



Australian Government

Australian Fisheries Management Authority

Southern Squid Jig Fishery Resource Assessment Group (SquidRAG) Meeting 27

Meeting minutes

8 October 2021

Microsoft TEAMS

Southern Squid Jig Fishery Resource Assessment Group (SquidRAG)

Meeting 27 – 8 October 2021

Agenda

Time (AEDT): 12:30-17:00

Location: Microsoft Teams

Chair Name: Mr Bruce Wallner

Approximate time	Item	Purpose	Lead presenter
12:30 (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	Executive officer
13:00 (20 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
13:20 (60 min)	Agenda item 3. 2022 TAE recommendation	For advice	AFMA member
14:20 (15 min)	Break		
14:35 (45 min)	Agenda item 4. Harvest Strategy update	For advice	AFMA member
15:20 (25 min)	Agenda item 5. Catch per unit effort update	For advice	Rocio Noriega
15:45 (30 min)	Agenda item 6. Draft Data and Monitoring Strategy	For advice	AFMA member
16:15 (25 min)	Agenda item 7. Scoping the feasibility of industry participation in oceanographic data collection	For noting	Lou Cathro
16:40 (20 min)	Agenda item 8. Annual research statement	For advice	AFMA member
17:00	Close		

The Chair opened the meeting at 12:35

Agenda item 1. Preliminaries

1.1 Welcome and apologise

1. Mr Bruce Wallner, the Chair, welcomed members and observers to the meeting and made an Acknowledgement of Country paying our respects to this country's First People and Traditional Custodians of the land throughout Australia. Acknowledging Australia's Traditional Custodians of Country and recognising their continued connection to land, waters and community. Paying our respects to them and their cultures and to Elders past present and emerging.
2. The Southern Squid Jig Fishery Resource Assessment Group (the RAG) members noted the Acknowledgement of Country, that the meeting was being recorded and commenced proceedings.

3. Members

Bruce Wallner	Chair
Shijie Zhou	Scientific member
Stephen Leporati	Scientific member
Robert Curtotti	Economic member
Debbie Wisby ¹	Industry member
Terry Romaro	Industry member
Lara Ainley	AFMA member
Heather Johnston	Executive officer

4. Invited Participants

Rocio Noriega	ABARES
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5. Observers

Fiona Hill	AFMA Management
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1.2 Declarations of interest

6. The RAG members followed the conflict of interest declarations as outlined in in *Fisheries Administration Paper 12*. Members and participants reviewed and updated the Declarations of Interest included at [Attachment A](#).
7. Terry Romaro declared a potential conflict with Agenda item 3 '2022 TAE recommendation'.
8. The RAG noted that while not present for Agenda item 1.2 Declaration of interest, Debbie Wisby would likely declare a potential conflict with Agenda Item 3 '2022 TAE recommendation'.
9. Terry Romaro left the meeting while the RAG considered his and Debbie Wisby's interests and how they should be managed.
10. The RAG agreed that Terry Romaro and Debbie Wisby could be part of the discussion but should not participate in the forming of the RAG recommendation for Agenda item 3.

¹ Debbie Wisby was an apology for Agenda items 1 and 2, joining the meeting at the end of the discussion for Agenda item 3

11. Shijie Zhou, Stephen Loporati, Robert Curtotti and Rocio Noriega declared a potential conflict with Agenda Item 8 'Annual Research Statement'. Shijie Zhou, Stephen Loporati, Robert Curtotti and Rocio Noriega left the meeting while the RAG considered their interests and how they should be managed.
12. The RAG agreed Shijie Zhou, Stephen Loporati, Robert Curtotti and Rocio Noriega could be part of the discussion but should not participate in the forming of the RAG recommendation for Agenda item 8.

