



Australian Government

Australian Fisheries Management Authority

Small Pelagic Fishery Resource Assessment Group (SPF RAG) Meeting 03

Meeting minutes

01 July 2021

Microsoft Teams

The Chair opened the meeting at 0930.

Agenda Item 1. Preliminaries

1.1 Welcome and apologise

1. Max Kitchell, 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. SPF RAG (the RAG) members noted the Acknowledgement of Country, that the meeting was being recorded and commenced proceedings.
3. The RAG welcomed Dr Lara Ainley as the new AFMA member of SPFRAG. The RAG thanked Sally Weekes as the outgoing AFMA member of SPFRAG.

4. Membership

| | |
|---------------------------|------------------------|
| Mr Max Kitchell | Chair |
| Mr Gerry Geen | Industry Member |
| A/Prof Tim Ward | Scientific Member |
| Dr Andrew Penney | Scientific Member |
| Prof Caleb Gardner | Economic Member |
| Mr Malcolm Poole | Recreational Member |
| Ms Anissa Lawrence | Conservation Member |
| Dr Lara Ainley | AFMA Member |
| Mr Max Bayly | Executive Officer |

Invited Participants

| | |
|---------------------------|----------------------------------|
| A/Prof Jeremy Lyle | Invited Participant (Virtual) |
| Mr Tony Muollo | Invited Participant (Virtual) |

Observers

| | |
|-------------------------------------|---|
| Dr John Stewart | State Observer (NSW) (Virtual) |
| Ms Frances Seaborn | State Observer (Tas) (Virtual) |
| Ms Rocio Noriega Tronoso | ABARES Observer (Virtual) |
| Ms Fiona Hill | AFMA Observer |
| Mr Simon Boag | Industry Observer (Agenda Item 6 only) |

1.2 Declarations of interest

5. The RAG members followed the conflict of interest declarations as outlined in *Resource Assessment Groups - Fisheries Administration Paper 12*. Members and participants reviewed and updated the Declarations of Interest included at **Attachment A**.
6. Regarding potential conflicts with agenda items, the following interests were declared:
 - Tim Ward, Andrew Penney, Rocio Noriega Tronoso, Caleb Gardner and Jeremy Lyle declared conflicts of interest for Agenda Item 5.2
7. The RAG agreed that the members with declared conflicts should participate in the discussion for Agenda Item 5.2 given their expertise but leave the meeting prior to the formation of any decision on research priorities.

1.3 Adoption of Agenda

8. The RAG adopted the Agenda (**Attachment B**) as final, noting the additional items under Agenda Item 6 Other business.
 - Localised Depletion

1.4 Minutes of previous meeting

9. The RAG noted the final minutes of the SPF RAG meeting of 07 December 2020 are available on the [AFMA website](#) ('Fisheries Management' – 'Committees'- Resource Assessment Groups'- 'SPFRAG').

1.5 Actions arising from previous meetings

10. The RAG noted the Action Items and updates from previous meetings at **Attachment C**.
11. The RAG discussed the availability of fishery dependent data being provided to the Australian public. Several RAG members expressed the view that the catch data should be made publically available to ensure transparency to the Australian public. The AFMA member noted AFMA is operating under [Fisheries Management Paper 12 "Information Disclosure"](#) (FMP 12), in particular 6.1.3 (b) "*the total*

area of waters fished within a season by fishery, sector and/or method, reported at a minimum spatial resolution of one degree square. This does not include catch or effort information where the data represents less than five vessels.”

12. The SPFRAG provided its strong support for a review of the information disclosure policy particularly relating to the 5 boat rule and the level of transparency around sharing catch data publicly. While, focused on the SPF, several members wish to see this matter resolved broadly across multiple jurisdictions. In making its statement, the RAG noted that this has been an ongoing concern for several members as well as advice from AFMA that a review was underway and public consultation is expected to take place in the second half of 2021.
 - Mr Muollo, a current operator in the fishery, suggested he would need to speak to the other SPF industry members before he is able to support the RAGs recommendation.

