

Scallop Resource Assessment Group (ScallopRAG) Meeting 37

Meeting minutes

2 March 2021

13:02-15:12

Microsoft Teams



Bass Strait Central Zone Scallop Fishery Resource Assessment Group (ScallopRAG)

Meeting 37 – 2 March 2021

Agenda

Time (AEDT): 13:00-16:15 Location: Microsoft Teams Chair Name: Brendan Kelaher

Approximate time	Item	Purpose	Lead presenter			
13:00 (30 min)	Agenda item 1. Preliminaries					
	1.1 Welcome and apologies	For action	Chair			
	1.2 Declaration of interests	For action	Chair			
	1.3 Adoption of agenda	For action	Chair			
	1.4 Minutes from previous meeting	For noting	Chair			
	1.5 Actions arising from previous meetings	For noting	Executive officer			
13:30 (30 min)	Agenda item 2. Fishery update					
	2.1 AFMA Management	For noting	AFMA member			
	2.2 Industry	For noting	Industry members			
	2.3 Economic	For noting	Economic member			
14:00 (30 min)	Agenda item 3. Principles to prioritising survey beds	For advice	AFMA member			
14:30 (60 min)	Agenda item 4. 2021 biomass survey beds prioritisation	For advice	AFMA member			
15:30 (30 min)	Agenda item 5. Harvest Strategy review working group terms of reference	For advice	AFMA member			
16:00 (15 min)	Agenda item 5. Other business	For noting	AFMA member			
16:15	Close					

Agenda item 1. Preliminaries

1.1 Welcome and apologise

- 1. Professor Brendan Kelaher the Chair, welcomed members and observers to the meeting and made an Acknowledgement of Country statement recognising the Traditional Owners of the many lands in which we met and payed respect to Elders past, present and emerging.
- 2. ScallopRAG (the RAG) members noted the Acknowledgement of Country, that the meeting was being recorded and commenced proceedings.

3. Membership

Brendan Kelaher	Chair
Jayson Semmens	Scientific member
Mervi Kangas	Scientific member
Julian Morison	Economic member
Stuart Richey	Industry member
John Cull	Industry member
Dan Corrie	AFMA member
Heather Johnston	Executive officer
4. Invited Participants	
Don Bromhead	ABARES
Andrew Sullivan	Industry
Bob Lister	Industry
Matt Koopman	Fishwell Consulting

1.2 Declarations of interest

- The RAG members followed the conflict of interest declarations as outlined in <u>Fisheries Administration</u> <u>Paper 12 (FAP12) – Resource Assessment Groups</u>. Members and participants reviewed and updated the Declarations of Interest included at <u>Attachment A</u>.
- 6. John Cull, Stuart Richey, Andrew Sullivan and Bob Lister declared a potential conflict with Agenda Item 4 '2021 biomass survey bed prioritisation'. The members and invited participants with the potential

conflict left the meeting while the RAG considered their interest and how they should be managed. The RAG also considered the declared interest of Matt Koopman who had not yet joined the meeting.

7. The RAG agreed that Matt Koopman also had a potential conflict with Agenda Item 4 and recommended that the members and invited participants with the potential conflict could be part of the discussion but should not participate in forming the RAG recommendation for Agenda Item 4.

1.3 Adoption of agenda

8. The RAG adopted the <u>agenda</u> as final.

1.4 Minutes of previous meeting

 The RAG noted the final minutes of the ScallopRAG 36 meeting on 9 June 2020 are available on the <u>AFMA website</u> ('Fisheries Management' – 'Committees'- 'Resource Assessment Groups'- 'Bass Strait Central Zone Scallop Fishery Resource Assessment Group')

1.5 Actions arising from previous meetings

10. The RAG noted the action items from previous meetings and the updates provided by the Executive Officer at <u>Attachment B</u>.

Agenda item 2 – Fishery update

11. The Chair introduced the Agenda Item and asked the RAG to note the AFMA Management, industry and economics updates for the Bass Strait Central Zone Scallop Fishery (BSCZSF).