1.3 Adoption of agenda

13. The RAG adopted the [agenda](#) as final.

1.4 Minutes of previous meeting

14. The RAG noted the final minutes of the SquidRAG 26 meeting on 14 October 2020 are available on the [AFMA website](#) ('Fisheries Management' – 'Committees'- 'Resource Assessment Groups'- Southern Squid Jig Fishery Resource Assessment Group')

1.5 Actions arising from previous meetings

15. The RAG noted the action items from previous meetings and the updates provided by the Executive Officer at [Attachment B](#).

Agenda item 2 – Fishery update

16. The Chair introduced the Agenda item and asked the RAG to note the AFMA Management, industry and economic updates for the Southern Squid Jig Fishery (SSJF).

2.1 AFMA Management

17. The AFMA member provided the following update:
 - 487 tonnes of Gould's squid was caught by eight boats in the SSJF in 2021 (as of September 2021). No bycatch or protected species interactions were reported in 2021.
 - On 20 April 2021, a joint media release announced \$20 million to revolutionise Commonwealth fisheries. This includes the following projects:
 - e-fish: streamlining and integration of data and data collection to increase flexibility for operators and reduce the costs of administration; and
 - e-monitoring: improve and expand the existing Commonwealth electronic monitoring into additional Commonwealth fisheries.
 - AFMA is currently developing electronic logbooks (elogs) for the SSJF. Operators who chose to transition to elogs will be able to do so in the coming season.
 - As of 7 June 2021, Dr Lara Ainley commenced in the role of manager of the Small Pelagic Fishery, Bass Strait Central Zone Scallop Fishery and SSJF, and is based in Canberra.
18. The RAG noted that industry have been engaged in the development of elogs for the SSJF.

2.2 Industry

19. The Industry members provided an update on the 2021 fishing season:
 - Catch rates in 2021 were significantly higher than 2020, with 2,000-3,000 kg caught per night.
 - The Tasmanian state fishery also had increased catches in 2021, however it was only a short season.
 - There is a boat processing catch on-board who joined the fishery two years ago.
 - There continues to be a sharing of information between operators.

- The average price of squid per kilogram was around five dollars.
- Locating squid continues to be a key uncertainty for the operators, there was some exploration in the fishery in 2021.

2.3 Economic

20. The Economic member provided the following update:

- The 2021 fishing year was a much better year for beach price than previous years, with Sydney Fish Market price for squid being around \$5 per kilogram compared to around \$2-3 in 2018.
- There are some negative cost drivers for the fishery, such as the increased price of oil. This will have an impact on operating costs.
- There are some positive cost drivers for the fishery, such as the reduction in imports due to increased squid costs and demand from longline boats for bait.
- International squid fisheries have been impacted by the covid-19 pandemic due to the reduction in tourism. This impact isn't being seen as much in Australia as the domestic demand for squid has been maintained and there's been a reduction in imported squid.

Agenda item 3 – 2022 TAE recommendation

21. The AFMA member introduced the Agenda item and asked the RAG to provide advice to the South East Management Advisory Committee (SEMAC) and the AFMA Commission on the total allowable effort (TAE) for the SSJF 2022 fishing season.

22. The RAG noted the following background:

- Gould's squid (*Nototodarus gouldi*, commonly known as arrow squid) is the key commercial species in the SSJF and is also taken as byproduct in the Commonwealth Trawl Sector (CTS) and Great Australian Bight Trawl Sector (GABTS) of the Southern and Eastern Scalefish and Shark Fishery (SESSF), and taken as byproduct in Tasmanian and Western Australian managed fisheries.
- In Commonwealth fisheries, management controls relating to Gould's squid only apply to the SSJF. There are no restrictions in terms of effort or catch quota that apply to the trawl sectors of the SESSF.
- Prior to the start of the SSJF fishing year (1 January each year), the AFMA Commission determines the TAE as the total number of standard squid jigging machines that can operate in the fishery. In setting the TAE, the AFMA Commission considers advice from the RAG and SEMAC.
- When developing TAE advice, the RAG consider the objectives set out in the [SSJF Management Plan 2005](#) (the Management Plan), in particular the need to ensure the ecological sustainability of target stocks and bycatch, and to maximise economic efficiency in the exploitation of fisheries resources.
- The [SSJF Harvest Strategy](#) (Harvest Strategy) uses a system of within-season monitoring against catch triggers for the SSJF, CTS and GABTS.
- There is limited information on the population dynamics and biology of Gould's squid in south-east Australian waters. However, they are known to be highly fecund, complete their life cycle within 12 months, have variable recruitment (linked to environmental factors) and reproduce throughout the year.
- There is insufficient scientific information available to set biological reference points and a total allowable catch (TAC) for squid.

