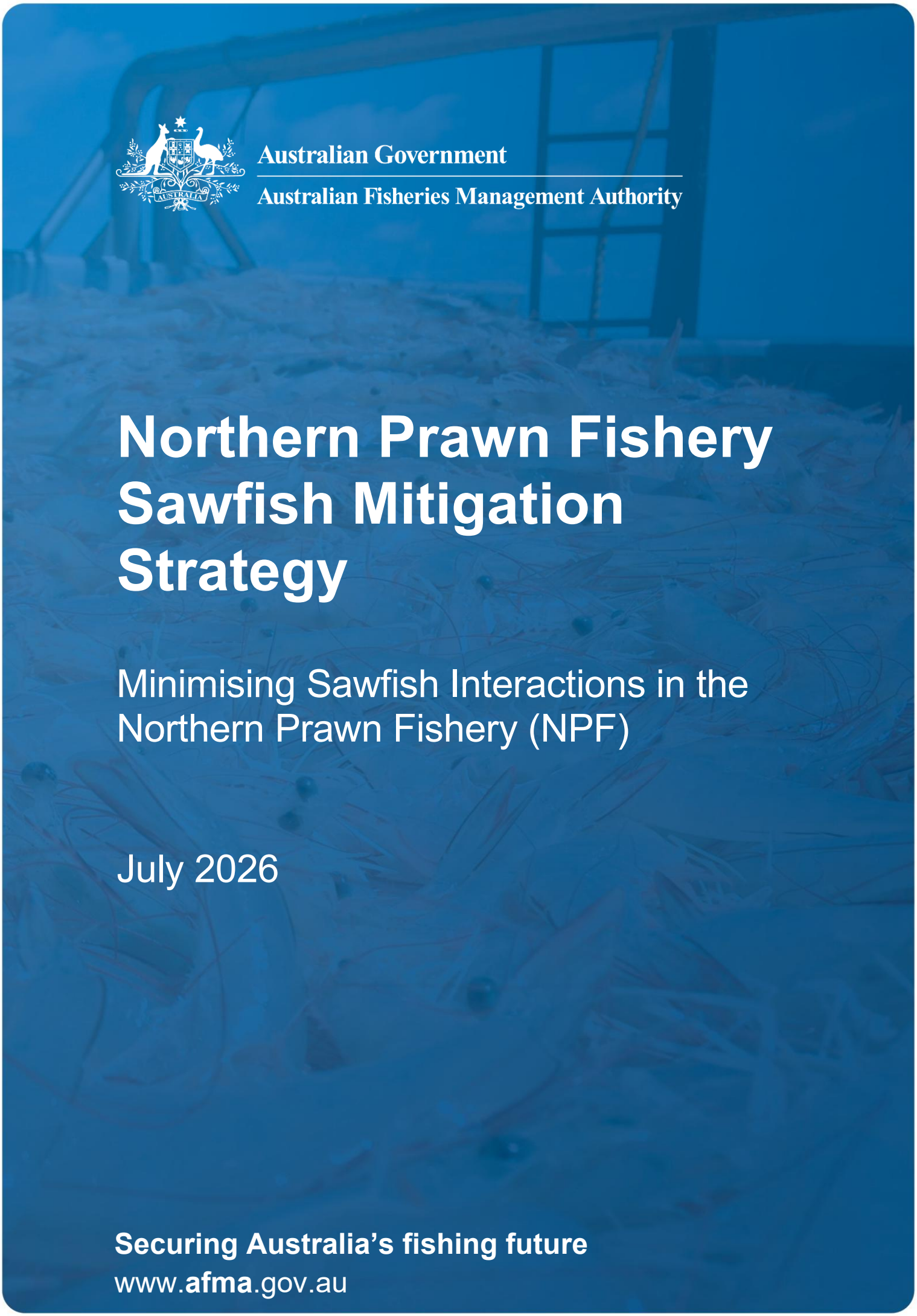


Australian Government
Australian Fisheries Management Authority

Northern Prawn Fishery Sawfish Mitigation Strategy

Minimising Sawfish Interactions in the Northern Prawn Fishery (NPF)

July 2026

Securing Australia's fishing future
www.**afma**.gov.au

Contents

Version and date	Updates	Approver
Version 1.0 – July 2026		AFMA Commission

Executive Summary

The Australian Fisheries Management Authority (AFMA) is committed to reducing bycatch to improve the protection of species listed under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The *Fisheries Management Act 1991* (the FMA) establishes AFMA's responsibilities for fisheries management, including the objective of ensuring that Commonwealth fisheries are managed in an ecologically sustainable manner.

