



Australian Government  
Australian Fisheries Management Authority

## BSCZSF Annual Research Statement 2022/23

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## BSCZSF Annual Research Statement 2022/23

This Annual Research Statement was developed by AFMA, in consultation with the ScallopRAG and ScallopMAC. It identifies areas of high priority research for both AFMA and potential FRDC funding in 2022/23 and will be presented to the AFMA Research Committee (ARC) for consideration as part of the 2022/23 funding round.

Evaluation key

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

### AFMA funding in 2022/23 (AFMA Research Committee (ARC))

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	Priority/rank	Feasibility
<b>Currently funded projects</b>				
N/A	N/A	N/A	N/A	N/A
<b>Newly identified research priorities for 2022/23</b>				
Bass Strait Central Zone Scallop Fishery – annual biomass Survey	In accordance with the Bass Strait Central Zone Scallop Fishery (BSCZSF) Harvest	Low	Essential	High

<p>including target species and bycatch.</p>	<p>Strategy (the Harvest Strategy), the total allowable catch (TAC) for commercial scallops will not be increased above 150 t unless a biomass estimate is able to identify an area or scallop bed containing at least 1,500 t biomass of high density scallops with a minimum size of 85 mm. The BSCZSF annual biomass survey provides the biomass estimate to inform the TAC setting process and meet this need.</p> <p>The objectives of the biomass survey are to:</p> <ol style="list-style-type: none"> <li>1. coordinate a fishery survey across the regions of the fishery to measure the size distribution and calculate biomass estimates to assess the potential for commercial catch rates in the BSCZSF using established methodology;</li> <li>2. inform the assessment of fishery impacts on bycatch species by year by bed, in particular the species identified as high risk in the fishery Ecological Risk Assessment, Threatened, Endangered and Protected (TEP) species and any other species identified as 'of interest'; and</li> <li>3. report the draft results to AFMA, ScallopRAG and ScallopMAC and</li> </ol>			
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	produce a final report to be published on the AFMA website.			
Development of a methodology to validate ageing techniques for Bass Strait scallops.	To develop cost effective, validated ageing techniques for Bass Strait scallops that can be used on a routine basis to inform management decisions and in particular inform the location of spatial closures that protect spawning biomass as required under the Harvest Strategy.	low	Medium	Medium
Analysis of economic data collected in the fishery.	<p>In order to meet the economic objectives of the Commonwealth Fisheries Harvest Strategy Policy (Harvest Strategy Policy), there is a need to incorporate economic data in the total allowable catch (TAC) setting process under the BSCZSF Harvest Strategy.</p> <p>The absence of detailed economic data has made it difficult for ScallopRAG and ScallopMAC to make an informed assessment of the economic implications of different management decisions, such as TAC, for the fishery when providing advice to AFMA and the AFMA Commission.</p> <p>A project is currently underway that will collect and analyse economic information that can inform the revised Harvest Strategy. This is funded for 2021-22.</p> <p>At the end of the current project AFMA anticipate that additional analysis of economic data will be required before the</p>	Low	High	High

	<p>model can be appropriately tested and incorporated into a revised Harvest Strategy.</p> <p>AFMA expects the revised Harvest Strategy approach will be adopted and there will be an ongoing requirement to collect and analyse economic data as part of the annual TAC setting process.</p>			
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### FRDC funding in 2022/23 (Commonwealth Research Advisory Committee (ComRAC))

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	Priority/rank	Feasibility
<b>Currently funded projects</b>				
<p>Building industry capacity to lead co-management initiatives that maximise economic returns to the Bass Strait Central Zone Scallop Fishery: Training industry to conduct biomass estimate surveys.</p> <p>Note: The scope of this project was revised in March 2020.</p>	<p>The unprecedented impacts of the COVID-19 pandemic have forced industry and management to review existing research and management processes to ensure the ongoing viability Australia's fishing industry. Whilst the scallop fishery has to date been largely shielded from the impacts (a seasonal effect) there is tremendous uncertainty about the coming fishing year and markets. There is now a need to re-think the data collection processes for this fishery and provide the industry with the opportunity and capacity to transition into a co-management scenario that gives greater responsibility to industry.</p>	N/A	N/A	N/A
Wider investigation of the use of video survey techniques to	Approved subject to conditions.	N/A	N/A	N/A

