Australian Government
Australian Fisheries Management Authority

South East Resource Assessment Group (SERAG) Meeting 2, 2024

Meeting minutes

26-28 November 2024

In Person and Virtual

Contents

SERAG Meeting 2, 26–28 November 2024

Agenda

Day 1: Tuesday 26 November 2024

Time (AEDT): 08:30

Location: Radisson on Flagstaff Gardens Melbourne and Microsoft teams

Chair: Dr Paul McShane

Start (Duration)	Item	Purpose	Presenter/s
8:30 (30 min)	**1. Preliminaries**		
	1.1 Welcome and apologies	For ACTION	Chair
	1.2 Declarations of interest	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
9:00 (30 min)	2. Climate and Ecosystem Status Report	For ADVICE	Steph Brodie
9:30 (45 min)	3. School Whiting Tier 1 - RBC advice	For ADVICE	Paul Burch
10:15 (15 min)	**Morning Tea**		
10:30 (45 min)	3. School Whiting Tier 1 - RBC advice (continued)	For ADVICE	Paul Burch
11:15 (90 min)	4. Pink Ling – RBC Advice a) Eastern stock Tier 1 b) Western stock	For ADVICE	Pia Bessell-Browne & Mark Grubert
12:45 (1 hr)	**Lunch**		
13:45 (90 min)	5. Silver Warehou Tier 1 - RBC advice	For ADVICE	Geoff Tuck
15:15 (15 min)	**Afternoon Tea**		
15:30 (30 min)	6. Traditional Tier 4 - RBC Advice a) Mirror Dory (LCLR for 2025–26; overcatch in April 2025) b) Oreo Basket	For ADVICE	Miriana Sporcic
16:00 (30 min)	7. Deepwater shark (E & W) Dynamic Tier 4 – RBC Advice	For ADVICE	Robin Thomson & Mark Grubert
16:30 (60 min)	10. Blue-eye Trevalla (Slope) Dynamic Tier 4 – RBC Advice	For ADVICE	Miriana Sporcic
17:30	**End of Day 1**		

Australian Government
Australian Fisheries Management Authority

Day 2: Wednesday 27 November 2024

Time (AEDT): 09:00

Location: Radisson on Flagstaff Gardens Melbourne and Microsoft teams

Chair: Dr Paul McShane

Start (Duration)	Item	Purpose	Presenter/s
	9. Effects of Spatial Closures Presentation (Withdrawn)		
09:00 (30 min)	8. EM trial in the CTS	For NOTING	Tamre Sarhan
9:30 (30 min)	11. Review of trigger species assessment and TAC options a) Alfonsino b) Smooth Oreo (Cascade)	For ADVICE	Mark Grubert
10:00 (15 min)	12. Hagfish non-quota TAC advice	For ADVICE	AFMA
10:15 (15 min)	**Morning Tea**		
10:30 (45 min)	13. Summary of the Upper-slope dogfish monitoring project	For NOTING	Franzis Althaus
11:15 (90 min)	14. SESSF Research Statement a) Research priorities for 2026–27 b) Consideration of research proposals for 2025–26	For ADVICE	Mark Grubert
12:45 (1 hr)	**Lunch**		
	15. Threatened endemic elasmobranchs report (Merged with item 16)		
13:45 (30 min)	16. Shark bycatch issues a) Bycatch and Discarding Workplan for GHaT line fishers b) Threatened endemic elasmobranchs report	a) For ADVICE b) For NOTING	Michelle Henriksen
14:15 (45 min)	17. Developing and validating novel methods to estimate age- and size-at-maturity in SE Australian fisheries	For ADVICE	John Morrongiello
15:00 (30 min)	18. Ocean Jacket and Silver Trevally stock structure	For NOTING	John Stewart
15:30 (15 min)	**Afternoon Tea**		
15:45 (30 min)	19. 2024 Eastern Zone Orange Roughy AOS results	For NOTING	Rudy Kloser
16:15 (45 min)	20. WORRP update, review of sampling targets and Research Catch Allowance for 2025–26	For ADVICE	Simon Boag & Mark Grubert
17:00	**End of Day 2**		

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Day 3: Thursday 28 November 2024

Time (AEDT): 8:30 hr

Location: Radisson on Flagstaff Gardens Melbourne and Microsoft teams

Chair: Dr Paul McShane

Start (Duration)	Item	Purpose	Presenter/s
8:30 (30 min)	21. Blue Grenadier acoustic survey results	For NOTING	Haris Kunath
9:00 (15 min)	22. Discussion on the review of the Blue Grenadier assessment	For NOTING	Mark Grubert & Geoff Tuck
09:15 (90 min)	23. Climate Risk Framework	For ADVICE	Dan Corrie
10:45 (15 min)	**Morning Tea**		
11:00 (15 min)	24. Other Business - Recommendations & action items review CKMR results	For ADVICE	Membership
11:15	**Meeting close**		

1 Preliminaries

1.1 Welcome and apologies

Paul McShane (Chair) welcomed attendees 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.

The RAG noted apologies received from:

- Daniel Hogan (Industry Member);
- Ian Knuckey apology for Day 2; and
- Daniel Corrie (AFMA – Senior Manager) also an apology for Day 2.

Members and other attendees at SERAG 2, 2024 are tabulated below.

Table 1. Attendees at SERAG 2, 2024.

Members	Position
Dr Paul McShane	Chair
Mr Ross Winstanley	Recreational Member
Mr Simon Boag	Industry Member
Dr Ian Knuckey	Scientific Member
Mr Will Mure	Industry Member
Dr Sarah Jennings	Economics Member
Dr Geoff Tuck	Scientific Member
Dr Andrew Penney	Scientific Member
Dr Mark Grubert	AFMA Member
Dr Jeremy Lyle	Scientific Member
Mr Nathan Jackson	Executive Officer
Invited Participants	**Organisation**
Dr Pia Bessell-Browne	CSIRO
Dr Paul Burch	CSIRO
Dr Miriana Sporcic	CSIRO
Dr Robin Thomson	CSIRO
Dr Rudy Kloser	CSIRO
Dr Stephanie Brodie	CSIRO
Dr Haris Kunnath	CSIRO
Ms Franzis Althaus	CSIRO – Agenda Item 13 only
Dr John Morrongiello	University of Melbourne
Dr John Stewart	NSW Department of Primary Industry

Dr Kyne Krusic-Golub	Fish Ageing Services
AFMA Employees	**Role**
Ms Sally Weekes	Senior Manager – Demersal and Midwater
Dr Lianos Triantafillos	Manager – Gillnet, Hook and Trap
Ms Michelle Henriksen	Senior Management Officer – Gillnet, Hook and Trap
Mr Daniel Corrie	Senior Manager – Fisheries Management Branch
Ms Rebecca Jol	Senior Management Officer – Trawl Fisheries
Ms Jennifer Power-Geary	Senior Management Support Officer – Trawl Fisheries
Ms Audrey Kent	Senior Management Support Officer – Trawl Fisheries
Mr Anthony Coggan	Senior Management Support Officer – Gillnet, Hook and Trap
Mr Tamre Sarhan	Senior Manager – Electronic Monitoring
Observers	**Organisation**
Dr Krystle Keller	ABARES
Dr Daniel Wright	ABARES
Dr Tim Emery	ABARES
Mr Andrew Warmbrunn	Department of Natural Resources and Environment Tasmania
Dr Geoff Liggins	NSW Department of Primary Industry
Dr Ashley Fowler	NSW Department of Primary Industry
Dr Karina Hall	NSW Department of Primary Industry
Mr Ryan Keightley	Department of Climate Change, Energy, the Environment and Water
Mr Peter Yates	Department of Climate Change, Energy, the Environment and Water

1.2 Declaration of interests

The RAG followed the procedure outlined in *Fisheries Administration Paper 12* for managing potential conflicts of interest, with the declarations in relation to specific agenda items, and the RAGs decision regarding the relevant member's participation, outlined in Table 2.