The Sawfish Mitigation Strategy (the Strategy) outlines AFMA's management response to risks posed to sawfish species by fishing operations. Reducing sawfish interactions to support the recovery and long-term survival of the four sawfish species occurring within Northern Prawn Fishery (NPF) waters is the primary objective of the Strategy.

In recent years, reducing sawfish interactions has been a major priority in the NPF, with considerable investment in key research projects to support management outcomes (see **Section 4.3**). The latest Marine Stewardship Council (MSC) certification (2024-2028) and Wildlife Trade Operation (WTO) approval (2023-2027) include conditions relating to the development of appropriate mitigation to reduce sawfish interactions. The NPF Sawfish Plan 2024-2026 outlines the work programme, including timeframes, implemented to meet the MSC and WTO conditions.

The purpose of the Strategy is to implement mitigation measures that reduce sawfish interactions in the NPF as much as practical, meeting relevant WTO and MSC conditions and aligning with the objectives of the NPF Bycatch Strategy 2020-2026. It has been developed considering the recent sawfish research, including industry-led gear modification trials, resulting in mitigation solutions that are tailored to the NPF and its target species.

1 Background

This Strategy has been developed based on the November 2025 NPF Sawfish Mitigation Workshop, Northern Prawn Fishery Resource Assessment Group (NPRAG) recommendations and has been endorsed by the Northern Prawn Fishery Management Advisory Committee (NORMAC).

The Sawfish Mitigation Workshop brought together representatives from industry, including skippers and industry leaders, Northern Prawn Fishery Industry (NPFI), alongside CSIRO researchers, independent scientists, the conservation sector, the Fisheries Research and Development Corporation (FRDC), the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and AFMA.

Workshop participants considered the key outcomes of relevant research projects and industry-led gear trials, providing recommendations on preferred effective sawfish mitigation measures, ongoing data and monitoring requirements, and future research priorities. The workshop report is available on the AFMA website at: Sawfish Workshop Report 2025.

1.1 Fishery Overview

Located off Australia's northern coast, the NPF covers an area of approximately 770,000 square kilometres. Around 6,000 kilometres of coastline from Cape York in Queensland to Cape Londonderry in Western Australia are covered (**Appendix A**), with the majority of fishing effort occurring in the Gulf of Carpentaria.

The NPF operates two fishing seasons per year:

- Season 1 (banana prawn season) is open from April 1 to June 15[1] annually.
- Season 2 (tiger prawn season) is open from August 1 to November 30[1] annually.

There are six key target species in the NPF; common and redleg banana prawns, grooved and brown tiger prawns, and blue and red endeavour prawns. Fishing effort is managed through gear and vessel limits, seasonal and area closures and maximum fishing days. The NPF is certified as sustainable by the MSC. Further information can be found on the AFMA website.

1.2 Sawfish Species and Status

Four species of sawfish reside in the waters of the NPF, with further details of these species outlined in Error! Reference source not found. below.

Fishing activity from commercial and recreational sectors has been highlighted as a principal threat to sawfish species, along with habitat degradation, marine debris and collection for public display (DCCEEW 2015). Recent research suggests largetooth sawfish are also particularly sensitive to altered river flows from resource water development (Kenyon et al. 2026; Plagányi et al. 2023). Low population growth rates and habitat degradation have also been identified as key global challenges for these species (Dulvy et al. 2016). There is relatively limited information available on sawfish populations, although this suggests stocks are declining globally, with populations in Australian waters potentially the last stronghold of regional populations (DCCEEW 2015).

The most recent reassessments (August 2025) for narrow and largetooth sawfish under the EPBC Act supported an uplisting to Endangered for largetooth sawfish but found there was insufficient data to support a listing for the narrow sawfish. Preliminary findings of the CSIRO and FRDC project '*Estimating Narrow*

[1] Season end dates are dependent on target species catch rate triggers, with the fishery closing early if these aren't met.

Sawfish (Anoxypristis cuspidata) abundance using close kin mark recapture' (CKMR project), estimated a breeding adult narrow sawfish population of approximately 50,000 across Northern Australia. However, there are very large confidence intervals in this estimate (between 4,000 and 600,000), with further sample collection required to reduce the uncertainty in this estimate (AFMA 2025).

Table 1. Summary of sawfish species occurring within the NPF (AFMA 2024).