determine commercial scallop abundance in inshore and offshore waters, closed areas and juvenile beds.				
<b>Newly identified research priorities for 2022/23</b>				
Impact of seismic surveys on scallop larvae.	<p>There is a lack of understanding on the effects of seismic surveys on scallops and other marine species. Research has been undertaken on the effects of these surveys but has not been supported to the extent that provides for research on larval scallops (or lobsters and some other key species). The vulnerability of animals to seismic waves appears to be driven by their sensory organs, size, and anatomical traits; highlighting the need for expanded testing for larval stages.</p> <p>The primary objectives will:</p> <ul style="list-style-type: none"> <li>• Develop effective experimental protocols and methods for the transport and at sea exposure of larvae to acoustic signals.</li> <li>• Determine the impact of low frequency acoustic signals on larval scallops.</li> </ul> <p>Outline threshold distances for potential impacts of seismic surveying on commercial scallop larvae.</p> <p>This project would develop effective experimental protocols and methods for the</p>	high	high	high

	transport and at sea exposure of larvae to acoustic signals. Determine the impact of low frequency acoustic signals on larvae scallops. Outline threshold distances for potential impacts of seismic surveying on commercial scallop larvae.			
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## Research projects identified for inclusion in future research plans

Title	Objectives and component tasks	Evaluation		
		Total cost (approx. only)	Priority/rank	Feasibility
Optimising the end of season date.	<p>To consider if the season end date of 31 December for the BSCZSF can be extended by one month to enable fresh scallops to be marketed for peak consumer season.</p> <p>The current end date of 31 December was determined to minimise disturbance to scallop spawning, recruitment and settlement in the peak period which is understood to occur over summer. However, this is based on data collected 2010 – 2011. This project would assess whether the timing of the peak spawning period has changed since the original work and if so, how it has changed. The outcomes will assist the decision making process about whether the current end date of December 31 should be maintained or whether there is a basis for review.</p> <p>Any such review needs to be evidence based.</p> <p>This has been a priority for industry for a long time and would provide updated information to support management arrangements for season closures.</p>	N/A	N/A	N/A
Determining if recruitment is under-represented in biomass surveys – establishing a sampling method for estimating scallop recruitment.	<p>The results of the annual biomass survey in the BSCZSF are used to inform decisions regarding total allowable catches (TACs) and closures. Under proposed amendments to the revised BSCZSF harvest strategy, recruitment will be more explicitly accounted for when considering closures and setting TACs.</p> <p>Beds containing juvenile scallops are not typically surveyed and industry actively avoid fishing in these areas during the fishing season to minimise disturbance and allow them to grow. Even where juvenile scallops are present amongst beds with adult scallops, they generally pass through scallop dredges and aren't</p>	N/A	N/A	N/A

	<p>landed. Therefore, the level of recruitment in the fishery is likely under-represented in surveys and commercial catches.</p> <p>In recent years, industry have provided 'exploratory marks' containing high densities of juvenile scallops. These areas are partially sampled under the biomass survey using smaller mesh, but the number of transects are kept to a minimum to avoid disturbance. Closures, including marine protected areas, are also avoided during the biomass survey.</p> <p>Developing a method of sampling areas with juvenile scallops will allow ongoing monitoring to better understand recruitment and dynamics in the fishery.</p> <p>This research priority is proposed as a scoping study to:</p> <ul style="list-style-type: none"> <li>• determine the extent to which recruitment is underestimated by the annual biomass survey and commercial fishing operations; and</li> <li>• explore options/methods for sampling beds of juvenile scallops in future biomass surveys, or as part of commercial fishing operations.</li> </ul>			
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## Key Documents

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- Framework for delivering cost effective research for AFMA
- RAG gap identification form
- AFMA research cycle and timetable
- FRDC research cycle and timetable