

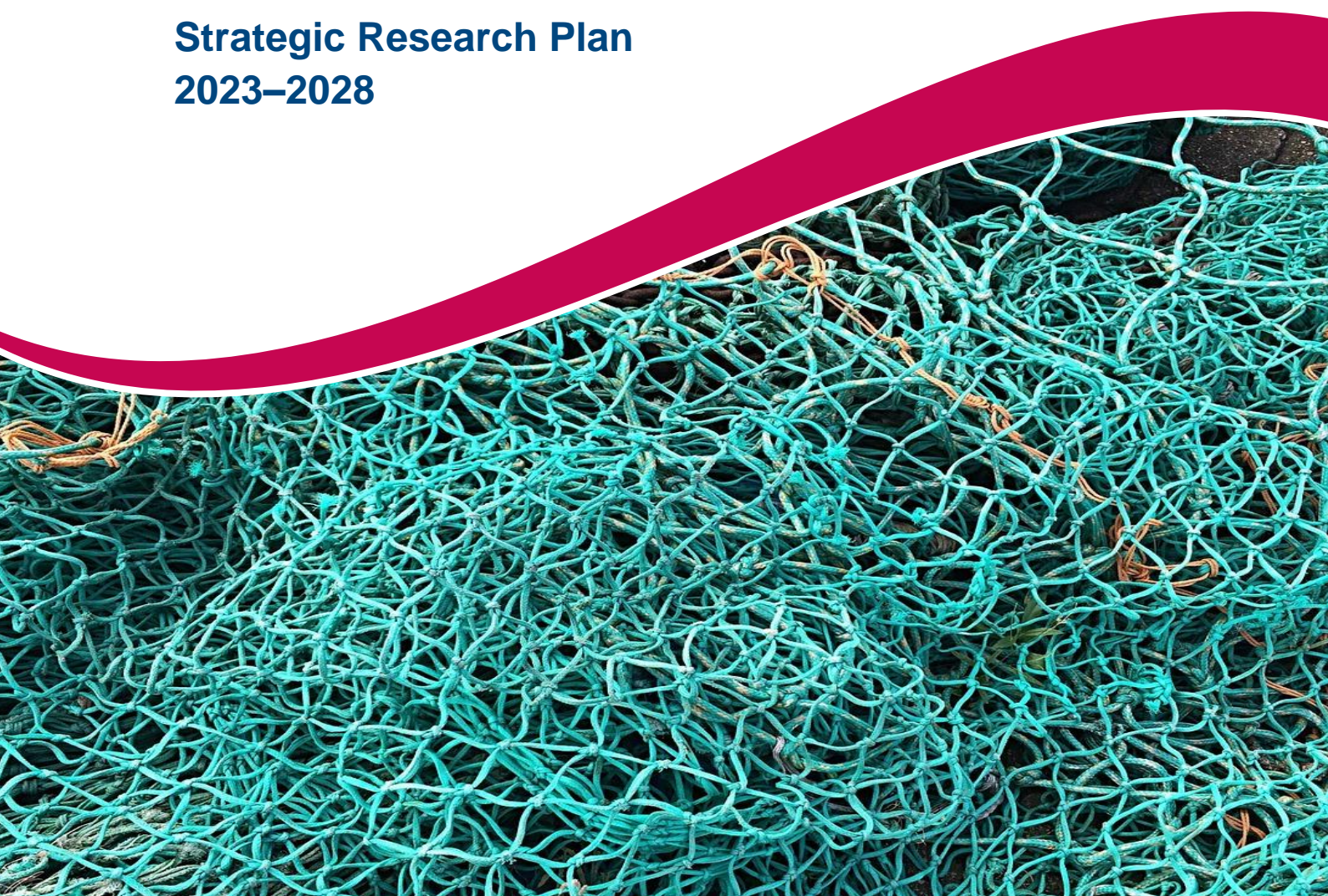


Australian Government

Australian Fisheries Management Authority

Eastern Tuna and Western Tuna Billfish Fisheries

**Strategic Research Plan
2023–2028**



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1 Introduction

The Eastern Tuna and Western Tuna Billfish Fisheries Strategic Research Plan provides a framework that identifies the key strategic research needs in these fisheries for the five-year period 2023–2028 inclusive.

This document aims to assist the Tropical Tuna Management Advisory Committee (TTMAC) to identify and support research that will help achieve the management goals for the tropical tuna fisheries which include the Eastern Tuna and Billfish Fishery (ETBF), the Western Tuna and Billfish Fishery (WTBF), and the Eastern and Western Skipjack Tuna Fisheries. The Strategic Research Plan also aims to ensure that research projects fit within a comprehensive and strategic research plan for the fisheries.

