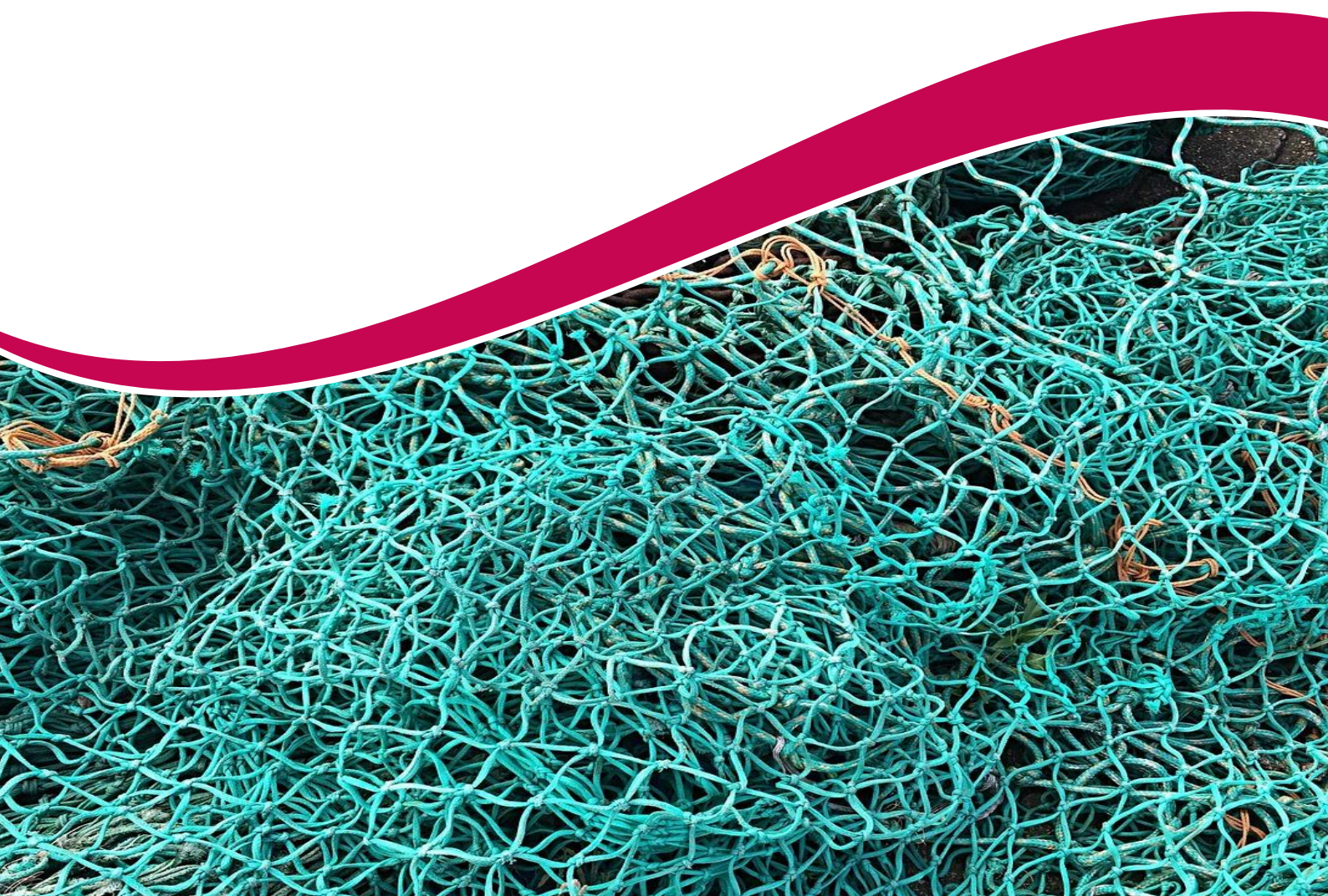**Australian Government**

Australian Fisheries Management Authority

Northern Prawn Fishery Annual Research Statement 2025/26

June 2024

Contents

This Annual Research Statement was developed by AFMA, in consultation with the NPRAG (Northern Prawn Resource Assessment Group) and NORMAC (Northern Prawn Fishery Management Advisory Committee). It identifies areas of high priority research for both AFMA and potential FRDC funding in 2025/26 and will be presented to the AFMA Research Committee (ARC) for consideration as part of the 2025/26 funding round

