possible cause of this.
 - The TAE for brown tiger prawns has historically been under-caught (on average ~50%), with industry fishing around recommended effort levels in the regime-shift model, despite having the option to use the full TAE allocation.
- Incorporating the regime shift into the model:
 - Would align the model more closely to the real catch experiences of industry, validating the recent reduced brown tiger prawn effort.
 - Potentially reduce risks of model continuing to attempt to rebuild stocks to now unrealistic historical levels.
- While the RAG agreed there was strong evidence for a regime shift, some concerns were raised regarding:
 - Making such a significant change to the assessment, noting larger changes are usually initially done as a sensitivity test to the base-case model.
 - Adopting regime shift as base case before peer-reviewed publication.
 - Potentially including the regime shift as a sensitivity in the stock assessment, rather than base case.

5b. AI Fuel model update

Prof Tom Kompas presented updates on the AI-driven fuel price projection model, with NPRAG considering the dynamic fuel pricing projections as an alternative to the current constant fuel price average input to the model:

- The model ‘learns’ by incorporating past data and changing parameters in updates.
 - It can predict short-term changes with relative accuracy but is less reliable in the longer-term.
- The model initially suggested downward trends from April 2026–2027 but markedly changing global conditions, such as elevated conflicts in the Middle East, could significantly alter the projections, suggesting higher upcoming fuel prices, reducing some confidence in forward projections.
- Prawn prices increased from last year, but overall profitability remains negative due to rising fuel costs.

Noting the presentation, NPRAG discussed the following points:

- Whether the model provides better guidance than using a constant fuel price in stock assessment, with agreement on the need for some consistency between NPFI-provided fuel prices and AI forecast inputs was highlighted.
- Short-term projections may inform the first year of the model but the confidence declines beyond that timeframe.
- Significant heterogeneity across the fleet means there is no standard fuel purchasing practice, with some operators having ability to store fuel, others have to take the fuel price when needing to purchase.
- A fuel price trend can influence estimated effort levels and profitability within the assessment.
- CSIRO advised they would be able to input both the NPFI fuel price and the projected figure to compare, if the figures were given to them in mid-April.
 - It was agreed the projected model figure and an estimated NPFI fuel price would be provided by mid-April.
- It was agreed that an average of the projected weekly fuel price during the 2026 season (1 Aug – 30 Nov) is used for the first year of projections (i.e., 2026), with a constant price applied for

subsequent years which is calculated as the average of the projected weekly fuel price for the whole of 2026.

Action 8: Tom Kompas and NPFI to provide fuel prices to CSIRO by 10 April.

5c. 2026 Stock Assessment Inputs

NPRAG reviewed and confirmed previously agreed inputs and sensitivities for the 2026 Tiger Prawn Stock Assessment:

- Base case parameters and sensitivity tests remain consistent with prior agreement (per Table 2a and 2b below).
- The prawn price inputs will be from the 2025 economic survey, with the projected fuel price trend used for the first year, with a constant price then applied.

Table 2a: Agreed 2026 Tiger Prawn Stock Assessment Base Case Parameters

| Models | Fishing power | Weekly pattern | Max. effort change [#] | Combined low effort threshold | No. of species * |
|--------|---------------|-----------------|---------------------------------|-------------------------------|------------------|
| SSB | Low | Last 2-year av. | 100% | 4,004 | 3 |

Table 2b: Agreed 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 | Last 2-year av. | 100% | 4,004 | 3 |
| DDD | DDD | Low | Last 2-year av. | 100% | 4,004 | 3 |
| Estimate season | SSB | Low | Estimated | 100% | 4,004 | 3 |
| No Constraining effort change | SSB | Low | Last 2-year av. | N/A | 4,004 | 3 |
| No effort threshold | SSB | Low | Last 2-year av. | 100% | 1 | 3 |
| Base case + red endeavour prawn | SSBB | Low | Last 2-year av. | 100% | 4,004 | 4 |

NPRAG discussed potential areas requiring adjustments due to fleet changes and inclusion of the regime shift, with key points outlined below.