- Gould's squid is assessed as 'not overfished' and 'not subject to overfishing' in the 2020 Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) Fishery Status Report.
- Locating aggregations of squid is an issue for the SSJF fleet given little is known about the environmental factors influencing the location of aggregations and the small number of boats fishing over a very large area further compounds the situation.
- While the fishery is characterised by very high levels of latent effort, leaving the potential for overcapitalisation, the TAE is typically set at a level to minimise the risk of this occurring without introducing any unnecessary impediments to efficiency.
- Only seven of the 34 gear Statutory Fishing Rights (SFRs) have been active in 2021.

23. In formulating its advice, the RAG noted the following:

- The catch and effort for the 2021 fishing season (as of September 2021) is as follows:
 - SSJF catch is 487 tonnes, which is well below the SSJF limit trigger level of 5,000 tonnes.
 - Combined trawl catch is 377 tonnes, with 333 tonnes being caught by CTS and 44 tonnes caught by GABT, which is well below the 2,000 tonne trawl limit catch trigger
 - Combined SSJF and trawl catch is 864 tonnes, well below the combined (all methods) limit catch trigger of 6,000 tonnes.
 - Eight boats have been active in the SSJF in 2021, well below the SSJF 30 boat effort limit.
- The catch and effort for the 2020 was as follows:
 - SSJF catch was 67 tonnes.
 - Combined trawl catch was 416 tonnes.
 - Combined jig and trawl catch was 483 tonnes
 - 5 SSJF boats were active.
- For the 2021 fishing year, the TAE was 550 standard squid jigging machines and has been set at this level since 2013.
- As of September 2021, there are 4,800 gear SFRs held in the fishery.
- Access to the fishery is through gear SFRs which replaced boat permits in 2007. An initial TAE of 800 standard squid jigging machines was set in 2007. There were 8000 SFRs at the time, which meant 10 SFRs were required to operate a jigging machine.
- Between 2008 and 2013 the TAE was reduced as SFRs were surrendered to maintain a requirement of 10 SFRs per jigging machine. Some SFRs have been surrendered since then, however the TAE has been maintained at 550 jigging machine since 2013. There has been no adjustment to the TAE based on sustainability concerns.

24. In formulating its advice, the RAG made the following key points:

- Across all sectors, the catch per unit effort (CPUE) increased in 2021 compared to 2020, indicating that squid abundance was higher in 2021, leading to higher catches.
- There is no information available on whether the current catch and effort is impacting squid population structure (sex-ratios) or recruitment.

- The catches in 2021 do not raise any sustainability concerns and no trigger points from the Harvest Strategy have been reached.
- A reduction in the TAE may have an implication on any future expansion of the fishery.
- The fishery is considered to be pursuing a proxy of a maximum economic yield (MEY) as there currently nothing constraining effort, noting that search costs are prohibitive.
- Noting large latent effort in the fishery and that there are no sustainability concerns for Gould's squid and reducing the TAE may be a barrier to continuing to pursue a proxy of MEY in the fishery.
- Increased effort and coverage in the fishery will assist with locating the distribution of squid and future modelling of the stock.

