



Australian Government

Australian Fisheries Management Authority

Southern Squid Jig Fishery Resource Assessment Group (SquidRAG) Meeting 30

Meeting minutes

17 October 2024

9:30 – 15:00

Microsoft TEAMS

Southern Squid Jig Fishery Resource Assessment Group (SquidRAG)

Meeting 30 – 17 October 2024

Agenda

Time (AEDT): 09:30-14:58

Location: Microsoft Teams

Chair Name: Mr Bruce Wallner

Approximate time	Item	Purpose	Lead presenter
9:30 (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
10:00 (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
	2.4 Other jurisdictions	For noting	NRE Tasmania
10:20 (15 min)	Break		
10:35 (60 min)	Agenda item 3. Climate Change		
	4.1 Climate and Ecosystem Status Report	For discussion	Steph Brodie
	4.2 Climate Risk Framework: Trial application in the Southern Squid Fishery	For advice	Dan Corrie
11:35 (20 min)	Agenda item 4. Harvest Strategy update	For noting	AFMA

Approximate time	Item	Purpose	Lead presenter
11:55 (45 min)	Lunch		
12:40 (60 min)	Agenda item 5. 2023 TAE Recommendation	For advice	AFMA
13:40 (20 min)	Agenda item 6. Data and Monitoring Strategy	For advice	AFMA
14:00 (30min)	Agenda item 7. Research Priorities	For advice	AFMA member
	6.1 Presentation FRDC project 2022-007	For discussion	Dr Ian Knuckey
14:30 (10 min)	Agenda item 8. Other Business		
	8.1 Industry Member	For discussion	AFMA
14:40	Close		

The Chair opened the meeting at 9:35

Agenda item 1. Preliminaries

1.1 Welcome and apologies

1. Mr Bruce Wallner, the Chair, welcomed members and observers to the meeting and made an Acknowledgement of Country, paying respects to Australia's First People and Traditional Custodians, their cultures and Elders past present and emerging, and recognising their continued connection to land, waters and community from which participants are joining the meeting.
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. The Chair noted that the meeting is being recorded by the Executive officer for minute taking purposes.
4. All members, participants and observers introduced themselves and their background to the RAG.

Members	
Bruce Wallner	Chair
Rocio Noriega	Scientific member
Stephen Leporati	Scientific member
Robert Curtotti	Economic member
John Cull	Industry member

Yvette Lamont	AFMA member
Alannah Wood	Executive officer
Invited Participants	
Dan Corrie	AFMA
Steph Brodie	CSIRO
Ian Knuckey	Fishwell
Observers	
Steve Hall	AFMA
Krystle Keller	ABAREs
Rosie Katunar	NRE Tasmania Observer

1.2 Declarations of interest

5. The RAG members followed the conflicts 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](#).
6. The Chair noted that where there is a perceived conflict of interest with an agenda item, that member/participant can generally participate in the discussion but is asked to leave for the formulation of a recommendation.
7. John Cull declared a potential conflict of interest with agenda item 5 (2024 TAE Recommendation).
8. The RAG agreed on the above process for managing Mr Cull's declared interest for agenda item 6.
9. Rocio Noriega requested her association to ABARES be removed as she is not currently working there.

1.3 Adoption of agenda

10. The RAG adopted the agenda as final.

1.4 Minutes of previous meeting

11. The RAG noted the minutes of SquidRAG meeting 29 held on 12 October 2023 are finalised and 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

12. The RAG noted the action items ([Attachment B](#)) from previous meetings and updates provided by the Executive Officer at [Attachment B](#).
 - The harvest strategy review would be further discussed in agenda item 4.
 - The request to invite squid researchers to the meeting was discussed and would continue to be an ongoing agenda item, it was requested that Steven Leporati would provide a list of relevant researchers who might attend future meetings and update the RAG on research initiatives.
 - Previously a request was made for AFMA to investigate jurisdictional boundary issues It was noted that there are some logistical issues with jurisdictional boundaries when fishing in some

locations however Industry clarified this was a minor issue and the current catch reporting requirements were sufficient for reporting catch to the relevant jurisdictions.

