# 2027–28 Research Statement for the Small Pelagic Fishery

Each year, AFMA develops a Research Statement for the Small Pelagic Fishery (SPF) in consultation with the SPF Resource Assessment Group (SPFRAG) and the South East Management Advisory Committee (SEMAC). Through this process, consideration is also given to the SPF Five Year Strategic Research Plan 2022–2026.

The 2027–28 Research Statement for the SPF consists of the following elements (relevant to this fishery only):

1. Outcomes of the AFMA Research Committee (ARC) funding round for the 2026–27 financial year;
2. Active ARC-funded projects;
3. Future ARC funding commitments;
4. Priorities for potential ARC funding starting in the 2027–28 financial year;
5. Research priorities and proposals for consideration by COMRAC/FRDC;
6. Active FRDC-funded projects;
7. Potential Industry-funded projects;
8. A compendium of recent project reports; and
9. Future RBC and DEPM survey planning matrix.

SPFRAG and SEMAC are invited to develop and/or refine research priorities for inclusion in this document, using the ranking criteria below as a guide. Depending on the stage of the research cycle, AFMA may also request that these advisory bodies evaluate proposals for potential ARC and/or FRDC funding. Please note that all amounts provided in the following tables are GST exclusive.

**Ranking criteria for proposed ARC/FRDC projects**

| Cost | | Management priority | Feasibility |
|---|---|---|---|
| High: | >$200K | Essential | High |
| Medium: | $100–$200K | High | Medium |
| Low: | <$100K | Medium | Low |
| | | Low | |

## 1. Outcomes of the ARC funding round for the 2026–27 financial year

| Title | Deliverables | Funded (Y/N) | Amount |
|---|---|---|---|
| Establishing knowledge and procedures to refine future applications of the DEPM to Jack Mackerel off south-eastern Australia | This study is designed to transform current scientific understanding of the reproductive ecology of Jack Mackerel off south-eastern Australia and ensure that future applications of the DEPM provide robust estimates of spawning biomass by:<br>1) Establishing science-led, industry-based procedures for collecting "real time" information needed to optimize the timing, design and coverage of future surveys<br>2) Developing a better understanding of spatial and temporal variability in spawning patterns, including potential changes in the timing and location of spawning<br>3) Collecting new data and refining methods currently used to estimate key reproductive parameters, especially spawning fraction and relative fecundity | Yes | $360K total<br>$180K in 2026–27<br>$180K in 2027–28 |

## 2. Active ARC-funded projects

| Title (project code) | Objectives | Funding | Due date |
|---|---|---|---|
| Ecological Risk Assessments for the Small Pelagic Fishery (SPF): Midwater Trawl Sub-fishery ERA (250808) | Broad objective: Undertake an ERA for the SPF-Midwater Trawl sub-fishery based on the methodology developed by CSIRO.<br>Specific objectives:<br>1) Conduct Level 1 - Scale, Intensity, Consequence Analysis (SICA) for key/secondary commercial species, bycatch/byproduct species, protected species, habitats and communities.<br>2) Conduct Level 2 - Productivity and Susceptibility Analysis (PSA) and/or Sustainability Assessment for Fishing Effects (SAFE) on species ecological components that have triggered a Level 2 assessment.<br>3) Present results at a SPFRAG meeting. | $37K | 30 June 2027 |

| | | | |
|---|---|---|---|
| Monitoring and assessment of SPF quota species under the SPF Harvest Strategy 2025-26 to 2027-28 (250801) | Broad objective: Address the data needs of the SPF Harvest Strategy to undertake an Annual Fishery Assessment.<br>Specific objectives:<br>1) Analyse catch, effort and CPUE data from 2001 to the most recent fishing season including spatial and temporal patterns of catch and effort<br>2) Provide length–frequency and age structure data from catches for each stock fished<br>3) Investigate signs of stock depletion, localized depletion, or changes in the size composition and age structure of catches that could indicate a decline in biomass, ruling out other explanatory factors.<br>4) Report results to SPFRAG. | $293K[1] | 30 Mar 2028 |

## 3. Future ARC-funding commitments

| **Project title** | **FY 2026–27** | **FY 2027–28** |
|---|---|---|
| Monitoring and assessment of SPF quota species | $89K | $131K |
| Establishing knowledge and procedures to refine future applications of the DEPM to Jack Mackerel off south-eastern Australia | $180K | $180K |
| **Annual commitment** | **$269K** | **$311K** |

[1] Budget increased to cover additional sampling from new vessel in the western sub-area of the SPF.

## 4. Priorities for potential ARC funding starting in the 2027–28 financial year

| Title | Need | Deliverables | Evaluation | | |
|---|---|---|---|---|---|
| | | | Total cost (approx.) | Priority/ranking | Feasibility |
| A Daily Egg Production Method (DEPM) survey for Redbait West[2] | A new operator began fishing for Redbait West in February 2026.<br>A DEPM for this stock is required to elevate it to Tier 1 (from Tier 2), with a higher exploitation rate | A contemporary estimate of the spawning biomass of Redbait West | High | High<br>2027–28 | High |
| DEPM for Redbait East | Redbait East will be demoted to Tier 2 from 1 May 2027 as no DEPM survey is currently scheduled for this stock.<br>Potential to combine with the Redbait West DEPM project but would require concurrent sampling by two vessels. | A contemporary estimate of the spawning biomass of Redbait East | High | High<br>2027–28 | High |
| A DEPM survey for Jack Mackerel East | A DEPM for this stock is required no later than the 2028–29 FY to avoid demotion to Tier 2 in 2030–31. Larger TAC and greater utilisation than Redbait East. | A contemporary estimate of the spawning biomass of Jack Mackerel East. | High | High<br>2028–29 | High |
| Age and growth of Blue Mackerel off eastern Australia and New Zealand | Current evidence suggests that Blue Mackerel off eastern Australia and New Zealand (NZ) may be part of the same biological stock. However, samples taken from NZ appear to include larger, older fish than samples from eastern Australia.<br>Researchers in NZ and eastern Australia have also used different protocols to age Blue Mackerel. Different research groups off eastern Australia (e.g., NSW Fisheries, University of Tasmania) have also used different ageing methods (e.g., whole versus sectioned otoliths). The lack of an agreed ageing protocol has led to high levels of uncertainty in the estimates of the age and growth parameters of Blue Mackerel off eastern Australia. | Development of an agreed ageing protocol for Blue Mackerel | High | Med | Med |