Table 2. Participation in items where there were declared conflicts of interest

Agenda item	Members	Discussion	Recommendation
3 – School Whiting Tier 1 – RBC advice	Simon Boag	Yes	No
4 – Pink Ling RBC Advice	Simon Boag and Will Mure	Yes	No
5 – Silver Warehou Tier 1 – RBC advice	Simon Boag	Yes	No
6 – Traditional Tier 4s – RBC advice	Simon Boag	Yes	No
7 – Deepwater Sharks RBC advice	Simon Boag and Will Mure	Yes	No
10 – Blue-eye Trevalla (Slope) Dynamic Tier 4	Simon Boag and Will Mure	Yes	No

Agenda item	Members	Discussion	Recommendation
11 – Review of Trigger species and TAC options	Simon Boag	Yes	No
14 – SESSF Research Statement	CSIRO, Ian Knuckey and Simon Boag	Yes	No
16 – Shark Bycatch Issues	Simon Boag and Will Mure	Yes	No
20 – WORRP update	Simon Boag	Yes	No

1.3 Adoption of agenda

Following adjustments to the order of several agenda items (which retain their numbering), the RAG adopted the agenda as final. This re-ordering means that some agenda items appear out of sequence in these minutes.

1.4 Minutes of previous meetings

The RAG noted that the draft minutes of the October 2024 SERAG meeting have been compiled and are undergoing internal review. The minutes will be distributed to members once this review has been completed.

1.5 Actions arising from previous meetings

The RAG noted the progress against action items from previous meetings and the updates provided by AFMA at **Attachment B**.

2 Climate and ecosystem status report

Stephanie Brodie opened the agenda item on the draft Climate and Ecosystem Status Report for the Southern and Eastern Scalefish and Shark Fishery (SESSF) and sought advice from the RAG on any additional observations for inclusion in the report.

The RAG suggested that CSIRO undertake a retrospective analysis of significant climate events on southern fisheries to better predict future events and assist industry in responding to these events.

The RAG noted two climate related research proposals currently in development: 1) An assessment of physiological responses of fishes during marine heatwaves and 2) A retrospective analysis of industry responses during marine heatwaves.

3 School Whiting Tier 1 - RBC advice

Paul Burch opened the agenda item on the Tier 1 assessment of School Whiting. Three model structures were considered following the advice from SERAG 1:

- A single region model incorporating the advice from SERAG 1 to increase the maximum modelled length in the assessment from 25 cm to 30 cm, separate the southern trawl fleet into Commonwealth and NSW components, and accommodate the change in discarding patterns for Commonwealth vessels in 2017-2019 by using time-blocking within the assessment.

- Two separate, complementary assessments for the NSW (zones 10, 20, 91) and the Victorian (Commonwealth, zone 60) components.
- Undertaking steps associated with advice from SERAG 1 for the single region model produced the final combined assessment. This resulted in an increase in the estimated 2024 stock status to 48% of unfished spawning stock biomass (SSB_0), compared to the preliminary base case estimate of 36%. This change appears to be driven by the change in the maximum modelled length from 25 to 30cm leading to an increase in the estimated growth rate.
- The final combined assessment estimates unfished spawning stock biomass (SSB_0) to be 13,207 t compared with 10,780 t from the 2020 assessment. The assessment projects that at the beginning of 2025 spawning biomass (SSB_{2025}) will be 7,110 t and stock status (SSB_{2025}/SSB_0) will 53.8%, assuming catches in 2024 are the same as those in 2023. The 2020 assessment estimated SSB_{2021} to be 4,407 t with SSB_{2021}/SSB_0 = 41%.
- The NSW-only assessment estimated SSB_0 to be 8,816 t, whereas the Victorian-only assessment estimated SSB_0 to be 5,175 t. SSB_{2025}/SSB_0 is estimated to be 81.0 % and 56.6% for the NSW and Victorian assessments, respectively. The overall estimate of SSB_0 for these two complimentary assessments is 13,992 t, similar to the estimate from the final combined assessment.
- The overall current stock status estimate of SSB_{2025}/ SSB_0 of 72.0% for the two complimentary assessments is much higher than the estimate of SSB_{2025}/ SSB_0 for the final combined assessment (i.e. 53.8%). This difference appears to be driven by the NSW assessment fitting the increase in recent CPUE of the Commonwealth trawl and NSW southern trawl fleets, fleets which catch a small proportion of the total catch, whereas the Victorian assessment (consisting of a single fleet) is not fitting particularly well to the recent decline in CPUE.

The RAG noted that the NSW model fitted to southern indices of abundance well. However, in order to do so, the model is overshooting the trends in the northern fishery, resulting in the model becoming overly optimistic. The RAG expressed concern with the consequences of accepting the optimistic NSW model. The RAG recommended that further work on this model is required, potentially with northern and southern NSW sub-stocks.

The estimation of growth had a significant impact on the School Whiting assessments and CSIRO requested formal instruction to review the boundary settings (i.e. maximum modelled length and age) within Tier 1 assessments before they are run.

Actions and recommendations from agenda item 3

SERAG recommended that the combined model (which pools data from Victoria and NSW) be accepted as the base case, because of the issues with the separate Victorian and NSW assessments.

The RAG recommended the 2-year average RBC of 3,023 t (retained catch 2,432 t and discarded catch 592 t) be applied to School Whiting for the 2025–26 and 2026–27 SESSF seasons.

Action Item: CSIRO to review boundary conditions (i.e. maximum modelled length and age) for Tier 1 assessments (before they are conducted) and seek advice at SESSFRAG Data Meetings where necessary.