25. Those members who declared a potential conflict left the meeting while the recommendations were being formed.

TAE recommendation for 2022 fishing season

26. Noting the advice above, the RAG recommended that the 2022 TAE be set at 550 standard squid jigging machines. With 4,800 SFRs in the SSJF, 8.7 SFRs are required for each machine. The RAG considered this level to be sustainable given the available information; and while there is latent effort in the fishery, the level maintains the capacity of the fleet to respond to changes in squid availability and/or markets.

Agenda item 4 – Harvest Strategy update

27. The AFMA member introduced the Agenda Item and asked the RAG to consider and provide advice on the draft SSJF Harvest Strategy 2022 (draft Harvest Strategy) to the SEMAC and the AFMA Commission.

28. The RAG noted the following background:

- The objective of the draft Harvest Strategy is to provide a framework for setting sustainable harvest levels for the fishery.
- The catch and effort triggers in the current Harvest Strategy were established in the absence of explicit biological or economic targets and reference points.
- The triggers are based on historic catch and effort estimates, including that of foreign boats. Since the cessation of foreign boats targeting squid in Australia, effort is considerably less.
- The AFMA Commission requested that the current Harvest Strategy be updated to reflect the current state of the fishery.
- A review of the current Harvest Strategy 2007 was undertaken throughout 2020 and 2021 in recognition of the need to simplify and update triggers and management responses to ensure they are appropriate, reflect the current state of the fishery and meet the requirements of the [Commonwealth Fisheries Harvest Strategy Policy 2018](#).
- As part of this review, AFMA sought advice from the RAG and SEMAC.
- While it was recognised that the trigger and decision rules should be reviewed, there was insufficient data available to undertake a depletion analysis and support an evaluation of the current Harvest Strategy catch triggers (current catch triggers).
- To support a more holistic review of the current catch triggers, AFMA, with advice from the RAG, have undertaken a review of the data needs in the fishery and developed the draft SSJF Data and Monitoring Strategy 2022 (draft Data Strategy).

- The draft Harvest Strategy encompasses the inclusion of a SSJF lower catch and effort trigger (end-of-year) which is based on more recent catch and effort data. The SSJF lower catch and effort trigger (end-of-year) is the average annual catch of Gould's squid in the SSJF (360 tonnes) and the average annual number of fishing days in the fishery (213 days), respectively, between 2017 and 2021.

29. The RAG made the following key points:

- It should be more explicit that the average annual number of boat days is for the whole of the fleet in the fishery.
- The proposed SSJF lower catch and effort trigger (end-of-year) (proposed SSJF trigger) is the formalisation of the process that the RAG already does at the TAE meeting annually. Recognising that the triggers in the current Harvest Strategy do not reflect current catch history and the request from the AFMA Commission.
- The proposed SSJF trigger is a 'soft trigger' which has no prescribed management responses, but rather may help to promote research rather than control effort.
- The proposed trigger reflects a process to review recent catch and effort data that the RAG undertakes annually.
- It is still to be determined whether nominal and/or standardised CPUE is an appropriate performance measure against which triggers can be set and as a result the proposed SSJF trigger is based on catch and effort.
- There is a potential public perception that the fishery is unmanaged due to the triggers in the current Harvest Strategy not having a clear linkage to the recent catch and effort.
- The only fundamental change between the draft Harvest Strategy and the current Harvest Strategy is the proposed SSJF trigger, all other triggers remain unchanged from the current Harvest Strategy.
- Due to the 'boom/bust' nature of squid fisheries significant over exploitation is possible however it is unknown what level that is in the SSJF. The historical catches, used as the triggers in the current Harvest Strategy, provide a known exploitation of the fishery to limit catches.
- Climate change and the impact of fishing on predators of squid are likely to have a positive impact on squid abundance.
- The short-lived life history of squid allows it to recover quickly during 'bust' or higher catches.
- In an effort to prevent increased management costs in the fishery, in line with the risk-catch-cost approach to fisheries management, the proposed SSJF trigger is an end-of-year trigger due to the established process in which the RAG consider and provide advice on Gould's squid catch and effort in the SSJF and trawl sectors of the effort.
- A depletion analysis may provide information on squid abundance and how it relates to historical catches, however due to the fishery coverage, the true abundance may be missed.
- While there is a recognition of the work that is being undertaken in the fishery such as the collection of additional data and the CPUE project, the proposed SSJF trigger is an interim measure until a more holistic review of the Harvest Strategy can be undertaken.
- An additional trigger may increase management costs of the fishery.
- There is limited benefit to industry, as the fishery is operating unconstrained and as a result reaching MEY.