Fleet size input

- There is still some uncertainty around the adjusted fleet structure following the 31% gear SFR value reduction, which comes into force from 16 June 2026. The RAG members considered that the future of operations across some companies in the fishery remained unknown at that time.
- Potential sensitivities for 52, 46, and 37-vessel scenarios were suggested, noting the best estimate was between 37-40 boats (pending the decisions of some key companies in the fishery).
- NPRAG agreed to defer the decision on fleet size input until there was more guidance on how the fleet will adjust.
- Noting the fleet restructure, NPRAG considered a Minimum Effort Threshold (MET) adjustment, noting the current MET of 4,004 days was based on 52 boats fishing a 77-day season (77 x 52 boats = 4,004).
 - The current MET which would allow for an 87-day season with 46 boats fishing (number of active vessels in 2025)
- While the RAG agreed there is no immediate risk to stock if MET remains unchanged, this does need to be adjusted once there is more certainty with the fleet adjustment.

Regime shift

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- NPRAG agreed that a significant productivity change or regime shift had occurred for brown tiger prawns, with broad support for incorporating this into the stock assessment. However, there wasn't consensus on whether this should be included within the base case or as a sensitivity.
- Therefore, the RAG agreed additional time was required to consider the impacts, with further consideration at an online out-of-session meeting.

Action 9: NPFI to provide vessel numbers to CSIRO by 18 March.

Recommendations

7. For the 2026 Tiger Prawn Stock Assessment, NPRAG supported:
 - a. Support previously agreed base case and sensitivity inputs, except for the fuel price input.
 - b. Using a forward projection fuel price for the 2026 season projection, with a constant price applied for projections thereafter.
 - c. Maintaining the MET until adjusted fleet structure is more certain.
8. Due to time constraints in the meeting, the following decisions are deferred to an additional virtual out-of-session meeting:
 - a. Whether the regime shift is included in the assessment as a base case or sensitivity.
 - b. Fleet size input

6. Sawfish Mitigation Strategy

This item was deferred until the out of session meeting.

7. 2027/2028 Research Priorities

This item was deferred until the out of session meeting.

8. Other Business/Next meeting

Due to running overtime, it was agreed an out-of-session meeting would be held online around two weeks after the meeting.

Action 10: AFMA to send out poll to gauge availability and organise a 4-hour online meeting between 18th-20th March 2026.

End of Meeting

The chair closed the meeting at 5:17pm.

Attachment A – Member, invited participant and observer declarations of interest

| Participants | Declared Interest |
|----------------|---|
| Chair | |
| Ian Knuckey | <p>Positions:</p> <p>Director – Fishwell Consulting Pty Ltd</p> <p>Director – Olrac Australia (Electronic logbooks)</p> <p>Chair – Northern Prawn Fishery Resource Assessment Group</p> <p>Chair – Victorian Rock Lobster and Giant Crab Assessment Group</p> <p>Chair – Gulf of St Vincent’s Prawn Fishery MAC Research Scientific Committee</p> <p>Chair – Spencer Gulf King Prawn Fishery Economic Sub-committee</p> <p>Chair – Impacts of algal bloom on SA fisheries</p> <p>Scientific Member – Northern Prawn Management Advisory Committee</p> <p>Scientific Member – Gulf of St Vincent’s Prawn Fishery Management Advisory Committee</p> <p>Scientific Member – Tropical Tuna Resource Assessment Group</p> <p>Scientific Member – SESSF Resource Assessment Group</p> <p>Member – The Geelong Agri Collective</p> <p>Involved in Fish for All Campaign Western Australia</p> |
| Members | |
| Rik Buckworth | <p>Director - Sea Sense Australia Pty Ltd</p> <p>Scientific Member – NPRAG</p> <p>Chair - SharkRAG</p> <p>Member – Data Working Group for the GABTF</p> <p>Adjunct Professor – Charles Darwin University</p> <p>Current or anticipated projects with government agencies, CDU and fishing industry for projects in the NT, Torres Strait and Qld.</p> <p>Researcher involved particularly in stock assessment research in NPF. Has in the past and may in future seek and receive funding for research in the fishery.</p> |
| Tom Kompas | <p>Economic member – NPRAG</p> <p>Employed by University of Melbourne. Research provider. Has in the past and may in future seek and receive funding for research in the fishery.</p> |
| Éva Plagányi | <p>Scientific member – NPRAG</p> <p>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</p> <p>Research provider involved particularly in stock assessment research in NPF</p> <p>Also currently receiving FRDC funding related to development of a GoC ecosystem model.</p> <p>Scientific member of TRLRAG and TS HCRA</p> |
| Denham Parker | <p>Scientific member – NPRAG & NORMAC</p> <p>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</p> <p>Research provider involved particularly in stock assessment research in NPF</p> |
| Phil Robson | <p>Industry member – NPRAG</p> <p>Employee of A Raptis and Sons, responsible for managing NPF vessels & an NT demersal fish trawler.</p> <p>Has provided charter for scientific surveys in NPF in the past and may in future.</p> <p>GABIA – Member</p> |