Agenda Item 2 – Monitoring and mitigating interactions between small pelagic fisheries and dolphins

13. Tim Ward introduced the Agenda Item, outlining the FRDC project number 2020-049 “*Monitoring and mitigating interactions between small pelagic fisheries and dolphins*”. The project involved a comprehensive literature review of methods used to monitor and mitigate interactions between small pelagic fisheries and dolphins. Professor Ward noted the report was not yet finalised and the findings being presented were preliminary.
14. The preliminary presentation was received positively from the RAG, which requested the final report be circulated when available. The RAG noted the research did not consider the concept of social licences in regards to dolphin interactions in the SPF. Even if population research is completed which shows healthy dolphin populations, the public perception on the issue may not be the same.
15. The RAG discussed the findings of the presentation, noting the following:
 - AFMA currently has the ability to perform a cumulative (across all Commonwealth fisheries) risk assessment for dolphin species with the data it currently collects.
 - AFMA noted that the Ecological Risk Management Working Group is reviewing the ERA framework and is examining a cumulative approach to the ERA process.
 - Many of the recommendations will be expensive to complete and there may not be an appetite for funding these projects in Australia.
 - There is a need to assess the effectiveness of currently used mitigation measures (e.g. acoustic devices). This should include the completion of the SPF underwater camera project and the development of a methodology to determine the effectiveness of individual mitigation measures (i.e. specifically SED designs, barrier nets, DDDs).
16. The RAG discussed key issues of the [SPF Dolphin Strategy](#) (the Strategy):
 - The Strategy does not consider species specific management responses.
 - The biological suitability of triggers in the Strategy is poorly understood.
 - There have not been population assessments completed for Common or Bottlenose Dolphin (the two major dolphin species that interact with the SPF).

17. The RAG discussed potential options to improve understanding of Threatened Endangered and Protected Species (TEP) interactions, reporting and biological impact:
- A detailed analysis and comparison of logbook, observer and Electronic Monitoring data should be completed to examine the effectiveness of mitigation measures.
 - A population assessments of dolphin species which interact with SPF fishing gears would assist in setting triggers in the fishery.
 - Evaluate biological suitability of trigger limits and responses.
18. AFMA provided the RAG with the following updates:
- The SPF Dolphin Strategy is currently under review. The RAG will be consulted on the review of the Strategy at a future meeting.
 - The SPF Underwater Camera Project is in the process of being finalised. The report will be distributed to the RAG when available and John Wakeford will be asked to present the findings at the next meeting of SPFRAG in December 2021.
19. The RAG requested the presentation and report be distributed out of session to the RAG.
- Tim Ward advised that the report is still in draft format and can't be distributed. However, he is happy to provide a copy of the presentation to the RAG on a confidential basis, asking the RAG not to distribute further.
 - The Executive Officer distributed the presentation to the RAG at the close of the meeting.

Agenda Item 3 – SPF Bycatch and Discard Workplan

20. The AFMA member introduced the Agenda Item seeking advice on the status of the action items included in the SPF Bycatch and Discard Workplan 2014-2016 (the Current Workplan). The AFMA member also requested advice on Action Items to be included in the future Bycatch and Discard Workplan (the Future Workplan), which will be provided to the RAG for further comment at its meeting in December 2021.

21. Concerning the actions from the Current Workplan:

Current Workplan Action 1. Design and test Seal Excluder Devices (SEDs) for SPF midwater trawl vessels, and adapt SED design based on results.

- The RAG agreed this item had been completed, however the RAG is unaware of how effective the SEDs are, as there are still a number of seal interactions in the fishery, noting that it is important to understand how effectively the SEDs are being implemented.

Current Workplan Action 2. Develop and implement individual vessel management plans (VMPs) for midwater trawl vessels to minimise TEP species interactions including procedures for reporting on catch and wildlife interactions.

- The RAG agreed this item had been completed, noting that VMPs are updated when new information is acquired which is relevant to the VMP. The RAG noted there is no regular review timeline for VMPs.

The RAG queried why current VMPs are not made publically available, noting the VMP of the *Geelong Star* was made publically available while it was operating in the SPF. AFMA noted vessel specific plans are

confidential across all Commonwealth fisheries, noting key items or concepts relating to the plans are publicly available through the concession conditions on the [AFMA website](#).