Species	Narrow sawfish	Green sawfish	Dwarf sawfish	Largetooth sawfish
Size	Up to 4.7m	Up to 7m	Up to 3.5m	Up to 7m
Colour	Dark grey dorsal, pale ventral	Olive-green/brown dorsal, pale ventral	Greenish-brown dorsal, white ventral	Dark golden-brown dorsal, white ventral
Location	Inshore and offshore	Inshore and offshore	Coastal and offshore	Inshore fresh water, estuarine and offshore
Depth	0-40m	0-70m	0-25m	0-60m
EPBC Listing	Migratory[2]	Migratory Vulnerable	Migratory Vulnerable	Migratory Endangered
CITES Listing	Appendix I	Appendix I	Appendix I	Appendix I
IUCN	Critically Endangered	Critically Endangered	Critically Endangered	Critically Endangered

1.3 Sawfish Interactions in the NPF

NPF vessels interact with all four sawfish species, with narrow sawfish accounting for around 90% of these interactions (Fry et al. 2024). While sawfish interactions occur during both fishing seasons, they are higher during targeted tiger prawn fishing, where trawl duration in targeted tiger prawn trawls are considerably longer than during the banana prawn fishing season. NPF logbook data shows sawfish interactions occur across all areas of the fishery where fishing effort occurs. Presently there are no clear spatial trends in reported interactions.

Reported interaction rates of sawfish have varied greatly over time, influenced by both declining fleet size and varying reporting practices. In 2019, NPFI began a targeted industry education program to improve reporting of sawfishes and other endangered, threatened and protected (ETP) species. A sawfish identification document was developed which is on-board all vessels and provided to observers. Since then, there has been a significant increase in the number of interactions reported in logbooks, and in the proportion of animals identified to species-level, with an average of 86% of sawfish interactions in logbooks reported to species-level in 2023 (NPF Annual Data Summaries 2023 - 2025).

In 2025, AFMA conducted a trial of Electronic Monitoring (EM) in the fishery, with this to become mandatory from 1 April 2027. Sawfish interaction rates for trial vessels were higher than for the rest of the fleet, which suggests that sawfish underreporting remains an issue, and that introduction of EM may see significant increases in reported interaction rates. This is not unusual and reflects implementation of independent monitoring in other fisheries in Australia and around the world. A change in reporting behaviour (as opposed to a change in interaction rate) will need to be accounted for in assessing future performance of this Strategy.

Since 2003, the NPF has participated in a Crew Member Observer (CMO) Program, which observes approximately 15–17% of the fishery's fishing effort annually. This program employs CMOs to record and

[2] In 2025, Narrow Sawfish was assessed by the Threatened Species Scientific Committee to not be eligible under any of the listing criteria.

photograph ETP interactions and bycatch species. All sawfish interactions recorded by CMOs are independently reviewed by CSIRO[3] to verify species identification as part of the NPF Bycatch Monitoring Program which monitors long-term catch rate trends with ETP and at-risk bycatch species (Fry et al. 2024).

