



Australian Government

Australian Fisheries Management Authority

Annual Research Statement (2025–26) for the Southern and Eastern Scalefish and Shark Fishery

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The Annual Research Statement for the Southern and Eastern Scalefish and Shark Fishery (SESSF) is developed by AFMA, in consultation with the South East Resource Assessment Group (SERAG), the Shark Resource Assessment Group (SharkRAG), the Great Australian Bight Resource Assessment Group (GABRAG), the South East Management Advisory Committee (SEMAC) and the Great Australian Bight Management Advisory Committee (GABRAG).

Through this process, consideration is also given to the broader Southern and Eastern Scalefish and Shark Fishery Strategic Research Plan (SESSF Research Plan 2021–2025).

This Annual Research Statement consists of the following elements relevant to the SESSF:

- (1) Proposed AFMA Research Committee (ARC) projects for the 2025–26 financial year;
- (2) Research proposals and priorities for consideration by COMRAC;
- (3) Approved ARC-funded projects commencing in the 2024–25 financial year;
- (4) Continuing ARC-funded projects;
- (5) Current FRDC-funded projects;
- (6) Current industry-managed data collection programs; and,
- (7) The current SESSF stock assessment schedule.

Each RAG and MAC listed above is invited to evaluate the research proposals and priorities itemised in sections (1) and (2) using the ranking criteria below. These proposals may relate to the SESSF stock assessment schedule, which is provided in section (7) for information.

Ranking criteria for proposed ARC/FRDC projects

Cost	Management priority	Feasibility
High: >\$200,000	Essential	High
Medium: \$100,000 - \$200,000	High	Medium
Low: <\$100,000	Medium	Low
	Low	

Please note that all amounts provided in the following tables are GST exclusive.

(1) Proposed ARC projects for the 2025–26 financial year

Title	Need	Deliverables	Evaluation		
			Total cost (approx.)	Priority/ranking	Feasibility
Development of guidelines for Harvest Control Rules when using low recruitment projections. (Potential for FRDC funding if there is a desire to involve state fisheries agencies)	The use of low recruitment projections to inform recommended biological catches for SESSF species has become more common in recent years and is expected to continue. However, the implementation of the SESSF Tier 1 harvest control rule within Stock Synthesis does not work correctly for low recruitment projections, as it projects future catches assuming recruitment is at the long-term average. This being the case, there is a need to develop guidelines on how to apply harvest control rules when using low recruitment projections.	A set of guidelines for harvest control rules when using low recruitment scenarios (for incorporation into the SESSF Harvest Strategy)	Low- medium \$100-200K	High	High
Blue Grenadier Acoustic survey 2025	Conduct structured acoustic surveys through the 2024 winter spawning aggregation of blue grenadier to provide a comprehensive view of the fishery and robust estimates of biomass to input into future Tier 1 stock assessments		Low-medium	High	High
Ecological Risk Assessments for the otter trawl and Danish seine fleets in the Great Australian Bight Trawl Sector	The most recent Ecological Risk Assessment (ERA) of the Great Australian Bight Trawl Sector (GABTS) was based on fishery data from 2012 to 2016 and limited to otter trawl vessels. At least one Danish seine vessel has been operating in the GABTS for most of the last ten years and this situation is likely to continue. Given that some of the data used in the abovementioned otter trawl ERA is now over a decade old, it would be prudent to update	To evaluate the risks posed by the otter trawl and Danish seine fleets in the GABTS on the following ecological components: • Key/secondary commercial species; • Byproduct and bycatch species; • Protected species; • Habitats; and • Communities.	Low	High	High

	this assessment and conduct a parallel assessment on the Danish seine fleet. The current Marine Stewardship Council certification of the GABTS expires in August 2028 and so this work would ideally be completed by December 2027 to inform the re-certification process (which starts around 12 months before certificate expiration).				
Survey of the 60-mile dogfish closure	There is no contemporary information on the protection afforded by the 60-mile dogfish closure in the GAB. Industry contends that the conservation benefits of this closure are minimal and would like to see fishing access reinstated.	Information on the spatial distribution, depth distribution and abundance of protected dogfishes within the 60-mile dogfish closure in the GAB.	High	Low (longer term medium)	High

