



Australian Government
Australian Fisheries Management Authority

Five Year Strategic Research Plan 2017-18 to 2021-22

Small Pelagic Fishery

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Strategic Research Plan 2017-18 to 2021-22

This Small Pelagic Fishery (SPF) Strategic Research Plan was developed by the Australian Fisheries Management Authority (AFMA), in consultation with the SPF Scientific Panel and identifies areas of high priority research for the SPF for the period 2017-18 to 2021-22.

The SPF Strategic Research Plan aims to address AFMA's strategic research objectives in AFMA's Strategic Research Plan for 2016 to 2021, outlined in the boxes below.

Goal 1: Prevent unacceptable impacts of Commonwealth fisheries on marine ecosystems and organisms

Strategy: Decrease the number of species identified as high risk by ERA/ERM after mitigation measures are applied

Goal 2: Increase the number of sustainably harvested stocks and maximise the economic return to Australia

Strategy: Focus on understanding the size and condition of fish stocks and their ecosystems, prioritised by ecological risk, to underpin fishery management actions

Goal 3: Continuously improve the efficiency and cost-effectiveness of fisheries management and administration

Strategy: Invest in business processes and technologies that match the core needs of AFMA and its stakeholders

Attachment 1 includes a summary of high priority research projects that will be undertaken and required monitoring under the SPF Harvest Strategy. The SPF Scientific Panel recognises that it will require significant resources and funding to complete items on the Strategic Research Plan and it is unlikely that all of the projects will be completed within the five-year timeframe of the Strategic Research Plan.

Each year the SPF Scientific Panel reviews the research needs and develops an annual set of research priorities and work plan for consideration and adoption by the South East Management Advisory Committee (SEMAC). Research priorities are developed based on consideration of:

- discussions between researchers, industry and management on issues and gaps in the knowledge for the SPF
- current research projects and recent research results
- the previous year's research priorities
- developments in the SPF.

The annual research priorities for the SPF are outlined in a separate document available on the AFMA website.

This Strategic Research Plan and the research priorities will be reviewed by AFMA and the SPF Scientific Panel annually. This Strategic Research Plan was most recently reviewed and updated in September 2016 but can be updated at any time.

SPF STRATEGIC RESEARCH PRIORITIES 2017-18 to 2021-22 (updated September 2016)

KEY:

 Indicates the time frame the project should be completed in

\$ Indicates that the project has been funded

TABLE 1. HIGH PRIORITY RESEARCH PROJECTS

AFMA STRATEGIC RESEARCH GOAL	PROJECT	PURPOSE & BENEFITS	TIMEFRAME / FUNDING				
			17-18	18-19	19-20	20-21	21-22
Goal 2: Increase the number of sustainably harvested stocks and maximise the economic return to Australia	Daily Egg Production Surveys (DEPM)	The objective of these surveys is to estimate the spawning biomass of SPF stocks to underpin the determination of Recommended Biological Catches. Stocks which either have not been surveyed or which were surveyed more than five years ago should be prioritised for surveying following the completion of the DEPM for jack mackerel west (2016-17).	 Redbait west	 Redbait east	 Blue mackerel west		
	Annual compilation of the Fishery Assessment Report	The annual assessment presents fishery statistics and catch at size/age data and synthesises existing stock assessment information for the key target species of the SPF. This is a requirement of the SPF Harvest Strategy.					
Goal 1: Prevent unacceptable impacts of Commonwealth fisheries on	Annual monitoring, reporting and assessment of the effectiveness of current mitigation measures and	With the resumption of midwater trawling operations in the SPF, there is a need to ensure that marine mammal bycatch data are collected through observer and camera coverage to:					

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marine ecosystems and organisms	impact of the fishery on protected species	<p>1) evaluate the effectiveness of the seal excluder device or barrier net in mitigating lethal interactions with marine mammals; and</p> <p>2) synthesise information on interactions to examine how operational and environmental factors influence interaction rates.</p> <p>These analyses will provide a basis to recommend modifications to fishing practices and the design of mitigation devices, and/or provide confidence that the welfare of marine mammals are not adversely impacted by mid-water trawling.</p>					
Goal 2: Increase the number of sustainably harvested stocks and maximise the economic return to Australia	Develop comprehensive integrated stock assessments that incorporate multiple lines of evidence	The aim of this project is to develop and test integrated stock assessment models for key SPF species when the fishery develops. This project will build on the initial stock assessment on jack mackerel east which is planned to be undertaken in 2016-17.					
Goal 2: Increase the number of sustainably harvested stocks and maximise the economic	The economic impact of reference point selection	Given the potential economic impetus to use higher harvest strategy reference points, a desktop study should be undertaken to quantify the marginal effect of cost on biomass to explore the maximum economic yield (MEY) and the drivers and constraints on MEY for the SPF. The study should draw on similar case studies in other multi-gear fisheries.					

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			17-18	18-19	19-20	20-21	21-22	
return to Australia	Tracking economic performance of the SPF	The collection of economic data is required if the value of the fishery and the factors that contribute to cost-effective fishery performance, are to be evaluated.						

TABLE 2. ASPIRATIONAL RESEARCH PROJECTS

PROJECT
Impact of climate change on future recruitment variation
Small Pelagic Fishery economic surveys