4 Pink Ling - RBC Advice

4.1 Eastern Stock (Tier 1)

Pia Bessell-Browne opened the agenda item on the Tier 1 assessment on the eastern stock of Pink Ling. The RAG noted the following information:

- The assessment estimates that the 2025 stock status will be 43% of unfished female spawning stock biomass (SSB_0).
- The base case assessment estimated the unexploited female spawning stock biomass, SSB_0 to be 7,297 t (compared to 5,886 tonnes from the 2021 assessment). This change in SSB_0 is due to changes in model structure, mainly the inclusion of additional conditional age-at-length data and transition to length-based selectivity.
- Results showed reasonable fits to the CPUE abundance indices, although some residual patterns are evident in fits to the trawl series. Fits to the discard data are reasonable given the variability observed from year to year for some estimates. The fits to the length composition and the conditional age-at-length data are very good.
- There is some uncertainty surrounding the pre-specified values of M in the assessment. The pre-specified value of M is the same value as used in the 2021 assessment (Cordue, 2021). The assessment of the western stock in 2021 estimated M to be 0.23 and this parameter was applied to the eastern assessment. Given this value is higher than used for Pink Ling stock assessments in New Zealand (M=0.18), and the model preference for lower values, further investigation of suitable values of M is required. This work should include development of an informative prior for M to reduce the uncertainty associated with the pre-specified value of this parameter in the assessment.
- To further understand this uncertainty a cross-catch risk assessment was completed to investigate the risk of applying the SESSF HCR to the base case assessment with M=0.23 and M=0.18. This investigation demonstrated no increased risk to stock status over the next four years if catches are implemented following standard protocols. No scenarios resulted in a decline in female spawning stock biomass or stock status.

An Industry member voiced concern with the increase in the RBC when there are some concerns about recruitment. However, another member highlighted the large amount of additional data incorporated into the 2024 assessment which is driving the increase in the RBC.

4.2 Western Stock

The RAG noted that the most recent assessment of Pink Ling (west) was conducted in 2021 and estimated SSB at 91% of SSB_0. The 3-year average RBC of 1,193 t has been applied to this stock from the 2022–23 season onwards. The long-term yield for Pink Ling (West) is estimated to be 730 t.

The RAG examined the annual RBC projections from the 2021 Pink Ling (west) assessment and noted that these values had progressively declined by around 8.5% per annum. The RAG agreed that this step-down approach should continue for the next two seasons.

Actions and recommendations from agenda item 4

The RAG recommended a four-year static RBC based on the four-year average of 661 t for Pink Ling (east), noting the long-term yield is 726 t.

For Pink Ling (west) the RAG recommended a step-down RBC of 1,004 t for the 2025–26 season and 924 t for the 2026-27 season. This follows the gradual decline in annual RBC estimates from the 2021 assessment.

The RAG noted that deferring assessments creates inherent risk and recommended that an assessment of Pink Ling (west) be scheduled as soon as feasible.

AFMA informed the RAG that it will seek advice at the 2025 SESSFRAG Chairs' meeting on the timing of the next Pink Ling (west) assessment and the nature of any discount factors applied if the assessment is delayed beyond the 2026–27 season.

7 Deepwater Shark (East & West) Dynamic Tier 4 - RBC Advice

Robin Thomson opened the agenda item on the Dynamic Tier 4 assessments of the eastern and western Deepwater Shark baskets.

- The 2024 working group and SERAG endorsed the use of the 'middle' (use of logbooks and ISMP discard percentage) and 'recent' (use of catch report, CDRs, State catches and ISMP discard percentage) approaches to estimate historical catches and endorsement of the Nick Hill/CPUE method for 'early' time period.
- During the reconstruction of Deepwater Shark catch history, it was identified that two CAAB codes were missing (37 020 904 Roughskin Dogfishes and 37 990 003 other sharks) from the series. It was also identified that CSIRO's Deepwater Shark east/west zoning differed from the SESSF Fisheries Management Plan 2003 zone definitions.
- Due to the uncertainty around the catch history the Working Group recommended deferring the Dynamic Tier 4 assessments of both species baskets until the changes could be investigated.
- In Nick Hill's work, the average trawl CPUE for 1996–2001 was used however CPUE declines rapidly over that time so it might be more representative to use the average over just 1995–1996.
- Although Nick Hill's work does not incorporate the depth of fishing, there is potential to use logbook position to estimate depth so that recorded shots can be used in a regression model that includes depth as a factor to estimate deepwater shark catches

The RAG noted that the assumption of consistent discarding means there is then no need to include a discard factor in assessment.

A scientific member suggested that the gemfish ISMP zones were based on genetic differences and that boundaries for this species may not be appropriate for Deepwater Shark. The RAG recommended that CSIRO go back to using longitude 147 degrees East as the point of separation for two Deepwater Shark baskets.

In the absence of new assessments, the RAG rolled over the current TAC and RBC for Deepwater Shark east and west, respectively.

Recommendations from agenda item 7

The RAG recommended:

1) That the Dynamic Tier 4 assessments for both Deepwater Shark baskets be deferred until the abovementioned data issues are resolved;
2) Maintaining the current RBC of 10 t, and TAC of 24 t (to limit discarding), for Deepwater Shark (east), and:

3) Maintaining the current RBC of 327t t for Deepwater Shark (west) as the 2nd year of a 3-year RBC period.

10 Blue-eye Trevalla (Slope) Dynamic Tier 4 - RBC Advice

Miriana Sporcic opened the agenda item on the Dynamic Tier 4 assessment for Blue-eye Trevalla (slope) and the RAG noted the following points:

- Changes to the Dynamic Tier 4 assessment include catch history series spanning 1969–2023 compared to the previous assessment that used 1997–2022 series, standardised dropline-CPUE series between 1997–2006 and standardised Autoline-CPUE series that incorporates Pink Ling as a covariate in the statistical standardisation analysis from 2005 onwards, as requested by the Blue-eye Trevalla and Pink Ling Working Group.
- The 2025 RBC was 295.71 t, corresponding to a 20.55 t increase compared to the 2024 RBC (275.16 t) based on the Traditional Tier 4 assessment. This increase in RBC may be attributed to the use of the new assessment method and (i) standardised CPUE series for autoline and dropline and (ii) annual catch history series.

The RAG noted that although the Dynamic Tier 4 assessment on Blue-eye Trevalla was more robust than the Traditional Tier 4 assessment, this new method has limitations. Members stressed the need to transition to a Tier 1 assessment for Blue-eye Trevalla (slope) as soon as practical.

Recommendations from agenda item 10

The RAG accepted the outputs of the 2024 Dynamic Tier 4 assessment of Blue-eye Trevalla (slope) and recommended an RBC of 296 t for this stock (to be combined with the 36 t catch limit for the seamount stock).

The RAG recognised the limitations of the Dynamic Tier 4 assessment and recommended that work be undertaken to transition the Blue-Eye Trevalla slope assessment to a Tier 1 assessment.

5 Silver Warehou Tier 1 - RBC advice

Geoff Tuck opened the agenda item on the Tier 1 assessment of Silver Warehou and the RAG noted the following points:

- The projected 2025 stock status is 48% of unfished levels, compared to 29% in 2022 from the 2021 assessment. The 2025 RBC produced by the assessment is 1,590 tonnes (122 tonnes of discards), with long-term yield projections assuming low recruitment (averaged from 2014–2018).
- Recruitment estimates have increased, particularly from 2013 onwards, with the 2018 recruitment deviation above average.
- Fits to CPUE abundance indices for both fleets were poor, with recent overestimation in the west trawl fleet. Fits to discard rates were reasonable, but the model struggled to fit the high discard rates in the east trawl fleet from 2018 and the west trawl fleet in 2021-2022.
- Fits to length data were also poor, due to highly variable annual length compositions.
- There are concerns regarding the outcomes of the assessment and results should be treated with caution.