[2] Added (as a "medium priority") by SEMAC at its 30 June 2026 meeting and subsequently elevated to a "high priority" by AFMA management (following an Industry submission). SEMAC withdrew the priority "*Can the SPF be moved closer to MEY by addressing barriers to higher catch?*" at the 30 June 2026 meeting.

| | |
|---|---|
| | This uncertainty needs to be resolved because age and growth parameters strongly influence the outputs of the Management Strategy Evaluations that have been used to establish sustainable exploitation rates for Blue Mackerel in the SPF.<br><br>**Identified as PHD project** |

## 5. Research priorities and proposals for consideration by COMRAC/FRDC

| Title | Need | Deliverables | Evaluation | | |
|---|---|---|---|---|---|
| | | | **Total cost (approx.)** | **Priority/ranking** | **Feasibility** |
| None identified at present | - | - | | - | |

## 6. Active FRDC-funded projects

| Title (project code) | Objectives | Funding | Due date |
|---|---|---|---|
| Nil (but see recently completed projects) | | | |

## 7. Potential Industry-funded projects

| Title | Need | Deliverables | Evaluation | | |
|---|---|---|---|---|---|
| | | | Total cost (approx.) | Priority/ranking | Feasibility |
| DEPM Survey for Blue Mackerel West | A new operator began fishing for Blue Mackerel West in February 2026.<br>A DEPM for this stock is required to elevate it to Tier 1 (from Tier 3), with a higher exploitation rate | A contemporary estimate of the spawning biomass of Blue Mackerel West | High | High | High |

## 8. A compendium of recent project reports

Small Pelagic Fishery Harvest Strategy Management Strategy Evaluation 2024

Estimating the spawning fraction of Blue Mackerel off eastern Australia: Stage 1: Developing sampling methods and identifying sampling locations

Estimating the spawning fraction of Blue Mackerel off eastern Australia: Stage 2: Spatiotemporal variability in spawning patterns and implications for future DEPM surveys

Application of the DEPM to Blue Mackerel and Sardine off eastern Australia in 2024

Spawning biomass of Jack Mackerel (*Trachurus declivis*) in the East sub-area of the Small Pelagic Fishery in January 2024

Trials of oceanographic data collection on commercial fishing vessels in SE Australia

## 9. Future RBC and DEPM survey planning matrix

| RBC by season and stock | 2022–23 | 2023–24 | 2024–25 | 2025–26 | 2026–27 | 2027–28 | 2028–29 | 2029–30 | 2030–31 | 2031–32 | 2032–33 | 2033-34 | 2034-35 | 2035-36 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Australian Sardine** 5@20%; 5@10%; Ind.@5% | 8,454 | 8,454 | 8,454 | 8,100 | *9,320* | 9,320 | 9,320 | **9,320** | 9,320 | 4,660 | 4,660 | 4,660 | 4,660 | 4,660 |
| **Blue mackerel EAST** 5@20%; 5@10%; Ind.@5% | 12,000 | 12,000 | 12,000 | 15,510 | *16,040* | 16,040 | 16,040 | **16,040** | 16,040 | 8,020 | 8,020 | 8,020 | 8,020 | 8,020 |
| **Jack mackerel EAST** 5@14%; 10@7%; Ind.@3.5% | 18,755 | 18,755 | 18,755 | 13,000 | *13,720* | 13,720 | **13,720** | 13,720 | 6,860 | 6,860 | 6,860 | 6,860 | 6,860 | 6,860 |
| **Redbait EAST** 5@12%; 10@6%; Ind.@3% | 5,400 | 5,400 | 5,400 | 6,470 | 6,470 | 3,235 | 3,235 | 3,235 | 3,235 | 3,235 | 3,235 | 3,235 | 3,235 | **3,235** |
| **Blue mackerel WEST** 5@20%; 5@10%; Ind.@5% | 3,240 | 3,240 | 3,240 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,320 | 4,321 |
| **Jack mackerel WEST** 5@14%; 10@7%; Ind.@3.5% | 4,200 | 2,100 | 2,100 | 8,490 | 8,490 | 8,490 | **8,490** | 8,490 | 4,245 | 4,245 | 4,245 | 4,245 | 4,245 | 4,245 |
| **Redbait WEST** 5@12%; 10@6%; Ind.@3% | 6,680 | 6,680 | 3,340 | 4,010 | 4,010 | 4,010 | 4,010 | 4,010 | 4,010 | 4,010 | **4,010** | 4,010 | 2,005 | 2,005 |

| Tier 1 | Tier 2 | Tier 3 |
|---|---|---|

The blue text summarises the time period (in years) and exploitation rate (at Tiers 1, 2 and 3) for that particular stock (Ind. = Indefinite).

The revised Harvest Strategy (and exploitation rates) first took effect in the 2025–26 fishing season.

Underlined text represents revised RBCs based on a new DEPM survey.

Italicised text represents RBCs recalculated from pooled data across years for mean daily egg production

Cells with bold white text indicate years where the next DEPM survey for that stock should start.

Future declines in RBCs are shown for illustrative purposes only.