Figure 1. Graph of Sawfish Interactions in the NPF from logbook data

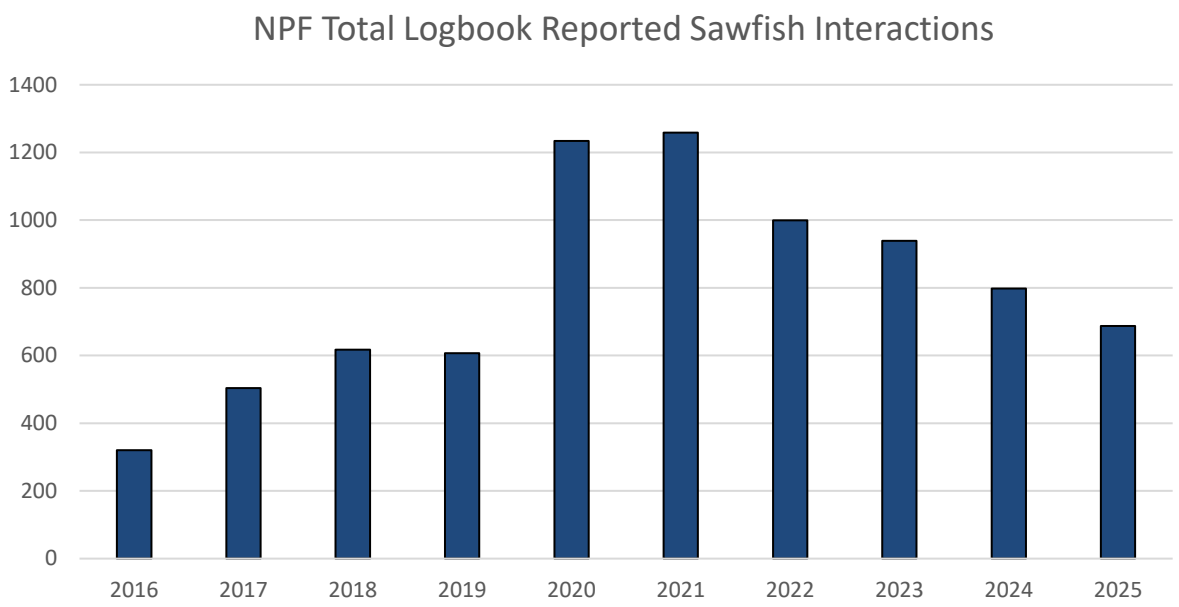
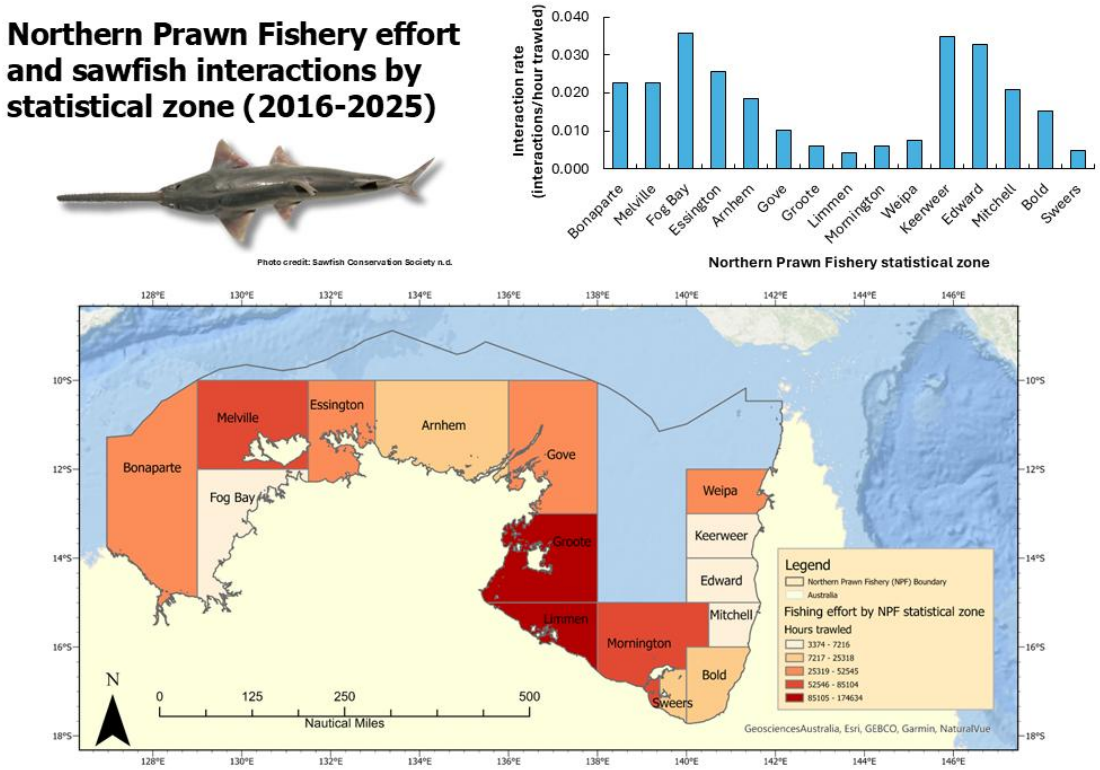


Figure 2. Map Showing Spatial Spread of Fishing Effort and Sawfish Interactions in the NPF (AFMA 2026)



[3] Where photographs are available, species identification can be confirmed with a high degree of confidence.

The 2025 Sawfish Workshop considered the outcomes of recent NPF sawfish research, including information presented by CSIRO on factors contributing to sawfish interactions in the fishery. While there is limited research available on sawfish population movement, recent tagging data suggests that sawfish frequently move large distances and depths (from 3m – 90m depth) (Jarrett et al. 2026).