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| | |
|-------------------------------|--|
| 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 | |
| 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 |
| 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 |
| Margaret Miller | 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. |

Attachment B – NPRAG March 2026 Adopted Agenda

NPRAG March 2026 meeting

DRAFT AGENDA – Day 1: 4 March 2026 / Time: TBC 0900 – 1635 AEST

| Time | Item | Purpose | Presenter |
|------|--|-----------------|---|
| 0900 | 1. Preliminaries a. Welcome and Apologies b. Declarations of Interest c. Adoption of Agenda | For action | Chair (20 mins) |
| 0920 | 2. NPRAG Actions Update | For information | AFMA (10 mins) |
| 0930 | 3. OOS Decisions | For information | AFMA (15 mins) |
| 0945 | 4. Data Collection and Monitoring a. NPF Data Strategy Development | For advice | AFMA (45 mins) |
| 1030 | <i>Morning Tea (15 mins)</i> | | <i>15 mins</i> |
| 1045 | 4. Data Collection and Monitoring cont... b. Ongoing NPF Data Requirements – EM Implementation c. Shot Level Reporting – ePRAWN Logbook | For advice | AFMA (2 hrs) |
| 1245 | <i>Lunch (30 mins)</i> | | <i>30 mins</i> |
| 1315 | 5. Tiger Prawn Stock Assessment a. Tiger MICE project (Regime Shift) b. AI Fuel model update c. 2026 Stock Assessment Inputs | For advice | a. Eva b. Tom Kompas c. CSIRO / AFMA (2 hrs) |
| 1515 | 6. Sawfish Mitigation Strategy | For discussion | AFMA (30 mins) |
| 1545 | <i>Afternoon Tea (15 mins)</i> | | <i>15 mins</i> |
| 1600 | 7. 2027/2028 Research Priorities | For discussion | AFMA (30 mins) |
| 1630 | 8. Other Business / Next Meeting | For information | 5 mins |
| 1635 | <i>End of Meeting</i> | | |

Attachment C – Actions arising from meetings previous to the March 2026 NPRAG.

| Complete | | Redundant / Consolidated | Ongoing | Need NPRAG advice | Pending |
|----------|-------------------|---|----------------------|-------------------|---|
| 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 in October/November 2022 if required. | AFMA, CSIRO and NPFI | Pending resources | 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 | <p>AFMA to continue development of a data and monitoring plan for the fishery in consultation with the RAG. The following items to be considered:</p> <ul style="list-style-type: none"> • 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; | AFMA | N/A | Consolidate. To be consolidated with subsequent data actions into new NPF Data Strategy item. |

| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|---------------------|--|-----------------------------|------------------------|--|
| | | <ul style="list-style-type: none"> 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. | | | |
| 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 | N/A | Redundant. No longer relevant, incorporated into development of Sawfish Mitigation Strategy. |
| 6 | 24-25 May 2023 | <p>Members of the MSC condition working group to consider the implications of, and how to meet, the MSC milestone requirement:</p> <p><i>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</i></p> <p>Membership: Toby Patterson, Rich Pillans, Darci Wallis, Dave Brewer, Bryan van Wyk, Brandon Meteyard</p> | MSC condition working group | N/A | Redundant. Covered under subsequent Sawfish / MSC Condition actions. |
| 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. |
| 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 November 2025 NPRAG meeting. |
| 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 | AFMA | N/A | Consolidate. To be consolidated with subsequent data actions into new NPF Data Strategy item. |