30. The industry members wished to seek advice from others in industry on the draft Harvest Strategy and provide feedback either to the RAG or directly to the AFMA Commission.

Recommendation

31. The RAG did not support the draft Harvest Strategy and requested that the proposed SSJF trigger is further considered.

Action item 1. AFMA to provide an update to the industry member on whether the proposed SSJF trigger can be shared.

Agenda item 5 – Catch per unit effort update

32. Rocio Noriega, ABARES introduced the Agenda Item and asked the RAG to note the update on the CPUE project being undertaken by ABARES and provide advice on data validation and the importance of the explanatory variables on the catchability of squid.

33. The RAG noted the following background:

- At their June 2020 meeting, the RAG considered the review of the Harvest Strategy, including triggers and decision rules. The RAG noted that triggers are typically scalable and prompt a series of increasing management actions to particular performance indicators, such as catch or CPUE, allowing for continual evaluation of the fishery impact on stock status and controlled expansion of the fishery.
- The RAG supported introducing lower level catch and effort triggers, with decision rules to monitor/analyse in-season trends (i.e. CPUE) which would allow fishing impacts to be assessed without prompting costly management strategies before they are necessary. With one of the fundamental next steps to determine whether CPUE indicators (nominal or standardised) is a useful index of relative abundance.
- ABARES are currently undertaking the project 'CPUE standardisation for Gould's squid caught in the CTS and SSJF'. The aim of this project is to investigate approaches to standardised CPUE and assess the utility of nominal and standardised CPUE indicators to support the review and implementation of a revised Harvest Strategy.
- ABARES has consulted with relevant scientists on the aims and design of the project.

34. Rocio Noriega presented the preliminary analysis, the RAG noted the following:

- The logbook data set used was from 2002 - 2020, due to the reliability of the data and the overlap with other data sets available for temperature and chlorophyll.
- For the SSJF the following was excluded from the standardisation:
 - June to December each year, due to limited fishing occurring in this time period.
 - Operations where either lures, number of jigs, depth of sea bed was not reported or where the latitude/ longitude was outside of the area of the fishery.
 - Operations identified as outliers.
 - Lighting wattage, due to limited reporting of wattage.
- Only the otter trawl fleet was considered for the CTS as this fleet catches the majority of the CTS Gould's squid catch.
- For the CTS the following was excluded from the standardisation:
 - Depth, due to this data not being available.

- Chlorophyll values greater than 5.
- Sea surface temperatures less than 8°C.

35. The RAG considered the presentation and made the following key points:

- Due variability in squid weight and numbers, it may be valuable to use week and month as a temporal variable.
- The unit for effort needs to be determined, e.g. jig used per hour or boat per hour, due to the number of machines used per operation may vary.
- Currently the number of machines used per operation is not collected, however this will be collected in e-logs.
- Combining the SSJF and CTS standardisation would capture the abundance over a larger area that might be missed if the fisheries are done separately, providing a standard area of coverage and the true abundance.
- The time lag for sea surface temperature and chlorophyll would not be more or less than three weeks.

Recommendation

36. Noting the key points, the RAG recognised that the project was beneficial and that ABARES should consult with industry.

37. The RAG recommended that ABARES continues the CPUE project and present a final report to the RAG for discussion.

Action item 2. RAG members to provide any further advice regarding the CPUE project being undertaken by ABARES to Rocio Noriega via email.