22. Concerning the suggested SPF Bycatch and Discard Action Items for the Future Workplan:

- The RAG requested the Action Item regarding improving barrier net design and configuration be clarified to provide a clear definition of a barrier net, perhaps with the use of a diagram to ensure consistency in terminology. The AFMA member noted this particular Action Item was derived from the outcomes of the “SPF Underwater Camera Project” (the Project), which has not yet been finalised. The RAG requested the outcomes of the Project be presented at the December 2021 meeting, as there may be more actions that would be placed in the Future Workplan.
- The RAG requested the Bycatch and Discard Workplan be updated to reflect that annual reports to industry regarding reporting of bycatch, discards and Threatened, Endangered and Protected species interactions also be made available to the public.
- The RAG discussed the Purse Seine Industry Code of Practice (CoP), which was last updated in 2006. The RAG suggested the Purse Seine CoP in the South Australian Sardine Fishery (SASF) could be used to guide the development of the SPF CoP. The importance of including industry in the review process to promote engagement of the sector was further noted.
- The RAG requested an additional Action Item be included in the Future Plan which incorporates the need for an analysis and comparison of data from logbook, observer and EM programs, including effectiveness of various methods used to mitigate interactions with dolphins. The AFMA member noted this topic is included in the draft research priorities for 2022-23 at Agenda Item 5.2.

Action Item 1. AFMA to enquire into the purpose of the confidentiality arrangements of Vessel Management Plans across Commonwealth fisheries and provide the RAG with an update at its next meeting in December 2021.

Action Item 2. The results of the SPF Underwater Camera Project be presented to the RAG at its next meeting

Action Item 3. The Draft SPF Bycatch and Discard Workplan be updated with recommendations from SPFRAG noted in the minutes

Agenda Item 4 – Ecological Risk Assessment Annual Triggers

23. The AFMA member introduced the Agenda Item, noting the Action Item arising from SPFRAG 01 (December 2019) for AFMA to prepare a checklist specific to the SPF that can be reviewed annually, which can be used to determine if an Environmental Risk Assessment is necessary for the Midwater Trawl Sector of the SPF (the Checklist). The AFMA member sought advice from the RAG on the Checklist, which could be finalised for the SPFRAG meeting in December 2021.

24. The RAG noted the following update from AFMA - *“The December 2020 meeting of the Ecological Risk Management Working Group proposed a fundamental change to AFMA’s ERM framework with a desire to move to a more automated approach to Ecological Risk Assessment (ERA) process (this would utilise automated Level 1 and 2 assessments under development by CSIRO) with outputs regularly reviewed and tracked by Resource Assessment Groups (RAGs) and Management Advisory Committees (MACs), allowing more timely understanding of risks and areas for management focus. Subject to Senior Executive and Commission approval, the changes would take place over a transition period from 1 July 2021 to December 2021. During this time the details of the new framework will be developed and discussed in consultation with key stakeholders. It is expected that there will be corresponding changes and updates required to AFMA’s Ecological Risk Management Framework and guidelines to support this change”.*
25. In light of the above update, the RAG questioned the need for a checklist as the automated process is relatively quick. AFMA noted that there had been no formal arrangement to change the ERM framework as described above, and recommended the RAG proceed with developing the Checklist as planned.
26. The RAG noted there is an annual fishery report which provides a more detailed overview of the fishery than the Checklist.
27. The RAG recommended the following in regards to the checklist:
- the categories remain the same for the primary indicators (area fished and total fishing effort).
 - AFMA provide maps of seasonal fishing effort with the Checklist so the RAG can assess if there has been a change in area fished.
 - the wording under “other indicators” be updated to become SPF specific, for example “has there been increased interaction or increased mortalities of bycatch or TEP species in the SPF Midwater Trawl Sector”.
 - the spreadsheet provided to the RAG be updated with graphs (which include data from 2010 - present) which will provide a visual presentation of historical trends in the sector.
 - effort (in number of trawls and hours trawled) be provided as supplementary data in the spreadsheet.
 - an interaction rate be provided as a number of shots in which an interaction occurred as well as number of shots per animal.
 - AFMA and Tim Ward to examine the list of secondary indicators in the Checklist out of session to make them more specific to the SPF Midwater Trawl sector, noting it is important to consider triggers that are relevant to an ERA.