(2) Research proposals and priorities for consideration by COMRAC

Title	Need	Deliverables	Evaluation		
			Total cost (approx.)	Priority/ranking	Feasibility
Evaluation and application of a preferred multi-species harvest strategy in the SESSF. (Proposal under consideration by FRDC)	FRDC Project ‘Development and evaluation of multi-species harvest strategies in the SESSF’ (MSHS) (FRDC 2018-021) developed and evaluated options for multi-species harvest strategies, including monitoring and assessment options identified in the SESSF Monitoring and Assessment Research Project (SMARP). The project conducted analyses to expand the options for several of the components needed to construct a multi-species harvest strategy, recognizing that the ability of a harvest strategy to satisfy the objectives of fisheries management relates to the data available and how those data are analysed. AFMA held a workshop in October 2023 to consider the key challenges associated with managing multi-species fisheries addressed by the project team. Workshop participants were supportive of progressing development a harvest strategy that incorporates a combination of three approaches identified by the project team; (1) Pretty Good Multi-Species Yield (PGMSY), (2) Indicator and (3) Trigger Species. The MSHS project identified a number of options but only undertook management strategy evaluation for a few species in the SESSF, as a proof-of-concept approach. Further specification and testing is required to understand how these approaches could be applied, and to what extent they would be effective in the SESSF. To do this, an extension project is required to further develop the approaches considered by the MSHS Project – effectively ‘Phase 2’ of the MSHS Project. The project would involve designing, specifying and testing a number of harvest strategies specifically tailored to the SESSF, using different combinations of the PGMSY, Trigger and Indicator Species approaches, coupled with various data, monitoring and	1. MSE tested multi-species harvest strategy for the Southern and Eastern Scalefish and Shark Fishery. 2. Complementary harvest strategy options for jurisdictions with multi-species and/or data poor stocks. 3. Workshop with State agencies to compare and contrast project outcomes with needs of State fisheries.	High	High Outcomes/objectives of HSP critical to timing of this project	High noting policy risks which could impact rating (to medium)

assessment regimes, e.g., data light(\$), medium(\$\$) and heavy (\$\$\$).

These would be MSE tested to identify the most likely candidates, and then trialled alongside the existing harvest strategy to understand the risk/catch/cost implications and be fine-tuned accordingly.

While FRDC project 2018-021 focussed on the SESSF as a test case, the concepts are equally as applicable to other mixed-species fisheries. Outputs from this extension project, as well as those from 2018-021, could be used to understand what is required to design, test and implement multi-species harvest strategies in other jurisdictions.

(3) Recently approved ARC projects for the 2024–25 financial year

Title (project code)	Objectives	Funding	Due date
Blue Grenadier Acoustic Survey for 2024	Conduct structured acoustic surveys through the 2024 winter spawning aggregation of blue grenadier to provide a comprehensive view of the fishery and robust estimates of biomass to input into future Tier 1 stock assessments.	\$123k	30 Jun 2025
Acoustic Optical Surveys (AOS) of the Eastern Zone Orange Roughy stock for 2024	Conduct structured acoustic surveys during the 2024 winter spawning aggregation of the Eastern Zone Orange Roughy using towed body AOS equipment to provide biomass estimates for use in future stock assessments.	\$374k total \$244k (2024-25) \$100k (2025-26)	30 Jun 2026
Review of Australian Blue Grenadier Stock Assessment	Provide an independent review of the Tier 1 stock assessment for Blue Grenadier (<i>Macruronus novaezelandiae</i>) off the coast of Australia to determine whether the data and methods used to develop the assessment are scientifically sound and appropriate for the application. To be undertaken free of charge by Kelli Johnson, Northwest Fisheries Science Centre, Seattle.	Nil cost	31 Dec 2024