As sawfish interactions are spread spatially and temporally across the fishery, the use of closure provisions was not considered to be the most effective management approach. Recent analysis found higher mortality in smaller sawfish (<1.5m), which primarily occur in the codend or near the Turtle Excluder Device (TED). Due to this, gear modifications to reduce sawfish entry into the codend and minimising entanglement adjacent to the TED were identified as the most effective and practical option for reducing sawfish interactions at this time.

2 Objectives, Actions and Performance Indicators

This Strategy aims to minimise sawfish interactions in the NPF. It has been developed in accordance with the NPF Bycatch Strategy and is consistent with AFMA's overarching objective to reduce bycatch for sustainable fisheries management. The key objectives of the Strategy are to:

1. Minimise sawfish interactions with trawl gear in the NPF through the implementation of practical, effective mitigation measures.
2. Improve understanding of species-level vulnerabilities of sawfish species across the NPF through improved reporting and understanding of population structure and post-release survival.

Table 2. Key actions and performance indicators for achieving the Strategy objectives

Actions	Performance Indicator
Implementation of gear mitigation measures to minimise sawfish interactions.	Voluntary industry adoption of STED 70[4] in the 2026 tiger prawn season. All NPF vessels are fitted with STED 70[4] in 50% of nets by 1 April 2027. All NPF vessels are fitted with STED 70[4] in 100% of nets by 1 August 2027.
Further assessment of the effectiveness of implemented gear mitigation measures against previous gear configurations.	Analysis undertaken of sawfish interactions rates between STED 70 and 'standard' TED, with results reviewed by NPRAG / NORMAC.
Continuation of gear trials to improve available mitigation measures to reduce sawfish capture.	Further gear trials have been undertaken to assess the effectiveness of identified alternative gear mitigation options.
Improved sawfish interaction reporting in logbooks.	Improved trends in sawfish logbook reporting (including species ID) across the fleet, validated through EM[5].

[4] The STED 70 is a smaller bar spacing TED, also known as the SBS-TED-70. See further definition below.

Actions	Performance Indicator
Continued collection of sawfish interaction data through EM to validate logbook records.	The number of ETP and at-risk species with catch rate trend analysis is maintained or increased[6].
Industry to continue to collect tissue samples and deploy satellite tags to support population, life history and post-capture survival research[7].	Sampling and tagging targets are achieved.
Ongoing monitoring of population estimates for sawfish species based on sample collection and tagging.	The most recent population abundance estimates and trends are considered as part of the ongoing Strategy review process.
NPFI / AFMA / CSIRO to develop a best practice safe sawfish handling practices to improve post-release survival while ensuring crew safety.	Sawfish Safe-Handling and Release Protocol is developed and distributed to all vessels with training provided to crew.
NPFI to incorporate safe sawfish handling practices into annual industry briefings / CMO workshops.	Industry education on the latest safe sawfish handling practices is undertaken at the banana and tiger prawn pre-season briefings and CMO workshops.

3 Management Measures

3.1 Gear Mitigation

Based on the outcomes of the recent industry-led gear trials in the NPF, the most practical and effective gear mitigation option identified to reduce sawfish interactions was a reduced bar spacing TED from 120mm to 70mm[8], known as the smaller bar spacing or SBS-TED-70 (STED 70). Relative to currently mandated TEDs, the STED 70 has been shown to deliver lower bycatch rates and corresponding risks of mortality for sawfish and other large bycatch species.

A staged implementation of gear mitigation measures will occur (outlined in Error! Reference source not found. below), allowing the opportunity for ongoing data collection and analysis on the interaction rates between the existing TEDs and the STED 70, and to allow industry to become familiar with the devices before mandatory implementation. This approach is consistent with the introduction of previous bycatch gear mitigation devices (e.g., TEDs, Bycatch Reduction Devices) in the fishery.

The use of the STED 70 will be mandated through amendments to the Northern Prawn Fishery Gear Requirements Direction 2021.

Table 2. Phased Implementation Timeline of Sawfish Gear Mitigation.

Year	Season	Approach
2026	Season 2 (Tiger Prawn)	Voluntary adoption of STED 70 in 50% of nets (per vessel), pending industry resources.

[6] The most recent Bycatch Monitoring Program Report (2024) assessed 14 ETP or 'at-risk' species for catch rate trend analysis, including one sawfish species (Narrow Sawfish).

[7] Pending research funding availability.

[8] The current permitted TED bar spacing is no more than 120mm. The bar spacing of the STED 70 is 70mm maximum to reduce the opportunity for sawfish to enter the codend.