- The Catch per unit effort (CPUE) project run by Rocio Noriega had been completed and is now available on the ABARES website, the recommendations are to be incorporated into AFMA logbooks (including elogs).
- Research priorities will be discussed in agenda item 7.

Agenda item 2 – Fishery update

13. 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

14. The AFMA member provided the following update:

- 11 boats nominated with 10 active this season so far
- There was one lease and one transfer of SFRs
- No bycatch/protected species has been reported
- 729 t caught to date 30 September 2024 (an increase of 87 t compared to 2023).

15. *Electronic logbooks*

It is now mandatory for all operators who have the software installed to use elogs. eCDRs are also available for the 2024 fishing season and can be used in parallel to the elogs. Instrument changes are underway to allow AFMA to enforce the mandatory use of elogs for reporting catch, as an interim measure AFMA encourages operators to contact the two vendors listed below to discuss elog options. For the current season three vessels are reporting using elogs.

Table 1. Elog software vendor information

Software vendor	Telephone	Email	Web
CatchLog Trading Pty. Ltd	07 4033 1322	admin@catchlog.com	www.catchlog.com
OLRAC	03 5258 4399	olrac@olsps.com	www.olsps.com

2.2 Industry

16. The industry member provided an update on the 2024 fishing season:

- Industry reported that the majority of fishing is now conducted under anchor with fishing taking place on hard bottom reef and at deeper depths, down to 160m compared to 90m depth in the past.
- In previous seasons fishing was predominately undertaken at night however more recently operators have fished both day and night.
- Weather conditions were not as rough this season with very few days recording 50 knot winds, strong winds can blow squid off the hooks during hauling.
- One squid vessel was fitted with a sensor as part of the Ships of Opportunity project, through data gathered fishers learned that the thermocline extended down to 40m before a drop in temperature was recorded.

- A single vessel which previously fished in the SSJF has been sold with the buyer intending to use the boat to fish in the New Zealand squid fishery.

2.3 Economic

17. The Economic member provided the following update:

- The Gross Value Production (GVP) has improved on past years with the current GVP valued at approximately three million dollars. The higher GVP was driven by price, not quantity of catch, with imported squid prices estimated at approximately \$7/kg.
- High fuel prices continue to impact operations although the price has dropped since the peak prices seen in 2021.
- Labour continues to be an issue for the fishery due to this many operators are using worker schemes to recruit employees from other countries. Although this has alleviated the labour shortage there continues to be limited skilled skippers for vessels, with high ongoing labour costs predicted for the future.
- The price for squid at the Sydney fish markets has been elevated compared to previous season at approximately \$6/kg. Some operators have found a market selling to the tuna longliners and for tournament fishers, however industry is still competing with cheap imported squid.

2.4 Other Jurisdictions

18. The State representative for Tasmania provided the following update:

- Catch of Gould's squid is reported as part of the Tasmanian Commercial Scalefish Fishery, the most recent figures from 2023-24 show only 40kg of catch was reported.
- The recreation sector catch of Gould's squid for Tasmania was estimated at approximately 15 tonnes which was a small decrease from previous years.
- The biggest focus for Tasmania currently is the Southern Calamari Fishery with annual catches between 80-100 tonnes, with recent closures put in place for this fishery during peak spawning season as stocks have been assessed as depleted or depleting.
- A research project '*Developing a cost-efficient stock assessment program for Southern Calamari fisheries*' ([FRDC 2021-118](#)) is currently underway with the project due for completion in 2027.

Agenda item 3 – Climate and ecosystem update

19. Steph Brodie (CSIRO) present the climate and ecosystem status report for the SSJF (can be found on the [AFMA website](#)).

20. The RAG noted the following background:

- There has been significant ocean warming with 2024 being the second hottest year recorded for global sea surface temperatures.
- The Southern Oscillation Index shows a change from La Nina in 2022 to El Nino in 2023. Neutral conditions were prevalent in 2024. Typically, El Nino weakens the Leeuwin current which cools the Great Australian Bight (GAB) in addition to strengthening the east Australian current (EAC) which moves warm water further south.
- The southern annular mode (SAM) has an impact on the north south movement of the westerly winds that often bring rains to southern Australia. Positive phases have become more common

which bring stable, drier conditions to southern Australia. This may impact the fishery with an increase in storms not allowing boats to operate.