(4) Continuing ARC-funded projects

Title (project code)	Objectives	Funding	Due date
Stock assessments for SESSF quota in the SESSF for the 2024-25 and 2025-26 financial years (including Integrated Scientific Monitoring Program, data services in the SESSF) (220803)	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 SESSF. This is a requirement of the SESSF Harvest Strategy. ISMP Detailed deliverables are subject to advice from the relevant RAGs and AFMA management, previously: Manipulate and analyse all applicable SESSF data to produce stock summaries that include Commonwealth and State catches, estimated discards, length and age information for all applicable SESSF species. These are presented in three reports; SESSF Data Summary, ISMP for the SESSF Discards and SESSF Catches and Discards for TAC purposes. Undertake targeting analyses and estimate companion species catches for school shark only.	~\$1,793K	30 Jun 2026
Fish ageing for SESSF quota species 3 year (220812)	Undertake fish ageing for the SESSF to support stock assessments for the period 2023-24 to 2025-26	~\$799K	30 Jun 2026
Monitoring the recovery of southern dogfish and Harrison's dogfish to support AFMA's upper slope dogfish management strategy (200820)	Undertake an initial baseline survey, which will underpin a long-term monitoring plan to measure the relative abundance and recovery of Harrison's dogfish and southern dogfish. The survey is to be conducted in accordance with 'Option 1A with DeepBRUVS identified in the report 'Research to support the upper slope dogfish management strategy: Options for monitoring the recovery of southern dogfish and Harrison's dogfish (Williams et al. 2018)' Work under the existing contract was not completed due to timing, wether and increased cost of vessel charters.	~\$464K	May 2023
Application of Close-Kin Mark-Recapture assessments for key and rebuilding species in the SESSF (220806)	Use CKMR methods to produce fishery dependent abundance data for species where Catch Per Unit Effort (CPUE) data are not available (e.g., gummy shark). CMKR abundance indices are more reliable than traditional CPUE methods, especially for species that can no longer be estimated against B0. This is important because of factors that cannot be effectively accounted for in the standardisation process and recent structural adjustments in the SESSF.	\$328K	Nov 2024
Continued Close Kin Mark Recapture (CKMR) sampling and analysis for school shark (190841)	Continue close kin sampling and analysis for school shark as the primary indicator of abundance for this species.	~\$300K	31 Jan 2025

Blue grenadier acoustic survey 2023 (220811)	Conduct structured acoustic surveys through the 2023 winter spawning aggregation of blue grenadier to provide estimates of biomass to input into future Tier 1 stock assessments. \$12,000 has been included in the 2022/23 FY research budget, for preliminary work for the 2023 survey to be commenced in May/June 2023.	\$105K	15 June 2024
Improving CPUE standardisations for sharks; (220810)	Improve standardisations: a) Incorporate the relationship between CPUE and net length. b) Effects of Australian Sea Lion and other closures on CPUE. c) Account for changing dynamics of fleet with new entrants. d) Combine manual and auto hook CPUE time series if feasible This project (~\$80k) was supported by the AFMA Research Committee (ARC) for 2022-23 however there was insufficient funding.	\$100K	19 Dec 2024

(5) Current FRDC-funded projects

Title (project code)	Objectives	Funding	Due date
Development and evaluation of multispecies harvest strategies in the SESSF (2018-021).	1. To develop and evaluate multi-species harvest strategies, including reference points and decision rules. 2. To evaluate future monitoring and assessment options identified in the SESSF Monitoring and Assessment Research Project. 3. To develop a process and set of design principles for multi-species harvest strategies.	~\$465K	31 Dec 2023
Improving and promoting fish-trawl selectivity in the Commonwealth Trawl Sector (CTS) and Great Australian Bight Trawl Sector (GABTS) of the Southern and Eastern Shark and Scalefish Fishery (SESSF) (2019-027).	1. Review the available domestic and international literature and data, and consult with a project stakeholder committee (comprising representatives of the CTS, GABTS, NSW PFA and AFMA) to prioritise modifications to be formally assessed for their utility in minimising bycatch, while maintaining target catches among trawls used in the CTS and GABTS. 2. Based on the outcomes of 1 above, assess the utility of existing and new modifications to trawls for minimising bycatch, while maintaining target catches in the CTS and GABTS. 3. By providing strong economic incentives through improved efficiencies, and via applied extension activities, encourage the wide-scale voluntary adoption and ongoing exploration of appropriate best-practice technologies that cumulatively reduce bycatches, while maintaining target catches in the CTS and GABTS.	~\$776K	29 Sep 2024
An updated understanding of Eastern School Whiting stock structure and improved stock assessment for cross jurisdictional management (2019-030).	1. To clarify the stock structure of Eastern School Whiting in south-eastern Australian waters using a range of modern methods. 2. Investigate the spatial and temporal variation in the main biological parameters (length and age structures, growth and reproductive biology) of Eastern School Whiting across the species' distribution. 3. Investigate the species composition of mixed trawl whiting catches in northern NSW to improve the quality of state catch data used in stock assessments. 4. Explore the effects of the findings from the first three objectives on the outputs of an updated Tier 1 stock assessment for Eastern School Whiting.	~452K	21 Sep 2022
Implementation of dynamic reference points and harvest strategies to account for environmentally-driven changes in productivity in Australian fisheries (2019-036).	1. To review relevant international research and management approaches to account for environmentally-driven productivity change in stock assessments, reference points and harvest strategies for selected Australian fish stocks. 2. To identify and describe circumstances and fish stocks for which dynamic reference points should or should not be used in stock assessments and harvest strategies, and develop appropriate methodology for conducting assessments using dynamic reference points.	~\$552K	4 Dec 2022