Dr Tuck stressed that several issues require further consideration before any future Silver Warehou assessment are attempted. These include consideration of:

- Starting recruitment estimation from 1990.
- The removal of length composition with small sample sizes.
- Separation into eastern and western assessments.
- A Harvest Control Rule that 'works' with low recruitment projections (pending funding).

An Industry member stated that Silver Warehou is not a target species, that current catches are low (~100 t) and questioned the need and validity of future Tier 1 assessments on this species (particularly given the cost of such assessments).

After a prolonged discussion, the RAG agreed that it would not accept the outputs of the 2025 Tier 1 assessment of Silver Warehou and proposed that the current 350 t TAC be maintained until a viable assessment option is developed.

AFMA advised the RAG that it would seek advice on assessment options for Silver Warehou at the 2025 SESSFRAG Chairs' Meeting.

Recommendations from agenda item 5

SERAG rejected the 2025 Tier 1 assessment of Silver Warehou and recommended maintaining the TAC of 350 t based on constant catch projections from the 2021 assessment.

6 Traditional Tier 4 - RBC Advice

Miriana Sporcic opened the agenda item in the Traditional Tier 4 assessments for Mirror Dory (east and west) and Oreo Basket and the RAG noted the following points:

6.1 Mirror Dory

Eastern stock

The 2024 RBC estimate for Mirror Dory east is 372.92 t. This is an increase of 103 t (or 38%) from the previous year's RBC and can be mostly attributed to an increase in the most recent four-year average CPUE (including discards) which was used to calculate the RBC.

Discard estimates used in the 2024 eastern assessment are high. However, Industry members noted that catches are significantly constrained by quota availability resulting in larger amounts of discards.

Industry highlighted to the RAG that the previous RAG recommendation made to the Commission was to waive the application of the 'large change limiting rule' to increase catch.

AFMA noted that even with the large change limiting rule applied, the quota for 2025 will increase to 372.92 t from the previous 270 t estimate in 2023.

A Scientific member noted the assessment is acceptable, considering the increase in discards over the past four years aligns with the reports of high discards.

Western stock

The 2024 RBC estimate for Mirror Dory west is 107.60 t. This represents a 41% increase from the previous year's RBC (76.32 t) and can be attributed to an increase in the most recent four-year average CPUE which was used to calculate the RBC.

The RAG requested reports on discards from fishers in the west to compare with those in the east. Industry noted Mirror Dory catch is greater in the east, and quota constraints are not an issue for the west.

Industry expressed support for Electronic Monitoring onboard vessels to assist in discard rate calculation to improve stock assessments.

6.2 Oreo Basket

The 2024 RBC estimate for Oreo Basket is 547.9 t, an increase of 377.7 t (or more than 200%) compared to the previous 2020 estimated RBC (170.2 t). This increase can be attributed to an increase in the mean of the most recent four-year average CPUE which is used to calculate the RBC. The 2024 RBC is greater than the reported catch of approximately 80.6 t (234.8 t including discards) in 2023 for this stock.

An ABARES observer noted that the RBC estimate produced by the 2024 assessment is driven by discard estimates, as 2022 and 2023 discard estimates were forward filled from 2021, using a discard percentage of 66%, the highest discard percentage since 2007.

The RAG noted that:

1) The model fit to the CPUE series is poor;
2) Oreos are a byproduct of targeted Orange Roughy fishing; and,
3) Issues with discard estimates for Oreos have been known for several years and CSIRO is in the process of reviewing the ISMP strata used for discard estimation (which will impact future discard estimates for this group of species).

A scientific member raised concerns about the validity of using CPUE as an index of abundance for bycatch species and suggested that Oreo abundance should be calculated as a percentage of Orange Roughy catch (as the target species). Other RAG members supported the concept but noted that such a change needs to be part of a broader discussion covering all bycatch species."

An Industry member highlighted that the cost of running the fishery is high and suggested that limited research funds should be directed towards assessments of primary target species rather than a byproduct species or group (such as Oreos).

Given the large increase in the RBC produced by the 2024 Tier 4 assessment of Oreo basket, combined with the other issues discussed, the RAG was not confident with the outputs of this assessment and deferred to the RBC of 170 t from the previous 2020 assessment.

Recommendations from agenda item 6

6.1 Mirror Dory

The RAG accepted the outputs of the 2024 Tier 4 assessments of the eastern and western stocks of Mirror Dory and recommended a two-year static combined (east and west) RBC of 481 t for this species for the 2025–26 and 2026–27 SESSF seasons.

6.2 Oreo Basket

The RAG rejected the 2024 Tier 4 assessment of Oreo basket and recommended maintaining the current RBC of 170 t until the review of discard strata is completed.

8 Electronic Monitoring trial in the CTS

Tamre Sarhan opened the agenda item on the trial of the Electronic Monitoring (EM) in the Commonwealth Trawl Sector (CTS).

The RAG noted the following points:

- Four vessels are involved in the trial; three board trawlers and one Danish seiner.
- EM data collection with concurrent with at-sea observer trips has been completed for all participating vessels.
- The project is now in the 'data review' phase.
- CTS-specific review protocols have been finalised and are being used by reviewers. Once the review of trips with at-sea observers is completed, the analysis comparing EM data to that of observers will be undertaken by ABARES.
- Currently in communication with CSIRO regarding potential for AI to be used with EM monitoring.
- $4 million in funding for EM project will be carried over to the 2025–26 financial year to facilitate rollout of EM into additional fisheries.

The RAG discussed the following points:

- The EM team's confidence in discard data reliability. Logbook, whole, snapshot and observer discard rates for each of the CTS vessels. Noting snapshots have increased from three to five.
- There is no set timeframe for when the EM rollout will occur. However, the trial will conclude in early 2025. There is a lot of work remaining, and the working group continues to identify gaps and improvements to the workplan.

9 Effects of Spatial Closures Presentation (Withdrawn)

12 Hagfish non-quota TAC advice

The current TAC for Hagfish is 80 t (split even across zones 10 and 20) and is based on the maximum annual catches during the 2018–19 and 2019–20 fishing seasons.

The Hagfish industry has expressed interest in increasing the TAC, but AFMA considers that current catch and effort data are not sufficiently robust to justify an increase in the TAC.

Industry has been working on an escape gap trial (to select for larger individuals that the market prefers) but has not yet made the data available to AFMA.

Recommendations from agenda item 12

The RAG recommended maintaining the 80 t TAC for Hagfish during the 2025-26 SESSF season on the basis that there is no new information to warrant a change in the TAC. The RAG also urged Industry to forward any new data, including the results of the escape hole trial, as soon as possible.

13 Summary of the upper-slope dogfish monitoring project

Franzis Althaus opened the agenda item on the results of the upper-slope dogfish surveys conducted in 2022 and 2023. The RAG noted that the final report for the project *Implementation of a survey program to monitor recovery of Conservation Dependent Southern Dogfish and Harrisson's Dogfish* has now been published.

The RAG also noted that CSIRO is developing a proposal (for submission to the AFMA Research Committee) to undertake similar work on upper-slope dogfish in the Great Australian Bight. The components of this work include:

- Collection baseline data in the 60-mile closure;
- Genetic analyses to assess connectivity and stock structure among populations of Harrison's and Southern Gulper Shark;
- Assessment of Gulper Shark bycatch in the SESSF since the implementation of the Upper-Slope Dogfish Management Strategy (USDMS) in 2013; and
- A pilot study to determine the viability of eDNA as a complementary monitoring method to inform the USDMS.