The annual research priorities detail the specific research topics of focus each financial year that have been identified by TTMAC. These will be updated by TTMAC on an annual basis in consultation with the Tropical Tuna Resource Assessment Group (TTRAG).

2 AFMA corporate goals and strategies

Research activities funded by AFMA must focus on attaining AFMA's primary management objectives, which are:

- i. to ensure the ecological sustainability of the fishery; and
- ii. to maximise the economic efficiency of the fishery.

AFMA has developed three research themes to assist in achieving these management objectives.

These research themes should act as a guide for TTMAC in developing Eastern and Western Tuna and Billfish Fisheries research plans, identifying research priorities for the annual call for research and assessing research proposals.

3 Identifying research needs

Research activities must be consistent with AFMA's corporate goals and strategies, although the drivers of research can be considered to fall into three programs:

Program 1 – Fishery Stocks, Biology and marine environment

- Collect appropriate information to support stock assessments
- Explore alternative species assessment methods and models
- Assess the impacts of fishing on non-target species and the marine environment
- Assess the impact of climate change on Commonwealth fisheries assessment and management.

Program 2 Development

- Bycatch Reduction and development of underutilised fisheries resources
- Take account of Indigenous commercial, and recreation interests
- Develop coordinated approach on economic issues

- Improve and enhance fishery Harvest Strategies and Management framework
- Management development
- Compliance methodologies

Program 3 Evaluation

- Management indicators – monitor and evaluate the effectiveness of existing management arrangements.

The success of fisheries management in the Eastern and Western Tuna and Billfish Fisheries should be monitored and measured through appropriate performance indicators. These performance indicators, together with appropriate reference points, must relate to the management objectives and have identified actions associated with them.

4 Research priority areas and needs

The following research areas have been identified as high priority needs for the next five years by TTRAG and TTMAC. These are consistent with AFMA's strategic goals and priorities and are not listed in order of priority.

4.1 Provision of data

- Provision of biological data to support relevant projects (stock assessments)
- Provision of economic data to support relevant projects
- Provision of environmental data to support relevant projects
- Provision of recreational catch data to support relevant projects

4.2 Biological research priorities

- *Stock assessments*
 - Ensure stock assessments are conducted on target species in Eastern and Western Tuna and Billfish Fisheries.
 - Ensure appropriate assessments are conducted for other species caught in Eastern and Western Tuna and Billfish Fisheries.
 - Improve understanding of biological characteristics of species caught in Eastern and Western Tuna and Billfish Fisheries.
 - Develop harvest strategies for target and byproduct species as needed.
 - Evaluate the effectiveness of the harvest strategies for Eastern and Western Tuna and Billfish Fisheries.
- *Connectivity*
 - Improve understanding of stock structure of primary species in Eastern and Western Tuna and Billfish Fisheries.
 - Investigate the levels of mixing between Australian fish resources and fish resources in the broader Indian and Western and Central Pacific Oceans.
 - Investigate the cross fishery interactions between Eastern and Western Tuna and Billfish Fisheries and other fisheries.

4.3 Ecological research priorities

- *Bycatch and Byproduct*
 - Investigate measures to improve bycatch mitigation in fishing operations.
 - Investigate the effects of fishing in Eastern and Western Tuna and Billfish Fisheries on non-target species.
- *Climate impacts*
 - Measure the effects of climate change on key species and ecosystems in Eastern and Western Tuna and Billfish Fisheries.
 - Investigate oceanographic and environmental factors impacting Eastern and Western Tuna and Billfish Fisheries.
- *Ecological Risk Assessment*
 - Review the Ecological Risk Assessment for the Eastern and Western Tuna and Billfish Fisheries.
 - Evaluate the relevance of certain species rated as high risk.

4.4 Economic and social research priorities

- *Spatial Management measures*
 - Investigate the economic and ecological impacts of Marine Protected Areas and closures.
 - Investigate the need for resource sharing between the Commonwealth and other jurisdictions or sectors.
- *Economic viability*
 - Determine trends in the economic performance of Eastern and Western Tuna and Billfish Fisheries.
 - Cost / Benefit Analysis of management costs (levies) versus the fishery outputs in Eastern and Western Tuna and Billfish Fisheries.
- *Indigenous and recreational fishing interests*
 - Develop the capacity of Indigenous and recreational fishers and investigate the need for resource sharing.

Conclusion

- This research plan provides a framework for identifying the key research priorities in the Eastern and Western Tuna and Billfish Fisheries for 2023–2028 that will help achieve the management goals for Eastern and Western Tuna and Billfish Fisheries and ensure that endorsed research projects fit within a strategic framework.
- TTRAG should identify the research needs for management of the stocks consistent with the research priorities of the Eastern and Western Tuna and Billfish Fisheries strategic research plan.