Agenda item 6 – Draft Data and Monitoring Strategy

38. The AFMA member introduced the Agenda Item and asked the RAG to provide advice on the draft Data Strategy to AFMA Management.

39. The RAG noted the following background:

- The Management Plan requires that AFMA develop and implement a strategy to collect, monitor and assess the data relevant to the management of the fishery.
- The SSJF Strategic Ecosystem Data Plan (current Data Plan) was implemented in 2005.
- A review of the current Data Plan was undertaken in 2020/21 in recognition of the need to simplify and clearly define the data requirements for the SSJF.
- The draft Data Strategy aims to ensure that the data collected is targeted, and supports the effective management of the fishery.
- Various data gaps were identified by the RAG, including the findings of various research and discussions with industry and relevant experts. Most of the identified gaps relate to the need for additional catch and effort data to improve the understanding of the impact of fishing on Gould's squid and the broader ecosystem.
- In April 2021, AFMA consulted with industry on proposed changes to the SSJF logbooks and met with the majority of operators. This consultation assisted with determining how and what data could be

collected by operators. AFMA also sought advice on which fields could have pre-populated options and what those options should be.

- The draft Data Strategy further incorporates the expected transition of the SSJF to e-logs and will incorporate any updates to the Harvest Strategy.

40. In formulating its advice, the RAG made the following key points:

- The draft data plan is sufficient for the current data needs of the fishery, however to increase the available meaningful data for the fishery, it may be appropriate to collect additional data such as biological information.
- Biological information could be collected in a one-off specific onshore research such as the collection of sex-ratio and length.
- Other variables that impact CPUE such as number of jig machines should be collected routinely as it is important to have this information as a time series.
- Industry are engaged in providing information but want to be sure that the information to be collected will be meaningful.
- Noting that it may not be possible for all variables to be collected, a priority list of variables should be established by the RAG.

Action item 3. AFMA to seek comment from the RAG on the draft data strategy out of session.

Agenda item 7 – Scoping the feasibility of industry participation in oceanographic data collection

41. This agenda item had to be postponed until a later meeting due to other agenda items running over the scheduled time.

42. The RAG sent their apologise to Lou Cathro.

Agenda item 8 – Annual Research Statement

43. The AFMA member introduced the Agenda Item and asked the RAG to provide advice on research priorities for the 2023-24 financial year to be included in the 2023-24 SSJF Annual Research Statement (draft Annual Research Statement).

44. The RAG noted the following background:

- Each year, the RAG are asked to provide advice on upcoming research needs for the fishery, in this instance for potential AFMA or FRDC funding in 2022-23 financial year.
- This is required in the context of the current AFMA Strategic Research Plan.
- As part of this process, the RAG are asked to prepare an Annual Research Statement and complete a research scope form for each new priority.
- The Annual Research Statement includes consideration of the cost-effectiveness, priority and timeframes for achieving identified priorities.

45. The RAG noted one research priority was identified in the 2022-23 Annual Research Statement, *'Using new in situ technology to collect real time environmental data and develop a central database to store environmental data in a meaningful way-A case study in the Southern Squid Jig Fishery, improving the understanding of environmental factors in the fishery to improve economic returns and optimise exploitation of the stock'*.

46. The RAG considered research priorities to be included in the draft Annual Research Statement, making the following key points:

- While there has been limited research into Gould's squid, a literature review of all available research that has been undertaken would provide be useful when discussing research priorities.
- The focus of any research should be catchability, including stock movement.

Action item 4: Prior to June 2022, AFMA to seek comment from the RAG on the Annual Research Statement.

Action item 5: AFMA and the RAG to develop a list of ongoing research priorities for the fishery.

Close of meeting

47. The Chair thanked the RAG for their contribution and closed the meeting at 17:16.

Attachment A - register of interest

Table 1. Members, invited participants and observers declarations of interests.