11 Review of trigger species assessment and TAC options

Mark Grubert introduced the agenda item to review TAC and assessment options for Alfonsino and Smooth Oreo Cascade.

The RAG noted that a recent comparison age estimates of (Indian Ocean) Alfonsino derived from whole versus thin-sectioned otoliths (Andrews, 2023), suggests that age reads from whole otoliths (such as those which informed the last assessment of Alfonsino in 2013) can produce estimates at least 50% lower than those derived from reads of thin-sectioned otoliths.

Dr Kyne Krusic-Golub (Fish Ageing Services - FAS) provided a summary of age estimates of Alfonsino sampled from Australian waters in the context of the study by Andrews, 2023.

- The most recent ageing of Alfonsino (from the East Coast Deepwater Trawl Sector) was completed between 2009–2013, with 2,216 samples analysed. More recently, FAS has aged 200 samples from the eastern and western Indian ocean.
- The bomb radiocarbon ageing of Alfonsino undertaken by Andrews (2023) was based on 12 individuals and suggested that whole otolith ageing may underestimate the age of fish older than 10 years.
- Given the small number of otoliths analysed by Andrews (2023) and that Alfonsino sampled from the Indian Ocean are unlikely to be representative of conspecifics from the Western Pacific Ocean, the findings of this work should be treated with caution.

The RAG noted that AFMA intends to implement concession conditions requiring prior notification of the first fishing trips of the season to the Cascade Plateau and the East Coast Deep Water Trawl (ECDWT)

grounds. The intent of these conditions being to better coordinate data collection on Orange Roughy and Oreos from the Cascade Plateau and Alfonsino caught by the ECDWT sector.

RAG members agreed that there are insufficient data to support new assessments for either Alfonsino or Smooth Oreo Cascade and that the current TACs and catch triggers be maintained for another six seasons.

Recommendations from agenda item 11

The RAG recommended maintaining the existing TAC and catch triggers for both Alfonsino (i.e. 1017 t and 50 t) and Smooth Oreo Cascade (i.e. 150 t and 50 t) for the next six-year trigger period (beginning on 1 May 2025) as there is no evidence to warrant a change in either case.

The RAG also recommended that ageing of Alfonsino otoliths resume if and when this species is consistently targeted.

20 WORRP update, review of sampling targets and Research Catch Allowance for 2025–26

Mark Grubert opened the agenda item on the Western Orange Roughy Research Plan (WORRP) and the RCA for Western Orange Roughy during the 2025–26 season.

Industry highlighted the opportunity for two vessels fitted with EM to fish for Orange Roughy in the Murray Dogfish Closure during the 2024–25 season. EM is becoming a competitive incentive for vessels, as it can open up opportunities.

Kyne Krusic-Golub provided a summary of the otoliths collected since the inception of the WORRP and some issues that need attention.

- A total of 11,442 samples have been registered; capture locations for 9,017 (or 79%) of these samples are known with high confidence, and but the capture location of 2,425 (or 21%) of these samples is known with low to moderate confidence.
- Industry agreed to take steps to improve record keeping but also noted the large number of otoliths collected over the past five years (which provides a degree of redundancy) and requested that CSIRO provide revised sampling targets for the WORRP as Industry appears to be higher than required for likely assessment methods.

The RAG commended SETFIA for the work undertaken thus far and supported the continuation of the 200 t RCA for Western Orange Roughy during the 2025–26 season, together with the associated catch triggers for each sampling zone.

Recommendations and action items from agenda item 20

The RAG recommended that the current (200 t) RCA for Western Orange Roughy be maintained for the 2025–26 season, together with the catch triggers/sub-triggers in each sampling zone.

Action Item: Paul Burch (CSIRO) to inform SETFIA of revised length and otolith collection targets for Western Orange Roughy by 31 March 2025.

15 Threatened endemic elasmobranchs report (Merged with item 16)

16 Shark bycatch issues

Michelle Henriksen opened the agenda item seeking advice on the updated 2025-26 Gillnet Hook and Trap Scalefish Autoline Bycatch and Discard Work Plan.

The 2021 ERA identified no species as high or extreme risk for the Scalefish Automatic Longline Sector and therefore do not require specific action items to be developed within the work plan. However, the inclusion of an action item to improve data collection and species ID has been proposed which extends to all deepwater sharks and skate species, including those proposed for listing.

A recent publication by Daley and Hyde (2023) (*Fishery and spatial management solutions to inform the protection and recovery of Australia's threatened endemic elasmobranchs)* outlined 10 endemic shark and ray species having overlap with the SESSF. Five of these species are being considered for listing under the EPBC act:

- Whitefin Swell Shark
- Longnose Skate
- Grey Skate
- Eastern Angel Shark
- Greeneye Spurdog

None of these species were identified as high risk in the most recent Ecological Risk Assessments of the GHAT, GAB or CTS.

Most of the Whitefin Swellshark catch comes from discarded catch by gillnet – this is assumed to be an error by logbook software (CAAB codes) and/or misidentification.

Of the species considered for listing, only Whitefin Swell Shark and Greeneye Spurdog have been recorded in logbooks by the Autoline sector.

Greeneye Spurdog is a no take species for SESSF operators and is afforded protection by the upper slope dogfish closures (which may also provide benefits to Whitefin Swell Shark).

A recent survey in the dogfish closures by CSIRO observed Whitefin Swell Shark in 70% of the baited remote underwater video station (BRUVS) operations in the Flinders Research Zone closure and in all operations in the Port MacDonnell closure. Preliminary results from the SEA-MES survey also indicate an increase in the abundance of Whitefin Swell Shark.

Proposed action items for inclusion in the updated Bycatch and Discarding Workplan:

- Develop a broader and more relevant species identification guide for Sharks, Skates and Rays.
- Consider recommendations from the ABARES congruence report for EM/Logbook data.
- Review the operational guidelines for seabird bycatch.
- Investigate the accuracy of logbook CAAB codes for Whitefin Swell Shark.

The RAG was informed of two instances where observers on Auto-longline boats detected Draughtboard Sharks being misidentified as Whitefin Swell Sharks. ABARES staff also noticed that Draughtboard Shark had been incorrectly coded as Whitefin Swell Shark when undertaking the EM logbook congruence work.

Industry noted that Greeneye Spurdog are a no-take species and look similar to Harrison's Dogfish.

The operational guidelines for seabird bycatch have several recommendations requiring action. This is a high priority action and is expected to be addressed in the next 12 months

Recommendations from agenda item 16

The RAG recommended that all the proposed action items be included in the new Autoline Bycatch and Discarding Work Plan.

17 Developing & validating novel methods to estimate age- & size-at-maturity in SE Australian fisheries

John Morrongiello opened the agenda item on the project "*Developing and validating novel methods to estimate age-and size-at-maturity in south east Australian fisheries".*

Maturity can pose a challenge for stock assessment models as they generally assume that all fish reach sexual maturity at the same age, that this age at maturity remains stationary through time, and that all sexually mature fish spawn each year. These assumptions may be violated due to climate and fishing-induced changes in age at maturity and environmental stressors leading to poorer conditioned fish.