Year	Season	Approach
2027	Season 1 (Banana Prawn)	Mandatory implementation of STED 70 in 50% of nets (per vessel) across the NPF fleet.
2027	Season 2 (Tiger Prawn)	Mandatory implementation of STED 70 in 100% of nets across the NPF fleet[9].

In addition to the STED 70 introduction, heavier-ply mesh in the throat, TED flaps and in front of the TED[10] were identified as potential future mitigation options. However, further trials of heavier-ply mesh materials are required to test their effectiveness at reducing interactions and to identify any potential impacts on prawn catches.

Industry trials of heavier-ply mesh types will continue during 2026 and 2027, with the outcomes of these trials to be considered by AFMA, NPFI and NPRAG.

3.2 Improved Sawfish Handling Practices

NPFI and AFMA, in consultation with fishers, will develop a Sawfish Safe-Handling and Release Protocol for onboard crew prior to the 2027 tiger prawn season. This will be a standardised procedure for returning landed sawfish back into the water for the safety of both the crew and the animal. A hard copy of this document will be printed for all NPF vessels, alongside in-person training workshops to develop crew confidence in safety.

4 Data Collection and Monitoring

4.1 Reporting

Accurate reporting of sawfish interactions is essential to effectively measure the performance of the Strategy. Under AFMA's legislation, all protected species interactions must be reported in logbooks and under the EPBC Act, all interactions must be reported to DCCEEW. Failure to report may result in penalties as outlined in the FMA or the EPBC Act.

Fishers in the NPF are required to report interactions with ETP species through Wildlife Interaction Reports as part of their mandatory logbook reporting requirements. Fishers are also encouraged where possible to provide additional information such as location in net, life status assessment and mesh size. This additional information will continue to be collected by NPFI as part of the ongoing gear trials and phased implementation of the STED 70 (see current Sawfish Interaction Forms at **Appendix B**).

4.2 Independent Monitoring

From 1 April 2027, all vessels in the NPF will be required to have EM systems installed. Data collected through EM will be used for improvement and independent verification of ETP reporting.

Observers have been deployed in the NPF to collect essential information on ETP bycatch species interactions. This ETP and bycatch interaction data has been used to verify the NPF logbook data through the

[9] Implementation in 100% of nets will be mandatory from the 2027 Tiger Prawn season onwards.

[10] These areas were identified as the areas of highest sawfish entanglement in NPF trawl nets.

ongoing Bycatch Monitoring Program, which assesses any changes in interaction rates for key species over time.

Observers have also collected tissue samples and associated biological information (length, species, sex, life status) for the fisheries independent estimates being derived by CKMR (see section 4.3).

In determining to implement EM in the fishery, AFMA directed NPRAG to review biological data being collected by AFMA observers in support of AFMA's objectives and provide recommendations for alternate sourcing of necessary information. That work is underway and will consider ongoing sample collection needs.

4.3 Support for Ongoing Research

A summary of ongoing and recently completed research is provided on the AFMA website at: Recent Sawfish Research in the NPF. Sawfish tagging and collection of tissue sampling for research have been identified as essential priorities for ongoing data collection, to determine population size (status) and trajectory for EPBC Act listed sawfish species, and post-release survival research. Enhanced EM (potentially incorporating AI for large ETP species identification), underwater video analyses of alternative gear mitigation options (e.g., mesh types), and analysis of sawfish interactions data will support this Strategy.

Funding for sawfish genetic sampling and tagging work concluded in mid and late-2026 respectively, with the CKMR project scheduled for completion late 2026. Future funding for both projects is essential to a) provide insights into post-release sawfish movements and survival estimates, and b) to reduce the uncertainty in the estimates of abundance for adult sawfish. CKMR assessments should be updated approximately every 5 years. The above research priorities are contingent on available research funding and resources.

5 Review

Annual performance reviews will be conducted to assess progress against the identified performance measures in **Section 2**.

The overall Strategy will be reviewed every five years following implementation, in line with the NPF Bycatch Strategy review (scheduled for 2032) and major certification and policy cycles (e.g., MSC, WTO, Harvest Strategies).

The Strategy may be reviewed and updated as required between the scheduled reviews, considering the outcomes of the annual performance reviews or other new available information.

References

Australian Fisheries Management Authority (AFMA) and Northern Prawn Fishery Industry (NPFI), 2024. *Northern Prawn Fishery Bycatch Strategy 2020–2026*.

Australian Fisheries Management Authority (AFMA), 2024. *NPF Sawfish Plan 2024–2026*, AFMA, Canberra.