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| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|---------------------|---|------------------|---|---|
| | | and an additional reporting requirements field (WTO and data to support MSC conditions). | | | |
| 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 | May NPRAG meeting | Ongoing. NPRAG advice sought on the ongoing need for this item. |
| 5 | 11 February 2025 | AFMA to confirm mandatory fields in e-observer app and determine extent of possible changes. | AFMA | Completed at Nov meeting | Complete. At Nov 2025 meeting, AFMA advised AFMA advised that the ability to make changes to generic fields in the e-Observer app such as weather and gear details is limited, but these inputs do not significantly impact observer workload. |
| 6 | 11 February 2025 | Data and Monitoring Working Group to discuss remaining changes to data collection protocols and make recommendation to NPRAG. | AFMA/CSIRO/NPFI | As required, prior to May NPRAG meeting | Ongoing. DMWG to meet as required prior to May NPRAG meeting. |
| 1 | 20-21 May 2025 | AFMA to discuss with ABARES offline about NPF data quality control and timelines for Fishery Status Report purposes. | AFMA/ABARES | May NPRAG meeting | Ongoing. Update to be provided at the May 2026 NPRAG meeting. |
| 2 | 20-21 May 2025 | AFMA, NPFI and CSIRO to discuss offline about NPF data processes and determining what data will become the 'single source of truth'. | AFMA/NPFI/ CSIRO | May NPRAG meeting | Ongoing. Update to be provided at the May 2026 NPRAG meeting. |
| 3 | 20-21 May 2025 | AFMA to provide a flow diagram of all the NPF data processes for the next NPRAG meeting. | AFMA | March NPRAG meeting | Ongoing. Update to be provided under Agenda Item 4a. |
| 4 | 20-21 May 2025 | AFMA to confirm what "percentage of logbook shots observed" refers to in the 2024 NPF Annual Observer Report and whether days would be a more accurate measure. | AFMA | March NPRAG meeting | Ongoing. Update to be provided under Agenda Item 2. |

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| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|----------------|--|-----------------|---------------------|--|
| 5 | 20-21 May 2025 | AFMA to confirm the process of correcting erroneous reports following subsequent ETP data becoming available. | AFMA | May NPRAG meeting | Consolidate. Combined with other ETP reporting items. Update to be provided at the May 2026 NPRAG meeting. |
| 6 | 20-21 May 2025 | AFMA to determine where ETP interactions are being reported and how they are being reported. | AFMA | May NPRAG meeting | Consolidate. Combined with other ETP reporting items. Update to be provided at the May 2026 NPRAG meeting. |
| 7 | 20-21 May 2025 | AFMA to organise a presentation on e-observer data collection and data warehouse processes (including QC). | AFMA | May NPRAG meeting | Ongoing. Due to time limitations at this meeting, a presentation will be provided at the May 2026 NPRAG meeting. |
| 10 | 20-21 May 2025 | Dr Tom Kompas to provide a presentation on his Artificial Intelligence (AI) fuel price model at the next NPRAG meeting. | Tom Kompas | N/A | Redundant. Note subsequent action from Nov 2025 RAG meeting. |
| 13 | 20-21 May 2025 | AFMA to undertake a desktop-study scoping exercise as a first step to broader coordination between jurisdictions on AI projects. | AFMA | May NPRAG meeting | Ongoing. NPRAG advice sought at meeting. |
| 14 | 20-21 May 2025 | AFMA to report back to NPRAG on contemporary EM and AI discussions occurring between jurisdictions and any coordination work that is taking place. | AFMA | May NPRAG meeting | Ongoing. NPRAG advice sought at meeting. |
| 15 | 20-21 May 2025 | AFMA should seek to advance a broader AI project encompassing multiple fisheries in collaboration with FRDC. | AFMA | May NPRAG meeting | Ongoing. NPRAG advice sought at meeting. |
| 16 | 20-21 May 2025 | NPFI and CSIRO to discuss potential low-cost options to encourage continued industry participation in the Sawfish research. | NPFI/ CSIRO | March NPRAG meeting | Complete. Agreement for CSIRO to continue to provide financial incentives for 2025 and 2026 NPFI tissue sampling programme. |
| 19 | 20-21 May 2025 | That further clarity is provided by AFMA on the future resourcing and funding for the CRF (if approved by the AFMA Commission). | AFMA | March NPRAG meeting | Complete. Update to be provided at November 2025 meeting. |