Fish otoliths archive reproductive proteins and assays are being developed for commercial-scale fish ageing to determine the frequency of spawning events over a fish's lifetime.

The key objectives of the project are to:

- Refine and validate maturity and spawning assays; and
- Assess potential shifts in maturity and skip spawning through time.

The novel assays of reproductive proteins in otoliths include:

- Clarity and act-presto methods;
- Visual spatial analysis techniques on sectioned otoliths; and
- Direct visualisation of antibodies in otolith sections.

The next steps for the project are to:

- Visualise and quantify vitellogenin on sectioned otoliths of four species (soon to be completed). If this works, continue refining method to explore cost effectiveness, or switch to Clarity/MALDI.
- Develop empirical maturity ogives for target fish species – advice sought,
- Continue working on statistical growth model approach; collaborators in Iceland and Poland working on complementary cod project.
- Recreate maturity/spawning frequency time series for SESSF species.
- Jackass Morwong has been selected as a candidate species to investigate historical environmental effects. Redfish is a potential candidate species if funds allow.

The RAG noted that there is a large otolith catalogue (dating back to the 1980s) for the candidate species that can potentially be used to examine responses to environmental change.

18 Ocean Jacket and Silver Trevally stock structure

John Stewart opened the agenda item on stock structure of Ocean Jacket and Silver Trevally and acknowledged the funding support from the Fisheries Research and Development Corporation.

With respect to Ocean Jackets:

- Genomic analyses showed two distinct populations, with low to negligible levels of genetic differentiation within each population and a medium to high differentiation between populations (low connectivity).
- Otolith analyses revealed that otolith shape was highly variable with no consistent patterns. Otolith chemistry shows large scale patterns consistent with western and eastern stocks (75% classification success rate) and evidence of differential habitat use within each stock.

With respect to Silver Trevally:

- Genomic analyses revealed three distinct populations, with low to negligible levels of genetic differentiation within each population and a medium to high genetic differentiation between populations (low connectivity).
- Otolith chemistry varied among locations and jurisdictions. East-coast chemistry overall classification accuracy of 78% when pooling all NSW state-managed locations and all Commonwealth locations. Different habitat uses over recent timescale, suggestive of inshore/offshore ontogenetic movement.

Action Item: AFMA to distribute John Stewart's report "*Identifying biological stocks of Silver Trevally and Ocean Jackets for assessment and management*" when accessible on the FRDC website.

19 2024 Eastern Zone Orange Roughy AOS results

Rudy Kloser opened agenda item 19 for SERAG to note the results of the July 2024 Acoustic Optical Surveys of Eastern Zone Orange Roughy.

The objectives of the 2024 voyage were to conduct acoustic biomass surveys of spawning Orange Roughy on St Helen's Hill and St Patrick's Head and to collect biological data to support target strength, age, length, weight, and environmental analyses.

- A total of 2,376 fish lengths and 910 otoliths were collected across 20 trawl shots.
- The data quality was very good for the towed-body AOS (120 kHz) but vessel acoustics were affected by persistent wind during the survey period.
- At sea estimates of the density of Orange Roughy at St Patrick's Head ranged from 17,000 to 39,000 tonnes, higher than the estimates from 2019 surveys at this location (5,000-13,000 tonnes) and the 2024 surveys at St Helen's Hill.
- St Helen's Hill had stable schools but high amounts of gas bladder species contamination – at sea biomass estimates were more variable than the 2019 surveys at this location.

Conclusions from the survey:

- The CSIRO Acoustic Optical System worked very well.
- The Simrad EK60 systems are getting old and newer, smaller equipment is available.

- A transition to the newer technology and housing (already built by CSIRO) could assist with reliability at sea.
- If performance of the new technology at 120 kHz frequency is proven it could become the main reporting frequency.

The RAG noted that:

- Multiple transects are required because some level of "contamination" with gas bladder species is expected and individual transects are rejected when this contamination occurs.
- The survey is only able to estimate the number of Orange Roughy present, not the proportion of fish spawning.
- The age structure and behaviour of Orange Roughy differs among locations. Those at St Patrick's Head are generally younger and tend to disperse and re-aggregate quite quickly (compared to St Helen's Hill).

21 Blue Grenadier acoustic survey results

Haris Kunnath (CSIRO) opened the agenda item on the results of the 2023 and 2024 acoustic surveys of the Blue Grenadier winter spawning aggregation.

The first phase of the project was to estimate target strength and biomass, and the second phase (since 2010) is the continuation of biomass time series and development of monitoring metrics (fish school metrics, environmental, fisheries indicators).

The objectives of the recent work were to:

- Conduct acoustic surveys through the 2023 and 2024 winter spawning aggregation of Blue Grenadier. Facilitating the development of a sustainable industry-based observation system;
- Produce biomass estimates of the Blue Grenadier spawning aggregation as an input to stock assessments for supporting management decisions; and
- Enable sustained acoustic observations of the Blue Grenadier fishery. This gives the potential to develop time series monitoring metrics (school metrics, fishing patterns) to detect seasonal and inter-annual trends, complementing formal biomass surveys.

The RAG noted that the biomass estimates from the 2023 and 2024 Blue Grenadier surveys will be incorporated into the 2025 Tier 1 assessment of this species.

23 Climate Risk Framework

Daniel Corrie opened agenda item 23 on the trial application of AFMA's Climate Risk Framework (CRF) in the SESSF. The RAG discussed the following points regarding the trial application of the CRF to Royal Red Prawn:

- Using the word 'risk' suggests something negative. This won't always be the case. Suggestion to use the word 'impact' instead.
- Industry highlighted that CPUE is increasing because of more consistent fishing effort in recent years and suggested that the risk rating be changed to 'low' rather than 'none'. Uncertainty as to climate impacts on Royal Red Prawn should also produce a higher risk rating.

- Mr Corrie advised that the risk classification of ‘none’ will be changed (probably to “minimal”), as we cannot be certain that there is no climate impact on Royal Red Prawn (or other species).

The RAG discussed the following points regarding the trial application of the CRF to the eastern Orange Roughy stock:

- There is no Marine Stewardship Council (MSC) equivalence as a mitigation measure. The MSC only evaluates current management measures when assessing a stock for certification.
- The RAG agreed that the climate risk rating for the eastern Orange Roughy stock was appropriate and agreed to maintain the risk rating at ‘none’ (noting that another descriptor will be used in future).

The RAG discussed the following points regarding the trial application of the CRF to Jackass Morwong:

- Industry highlighted that the recent changes in Danish seine net configuration was a further measure to limit impacts on Jackass Morwong.
- An ABARES observer noted that a reduction in landed catch may not be positive indicator as it may reflect a decline in biomass. Mr Corrie advised that landed catch is one component of the risk evaluation process. Step three allows for the RAG to make an alternative judgement.
- A scientific member suggested that catch rates in open areas be examined and not just catches in general.
- Current policy outlines even if environment is the main driver of decrease in stock abundance, it is imperative to take management action to get the stock back to the limit reference point. A specific climate classification should be developed.
- The RAG agreed that significant management measures are warranted to reduce the mortality of Jackass Morwong.
- The RAG agreed that the climate risk rating for Jackass Morwong was appropriate and agreed to maintain the risk rating as ‘Medium’.