AFMA funding in 2025/26 (AFMA Research Committee (ARC))

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	Priority / rank	Feasibility
Current projects with funding allocated in for 2025/26				
NPF Stock Assessment: • to set the Total Allowable Effort (TAE) for the tiger prawn fishery (including endeavour prawns) • to set the TAE for Redleg Banana Prawns in accordance with the NPF Harvest Strategy • determine the MEY target trigger catch rate for White Banana Prawns • to set the catch limits for broodstock collection of black tiger prawns **Finishing October 2027**	• Provide a full assessment of the tiger prawn fishery for 2026 (using 2025 data). • Provide an update of the fishery catch, effort and survey index of the tiger prawn fishery for 2025 and 2027. • Update the fishing power series in assessment years, that incorporates data from gear surveys conducted annually (for both the tiger prawn fishery and the redleg banana prawn fisheries). • Estimate MEY-based TAEs (Total Allowable Effort) for the tiger prawn fishery for 2026 plus 2027 (based on the 2026 assessment). • Assess stock status of the Redleg Banana Prawn fishery (and if relevant key environmental factors) and provide a TAE for Redleg Banana Prawns in each of 2025, 2026, and 2027. In 2025, review the minimum 70 fishing day threshold requirement to run an assessment in the harvest strategy. • Support the annual estimation of MEY-catch rate triggers for the White Banana Prawn fishery. This will be undertaken each year, i.e., 2025, 2026 and 2027.	High - $600-800K Three-year project spanning 2024/25 – 2027/28 (Oct 2024 – Oct 2027)	Essential	High
Integrated monitoring program NPF 2024-27	Undertake analysis of data collected during the recruitment/spawning surveys to determine and evaluate: • Fishery independent parameters on the state and status of the population and recruitment indices for commercial prawn species;	High - $1-1.5m Three-year project spanning 2024/25 –	Essential	High

	• The spatial extent, variability, and abundance of prawn populations; and • The spatial extent and abundance of byproduct and bycatch species at risk.	2027/28 (August 2024 – June 2028)		
Vessel charter for the NPF recruitment/spawning surveys 2024-27	• 2024-25: To obtain two adequate vessels for the recruitment survey (for a 15-20 day period in January/February) meeting the specifications; being the required length, providing adequate crew, providing fuel, and providing stores for both crew and scientists. • 2025-26: To obtain adequate vessels for the spawning survey (one vessel for a 21-day period in June/July) and to obtain two adequate vessels for the recruitment survey (for a 15-20 day period in March) meeting the specifications; being the required length, providing adequate crew, providing fuel, and providing stores for both crew and scientists. • 2026-27: To obtain two adequate vessels for the recruitment survey (for a 15-20 day period in March) meeting the specifications; being the required length, providing adequate crew, providing fuel, and providing stores for both crew and scientists.	High - $1-1.5m Three-year project spanning 2024/25 – 2027/28 (August 2024 – June 2028)	Essential	High
Monitoring interactions with bycatch species using crewmember, scientific observer, and integrated monitoring program data collected in the Northern Prawn Fishery.	• Attend the 2024, 2025 and 2026 annual crew member observer (CMO) workshops and train observers in TEP and 'at risk' bycatch species identification and quality catch data recording. • Process all digital data collected by the CMO, AFMA scientific observers (SO) and integrated monitoring (IMP) programs in 2023, 2024 and 2025 and report on data collected via annual milestone reports. • Undertake a catch trends analysis of CMO, SO and IMP data collected over the 2023-25 banana and tiger prawn seasons, including an evaluation of the performance of the CMO, SO and IMP programs over the previous three years. • Deliver a triennial sustainability assessment report for the TEP and 'at risk' bycatch species impacted by the NPF in 2026.	Medium - approximately $200,000 Three-year project spanning (Aug 2024 – Dec 2026)	Essential	High