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| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|----------------|--|-----------------|---------------------------|--|
| | | | | | <p>AFMA's Climate Adaptation and Strategic Reform team will lead and coordinate implementation of the CRF. Activities are 50% cost-recovered in-line with AFMA's Cost Recovery Implementation Statement 2025-26.</p> <p>Further information on the CRF process will be provided at the May 2026 NPRAG meeting.</p> |
| 20 | 20-21 May 2025 | CSIRO to present additional details on the biological elements of the tiger prawn stock assessment model, including the key components influencing the model outputs, at the May 2026 NPRAG meeting. | CSIRO | May NPRAG meeting | Ongoing. A presentation will be provided at the May 2026 NPRAG meeting. |
| 21 | 20-21 May 2025 | CSIRO to calculate the area of the NPF subject to trawling using grid cells. | CSIRO | March NPRAG meeting | Ongoing. Pending resourcing, update to be provided under Agenda Item 5 , otherwise will be completed for May NPRAG meeting. |
| 1 | 12 Nov 2025 | Industry and CSIRO to work together to find new mesh material with a similar physical structure to the current mesh for future NPF surveys. | NPFI / CSIRO | Prior to Feb 2027 surveys | Ongoing. NPRAG to confirm discussions to be led by Phil R / Rob K, with further updates to be provided at the May / November NPRAG meetings. |
| 2 | 12 Nov 2025 | CSIRO / AFMA to review recruitment indices and other relevant indicators (including economic data) from lower tiger prawn catch years (2008, 2011, 2017 and 2025), including comparing with the MICE model for any correlations. | CSIRO / AFMA | May NPRAG meeting | Ongoing. Update to be provided at the May 2026 NPRAG meeting. |
| 3 | 12 Nov 2025 | Tom Kompas to present information on the AI dynamic fuel price model at the next NPRAG meeting (March 2026). | Tom Kompas | March NPRAG meeting | Ongoing. Presentation to be provided under Agenda Item 5b . |
| 4 | 12 Nov 2025 | CSIRO to present the latest outcomes on the brown tiger prawn regime shift at the March NPRAG meeting for NPRAG consideration | CSIRO | March NPRAG meeting | Ongoing. Presentation to be provided under Agenda Item 5a . |