The RAG discussed the following points regarding the trial application of the CRF to Blue-eye Trevalla:

- An Industry member noted that the impact of orca depredation on Blue-eye Trevalla abundance had not been considered and requested clarification on how Industry should report orca depredation.
- The RAG agreed that the climate risk rating for Blue-eye Trevalla was appropriate and agreed to maintain the risk rating as ‘Low’.

The RAG discussed the following points regarding the trial application of the CRF to John Dory:

- There are limited data available for John Dory.
- There was a conflict in data sources in previous the John Dory assessment; age and length data suggested that the stock was well above the limit, but the pattern in CPUE suggested that it was below the limit.
- Rikki Taylor (a PhD candidate at CSIRO/IMAS) may conduct a data-limited assessment of John Dory in 2025.
- Discards of John Dory are typically less than 5 t, much lower than for Jackass Morwong.

- The RAG agreed with the high-risk rating for John Dory, but the 'immediate response before next season' associated with this rating was not considered practical (as it does not allow time for sensitivities to be conducted before implementing a response).
- There was further concern with the high-risk rating indicating no action has been taken to rectify stock levels when that does not reflect the actions that have been taken.
- The RAG recommended that the CRF should be refined to address the issues identified through its application to John Dory.

A scientific member commended Mr Corrie on the CRF as a means of formally including climate change impacts when providing management advice.

Recommendations and action items from agenda item 23

The RAG supported the CRF, noting that there will be some changes to the urgency and timeframe descriptors in the finalised framework.

The RAG recommended that the residual risk for Royal Red Prawn be ranked as "low".

The RAG agreed with the residual risk ratings for Blue-eye Trevalla, Orange Roughy and Jackass Morwong noting concerns with uncertain discard estimates of Jackass Morwong, and the effect of climate change impacts on stock abundance and how the framework and policy respond to that.

The RAG raised concerns with the "high" residual risk rating for John Dory, noting the time limits and urgency associated with the limits next to the risk profile needs to be reconsidered before the RAG can provide an informed assessment for the risk profile.

Action Item: AFMA to clarify depredation fields have been incorporated into electronic logs for Blue-eye Trevalla. Confirm what fields are being collected with SERAG and provide guidance on utilising fields with Industry.

22 Discussion on the review of the Blue Grenadier assessment

Geoff Tuck opened the agenda item on the review of the Blue Grenadier Tier 1 assessment undertaken by Dr Kelli Johnson of the (United States) National Marine Fisheries Service. Dr Johnson had a number of questions and suggestions regarding the structure of the assessment and the content of the associated report. These included:

- Improved explanation of the catch history and how discards are presented in assessments and turnover;
- Number of sensitivities with regard to inclusion and exclusion of CPUE and eggs survey, attempting a single sex model and remove cohort-dependent growth;
- Looking at σ_R and recruitment deviations;
- Suggested estimating natural mortality and steepness at the same time;
- Including and excluding acoustic surveys to see influence on outcomes;
- Expressed concerns with current biomass being greater than virgin biomass; and
- Developing a surplus production model to compare to the Tier 1.

A number of these points have been addressed in earlier assessments and CSIRO will discuss the above recommendations with Kelli Johnson before undertaking Tier 1 assessment in 2025.

The RAG expressed concern with removing cohort-dependent growth from the model given the recruitment dynamics that Blue Grenadier exhibits. The RAG also questioned the merits of a single-sex model given the differential growth of male and female Blue Grenadier.

The RAG agreed with the suggestion to exclude acoustic survey data as a sensitivity to determine its influence on assessment outputs.

A scientific member noted that Blue Grenadier is impacted by environmental change and that the high estimate of relative biomass (i.e. above virgin biomass) may be the product of environment variation rather than a problem with the assessment model.

The RAG was supportive of additional sensitivities being run but also noted the extra time (and cost) in doing so. The RAG agreed that external reviews of assessments are important to the development of more effective stock assessments and recommended that AFMA write a letter of thanks to Dr Johnson.

14 SESSF Research Statement

Mark Grubert opened the agenda item on research priorities to be included in SESSF Annual Research Statement 2026-27 and research proposals submitted to the AFMA Research Committee for potential funding in the 2025-26 financial year.

The RAG noted that only one essential research priority for the CTS (i.e. A Blue Grenadier acoustic survey) was identified for potential AFMA funding during the 2025-26 financial year. No new essential research priorities were identified for the GHAT sector.

The RAG also noted that Blue Grenadier acoustic surveys to date have been undertaken through annual contracts, and that AFMA suggests that they now be undertaken through to three-year contracts (to reduce administrative burden).

The RAG considered the 3-year acoustic survey project proposal outlined by Dr Haris Kunath (CSIRO) including a sub-project to examine Blue Grenadier movement.

A scientific member highlighted a gap in current knowledge of sub-surface conditions and suggested that Haris include the use of environmental data loggers (mounted in the nets) in his research proposal.

The RAG noted that AFMA has identified four research priorities for potential ARC funding starting in the 2026-27 financial year, as follows:

1. Ageing of SESSF quota species for three years (ending 30 June 2029);
2. Stock assessments and data services for SESSF species for three years (ending 30 June 2029);
3. A review of Tier 1 assessment; and
4. An evaluation of vessel profitability, market trends and price elasticity in southern Australian trawl fisheries.

The fisheries economics research priority arose from a desire to understand the impacts of recent high fuel prices, the structural adjustment and spatial closures on the economics of the SESSF trawl sectors.

The economics member agreed that more work is required on price elasticity, and that it could follow the methodology developed in 2021.

An Industry member raised the point that ABARES has previously conducted research on fishery economics and suggested that the work be undertaken as part of their core business.

Recommendations from agenda item 14

The RAG supported the research proposal submitted by Haris Kunnath for Blue Grenadier Acoustic Surveys during the next three SESSF seasons (starting in the 2025–26 financial year).

The RAG supported the following research priorities to be included in the 2026–27 SESSF Research Statement:

1. "*Ageing of SESSF quota species for three years (ending 30 June 2029)".*
2. "*Stock assessments and data services for SESSF species for three years (ending 30 June 2029)*"
3. "*Review of the Eastern Zone Orange Roughy Assessment*"

The RAG did not support the priority "*An evaluation of vessel profitability, market trends and price elasticity in southern Australian trawl fisheries*" for ARC funding and suggested that it be undertaken as part of the routine work of the Fisheries Economics section of ABARES.

24 Other Business

The RAG noted that AFMA relies on video recordings and AI-generated transcripts to produce meeting minutes. It also noted that AFMA has, with assistance from CSIRO, begun using Microsoft Co-Pilot to produce meeting minutes from the transcripts.

The RAG requested clarity on AFMA's policy on deleting meeting recordings and AI-generated transcripts.

Action Item: AFMA to outline the process for deleting video recordings of RAG meetings and the associated AI-generated transcripts.

Andrew Penney gave a presentation entitled "*What should we be doing in response to persistent below-predicted recruitment in a stock*" using Silver Warehou and Jackass Morwong as examples.