- Strong Bonney upwelling occurred throughout summer which coincides with high chlorophyll-a and cool waters in the GAB.
- Shelf bottom temperature anomaly indicates warmer water at depth for the East coast and Bass Strait with the GAB and Bonney Coast recording very cool temperatures during the summer.
- It was noted that the project '*Trials of oceanographic data collection on commercial fishing vessels in SE Australia*' ([2022-007](#)) is underway with one squid boat participating to collect subsurface ocean data. This is expected to support monitoring of the broader environmental conditions and the impacts of climate change. Fishwell Consulting will provide an update on this project as part of Agenda item 9. Research priorities.
- Outlook prediction models forecast neutral ENSO conditions until February (2025), while other models forecast La Nina forming from October. La Nina conditions can strengthen the Leeuwin current leading to warmer waters in the GAB, with the forecast for sea surface temperature predicting significantly high temperatures in the GAB but less severe off the east coast of Tasmania.
- Forecast of sea surface temperatures (SST) anomalies indicate warmer conditions for most of Australia, predicting the south-east to exceed 1.5°C anomalies, while the GAB is forecast to be 0.5°C warmer than average.

21. The following was discussed by the RAG

- Industry have noticed the warmer water off Tasmania and are likely to explore fishing closer to South Australia where the water is cooler. However, there is a significant distance to cover for fishers based near Tasmania – this equates to approximately four days of steam time to reach the fishing grounds.
- Fishing effort continues in deeper water (up to 160m) with squid needing to be aggregated to increase catchability and make trips economically viable. Industry advised that squid were present in Bass Strait but not aggregated.

22. Dan corrie provided an overview of AFMA's Climate Risk Framework (CRF):

- AFMA's Climate Adaptation Program is implementing a range of measures to incorporate climate change information and risks into decision making frameworks, to ensure that management of Commonwealth fisheries is adaptive to the impacts of climate change.
- AFMA established a Working Group to support the trial implementation of the CRF and provide strategic advice to the AFMA Commission and AFMA management on the development, coordination and implementation of the CRF across Commonwealth fisheries
- AFMA has drafted a CRF Species Assessment Report for Gould's Squid.

23. AFMA is seeking advice from SquidRAG on the CRF assessment for Gould's squid. AFMA will then seek advice from the Southeast Management Advisory Committee at its November 2024 meeting.

24. Note this is for trial purposes only, and any advice provided to the AFMA Commission will inform a review of the CRF for future implementation and will not be used to determine TACs for the 2025 season.

25. The RAG discussed the following:

- The overall risk for squid were assessed as ‘none’ on the basis that climate is not expected to negatively impact abundance, and the stock is currently underutilised.
- Accordingly, there are no targeted management arrangement to manage climate impacts.
- Increased environmental variability due to climate change is expected to increase variability in the squid fishery, including stronger increases and decreases in squid abundance through time.
- Squid are known to be highly mobile species therefore low catch rates is not necessarily a sign of localised depletion.
- There is an inherent level of precaution built into the fishery and as new information becomes available this will be used to reassess climate risk in the fishery and identify any management response required.
- The use of the word “None” as a risk rating was considered inappropriate for use in the climate risk framework, AFMA to consider other options.

Recommendation 1: Climate risk framework Recommendation

No additional measures are required to manage the climate risk for Gould’s Squid, the overall risk is unlikely to change given the capacity of the fleet and expected impacts of climate change.

Squid catches are dynamic and highly influenced by availability. While climate is expected to drive variability in stock abundance, environmental conditions are likely to influence catchability. This should be considered when reviewing catch rate information to support decision making.