Action Item 4. AFMA and Tim Ward to update the secondary indicators in the Checklist to ensure they are specific to the SPF

Action Item 5. AFMA to provide the SPFRAG with maps of annual fishing effort, graphs showing historical trends of TEP interactions, effort (number of shots and number of hours trawled) and interaction rates (shots per interaction and shots per number of individuals)

Agenda Item 5.1 – Five Year Strategic Research Plan

28. The AFMA Member introduced the Agenda Item, noting the SPF Five Year Strategic Research Plan 2017-22 is about to expire. The AFMA member sought SPFRAG advice on the contents of the draft five year research plan (the draft Plan), which had been provided to the RAG prior to the meeting.
29. The RAG noted the draft Plan does not contain a five year timeline of research priorities. AFMA advised the RAG this had been removed as the draft Plan is a more strategic document and specific research items should be captured in the Annual Research Statements.
30. The RAG recommended the following:
- The economic member draft wording for research priorities under the “Economic and Social” Research Plan which reflects:
 - Exploring strategies for ensuring the TAC is fully utilised
 - The fishery is managed in such a way that there is a return to the Australian community
31. The AFMA member noted a final draft of the Five Year Research Plan will be provided at the December 2021 meeting of SPFRAG.

Action Item 6. The Economics Member to provide research priorities which reflect the “Economic and Social” for the RAG at its meeting in December 2021

Agenda Item 5.2 – 2022-23 Annual Research Statement

32. The AFMA Member introduced the Agenda item, seeking advice from the RAG on the contents of the draft 2022-23 Annual Research Statement, which was provided to the RAG prior to the meeting.
33. The ABARES observer noted previous work had been completed analysing logbook against Electronic Monitoring data using the GHAT and ETBF as case studies. AFMA noted there are differences in the data that is collected in the SPF, however this possibility could be explored further.
34. The RAG members with a conflict of interest for this Agenda item left the meeting and the remaining members discussed the priorities of the proposed research projects. The RAG recommended that:
- The ‘*Annual monitoring, reporting and assessment of marine mammal interactions, including effectiveness of mitigation*’ needs to be kept in the priority list as ‘Essential’
 - The ‘*Daily Egg Production Method Surveys (DEPM) (Jack Mackerel West)*’ should be in the priority list as essential and if fishing does not occur in the western region it can be removed at a later date.
 - The ‘*Collection of Blue Mackerel East adult samples* to update the parameters in the DEPM surveys be listed as high

- The *'Monitoring & assessment of SPF quota species under the SPF Harvest Strategy'* be listed as essential

Agenda item 6 – Other Business

Localised depletion

35. The Recreational member introduced the Agenda Item of “localised depletion” of Small Pelagic fish stocks, noting the issue has been raised by the recreational sector regarding the lack of available information surrounding localised depletion. The Recreational Member asked the RAG to consider the issue of assessing the effects of fishing effort post fishing activity on local bait stocks which are important for those other than the commercial fishers.
36. The RAG noted the topic of localised depletion has been discussed at previous meeting of the RAG and the SPF Scientific Panel, citing [previous minutes](#) from the SPF Scientific Panel in January 2019. The RAG noted there has been no new information or research completed concerning localised depletion since the RAG last discussed the topic.

Interpretation of AFMAs Objectives

37. The Recreational Sector also asked the RAG to consider if the current take of Small Pelagic Fish in the commercial sector was providing the best value of the resource to the Australian Public. The RAG suggested the issue being raised may not be within the scope of the SPFRAG.
38. The RAG also discussed the interpretation of the AFMA Objective *'To maximise net economic returns to the Australian community through the ecologically sustainable development of Commonwealth fisheries.'* AFMA noted the AFMA Commission have developed a Fishery Management Policy concerning Net Economic Returns and how this objective is interpreted.

Close of meeting

39. The Chair thanked the RAG/MAC for their contribution and closed the meeting at 1455h.

Attachment A - Agenda

| Approximate time | Item | Purpose | Lead presenter |
|------------------|--|----------------|-------------------|
| 09:30 (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 | AFMA Member |
| 10:00 (20 min) | Agenda Item 2. Monitoring and mitigating interactions between small pelagic fisheries and dolphins | For Noting | Tim ward |
| 10:20 (60 min) | Agenda Item 3. SPF Bycatch and Discard Workplan | For advice | AFMA Member |
| 11:20 (30 min) | Agenda Item 4. Ecological Risk Assessment Annual Triggers | For advice | AFMA Member |
| 11:50 (40 min) | Break (Lunch) | | |
| 12:30 (90 min) | Agenda Item 5. Research 5 Year Strategic Plan 22-23 annual research statement | For advice | AFMA Member |
| 14:00 (15 min) | Agenda Item 6. Other Business 6.1 Localised Depletion and Resource Sharing | For discussion | Chair |
| 14:15 (5 min) | Agenda Item 7. Next Meeting December 2021 – Annual assessment of SPF stocks and RBC advice, Jack Mackerel | For noting | Executive Officer |

| Approximate time | Item | Purpose | Lead presenter |
|------------------|--|---------|----------------|
| | East DEPM survey results, Research Priorities 2023-24, SPF HS Review | | |
| 14:20 | Close | | |