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| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|-------------|---|---------------------|---------------------------------------|---|
| | | for inclusion to the 2026 assessment (either the base case or as a sensitivity). | | | |
| 5 | 12 Nov 2025 | CSIRO to follow up on the broader implication of the MSC requirements regarding the implications of the inclusion of a brown tiger prawn regime shift in the NPF stock assessment | CSIRO | March NPRAG meeting | Ongoing. Update to be provided under Agenda Item 5a. |
| 6 | 12 Nov 2025 | CSIRO to present the broader Tiger MICE project outcomes at the May 2026 NPRAG meeting, with their inclusion to be considered for the 2028 stock assessment. | CSIRO | May NPRAG meeting | Ongoing. Update to be presented at the May 2026 NPRAG meeting (noting some project elements may not be finalised pending timing of RAG). |
| 7 | 12 Nov 2025 | NPFI to provide 2025 banana prawn fuel prices to CSIRO at the end of April. | NPFI | End April | Ongoing. NPFI will provide fuel prices to CSIRO by end of April. |
| 8 | 12 Nov 2025 | AFMA to outline processes and timeframes for the 2028 assessment to be considered at the May 2026 NPRAG meeting. | AFMA | May NPRAG meeting | Ongoing. To be provided at the May 2026 NPRAG meeting. |
| 9 | 12 Nov 2025 | NPFI, in consultation with NPRAG, review the NPF Performance Monitoring Framework. | AFMA / CSIRO / NPFI | Through 2028 Stock Assessment Process | Ongoing. Review / Update of the PMF to be coordinated with other potential stock assessment changes being considered for the 2028 assessment (e.g. MET). |
| 10 | 12 Nov 2025 | AFMA to prepare a paper for the May NPRAG meeting addressing the MET review. | AFMA | May NPRAG meeting | Ongoing. To be provided at the May 2026 NPRAG meeting. |
| 11 | 12 Nov 2025 | AFMA to provide costings of alternative observer coverage levels / EM review rates for consideration at the next meeting (March 2026). | AFMA | March NPRAG meeting | Ongoing. For discussion at Agenda Item 4b. |

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| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|-------------|--|-----------------|-------------------------------|---|
| 12 | 12 Nov 2025 | AFMA to explore options AI-based automation for EM review and develop a project proposal in consultation with NPFI, NPRAG Chair and CSIRO for consideration at the next meeting (March 2026). | AFMA | March NPRAG meeting | Ongoing. A detailed project proposal for AI-based automation for EM review was not developed, as further internal AFMA discussions after the November meeting concluded its development was premature. |
| 13 | 12 Nov 2025 | AFMA and NPFI to report workshop outcomes to the NPRAG in March for NPRAG endorsement of Data Strategy draft inputs. | NPFI / AFMA | N/A – combined with March RAG | Redundant. Separate workshop not held, incorporated into March NPRAG meeting. |
| 14 | 12 Nov 2025 | AFMA to organise a Data Workshop in March 2026 to review monitoring priorities and options and develop the NPF Data Strategy. | AFMA | N/A – combined with March RAG | Redundant. Separate workshop not held, incorporated into March NPRAG meeting. |
| 15 | 12 Nov 2025 | NPFI to seek further clarity from the NPF MSC assessment team regarding demonstrating a reduced NPF impact with ‘an 80% probability’ and ‘not hindering recovery’. | NPFI | May NPRAG meeting | Ongoing. CAAB can't provide specific advice on this, NPFI to follow up with MSC directly with an update to be provided at the May 2026 NPRAG meeting. |
| 16 | 12 Nov 2025 | 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. | NPFI / AFMA | May NPRAG meeting | Ongoing. Update to be provided at the May 2026 NPRAG meeting. |
| 17 | 12 Nov 2025 | AFMA and NPFI to commence drafting the Sawfish Mitigation Strategy, considering outcomes / recommendations from the Sawfish workshop, with further NPRAG consideration at the next NPRAG meeting (March 2026). | NPFI / AFMA | May NPRAG meeting | Ongoing. Update to be provided at the May 2026 NPRAG meeting. |
| 18 | 12 Nov 2025 | AFMA to organise SWG meetings with agreed members as required. | AFMA | Prior to May NPRAG meeting | Ongoing. SWG advice to be sought as required prior to the May 2026 NPRAG meeting. |

| No. | Mtg Date | Action Item | Agency / Person | Timeframe | Progress |
|-----|-------------|--|------------------------|-------------------|--|
| 19 | 12 Nov 2025 | CSIRO (Toby Patterson) to provide an update on the potential expansion of the CKMR project to estimate interaction and mortality rates using current biomass and life-history parameters at the next meeting (March 2026). | Toby Patterson (CSIRO) | May NPRAG meeting | Ongoing. Update to be provided at the May 2026 NPRAG meeting. |
| 20 | 12 Nov 2025 | AFMA to send placeholder invitations for the March 2026 NPRAG. | AFMA | Following meeting | Complete. Placeholders sent for March and May NPRAG meetings on 26 November 2025. |