Agenda item 4 – Harvest Strategy update

26. The AFMA member provided an overview of the harvest strategy which after consultation with SquidRAG, SEMAC and Commission was amended to include a lower catch and effort trigger which was introduced for the 2023 fishing season.
27. The Department of Agriculture, Fisheries and Forestry (DAFF) have undertaken a review of the Commonwealth Fisheries Harvest Strategy Policy with a draft report expected to be released for public consultation in November 2024.
28. The ABARES report ‘Analyses to support the review of the Southern Squid Jig Fishery harvest strategy’ which was presented at SquidRAG27 and informed the updated 2022 SSJF Harvest Strategy is available on the ABARES website. The review concluded that there is currently not sufficient data to calculate a reliable standardised CPUE series to support undertaking a depletion analysis as required by the fishery’s harvest strategy.
29. Members requested a heat map showing catch and effort for the SSJF be provided as part of AFMA’s annual report as this would be beneficial for the RAG to gain an understanding of where fishing occurs and to inform the TAE recommendation.

Action 1:

AFMA to include catch and effort heat map in annual reporting and documents to assist with TAE setting.

Agenda item 5 - 2023 TAE Recommendation

30. The AFMA member introduced the agenda item and asked the RAG to provide advice to the Southeast Management Advisory Committee (SEMAC) and the AFMA Commission on the total allowable effort (TAE) for the SSJF 2025 fishing season. The AFMA member noted the following background:

2024 Catch summary

31. Catch of Gould's squid in the SSJF for the 2024 fishing year was 748 tonnes as of September 2024, well below both the intermediate and limit trigger levels of 3,000 and 5,000 tonnes, respectively. Catches of Gould's squid in the SSJF are within the end of year lower catch and effort trigger of 360 tonnes and 213 days.
32. Trawl catch was approximately 216 tonnes, with 164 tonnes being caught by CTS and 52 tonnes caught by GABTS, as of September 2024, which is also below the 2,000 tonnes trawl catch limit trigger.
33. Combined jig and trawl catch was approximately 964 tonnes, well below the combined catch limit trigger of 6,000 tonnes.
34. Ten vessels have been active in SSJF as of September 2024, during the 2023 season eight vessels fished the SSJF, this does not exceed the effort trigger of '30 standard vessels' in the fishery as outlined in the current SSJF Harvest Strategy.
35. In 2023 the total catch of Gould's squid in the SSJF was 692 tonnes, the 2023 combined trawl catch was 272 tonnes and the combined SSJF and trawl catch was 964 tonnes.

2024 TAE considerations

- While annual variability is expected to be observed for squid stock; catch, fishing effort and CPUE levels across all sectors were up or stable in 2024 compared to previous years.
- The SquidRAG also considered information provided at the meeting by AFMA about the expected impact of climate change in the region of the SSJF – namely increased variability in key indicators and increased water temperature.
- This fishing year was slightly above average, there were no strong changes in relation to climate, noting that if more SFRs were required there would be an associated cost. SquidRAG consider that the annual TAE setting process enables AFMA to respond to any potential changes in the fishery and that the TAE is sufficiently precautionary to account for any potential risks currently posed by climate change.
- At previous meetings SquidRAG have considered that a reduction in the TAE may have implications for any future expansion of the fishery, however at the recent meeting there was some industry support for reducing the latent effort in the fishery and stimulate fishing interest.
- Industry advised that each boat has between six and ten jigging machines and discussed the implication of a reduction in SFRs, how this might affect the levy base and reduce individual operator profits. There was support from some members to further explore whether a reduction in TAE would be a practical way to create interest in the fishery.
- Those with a pecuniary interests left the room prior to members making a decision on setting the TAE.

Recommendation 2: 2025 TAE Recommendation

The RAG recommended that the 2025 TAE be set at 550 standard squid jigging machines. The RAG considered this level to be sustainable and suitable, 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 and is sufficiently precautionary to account for potential risks currently posed by climate change.

Action 2:

AFMA and Economic member to investigate options for stimulating interest in the fishery.