Attachment B- Declarations of Interest

| Name | Membership | Declared interests |
|-----------------|-----------------|---|
| Mr Max Kitchell | Chair | No interest, pecuniary or otherwise, in the SPF. Chair of the Southern Bluefin Tuna Management Advisory Committee. |
| Mr Gerry Geen | Industry Member | A partner in Seafish Tasmania Pty Ltd that holds approximately 60 per cent of the Small Pelagic Fishery (SPF) Jack mackerel Statutory Fishing Rights (SFRs), 70 per cent of the redbait (east) SFRs, 30 |

| | | |
|---------------------------------|----------------------------|--|
| | | <p>per cent of blue mackerel (east) SFRs and significant quota holdings in the western zone.</p> <p>Seafish Tasmania Pty Ltd owns a Southern and Eastern Scalefish and Shark Trawl Boat SFR.</p> |
| A/Prof Tim Ward | Scientific Member | <p>Leader of the pelagic fisheries sub-program in SARDI which undertakes research in the relation to the SPF including Daily Egg Production Method surveys. Conducts research for State fisheries and other jurisdictions. Member of South Australia Sardine Fishery Industry research/management committee.</p> |
| Dr Andrew Penney | Scientific Member | <p>Director of Pisces Australis (Pty) Ltd which has a potential interest in research in relation to the SPF.</p> |
| Prof Caleb Gardner | Economic Member | <p>No interest, pecuniary or otherwise, in the SPF. Employee of Institute for Marine and Antarctic Studies (IMAS), which conducts research on a range of fisheries issues including at times the SPF.</p> |
| Mr Malcolm Poole | Recreational Member | <p>No pecuniary interest</p> <p>Recfish Australia - Treasurer and RFANSW member NSW delegate Recreational Fishing Alliance of NSW RFANSW - Committee Member and Recreational Fishing Safety Officer Australian Recreational Fishing Foundation ARFF - Alternate member for the RFANSW</p> |
| Ms Anissa Lawrence | Conservation Member | <p>No pecuniary interest</p> <p>Director of TierraMar Ltd Independent consultant</p> <p>Undertakes contracts for a number of Conservation NGOs, government departments, non-government agencies and the private sector on a range of fishery related matters</p> <p>Conservation member on GABMAC, SPFRAG, SEMAC and the South Australian Rock Lobster MAC</p> |
| Dr Lara Ainley | AFMA Member | <p>AFMA – Manager, Small Pelagic, Squid and Scallop Fisheries- no interest pecuniary or otherwise.</p> |
| Mr Max Bayly | Executive Officer | <p>AFMA – Senior Management Officer, Small Pelagic and Coral Sea Fisheries. No interest pecuniary or otherwise.</p> |
| Dr Jeremy Lyle | Invited Participant | <p>Senior Research Scientist, Institute for Marine and Antarctic Studies which undertakes research in relation to the SPF from time to time. Has led several research projects relevant to the SPF and is involved in the assessment of Tasmania’s scalefish fishery.</p> |
| Mr Tony Muollo | Invited Participant | <p>Majority SPF quota holder and actively fishing in the fishery. Also involved in other Commonwealth fisheries.</p> |
| Ms Rocio Noriega Tronoso | Invited Participant | <p>No interest pecuniary or otherwise.</p> |

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| Ms Frances Seaborne | State Observer | No interest pecuniary or otherwise. |
| Dr John Stewart | State Observer | No interest pecuniary or otherwise. |