2.1 AFMA Management

- 12. The AFMA member provided an update on matters relevant to the management of the BSCZSF:
 - 91 per cent (2,732 t) of the 3,000 t commercial scallop total allowable catch (TAC) was caught by nine boats in 2020. No doughboy scallop were caught or bycatch or protected species interactions reported in 2020.
 - In the <u>Australian Bureau of Agriculture and Resource Economics (ABARES) 2020 Fishery Status</u> <u>Report</u>, commercial scallop were listed as not subject to overfishing and not overfished. The report noted:
 - o there was a large and stable biomass identified in western Bass Strait;
 - Gross Value Product (GVP) was around \$2.9 million higher in 2018-19 than in 2010-11, reflecting an increase in catch and higher average prices;
 - there were more known beds, closer to ports, allowing less steaming time to fishing grounds, indicating lower costs of fishing in the latter period; and
 - the total catch in 2018-19 was achieved with 6 fewer vessels (a reduction of one-third) than in 2010-11, which is expected to have reduced the economic cost for the fishery.
 - Due to a restructure of AFMA's Demersal and Midwater Fisheries team, Dan Corrie will transition management of the BSCZSF and Southern Squid Jig Fishery (SSJF) to a new manager over the next few months. AFMA are currently undergoing a recruitment process to fill this position. Heather Johnston will continue to work on both fisheries.
- 13. The RAG made the following key points:
 - In Tasmania, the beach price was higher in 2010 than in 2018. It is likely that the higher GVP in recent years is due to an increase in catch.

- While there was a higher beach price and catch across the fishery in 2018, the beach price the next season was decreased due to an increase of scallops stored in freezers which were sold off for a reduced price at the start of the season, bringing the price down.
- The lowered operating cost reported in the ABARES report is likely due to less vessel catching more scallops.

Action item 1: Industry members, through AFMA to provide input into the 2021 ABARES fisheries status report.

Action item 2: ABARES to provide an update on why the GVP from the 2010-11 financial year is used as a comparison in the annual report.

2.2 Industry

14. The RAG industry members provided an update on matters relevant to the BSCZSF:

- The 2020 season was difficult for operators with most processors operating on reduced staffing capacity which impacted processing ability and ability to develop export markets.
- Due to the reduced TAC in 2020 some operators had to lease quota which impacted the profit for operators.
- At the start of the 2020 season, after promising signs from the Tasmanian scallop survey, some vessels searched for viable scallop beds in the Flinders Island area. Initially they were unable to find the beds, however, when the King Island beds lost their quality part way through the season vessels returned to Flinders Island and were able to locate viable beds.
- Consumers responded well to the large scallops caught near Flinders Island, especially with a reduced quality in the scallops near King Island compared with previous seasons. This meant that once one vessel started fishing near Flinders Island most vessels moved to the area to keep up with market demand.
- In response to reduced processor capacity, some vessels landed smaller catches but increased the number of trips per week.
- The scallops in the Flinders Island area spawned first, while those in the King Island area remained a better quality towards the end of the season. Some operators also reported an increased catch rate in the Flinders Island area when fishing at night.
- The two BSCZSF industry associations, Bass Strait Scallop Industry Association (BSSIA) and Scallop Fishermen's Association of Tasmania (SFAT) have met with Beach Energy to negotiate compensation from the Beach Energy Prion Marine Seismic Survey.

2.3 Economic

- 15. The RAG economic member provided an observation on the data available for the 2021 season:
 - There was a small reduction in catch from 2019 to 2020 (214 t) and a reduction in vessels from twelve to nine.
 - It is likely that there would be a reduced cost in catching for operators with the reduction in vessels.
 - There was a reduction in costs for operators directly from the lower fuel prices and levy relief and indirectly due to the reduction in vessels.

- Some operators moved their landing port to be closer to the Flinders Island bed to reduce their steaming time and operational costs.
- It may be assumed that beach prices either increased or remained stable in 2020.
- Based on the small amount of data available, there is likely to have been an increase in the net economic return (NER) to the fishery.
- 16. The RAG economic member noted that the collection of economic data is due to commence shortly under the project 'Informing the Bass Strait Central Zone Scallop Fishery Harvest Strategy and TAC setting process with economic data and MEY proxies'.
- 17. Matt Koopman joined the meeting