Agenda item 6 – Draft Data and Monitoring Strategy

36. AFMA is seeking feedback from members on identifying current and future data needs for the SSJF that may need to be incorporated into updating the strategy.
37. Various data gaps have been identified which relate to the need for additional catch and effort data to improve the understanding of the impacts of fishing on Gould's Squid and the broader ecosystem.
38. Changes have been made to address gaps in the logbook data, with plans underway to undertake a gear survey to provide the necessary data to improve CPUE modelling in the fishery.
39. Fine scale spatial information was identified as an area for improvement this was particularly important when fishing was undertaken using a parachute anchor, however the majority of fishing is now done under anchor therefore start and end of shot/drift is not as crucial.
40. Members discussed the other data and monitoring requirements including collecting additional data relating to proportion and/or evidence of spawning and how this might be undertaken.
41. As highlighted in the ABARES report, squid numbers would assist in stock assessments, suggesting that estimates could be used to inform CPUE. Industry confirmed that fishers have a good understanding of the number of kilograms of squid per bin and generally have an estimate of squid weight this would make it relatively easy to create a squid count based on the numbers.

Action 3:

AFMA to discussed with the data and monitoring team about the possibility of including a place to record spawning and squid number catch in AFMA logbook data.

Agenda item 7 – Research Priorities

42. The chair welcomed Ian Knuckey to share the results of the FRDC research project *Trials of oceanographic data collection on commercial fishing vessels in SE Australia* that Fishwell are undertaking in conjunction with UNSW and IMOS. The trial project has gathered data through partnering with commercial fishers, with the ultimate goal of better understanding subsurface ocean conditions to improve ocean modelling and fishery CPUE and assessments.
 - The trials attach temperature-depth sensors to the gear that relay information via Bluetooth to a solar-powered deckbox mounted above the wheelhouse. Once installed, they require very minimal maintenance or upkeep from the fishers, with the life of the sensor batteries being two years. Data is stored on the deckbox after each fishing shot and once the vessel is in range the data collected automatically transfers via the mobile network to a central database.
 - Vessels from across many different fisheries participated. The sensor for squid boats was fitted to the submersible squid light as this was considered the least likely piece of equipment to be lost or damaged. During the 2024 season the deepest depth the squid vessel fished was 160m with the light being lowered approximately 10m above the sea floor.
 - The initial goal was to collect data in southeastern Australia from different fishing vessels across several fisheries and gear types. The initial program included 16 vessels however this has since expanded to include 34 vessels from around Australia. Approximately 2-4 million data points have been collected over the 18 months of the project. This data is publicly available

through the AODN portal. No associated vessel information or fisheries catch data is transferred or made publicly available.

- One of the potential uses of the sensor data is to link this with the data reported by fishers through logbooks to assist in identifying any correlation between parameters such as temperature and catch.
- Now led by UNSW, Integrated Marine Observing System (IMOS) will continue to fund the project for an additional three years. The scope for expansion of the project is still being decided.

43. The RAG discussed the following

- The industry member who had used the FishSOOP system commented on the minimal effort required by the fishers to have the equipment installed and onboard the vessel and acknowledged how useful the real time temperature data was.
- An outcome of the project identified that collecting data relative to salinity would be useful, currently the sensors available for collecting salinity are more expensive and not available on the model used.
- Coverage of the Bonney Upwelling was discussed, as this oceanic system is known to draw nutrient-rich cold water upwards towards the sea surface and is considered a key driver in the Bass Strait region.

44. The AFMA member introduced the agenda item and asked the RAG to provide advice on research priorities for the 2025-26 financial year to be included in the 2025-26 SSJF Annual Research Statement (draft Annual Research Statement).

- 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 2024-25 financial year.
- Collection of in-situ data is ongoing; it was agreed that any data that could be collected would be beneficial however due to the size of the fishery there is very limited funding for this.
- Keeping the sensors from the FRDC boats of opportunity project to collect environmental data, including conductivity, temperature and depth ongoing temperature depth could be a cost-effective way to collect data, if installed on all vessels.
- Members iterated the need to have an expert on squid attend RAG meetings as it would be beneficial to remain informed about current research projects.
- Industry advised that the majority of research on squid is done in Argentina and Japan where there can be up to 30,000 boats in their squid fisheries.

Action 4:

The RAG requested that the research member provide a list of academics who may be able to provide the RAG with relevant research information and projects and to assist in identify key biological knowledge gaps we have of squid.

Agenda item 8 – Other business

45. The Chair advised it would be useful to fill the vacant industry member position for next year, the industry member suggested some potential candidates for the vacant position.

Action 5:

AFMA to approach suitable squid industry operators to fill the Industry member vacancy prior to the next RAG meeting.