Australian Fisheries Management Authority (AFMA), 2025. *Northern Prawn Fishery Resource Assessment Group (NPRAG) meeting minutes, 12 November 2025*, AFMA, Canberra, accessed 3 June 2026.

Cahill, J., 2022. *Northern Prawn Fishery Data Summary 2021*, NPF Industry Pty Ltd, Australia.

Department of Climate Change, Energy, the Environment and Water (DCCEEW), 2015. *Sawfish and River Sharks Multispecies Recovery Plan*, Commonwealth of Australia.

Dulvy, N.K., Davidson, L.N.K., Kyne, P.M., Simpfendorfer, C.A., Harrison, L.R., Carlson, J.K. and Fordham, S.V., 2016. 'Ghosts of the coast: global extinction risk and conservation of sawfishes', *Aquatic Conservation: Marine and Freshwater Ecosystems*, 26, pp. 134–153.

Fry, G., Liang, X., Yang, W-H., Meteyard, B., Laird, A. and Lawrence, E., 2024. *Monitoring interactions with bycatch species using crew-member observer data collected in the Northern Prawn Fishery: 2020–2022*. Final report to AFMA, R2020/0804. CSIRO, Australia. 220p.

Jarrett, A. and Meteyard, B., 2024. *Investigating potential for fishing gear, technology and management measures to reduce sawfish and sea snake interactions in Australia's Northern Prawn Fishery (NPF)*, Queensland, Australia.

Jarrett, A. and Meteyard, B., 2025. *Mitigating Sawfish Interactions in the Northern Prawn Fishery (NPF)*, NPFI Pty Ltd, Queensland, Australia.

Jarrett, A., Meteyard, B. and Knuckey, I., 2026. *NPF Sawfish Mitigation Workshop*. NPFI Pty Ltd, Queensland, Australia.

Kenyon, R.A., Plagányi, É.E., Blamey, L.K., Deng, R.A. and Hughes, J.D., 2026. Environmental Flows Should Be Climate-Adapted and Can Reduce Downstream Impacts of River Flow Modification. *Estuaries and Coasts*, 49(4).

Laird, A., Fry, G. and Lawrence, E., 2019. *How does trawl gear configuration affect sawfish catches: mitigating commercial fishing interactions with sawfish in the North and North-West Marine Parks Networks*. Final Report to Our Marine Parks Round One Grants. Marine Parks Grant Project PY7BSVQ 2020. 31p.

Meteyard, B., 2023. *Northern Prawn Fishery Data Summary 2022*, NPF Industry Pty Ltd, Australia.

Meteyard, B., 2024. *Northern Prawn Fishery Data Summary 2023*, NPF Industry Pty Ltd, Australia.

Meteyard, B., 2025. *Northern Prawn Fishery Data Summary 2024*, NPF Industry Pty Ltd, Australia.