Agenda item 3 – Principles for prioritising survey beds

- 18. The AFMA Member introduced the Agenda Item and asked the RAG to consider the revised draft paper 'Principles for prioritising survey beds' (the Principles paper) and provide advice on any amendments to be made before it is finalised.
- 19. The RAG considered the background of the Principles paper, noting:
 - The <u>BSCZSF Harvest Strategy</u> (the Harvest Strategy) requires that prior to the start of the fishing season each year, the Industry Co-Management Committee (the Committee) advise AFMA how to proceed with the opening of the season.
 - In recent year's industry have opted to proceed directly to a biomass survey, rather than the default opening of 150 tonnes.
 - There is a need to prioritise the beds to be surveyed each year as the number of known beds has increased as surveys have been undertaken each year, however, within a given year, the number of beds which can be surveyed is limited by funds and timing.
 - The draft Principles paper is based on discussions with industry and advice from ScallopRAG at their <u>February (ScallopRAG 33)</u> and <u>June (ScallopRAG 36)</u> 2020 meetings.
 - At their <u>June 2020 meeting</u>, the RAG noted that the draft document reflects the current state of the fishery, and may benefit from being more generalised, to account for changes in the fishery over time.
 - The draft principles paper has been revised to address the RAGs comments, with an overview of the principles is provided at <u>Attachment C</u>.
- 20. The RAG made the following key points:
 - This document is relevant to the current Harvest Strategy, however it may become irrelevant depending on the outcomes of the Harvest Strategy review.
- 21. The RAG approved the Principles paper as final

Agenda item 4 – 2021 biomass survey beds prioritisation

- 22. The AFMA Member introduced the Agenda Item and asked the RAG to consider the Committee advice and provide advice on which scallop beds to survey in the 2021 biomass survey (the 2021 Survey).
- 23. The RAG noted the following:

- In accordance with the Harvest Strategy, the TAC for commercial scallops will not be increased above 150 t unless a biomass estimate, as determined by the research survey, 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.
- In addition to identifying beds to close under the Harvest Strategy the objectives of the annual biomass survey are to:
 - coordinate a fishery survey to measure the size distribution and calculate biomass estimates to assess the potential commercial catch rates in the BSCZSF; and
 - inform the assessment of fishery impacts on bycatch.
- The RAG and Committee are responsible for identifying and prioritising survey beds each year. The process is informed by the proposed scallop survey design which includes:
 - previous survey areas;
 - recent commercial catches (confidential); and
 - a list of proposed beds to survey.
- Due to the logistical and work health and safety issues arising from the COVID-19 pandemic, the 2020 Survey was cancelled. Prior to the 2020 Survey being cancelled the RAG provided advice on beds to be surveyed in 2020 and made the following key points:
 - If the Flinders Island bed isn't surveyed in 2020, it cannot be closed under the Harvest Strategy, however, it could be closed voluntarily by industry.
 - Industry have reported that the 'space' between historical commercial scallop beds are producing scallops, and some beds seem to be joining.
 - A partial survey of the JH bed would provide information on the growth of the bed, but would not contribute to closures under the Harvest Strategy.
 - The draft prioritisation principles do not provide a lot of guidance on how to prioritise between two similar beds, rather, the RAG made their recommendation based on recruitment, proximity of commercial fishing and scallop biomass.
 - Twelve beds were considered to be high priority, and were recommended to be included in the survey, with JH bed to be partially surveyed. King Island 5 small, King Island new and Flinders Island were considered to be medium priority, with one of them to be included in the survey as the twelfth bed to be fully investigated. The RAG decided to not survey Flinders Island in 2020 but in order to keep the time series would recommend it is surveyed in 2021
 - The RAG decided to include King Island 5 small due to this bed showing more promising signs of recruitment in recent years than King Island new. It was also in closer proximity to recent commercial fishing.
- 24. The RAG noted the following key points from the Committee:
 - The Committee met on Thursday 25 February 2021 to provide advice on which scallops beds to survey in 2021, considering the proposed scallop survey design (without confidential information).
 - In addition to the 10 high priority beds identified by Fishwell Consulting in the proposed survey design, AFMA proposed to the Committee that the Blue Dot Extended and King Island 7 areas were also high priority.