	3. To identify selected candidate fish stocks showing likely environmentally-driven productivity change, conduct comparative assessments for these stocks using equilibrium and dynamic reference points, and prepare a candidate harvest strategy that includes dynamic reference points for testing in the FRDC Multi-Species Harvest Strategy project. 4. To make recommendations on future implementation of dynamic reference points and harvest strategies for Australian fish stocks. 5. To develop and improve methods for detecting and quantifying changes in productivity (growth and recruitment) in stock assessments, to relate these to environmental mechanisms causing productivity changes, and to evaluate data needs, including environmental indices, required to usefully detect and evaluate productivity change under various circumstances. 6. To consider and evaluate options for effective harvest control rules, incorporating dynamic reference points, that might appropriately respond to changes in fish stock productivity, including environmentally driven trends in productivity. 7. To identify environmental circumstances and fish stock characteristics under which it would be appropriate and advisable to move to using assessments and management approaches incorporating dynamic productivity and reference points, vs. stocks for which dynamic approaches offer no benefit compared to existing equilibrium approaches. 8. To make recommendations on future stock assessment approaches, data requirements, harvest control rules and management approaches incorporating environmental indicators, dynamic productivity and dynamic reference points for Australian fish stocks.		
Identifying biological stocks of Silver Trevally and Ocean Jackets for assessment and management (2021-009).	1. To clarify the stock structure of Silver Trevallies nationally across Queensland, New South Wales, the Commonwealth, Victoria, Tasmania, South Australia and Western Australia. 2. To clarify the stock structure of Ocean Jackets nationally across New South Wales, the Commonwealth, Victoria, Tasmania and South Australia. 3. Using information from objectives 1 and 2, make recommendations on stock delineation for each species and appropriate scales for management.	~\$458K	29 Jun 2024
Developing a harvest control rule (HCR) to use in situations where depletion can no longer be calculated relative to unfished levels (2022-006).	1. Describe international experiences, recommendations and best practices relating to HCRs that do not use B_0 as a reference point and how these may be applied in the SESSF; 2. Develop a suitable, simulation tested, HCR that could be implemented within the SESSF when a stock assessment is completed with CKMR inputs and does not have an estimate of B_0; 3. Provide comparative results of the performance of the HCR for both a School Shark like example and also for a generic SESSF teleost example; and 4. Provide advice on the application of the most suitable HCR identified through the project and how it might best be implemented in the SESSF.	~\$201K	8 Jul 2024

Trials of oceanographic data collection on commercial fishing vessels in SE Australia (2022-007).	1. Effective installation and operation of oceanographic data collection equipment on network of commercial fishing vessels using a range of common fishing gear 2. To provide QC'd data direct to fishers in near real-time to assist in habitat characterisation and the targeting of effort 3. 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 4. 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.	~\$348K	30 May 2025
Biological parameters for stock assessments in South Eastern Australia – an information and capacity uplift (2022-032)	1. Develop, in collaboration and consultation with key research and fishery stakeholders a series of projects involving postgraduate students and early-mid career researchers that directly address priority areas for updating biological parameters for target species in the SESSF and understanding the implications of changing parameters on the fishery 2. Reduce uncertainties in stock assessments for the SESSF through the updating of biological parameters and understanding of key interactions between and drivers of change in biological parameters 3. Progress methods development associated with ascertaining biological parameters and progressing stock assessments to increase efficiencies, reduce time and financial costs, expand applicability and reduce uncertainties in stock assessments 4. Build fisheries capability across multiple pathways to support the ongoing sustainability of high quality fisheries research	~\$767K	27 Feb 2027
Developing and validating novel methods to estimate age- and size- at maturity in South Eastern Australian fisheries (2022-047)	1. Refinement and validation of three methods to estimate the maturity and spawning history of SESSF species, using information naturally archived in fish otoliths 2. Identification of an accurate and cost-effective method to estimate fish age at maturity and spawning history from their otoliths 3. Recreation of the maturity and spawning history of a SESSF species using one of our three novel assays 4. Quantification of how rapid ocean warming and harvest have affected the expression of age at maturity and the propensity of a SESSF species to skip spawn	~\$348K	27 Sep 2026