Attachment C- Action items (to be updated when minutes finalised)

| | Meeting | Agenda item reference | No. | Description | Responsibility | Timeframe | Status update |
|--|-----------|--|-----|--|-------------------|-----------|--|
| | SPFRAG 01 | 5.2 Triggers for bycatch and Ecological Risk re-Assessment | 1.1 | AFMA to prepare a checklist that can be reviewed annually, specific to the SPF, based on the pro-forma detailed in Attachment A of the 'Guidelines for ERA reassessment triggers for Commonwealth Fisheries' and provide back to the RAG for comments out of session. | AFMA | SPFRAG 02 | Draft checklist provided at Agenda Item 3 Att B of SPFRAG 03, July 2021. SPFRAG to provide comments and finalise for SPFRAG 04, December 2021 |
| | SPFRAG 01 | 5.2 Triggers for bycatch and Ecological Risk re-Assessment | 1.2 | AFMA to include the updated list of bycatch species weight and number of protected species interactions provided as part of the annual update on catch and effort in the fishery, in the ERA checklist. | AFMA | SPFRAG 02 | To be provided to SPFRAG for comment at SPFRAG 04, December 2021, as part of the annual review action item. |
| | SPFRAG 02 | 1.2 Declarations of Interest | 2.1 | The RAG suggested re-wording the agenda for future meetings to explicitly make 'agreeing the biomass' part of the RBC agenda item to assist managing declared conflicts with this item. | Executive Officer | SPFRAG 03 | This will be reflected in the agenda of the December 2021 Meeting of SPFRAG |
| | SPFRAG 02 | 2. Review of fishery performance | 2.2 | AFMA to develop a draft report for protected species interactions that captures a broader suite of information than just interaction numbers (eg that includes life status, historical trends, monitoring level, mitigation being used and management response for consideration by the RAG at its next meeting. The report could be done as part of or sit alongside the ERA trigger report that is also under development. In addition to protected species, information should also be collated on species of interest such as sunfish. | AFMA | SPFRAG 03 | |

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|--|-----------|--|-----|---|-------------------|---------------|---|
| | SPFRAG 02 | 3.3. RBC advice for SPF stocks, including agreeing new biomass estimates | 2.4 | Tim Ward to include monthly catch figures to accompany the weekly CPUE graphs presented as part of the Annual Fishery Assessment. | Tim Ward | SPFRAG 03 | Tim ward to provide update at SPFRAG 04, December 2021. |
| | SPFRAG 02 | 4. Harvest Strategy Review | 2.5 | For the RAGs consideration at its July meeting, AFMA to update the SPF HS, including the development of a draft metarule that outlines if the stock moves outside of the range tested under the MSE that the RAG would consider an appropriate response. | AFMA | SPFRAG 04 | Postponed to SPFRAG 04 |
| | SPFRAG 03 | 3. SPF Bycatch and Discard Workplan | 3.1 | AFMA to enquire into the purpose of the confidentiality arrangements of Vessel Management Plans across Commonwealth fisheries and provide the RAG with an update at its next meeting in December 2021. | AFMA | SPFRAG 04 | |
| | SPFRAG 03 | 3. SPF Bycatch and Discard Workplan | 3.2 | The results of the SPF Underwater Camera Project be presented to the RAG at its next meeting | John Wakeford | SPFRAG 04 | |
| | SPFRAG 03 | 3. SPF Bycatch and Discard Workplan | 3.3 | The Draft SPF Bycatch and Discard Workplan be updated with recommendations from SPFRAG noted in the minutes | AFMA | SPFRAG 04 | |
| | SPFRAG 03 | 4. ERA Annual Triggers | 3.4 | AFMA and Tim Ward to update the secondary indicators in the Checklist to ensure they are specific to the SPF | AFMA and Tim Ward | December 2021 | |
| | SPFRAG 03 | 4. ERA Annual Triggers | 3.5 | AFMA to provide the SPFRAG with maps of annual fishing effort, graphs showing historical trends of TEP interactions, effort (number of shots and number of hours trawled) and interaction rates (shots per interaction and shots per number of individuals) | AFMA | SPFRAG 04 | |

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|--|-----------|------------------------------------|-----|---|------------------|-----------|--|
| | SPFRAG 03 | 5.1 5 year strategic research plan | 3.6 | The Economics Member to provide research priorities which reflect the "Economic and Social" for the RAG at its meeting in December 2021 | Economics Member | SPFRAG 04 | |
|--|-----------|------------------------------------|-----|---|------------------|-----------|--|