Name	Membership	Declared interests
Bruce Wallner	Chair	No interests declared, pecuniary or otherwise in the SSJF.
Shijie Zhou	Scientific member	CSIRO undertakes research on a range of fishery related matters. No interest declared, pecuniary or otherwise in the SSJF.
Stephen Leporati	Scientific member	Bio.inspecta undertakes audits for Marine Stewardship Council (MSC) as the Conformity Assessment Body for a range of Commonwealth fisheries. No interest declared, pecuniary or otherwise in the SSJF.
Robert Curtotti	Economic member	ABARES undertakes research on a range of commonwealth fisheries related matters. No interest declared, pecuniary or otherwise in the SSJF.
Debbie Wisby	Industry member	Manager - Fishing Company in Tasmania (owned by husband). Husband owns Commonwealth and Tasmanian Squid Entitlements. Tasmanian Scallops Fishery Advisory Committee industry member, invited participant SEMAC, member Scallop MAC.
Terry Romaro	Industry member	Director of a company that owns ETBF boat SFRs, minor line SFRs, ETBF longline SFRs, WTBF boat SFRs, WTBF longline SFRs, Coral Sea Trawl permit, Western Skipjack purse seine permit, SPF purse seine, mid-water trawl SFRs, SPF quota SFRs and Squid (SSJF) units. Shareholder of a company that owns shares in a proposal to fish with foreign longliners in the WTBF. Invited participant on SBTMAC, SquidRAG and industry representative at the Commission for the Conservation of Southern Bluefin Tuna & IOTC.
Lara Ainley	AFMA member	No interests declared, pecuniary or otherwise.
Heather Johnston	Executive officer	No interests declared, pecuniary or otherwise.

Rocio Noriega	Invited participant, ABARES	ABARES undertakes research on a range of commonwealth fisheries related matters. No interest declared, pecuniary or otherwise in the SSJF.
Lou Cathro	Invited participant, AFMA	No interests declared, pecuniary or otherwise.
Fiona Hill	Observer, AFMA Management	No interests declared, pecuniary or otherwise.

Attachment B- action items

Complete/Redundant	Underway	Yet to start	Need further advice	On hold
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Table 2. Progress of action items from previous meetings

	RAG meeting	Agenda Item	No.	Action Item	Agency/Person Responsible	Timeframe	Progress
	23	3.2	2	SquidRAG to provide any comments on the Fishwell project report on 'Locating and targeting of squid' prior to it being made publically available.	SquidRAG	As a priority	No comments received. To be published on AFMA website.
	23	3.2	3	AFMA to liaise with Fishwell Consulting regarding the feasibility of corroborating this seasons (2018) data with the findings outlined in the report	AFMA	As a priority	AFMA have provided 2018 catch data and Fishwell were working on this action item in 2020. AFMA to discuss with SquidRAG following progression of action item.
	25	2	1a	Investigate methods and data requirements for evaluating whether the current harvest strategy catch triggers remain appropriate, including whether an updated depletion analysis is a cost-effective approach.	AFMA	On hold	To be progressed following additional data collection.
	25	2	1b	Determine whether nominal and/or standardised CPUE is an appropriate performance measure against which triggers can be set.	AFMA and ABARES		To be discussed at agenda item 5
	25	2	1c	AFMA to review the timing of the HS review subject to a) investigating methods and data	AFMA	On hold	To be discussed at agenda item 4