(6) Current Industry-managed data collection programs

The programs below are managed by Industry associations and form deliverables within the respective co-management contracts with AFMA

Title (Industry association)	Objectives	Funding	Contract Expiration
Shark Industry Data Collection (SIDaC) Program. (Southern Shark Industry Alliance; SSIA)	In line with the SESSF Data Plan collect: a) sex and length information and take otoliths from Pink Ling and Blue-eye Trevalla; b) tissue samples from Blue-eye Trevalla for CKMR analysis (linked to relevant samples above); c) sex and length information and take vertebrae samples from School Shark and Gummy Shark; d) Monitor the take of Blue-eye Trevalla by concession holders against their individual catch commitments for the seamount stock. and link all of the above samples back to shot information.	\$518K (across 3.5 yrs)	15 Nov 2024
Western Orange Roughy Data Collection (WORDaC) Program. (South East Trawl Fishing Industry Association; SETFIA)	In line with the Western Orange Roughy Research Plan, collect lengths and otoliths from Western Zone Orange Roughy.	Cost neutral	30 Jun 2025
Great Australian Bight crew collected data program. (Great Australian Bight Industry Association; GABIA)	In line with the SESSF Data Plan and the Great Australian Bight Orange Roughy Research Plan, collect lengths and otoliths from Bight Redfish, Deepwater Flathead and Orange Roughy.	Up to \$46.8K (pro-rata across 3 years)	30 Jun 2026

A project plan for the Western Trawl Data Collection (WeTDaC) program is expected to be developed in the 2024–25 financial year.

(7) The current SESSF stock assessment schedule (as at 20 June 2024)

Note that 2025 is the last year covered by the current (3-year) stock assessment contract. The next stock assessment contract is expected to span three calendar years as well.

Tier colours	RAG	Area	Species	2023	2024	2025	2026	2027	2028
1	GABRAG	GAB	Bight redfish			1			
3			Deepwater flathead	1			1		
4			Orange roughy - Albany & Esperance			3			
5	SERAG	Shelf	Flathead				1		
WOE			School whiting		1		1		Update
			Mirror dory	4	4		4		4
			Silver trevally	1				1	
			Ocean perch (236 t trgr)				Review		
			Jackass morwong						
			Blue warehou						
			John dory	Annual bycatch TAC - Metier Analyses as required - Assessment as required (if possible)					
			Redfish						
		Slope	Blue grenadier			1			1
			Pink ling		1 (East)				1
			Silver warehou		1				1
			Blue eye trevalla (Slope)	4	DT4		DT4		DT4
			Royal red prawn (TBD t trgr)		Review				
			Blue-eye trevalla - sm (27 t trgr)				Review		
			Alfonsino (50 t trgr)		Review				
			Ribaldo (295 t trgr)				Review		
			Gemfish - west (135 t trgr)					Review	
			Gemfish - east	Annual bycatch TAC - Metier Analyses as required					
		Deep	Orange roughy - east			1		Update	
			Orange roughy - Cascade Plateau	WOE		3			
			Oreo basket		4				4
			Deepwater shark east	4	DT4				
			Deepwater shark west	4	DT4				
			Oreo smooth - cascade (50 t trgr)		Review				
			Oreo smooth - other (68 t trgr)				Review		
			Orange roughy - South						
			Orange roughy - west	Annual bycatch TAC - Metier Analyses as required					
	SharkRAG	SESSF	Gummy shark	1		Prep for 2026	1		
			School shark			1*		1	
			Saw shark (395 t trgr)				Review		
			Elephant fish (86 t trgr)				Review		
	RAG	Area	Species	2023	2024	2025	2026	2027	2028

Trigger species are identified with background fill where the colour corresponds to the tier of the most recent assessment