FRDC funding in 2025/26 (Commonwealth Research Advisory Committee (ComRAC))

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	Priority / rank	Feasibility
Current projects with funding allocated in 2025-26				
Estimating Narrow Sawfish (*Anoxypristis cuspidata*) abundance using close kin mark recapture **FRDC 2021-015** finishing 2025	The CSIRO has pioneered a new technique for assessing populations called Close-Kin Mark Recapture (CKMR) that can be applied to sawfish in the NPF. With enough data, and for suitable species, the method can provide estimates of: • abundance of the breeding adult segment of a population • adult survival rates • connectivity within mature individuals of a population • population trend.	$281,420 (4-year project commencing 2021/22)	N/A	N/A
Methods to account for climate impacts in fishery models and management: case study example of environmental contributors that affect tiger prawn population dynamics **FRDC – commencing in August 2023** (co-funded by AFMA)	• Collate relevant environmental and biological data, spatially disaggregated where possible, and conduct statistical analyses to inform as to potential environmental drivers of tiger prawn population dynamics • To rigorously analyse and quantify potential role of environmental variability in driving tiger prawn population dynamics, including exploring plausibility of alternative hypotheses and possible role of changes in predation • To fill the most critical data gap and obtain data on inshore tiger prawn juvenile abundance and associated habitat • Outreach and extension: a number of extension activities and materials to support broader dissemination of study findings.	$460,199 (3-year project) $230,099 each for FRDC and AFMA Costs between financial years TBC 2023/24 - 2025/26	N/A	N/A

Multi- fishery collaboration to assess population abundances and post release survival of threatened sawfish in northern Australia FRDC 2022-068 **finishing June 2026** **Co-funded by NESP**	Obtain data on abundance of sawfish (via collection of CKMR tissue samples) as well as obtain estimates of post release survival (through a tagging program) of sawfish captured in gillnet and prawn trawl fisheries operating in the Gulf of Carpentaria and Northern Territory.	$528,552.00 31 Dec 2022 - 29 Jun 2026	N/A	N/A
Trials of oceanographic data collection on commercial fishing vessels in SE Australia FRDC 2022-007 **finishing November 2024** ***Note:*** *Project will be taken over by IMOS and administered by UNSW*	• Effective installation and operation of oceanographic data collection equipment on network of commercial fishing vessels using a range of common fishing gear • To provide QC'd data direct to fishers in near real-time to assist in habitat characterisation and the targeting of effort • To cost-effectively increase the spatial resolution of sub-surface physical data collected in Australia's inshore, shelf, upper-slope, and offshore waters by fitting commercial fishing equipment from a variety of gear types with low-cost temperature/pressure sensors • To make the QC'd temperature depth data publicly available through the IMOS-AODN portal for uptake and use in ways that support safe maritime operations the sustainable management of marine resources, and improves understanding of drivers of change.	$885,000 (spilt evenly between 2023/24 and 2024/25) Includes $60K from IMOS for hardware and $17,500 each year FTE to coordinate project.	N/A	N/A
Newly identified research priorities for 2025/26				
nil				

Priorities for external funding in 2024/25 or 2025/26

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	**Priority / rank**	**Feasibility**
Current projects with funding allocated				
Investigating potential for fishing gear, technology and management measures to reduce sawfish and sea snake interactions in Australia's Northern Prawn Fishery (NPF Industry Pty Ltd) MSC funded project – **finishing August 2024**	• Analyse observer data and catch data to identify differences in bycatch between individual vessels, gear type and net mesh size, fishing grounds, and fishing times and seasons • Support the development and design of sawfish bycatch mitigation trials • Evaluate whether the implementation of Tom's Fisheye BRD to trawl nets has reduced sea snake bycatch.	$86,100.00 Awarded by MSC, commencing May 2023.	N/A	N/A
Mitigating Sawfish Interactions in the Northern Prawn Fishery (NPF Industry Pty Ltd) Threatened and Migratory Species Fisheries Bycatch Mitigation Program – **finishing April 2025**	• Collect and analyse data to determine the potential efficiency of TED flap mesh material to enable the egress of sawfish; and • Undertake trials of a modified TED (STED) which has been designed with a view to reducing sawfish interactions/improving escapement.	$1,074,727 Grant details: $515,379.70 awarded for a term 28 April 2023 – 7 September 2025 as part of the Threatened and Migratory Species Fisheries Bycatch Mitigation Program by DCCEEW.	N/A	N/A