			requirements for evaluating whether the current harvest strategy remains appropriate, including when it would be appropriate to complete an updated depletion analysis; and, b) determining whether nominal and/or standardised CPUE is an appropriate performance measure against which triggers can be set.			
25	4	2	Write to operators to remind them of their obligation to report bycatch and discards in the fishery; and highlight the importance of this to inform the ERA.	SquidRAG industry members and AFMA	Prior to the start of the 2021 fishing season	AFMA wrote to all operators prior to the start of season and Executive Officer spoke to all operators as a part of the review of the logbooks in early 2021.
26	8	1	AFMA to determine whether a proxy for a member would contribute towards the quorum.	AFMA	Prior to SquidRAG 27	A proxy would not contribute towards the quorum. AFMA appointed an additional scientific member and received sign off from the AFMA Commission on the TOR which only requires one scientific member to be present at the meeting for the purpose of the quorum.
26	8	1	AFMA to consider the advice provided by the SquidRAG and provide an updated draft TOR to the SquidRAG for comment prior to sign off by the Commission.	AFMA	Prior to SquidRAG 27	Complete.
26	3	3	For the 2021 TAE meeting, AFMA to produce maps that illustrate	AFMA	For the 2021 TAE meeting	Completed at Agenda item 3.

				CPUE, as a potential line of evidence to estimate abundance.			
	26	4	4	AFMA to establish whether the requirements to review the Harvest Strategy under the HSP have been met.	AFMA	Prior to SquidRAG 27	Update provided at Agenda item 4.
	26	4	5	AFMA to provide an update at the next SquidRAG meeting on: a) whether a depletion analysis can be done for Gould's squid; and b) if one can be completed, which method might be most appropriate and what information would be required.	AFMA	SquidRAG 27	Yet to start
	26	4	6	ABARES to provide AFMA with a TOR/project scope that describes their proposed work on CPUE.	ABARES and AFMA		Sent out to relevant members prior to SquidRAG 27 and scope presented as attachment to Agenda Item 5
	26	4	7	AFMA to circulate the TOR to the SquidRAG and other relevant researchers such as Ian Knuckey and the scientific member on SEMAC for feedback before progressing the work.	AFMA		Sent to Ian Knuckey and scientific member on SEMAC in early 2021 for comment
	26	5	8	AFMA to include an objective, developed in conjunction with industry members, which captures the need to consult with industry.	AFMA	Prior to the implementation of Bycatch and Discarding Workplan	Completed at agenda item 6.

	26	5	9	AFMA to seek adoption of a finalised, revised Bycatch and Discarding Workplan from the SquidRAG, once the SquidRAG and SEMAC advice has been incorporated.	AFMA	December 2020	Completed, finalised Bycatch and Discarding Workplan now available on the AFMA website
	26	6	10	AFMA to arrange a meeting with operators to discuss the proposed actions and additional data collection prior to the revised Data Plan being implemented.	AFMA	Prior to SquidRAG 27	AFMA met with individual operators.
	26	6	11	When reviewing the paper logbook, AFMA to establish what the timeline might be for transitioning to electronic logbooks.	AFMA	Prior to SquidRAG 27	Update provided at Agenda item 2.
	26	6	12	AFMA to contact IMOS regarding whether it may be an option to have some of the SSJF vessels become boats of opportunity.	AFMA	Prior to SquidRAG 27	AFMA waiting on outcome of FRDC project proposal to test sensors on SSJF boats.
	26	6	13	AFMA to seek feedback from Fishwell and the SEMAC scientific member on the draft Data Plan.	AFMA	Prior to SquidRAG 27	SquidRAG to provide advice on whether action item is still required.

Table 3. New action items from SquidRAG 27

Agenda Item	No.	Action Item	Agency/Person Responsible	Timeframe
4	1	AFMA to provide an update to the industry member on whether the proposed SSJF trigger can be shared.	AFMA	ASAP
5	2	RAG members to provide any further advice regarding the CPUE project being undertaken by ABARES to Rocio Noriega via email.	SquidRAG members	ASAP
6	3	AFMA to seek comment from the RAG on the draft data strategy out of session.	AFMA	Prior to SquidRAG 28
8	4	AFMA to seek comment from the RAG on the Annual Research Statement.	AFMA	Prior to June 2022
8	5	AFMA and the RAG to develop a list of ongoing research priorities for the fishery.	AFMA and SquidRAG members	SquidRAG 28