Attachment D – Alternative Species Distribution Sampling Summary

Suggested Sampling Protocol Approach

1. SD sample collected by CMOs (100 prawn random sample of either, all tiger prawns or all endeavour prawns).
 - Samples are collected from the conveyer belt, with 1st 100 tiger OR endeavour prawns collected from either the first catch on the conveyer belt or from a specific point during the shot¹.
 - Where fishing occurs in areas where both tigers and endeavours are present, sample collection should be alternated between the species groups as much as possible (e.g. tigers one sampled night, endeavours the next).
 - Each CMO would sample one tiger prawn shot, once or twice a week – providing between 155-180 or 310-360 SD samples annually respectively².
 - SD sample collection would only be required during targeted tiger prawn fishing in Banana Season and Tiger Prawn season.
2. CMOs sort sample by sex
 - Appropriate training would be required to CMOs, with waterproof guides also provided to assist at-sea.
3. Length composition: CMOs arrange males / females on separate measuring sheets (marked male / female), with rear of the orbit (eye socket) on a line to ensure as much accuracy in measurement.
4. CMOs take photos taken of measuring boards, getting as good photo quality / accurate lighting as possible.
 - Based on trial outcomes to date, maximum number of prawns per photo is 25-30.
 - Details of each sample recorded by CMO (e.g. time, date, location, shot no., vessel) to allow cross checking with photo time / date stamp.
5. Photos (time/date stamped) and associated sample details provided to AFMA / NPFI at the end of each season.

Estimated Timing

Initial assessment of the proposed sampling process estimate it would take crew / CMOs approximately 30 minutes to undertake, based on the following approximate timing:

- Sample collection: 5 minutes
- Separate sample by sex: 5-10 minutes
- Arrange / photograph prawns on measuring grid: 15-20 minutes.

¹ This ensures a randomised sample is collected, which is essential for the data to be a useful input into the stock assessment model.

² This assumes deployment of 2-3 CMOs in the banana season and 9-10 in the tiger season. During the SD project, AFMA SOs collected an average of 280 tiger prawn and 270 endeavour prawn samples annually (total of ~550 annually) – noting that this level of sampling isn't necessarily required as long as there is sufficient spatial / temporal sample coverage.

Attachment E – Summary of Actions and Recommendations March 2026

| Agenda no. | Action item. | Action | Responsible party |
|-------------------|---------------------|--|--------------------------|
| 2 | 1 | AFMA to develop a research scope for AI-based automation for EM review, in consultation with NPFI, NPRAG Chair and CSIRO as required, for consideration at the May meeting. | AFMA |
| 4a | 2 | Ian Knuckey to confirm with FishSOOP coordinators if early release of NPF data to a specific provider is feasible. | Ian Knuckey |
| 4a | 3 | CSIRO to provide NPFI with further details of the purpose of early access to the NPF temperature FishSOOP data. | CSIRO |
| 4a | 4 | AFMA to seek an extension from DCCEEW to the current data strategy WTO condition, to align the release of the data strategy with the roll out of EM in the fishery. | AFMA |
| 4a | 5 | AFMA to update NPF Data process flow chart per RAG agreement. | AFMA |
| 4b | 6 | NPFI to explore external observer provider options, in consultation with AFMA, with at update to be provided at the May meeting. | NPFI/AFMA |
| 4c | 7 | AFMA and NPFI, in consultation with Catchlog, to develop the implementation approach for shot-level reporting and additional gear fields, ensuring the process is as simple as possible for operators. | AFMA/NPFI |
| 5b | 8 | Tom Kompas and NPFI to provide fuel prices to CSIRO by 10 April. | Tom Kompas/NPFI |
| 5c | 9 | NPFI to provide vessel numbers to CSIRO by 18 March. | NPFI |
| 8 | 10 | AFMA to send out poll to gauge availability and organise a 4-hour online meeting between 18 th -20 th March 2026. | AFMA |