Close of meeting

46. The Chair thanked the RAG for their contribution and closed the meeting at 14:56.

Attachment A - Register of interest

Table 1. Members invited participants and observer's declarations of interests (reviewed & updated at SquidRAG 30).

Name	Membership	Declared interests
Bruce Wallner	Chair	No interests declared, pecuniary or otherwise in the SSJF.
Rocio Noriega	Scientific member	Undertakes research on a range of commonwealth fisheries related matters. 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.
Steve Leporati	Scientific Member	
John Cull	Industry member	Holds Commonwealth and State concessions.
Steve Hall	AFMA member	No interests declared, pecuniary or otherwise.
Alannah Wood	AFMA, Executive officer	No interests declared, pecuniary or otherwise.
Dan Corrie	Observer, AFMA Management	No interests declared, pecuniary or otherwise.
Sally Weekes	AFMA member	No interests declared, pecuniary or otherwise.
Steph Brodie	CSIRO	Employed by the CSIRO and through the organisation either has in the past or may in the future, receive funding for research related to the fishery.
Stephen Leporati	scientific member	No longer involved in MSC assessment
Krystle Keller	Observer	Employed by ABARES. No pecuniary interest in the fishery. Any future interests in projects or research will be declared as required.
Rosie Katunar	Observer	No interests declared, pecuniary or otherwise.

Attachment B- action items

Table 2. Progress of action items from previous meetings

Complete/Redundant		Underway		Yet to start		Need further advice		On hold	
RAG meeting	Agenda Item	No.	Action Item	Agency/Person Responsible	Timeframe	Progress			
25	2	1	AFMA to review the timing of the HS review subject to a) investigating methods and data 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.	AFMA/ABARES	On-going	To be progressed following additional data collection. To be discussed in agenda items 3 & 7.			
27	6	3	AFMA to seek comment from the RAG on the draft data strategy out of session.	AFMA	Prior to SquidRAG 28	To be addressed at Agenda item 7.			
29	3	2	AFMA to implement the recommended data parameters	AFMA	Prior to SquidRAG 29	In progress. To be discussed at agenda item 3.			

				from the CPUE project into logbooks and elogs.			
28	6	3		AFMA to seek comment from the RAG on the draft data strategy out of session.	AFMA	Prior to SquidRAG 29	Incomplete. To be discussed at agenda item 7.
28	8	4		As part of next year's Research Agenda item, invite researchers who are undertaking relevant squid research to present a summary of their work at SquidRAG.	AFMA	Prior to SquidRAG 29	Stephen Leporati to provide a list of potential contacts.
29	8	5		AFMA to seek out of session advice on the draft Annual Research Statement for 2025-26.	AFMA	Prior to SquidRAG 30	Complete

Table 3. New action items from SquidRAG 30

Agenda Item	No.	Action Item	Agency/Person Responsible	Timeframe
4	1	AFMA to include catch and effort heat map in annual reporting and documents to assist with TAE setting.	AFMA	Prior to SquidRAG 31
5	2	AFMA to explore the impacts of reducing the SFRs on the fishery and the economic impacts it may have.	AFMA	Prior to SquidRAG 31
6	3	AFMA to look at including a spot to record spawning and squid number catch in logbook data.	AFMA	Prior to SquidRAG 31
7	4	Stephen Loporati to provide a list of researchers and identify key biological knowledge gaps we have on squid.	AFMA	Prior to SquidRAG 31
8	5	AFMA to fill vacant industry member position prior to the next RAG.	AFMA	Prior to SquidRAG 31

Table 4. Recommendations from SquidRAG 30

Recommendation number	Agenda item	Recommendation
1	3	No additional measures are required to manage the climate risk for Gould's Squid. The overall risk is unlikely to change given the capacity of the fleet to influence stock size.

		<p>Squid catches are dynamic and highly influenced by availability. While climate is expected to drive variability in stock abundance, environmental conditions are likely to influence catchability. This should be considered when reviewing catch rate information to support decision making.</p>
2	6	<p>The RAG recommended that the 2025 TAE be set at 550 standard squid jigging machines. The RAG considered this level to be sustainable and suitable, 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.</p>