- The Committee recommended:
 - that the survey be conducted on the following beds:
 - o Apollo Bay 2
 - \circ Blue Dot Extended
 - \circ Blue Dot South East
 - \odot King Island 7
 - $_{\odot}$ King Island 9
 - \circ King Island 10 (exploratory)
 - $\circ JH$
 - The Hill (exploratory)
 - 5 Hours (exploratory)
 - Flinders Island
 - Flinders Island North/The Sisters (exploratory)
 - Flinders Island South/ North of Babel (exploratory);
 - the Apollo Bay 2 area be extended north to capture industry reports that the bed extends further than the current boundaries; and
 - the survey in the Flinders Island area be conducted at night due to industries experience with decreased catch rates during the day.
- 25. Dr Koopman from Fishwell Consulting presented the proposed 2021 scallop survey design, the RAG note the following:
 - The catch and effort in the area of the blue dot beds has been moving south east in recent season.
 - Prior to 2020, there were no catches in the Flinders Island area for at least five years.
 - 2,076 t of the 2,593 t logbook report catch in 2020 was taken from outside of 2019 surveyed beds.
 - Due to the survey being cancelled in 2020 the 2019 survey beds do not align with recent commercial fishing.
 - The exploratory marks provided by industry to AFMA and Fishwell Consulting in 2020 and 2021 align with the major areas of catch in 2020.
 - According to the average size reported in logbooks, more than half of the catch was between 101-110 mm.
- 26. The RAG made the following key points:
 - The two vessels that fished Flinders Island at the start of the season are a good indicator of how close vessels can be to a commercial viable bed but unless they are directly on top of the bed in favourable conditions they may miss it.
 - Although Flinders Island has not been surveyed in the last five years, it has historically been surveyed. The Flinders Island beds proposed for surveying in 2021 are the as area surveyed in the early 2000's.

- This historic data and industry reports indicates that scallops settle in the same beds in cycles.
- Industry are reporting that they are able to fish a bed for longer in recent years and there is recruitment seen in beds that are fished, potentially due to less vessels operating in the fishery and beds aren't fished down completely before the vessels move on.
- The acquisition area for the Beach Energy Prion Marine Seismic Survey (as of November 2020) has a slight overlap with the southeast corner of the King Island 10 exploratory mark.
- Some of industry, are proposing that some vessels fish in the acquisition area at the start of the 2021 season to determine where the scallop beds are likely to be and attempt to harvest as much scallop as possible to minimise the economic impact of the seismic survey.
- The RAG understands the impacts and industries concerns regarding seismic surveys on scallop beds and acknowledge AFMAs role in the process, as discussed at previous RAG meetings.
- A survey provider has been approached by Beach Energy to conduct a pre and post seismic activity survey of areas inside and control sites outside of the acquisition area.
- Beach Energy have committed to conduct research into the impacts of seismic surveys.
- Closures, other than for the reasons outlined in the harvest strategy, could be implemented by industry through voluntary agreement.
- If there was an exploratory mark or known bed in the area of a seismic survey, it would be considered for surveying and closing in accordance with the Harvest Strategy.
- King Island Middle has the longest time series and although it is not currently fished the bed had previously contributed to the fishery.
- The 2019 survey indicated that King Island Middle was in decline and it would be useful to be able to monitor the decline in biomass of a bed.
- Surveying King Island Middle might provide some understanding of bed dynamics such as recruitment and how biomass fluctuates over time.
- Although it may be reasonable to survey King Island Middle in 2022 rather than 2021, if the bed is declining it may not be captured in the 2022 survey.
- If a bed had to be removed from the Committee recommendation to allow for King Island Middle to be surveyed, it would be appropriate to remove King Island 7 due to it having similar results as King Island Middle in the 2019 survey.
- Industry members supported surveying King Island Middle instead of King Island 7.
- There is an opportunity for the FRDC project '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' to survey any of the beds in season which have been identified as high priority but were not surveyed as a part of the 2021 Biomass Survey.
- 27. Those members and invited participants with declared a potential conflicts left the meeting while the recommendation was being formed.

Recommendation

- 28. The RAG recommended that the following beds be surveyed during the 2021 biomass survey:
 - 1. Apollo Bay 2 (extended)

- 2. Blue Dot Extended
- 3. Blue Dot South East
- 4. King Island 9
- 5. King Island 10 (exploratory mark)
- 6. JH extended
- 7. The Hill north (exploratory mark)
- 8. 5 hours
- 9. Flinders Island
- 10. Flinders Island North/ The Sisters (exploratory mark)
- 11. Flinders Island South/ North of Babel (exploratory mark)
- 12. King Island Middle
- 29. In accordance with the guidance provided in the BSCZSF Principles paper, the RAG recommended that if the first five exploratory shots at King Island Middle yield less than 50 kg per shot on average, then subject to the discretion of the skipper and observer on board, the survey vessel should move onto King Island 7 and no biomass estimate is to be obtained for King Island Middle.
- 30. The RAG also recommended that four vessels be used to conduct the 2021 Survey.
- 31. John Cull, Bob Lister, Andrew Sullivan and Matt Koopman returned to the meeting.