| Agenda no. | Rec item. | Recommendation |
|------------|-----------|--|
| 2 | 1 | <p>NPRAG supported the following changes to relevant action items:</p> <ul style="list-style-type: none"> a. Data and ETP actions are consolidated: <ul style="list-style-type: none"> ○ May 2025 (Action 5): <i>AFMA to confirm the process of correcting erroneous reports following subsequent ETP data becoming available.</i> ○ May 2025 (Action 6): <i>AFMA to determine where ETP interactions are being reported and how they are being reported.</i> ○ May 2022 (Action 1): <i>AFMA to continue development of a data and monitoring plan for the fishery in consultation with the RAG.</i> ○ November 2024 (Action 5): <i>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).</i> b. No longer relevant actions are marked redundant. <ul style="list-style-type: none"> ○ <u>May 2022 (Action 14)</u>: <i>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.</i> ○ <u>May 2023 (Action 6)</u>: <i>Members of the MSC condition working group to consider the implications of, and how to meet, the MSC milestone requirement.</i> ○ <u>May 2025 (Action 10)</u>: <i>Dr Tom Kompas to provide a presentation on his Artificial Intelligence (AI) fuel price model at the next NPRAG meeting.</i> ○ <u>Nov 2025 (Action 13)</u>: <i>AFMA and NPF to report workshop outcomes to the NPRAG in March for NPRAG endorsement of Data Strategy draft inputs.</i> ○ <u>Nov 2025 (Action 14)</u>: <i>AFMA to organise a Data Workshop in March 2026 to review monitoring priorities and options and develop the NPF Data Strategy.</i> ○ <u>Nov 2024 (Action 10)</u>: <i>NPRAG Chair to write to AFMA Commission expressing concerns that the automation process has not resulted in time or cost saving.</i> |
| 4a | 2 | <p>NPRAG supported the prioritisation of current NPF data collection per Table 1 above, specifically noting:</p> <ul style="list-style-type: none"> a. The importance of the species distribution and bycatch composition sampling (currently collected by AFMA observers). b. Commercial prawn sampling is a very a low priority and can discontinued if necessary. |

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| 4b | 3 | <p>Further pursuit of service provision through an external observer provider by NPFI, in consultation with AFMA, including:</p> <ul style="list-style-type: none"> a. Retaining current observer sampling protocols for ETP interactions, species distribution and bycatch composition sampling, excluding commercial prawn sampling. b. Considering spatial / temporal distribution of coverage (noting can't direct fishing effort). c. Observer coverage targets (i.e. 2%) are based on annual fishing effort. d. Any external provider attends NPRAG discussions as required. |
| 4b | 4 | <p>Maintaining AFMA observer coverage for the 2026 banana prawn season, with external observer services to commence from 2026 tiger prawn season if possible.</p> |
| 4c | 5 | <p>Inclusion of additional gear fields in the ePRAWN logbook.</p> |
| 4c | 6 | <p>Introduction of shot-level reporting with a voluntary trial in the 2026 tiger prawn season and mandatory implementation in 2027, noting the:</p> <ul style="list-style-type: none"> a. Benefits of finer scale data to improve future stock assessments, bycatch and ETP species analyses. b. Streamlining of EM review / data processes and increased spatial and temporal coverage of EM review. |
| 5c | 7 | <p>For the 2026 Tiger Prawn Stock Assessment, NPRAG supported:</p> <ul style="list-style-type: none"> a. Support previously agreed base case and sensitivity inputs, except for the fuel price input. b. Using a forward projection fuel price for the 2026 season projection, with a constant price applied for projections thereafter. c. Maintaining the MET until adjusted fleet structure is more certain. |
| 5c | 8 | <p>Due to time constraints in the meeting, the following decisions are deferred to an additional virtual out-of-session meeting:</p> <ul style="list-style-type: none"> a. Whether the regime shift is included in the assessment as a base case or sensitivity. b. Fleet size input. |