Identified research priorities for external funding				
Review of the fishing power model	• Review the Prawn Trawl Performance Model (PTPM) to determine if the estimated increase in swept area since 2008 is accurate given the observed fleet modifications during that time. This should be done in collaboration with the NPF industry and relevant NPF stock assessment researchers at CSIRO. • Update the relevant components of the PTPM based on the outcomes of the review. • Review the current validity of the constant offset values, which were established around 2003, for variables such as Plotter and PC_satellite.	Low - Medium	Essential	High
Fishery impacts from a changing climate (R&D need 7 NPF research plan)	A focussed workshop to prioritise R&D related to all the concerns related to fishery impacts from environmental change.	Low	High	High
Ongoing research to reduce interactions with sawfish and sea snakes (R&D need 8 (sawfish) and WTO condition (sea snake))	Research aimed at reducing interactions with sawfish and sea snakes and building on previous projects to assess the impacts of trawl gear on these species as a key priority for the fishery. This may include (but not limited to) identification and trial of alternative technologies (*e.g.* lights) to reduce interactions; underwater video cameras to monitor behaviour of sawfish and sea snake interactions with trawl nets; analysis of footage to determine sawfish and sea snake behaviour when entering a trawl net, escapement rates, and TED effectiveness for these species	Low	High	High

Research projects identified for inclusion in future research statements

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	Priority / ranking	Feasibility
Estimation of banana prawn price flexibilities	The main objective of the project is the estimation of own and cross price flexibilities for banana prawns from the NPF on the Australian domestic market. Own price flexibilities represent the percentage change in banana prawn price due to a 1% change in banana prawn landings. Cross price flexibilities represent the percentage change in banana prawn price due to a 1% change in the landings of other prawn species from other fisheries who also supply the domestic market. Factors such as the impact of Marine Stewardship Council certification will also be considered. The project will benefit from direct assistance from Industry with respect to prices received for different grades etc. over time. Given appropriate data, the study could consider both common and redleg banana prawns separately. It is likely that Industry already holds most of the information needed to conduct the analysis. The key deliverable will be a short report that will also be submitted for publication as a peer reviewed journal article. The derived price flexibilities will also be directly incorporated into the integrated NPF bioeconomic model as part of its further development to provide a whole-of-fishery model (rather than a partial model)	Low/Medium	Medium	High
Developing assessment methods and harvest strategy for by-product species in the NPF	With the available data for byproduct species, undertake a CPUE standardisation and develop stock assessment methods, estimate reference points, and stock status with recommendations for management provided.	Medium	TBC	High
Scampi identification project (raised at NPRAG November 2019)	Aims to better understand the species caught in the Scampi fishery and improve species ID.	Low	TBC	High

Evaluation key

Cost	Priority categories	Feasibility categories
High: >$200,000	Essential	High
Medium: $100,000 - $200,000	High	Medium
Low: <$100,000	Medium	Low
	Low	

NPF stock assessment schedule

Species	2024	2025	2026	2027
Tiger prawn assessment (4 spp.)	X		X	
Redleg banana prawn[1]	X	X	X	X
Banana prawns	X	X	X	X
P. monodon (broodstock)			X	

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[1] Stock assessment dependent on reaching the minimum threshold to run an assessment (70 fishing days). Threshold to be reviewed in 2025 to enable consideration of the impacts of the first season closure on data availability (as per February 2022 NPRAG recommendation)