Agenda item 5 – BSCZSF Harvest Strategy review working group terms of reference

- 32. The AFMA Member introduced the Agenda Item and asked the RAG to provide advice on the draft Terms of Reference (TOR, <u>Attachment D</u>) for the BSCZF Harvest Strategy review working group.
- 33. The RAG noted the following:
 - The <u>Commonwealth Fisheries Harvest Strategy Policy 2018</u> (HSP) and <u>Guidelines for the</u> <u>Implementation of the Commonwealth Fisheries Harvest Strategy Policy</u> (HSP Guidelines) were released in November 2018. Accordingly, all Commonwealth fishery harvest strategies need to be revised within four years to ensure they meet the requirements of the HSP.
 - The BSCZSF Harvest Strategy was last reviewed in 2014 due to industry concerns about the cost effectiveness and flexibility of the 2012 Harvest Strategy.
 - Since the last review, in addition to the release of broader fishery polices, the management of the BSCZSF has evolved, underpinned by a better understanding of stock status from the annual biomass survey, and the need to consider the economic performance of the fishery when setting the TAC.
 - AFMA are in the process of updating the Harvest Strategy to better reflect the current state of the fishery, which is also scalable and can respond to changes in biomass or economic factors over time.
 - At its <u>June 2020</u> meeting, the RAG considered a discussion paper which included proposed revisions to the current Harvest Strategy. This was also considered by the Scallop Management Advisory Committee (ScallopMAC) at their June 2020 meeting.

- The RAG recommended that AFMA establish a working group to consider feedback from each of the committees, with a view to providing a revised set of papers to the June 2021 meetings.
- Based on the advice from the RAG, AFMA have developed a draft TOR (<u>Attachment D</u>) and are intending to have the working group meeting April 2021.

34. The RAG made the following key points:

- The working group will provide recommendations to the RAG and MAC, which includes representation of processors.
- If there is any recommendations to be made by the working group that requires processors input, consideration will be given to including them in the membership.
- The revised Harvest Strategy should be independent of the current stock but should take into account the capacity to manage the fishery sustainable at various levels of biomass.
- In the context of the current TOR, consideration should be given should be given to the role of comanagement in the fishery including the role that industry may play and the reference to the industry co-management committee within the Harvest Strategy,
- The scope of the working group initially will be on components of the Harvest Strategy recommended by the RAG.

35. The RAG approved the terms of reference as final.

Close of meeting

36. The Chair thanked the RAG for their contribution and closed the meeting at 15:12.

Attachment A- register of interest

Table 1 declared interests

Name	Membership	Declared interests
Brendan Kelaher	Chair	No interest in the fishery pecuniary or otherwise.
Jayson Semmens	Scientific member	Scallop Research Group Leader, Institute for Marine and Antarctic Studies. Organisation is known to submit research funding applications for consideration by ScallopRAG
Mervi Kangas	Scientific member	Department of Primary Industries and Regional Development, WA employee. No interest in the fishery pecuniary or otherwise.
Julian Morison	Economic member	Director, Kuti Co Pty Ltd – SA Pipi quota holder, Director, BDO Advisory (SA) Pty Ltd - current contracts with SA & Qld state governments collecting fisheries economic data, providing economic advice; Member, SA Snapper Management Advisory Committee (PIRSA), Economics member, Shark Resource Assessment Group (AFMA), Member, Economics Working Group (AFMA), Member, Human Dimensions Research subprogram Steering Committee (FRDC), Principal & coinvestigator on several FRDC research projects
Stuart Richey	Industry member	Holds Commonwealth and State concessions.
John Cull	Industry member	Holds Commonwealth and State concessions.
Dan Corrie	AFMA member	AFMA employee. No interest in the fishery pecuniary or otherwise.
Heather Johnston	Executive officer	AFMA employee. No interest in the fishery pecuniary or otherwise.
Matt Koopman	Invited participant, Fishwell Consulting	Fishwell Consulting. We have undertaken the BSCZSF survey since 2015. We also submit research funding applications and undertake research projects for Commonwealth, State and International fisheries agencies and other organisations including fishery associations and private companies. We are regularly engaged by SETFIA to report to numerous seismic exploration companies on fishing catch, effort and value that takes overlaps with the proposed seismic testing areas. This included catch and effort from the BSCZSF. Related projects are looking at the effects

		of the seismic survey off east Gippsland on Danish seine catches, and on scallop densities in Bass Strait. I have no interest in any commercial fisheries.
Don Bromhead	Invited participant, ABARES	ABARES Employee, on temporary transfer from AFMA. No interest in the fishery pecuniary or otherwise.
Andrew Sullivan	Invited participant, Industry	Executive Officer, Bass Strait Scallop Industry Association
Bob Lister	Invited participant, Industry	Executive Officer, Scallop Fishermen's Association of Tasmania