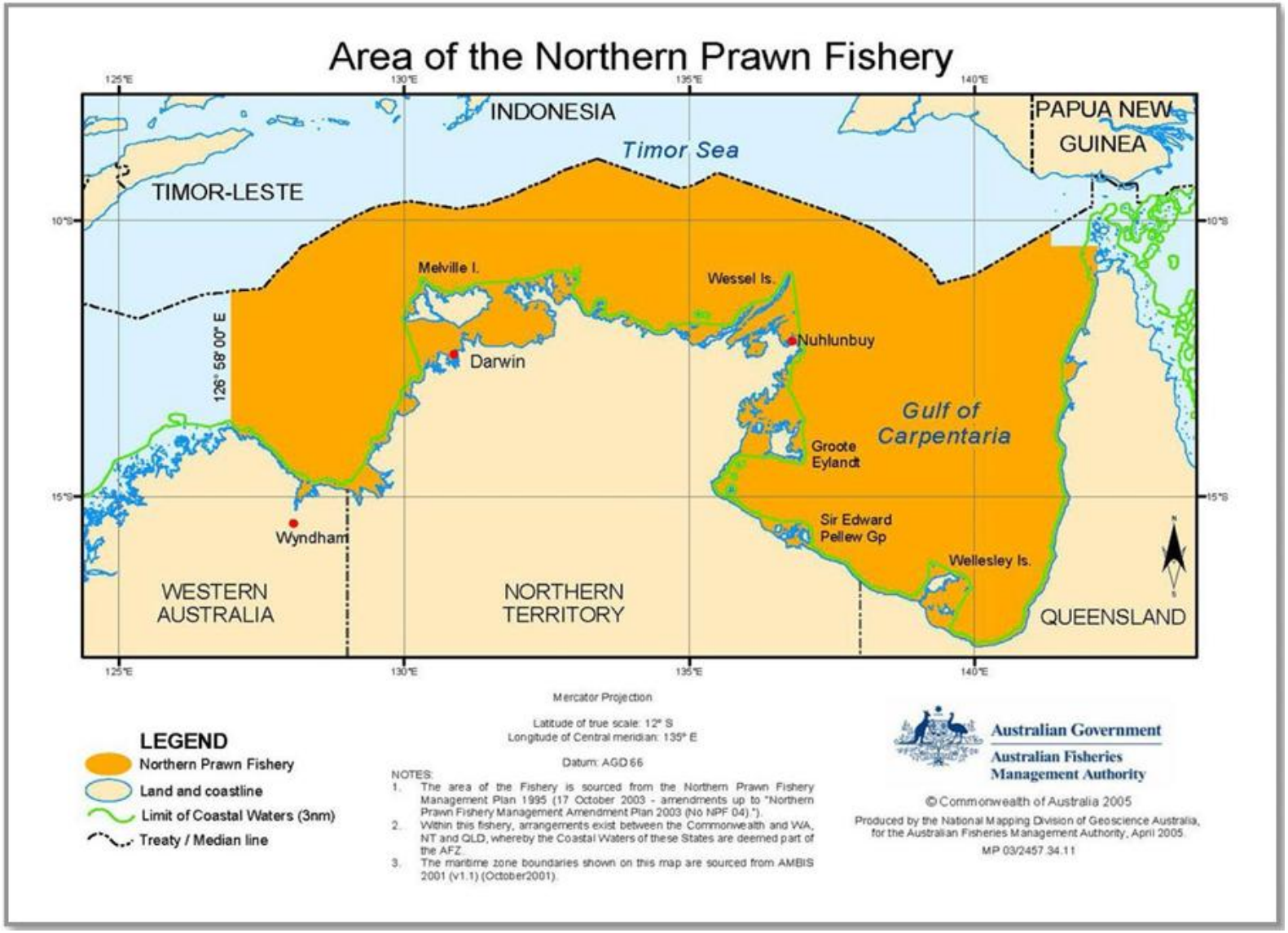
Meteyard, B., 2026. *Northern Prawn Fishery Data Summary 2025*, NPF Industry Pty Ltd, Australia.

Plagányi, É., Kenyon, R., Blamey, L., Robins, J., Burford, M., Pillans, R., Hutton, T., Hughes, J., Kim, S., Deng, R.A. and Cannard, T., 2023. 'Integrated assessment of river development on downstream marine fisheries and ecosystems', *Nature Sustainability*, 7(1), pp. 31–44.

Tonks, M.L., 2006. *Bycatch Guide: A guide to common prawn-trawl bycatch species from the Joseph Bonaparte Gulf, northwestern Australia*. CSIRO Publishing.

Appendix A

Figure 3. Map of the Northern Prawn Fishery



Appendix B

Figure 4. NPFI Sawfish Interaction Form (TED type)

Vessel: Season 2

Gear Configuration: *e.g. SBS-TED*

Date	Time	Species	Length	Gear	Describe Where In the Net The Animal Was Caught
e.g. 8/04	*13:00*	☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green	*1.5 m*	☐ SBS-TED ☐ Normal TED	*e.g. Sawfish in the codend*
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ SBS-TED ☐ Normal TED	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ SBS-TED ☐ Normal TED	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ SBS-TED ☐ Normal TED	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ SBS-TED ☐ Normal TED	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ SBS-TED ☐ Normal TED	

Figure 5. NPFI Sawfish Interaction Form (mesh type)

Vessel: Season 1

Gear Configuration: *e.g. SBS-TED / Grey mesh*

Date	Time	Species	Length	Gear	Describe Where In the Net The Animal Was Caught
e.g. 8/04	*13:00*	☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green	*1.5 m*	☐ Grey Throat ☐ Normal Throat	*e.g. Sawfish in the codend*
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ Grey Throat ☐ Normal Throat	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ Grey Throat ☐ Normal Throat	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ Grey Throat ☐ Normal Throat	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ Grey Throat ☐ Normal Throat	
		☐ Narrow ☐ Dwarf ☐ UNK ☐ Fresh ☐ Green		☐ Grey Throat ☐ Normal Throat	

Australian Government

Australian Fisheries
Management Authority