Attachment B- action items

Complete/Redundant	Underway	Yet to start	
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Table 2. Progress of action items from previous meetings

Meeting #	Agenda Item	No.	Action Item	Agency/Person Responsible	Timeframe	Progress
36	2	1	AFMA to establish membership for the Harvest Strategy review working group	AFMA	Prior to ScallopRAG 37	Update to be provided at Agenda item 5
36	2	2	AFMA to distribute a terms of reference to the RAG and MAC for the Harvest Strategy review working group	AFMA	Prior to ScallopRAG 37	Update to be provided at Agenda item 5
36	6	3	AFMA to draft Gap ID form for research priority identified and provide to the RAG out of session	AFMA	August 2020	Sent to RAG on 31 July 2020
36	6	4	AFMA to contact ComRAC to receive an update on FRDC project 2017-186 and establish the linkage of that project to the 'Impact of seismic surveys on scallop larvae'	AFMA	August 2020	FRDC have advised that project 2017-186 is due to be completed in April 2021. AFMA have re-submitted the project 'impact of seismic surveys on scallop

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						larvae' for FRDC's consideration in the January 2021 call ¹ .
36	6	5	AFMA contact ComRAC to receive an updated on the FRDC priority 'Wider investigation of the use of video survey techniques to determine scallop abundance in both inshore and closed areas'	AFMA	August 2020	FRDC advised that this project had not been funded due to limited support from industry. The project has been re- submitted for FRDC's consideration in the January 2021 call.

Table 3 new action items from ScallopRAG 37

Agenda Item	No.	Action Item	Agency/Person Responsible	Timeframe
2.1	1	Industry members, through AFMA to provide input into the 2021 ABARES fisheries status report	Industry members, AFMA, ABARES	Prior to 2021 ABARES fisheries status report
2.1	2	ABARES to provide an update on why the GVP from the 2010-11 financial year is used as a comparison in the annual report.	ABARES	Prior to ScallopRAG 38

¹ AFMA has since clarified that the project was not considered in the January 2021 call but will be considered in a future call for projects

Attachment C- Summary of principles to prioritising scallop beds of survey

- 1. Under the current survey design, a maximum of 12 beds can be fully surveyed. The number of beds which can be surveyed in a given year may be limited by either the survey design (12 beds), or because there has been a decrease in the known biomass, meaning less than 12 beds are surveyed.
- 2. Where possible, the annual biomass survey will include beds that represent the spatial extent of the fishery.
- 3. Beds should be prioritised, with the lowest priority beds to be replaced by exploratory marks if they are identified as being viable to be fully surveyed
- 4. If an exploratory mark does not yield scallop beds considered worthwhile surveying, the survey schedule will continue as planned.
- 5. If a bed of juvenile scallops is identified, and the benefit of sampling the area outweighs the potential cost of mortality, conduct a small survey of the area with a minimal number of shots to obtain length frequencies
- 6. Beds that are considered to have a good time series and are typically fished (even if closed for one season) will be surveyed annually based on age, tonnage and density of the bed from previous surveys and its capacity to contribute to closure arrangements under the Harvest Strategy for the upcoming season
- 7. Beds that are considered to have a good time series but aren't currently fished may be surveyed on alternating years based on the age, tonnage and density of the bed from previous surveys and its capacity to contribute to the closure arrangements under the Harvest Strategy for the upcoming season if there new beds of a higher priority to be surveyed.
- 8. Where two or more scallop beds with similar characteristics need to be prioritised, consideration should be given to signs of recruitment, proximity to recent commercial fishing, and the estimated biomass of the beds when they were most recent surveyed.

Attachment D- BSCZSF Harvest Strategy Review Working Group Terms of Reference

The terms of reference for the BSCZSF Harvest Strategy review working group are to provide advice to ScallopRAG, ScallopMAC and AFMA Management, as required, on the review of the current Harvest Strategy. Advice may include, but is not limited to:

- 1. decision rules for determining the frequency of biomass surveys;
- 2. implementing recommendations from research relevant to the development of the Harvest Strategy;
- 3. developing clear definitions for terms which underpin the decision rules for setting TACs such as 'recruitment' and 'biomass'; and
- 4. determining biological and economic reference points, or thresholds, used to inform the TAC setting process.