The RAG noted the following points:

- Non-fishing effects on below-predicted recruitment stocks: Jackass Morwong has a high climate sensitivity, with an average Abs (ln(BnoF/B0) of ≈ 0.5 and Silver Warehou has a medium climate sensitivity, with an average Abs (ln(BnoF/B0) of ≈ 0.2.
- There is an example from the South Pacific Regional Fisheries Management Organisation (SPRFMO) 2012 Chilean Jack Mackerel assessment where stock recruitment estimates (with steepness fixed at 0.8) were estimated for different regimes. For near-term projection purposes, the regime specified from 2000-12 was used for this assessment.
- The recent use of low recruitment projections for Jackass Morwong and Silver Warehou support the notion of regime shifts.
- The presentation emphasised the need for further work on low-recruitment stocks, as there is no single solution on how to deal this issue. Several factors can contribute to low stock recruitment, and many works are underway to attempt to resolve the drivers of low recruitment.

Close of Meeting

Members noted that the next meeting will be held in 2025 in Hobart. The Chair thanked the RAG for their contribution and closed the meeting at 12.13 hr AEDT.

Attachment A – Register of Interests

Members, invited participants and observer's declarations of interest.

Participant	Declaration
Dr Paul McShane (Chair)	Chair of SERAG and a member of SEMAC and SESSFRAG. No pecuniary interest in the SESSF. Principal of Global Marine Resource Management Pty Ltd. Adjunct Professor (Fisheries and Aquaculture) College of Science and Engineering, James Cook University
Dr Mark Grubert	Employed by AFMA, Manager of the South East Trawl (SET) and Great Australian Bight (GAB) Trawl sectors. No pecuniary or other interest.
Dr Sarah Jennings	Adjunct Senior Researcher, TSBE Economics member of SERAG Economic member of SEMAC Member of AFMA EWG Independent economics consultant No pecuniary or other interest in the SESSF.
Dr Geoff Tuck	Involved in Stock assessments. Interest in obtaining funding for future research. Principle investigator on the SESSF stock assessment project. Project leader CSIRO Marine Visual Technologies project team on automated catch detection and species identification.
Dr Andrew Penney	Director of Pisces Australis Pty Ltd, an Australian registered marine/coastal research and management consultancy based in Canberra - interests in any opportunities in this regard. Currently Principal Investigator on FRDC Projects Nos 2017-180: Design and implementation of an Australian National Bycatch Report: Phase 1 – Scoping; and 2019-036: Implementation of dynamic reference points and harvest strategies to account for environmentally-driven changes in productivity in Australian fisheries. Independent scientific member on the AFMA Southeast RAG, the Tropical Rock Lobster RAG and the Small Pelagic Fishery RAG. Member of the AFMA ERA Technical Working Group. Deputy Scientific Member on the New South Wales Fisheries Total Allowable Fishing Committee Sep 2020 to Sep 2023. No shareholding and hold no positions relating to any other companies, including any fishing companies or industry associations.
Dr Ian Knuckey	Positions: Director – Fishwell Consulting Pty Ltd Director – Olrac Australia (Electronic logbooks) Chair – Northern Prawn Fishery Resource Assessment Group Chair – Tropical Rock Lobster Resource Assessment Group Chair – Victorian Rock Lobster and Giant Crab Assessment Group Chair – Gulf of St Vincent's Prawn Fishery MAC Research Scientific Committee Scientific Member – Northern Prawn MAC Scientific Member – Gulf of St Vincent Prawn Fishery MAC Scientific Member – Tropical Tuna Resource Assessment Group Member – The Agri Collective Current projects: FRDC 2018-021 – Development and evaluation of multi-species harvest strategies in the SESSF IMOS Fishing Ships of Opportunity project (FishSOOP)

	FRDC 2023-063 – Design of a fishery independent longline survey for chondrichthyans in Northern Australia FRDC 2024-012 – Capturing fisher ecological knowledge of climate change: a Southern and Eastern Scalefish and Shark Fishery case study AFMA 2020-0807 – Bass Strait Scallop Fishery Survey – 2020-22 NSW 2021-1238 – Developing a harvest strategy framework for Aboriginal cultural fishing in NSW Traffic Project – Shark Product Traceability Sea Cucumber – Design and implementation of various sea cucumber dive surveys. Australia Bay – Qld Gulf of Carpentaria Developmental Fin Fish Trawl Fishery, onboard and EM observer work. WAFIC Project – Strategic Review of Western Australia's Shark Fisheries
Dr Jeremy Lyle	Adjunct Associate Professor (Institute for Marine and Antarctic Studies) Steering Committee Chair, RecFishing Research Coordination Program (FRDC) Scientific Board Member for the Tasmanian Association for Recreational Fishing (TARFish) - peak body for recreational fishing in Tasmania.
Mr Ross Winstanley	No pecuniary interest in the SESSF.
Mr Daniel Hogan	Owner operator of trawler Zeehaan out of Portland, Vic. Commonwealth Trawl Sector boat and quota SFR holder.
Mr Will Mure	Sole Director of Mures Fishing P/L Commonwealth fish receiver permit Tasmania fish processing licence Scalefish hook boat SFR, SEQ Quota Holding Permits, Auto longline fishing permit High Seas permit Blue eye trevalla SFRs, Ling SFRs, Ribaldo ITP Mixed species Individual Transferable Quotas (ITQs) and SFRs Member of various fishing related associations including Seafood Industry Australia (SIA), South East Trawl Fishing Industry Association (SETFIA), Southern Shark Industry Alliance (SSIA), Tasmanian Seafood Industry Council (TSIC)
Mr Simon Boag	EO SETFIA (trawl), SSIA (sharks) and SPFIA (Small Pelagic Fishery) Industry member on both SERAG and SEMAC. SSIA is engaged by AFMA to collect shark industry biological data. Atlantis undertakes work to assist shared marine space developers (wind, oil etc) understand the fishing industry. Atlantis undertakes other work within the fishing industry including on MSC assessments. SETFIA is the PI on the orange roughy east AOS. SETFIA is engaged by participants within the W ORS research fishery to collect biological samples. SETFIA is engaged by AFMA under co-management to undertake a variety of tasks including snapper management, ling management, future industry data collection and consultation. Investment committee member of a large fund that owns fishing rights including SBT, ling and flathead.
Mr Nathan Jackson	Employed by AFMA, Senior Management Officer. Executive Officer (EO) of SERAG. No pecuniary or other interest.
Dr Robin Thomson	CSIRO Assessment Scientist. Acquiring funding for research purposes. Principal Investigator (PI) for close kin project for school shark. PI on close kin scoping study for blue-eye trevalla.
Dr Miriana Sporcic	CSIRO Assessment Scientist. Acquiring funding for research purposes. Project leader CSIRO Ecological Risk Assessments
Dr Paul Burch	CSIRO Assessment Scientist. Acquiring funding for research purposes.

Dr Pia Bessell-Browne	CSIRO Assessment Scientist. Acquiring funding for research purposes. PI on FRDC project: Developing a harvest control rule to use in situations where depletion can no longer be calculated relative to unfished levels.
Dr Franzis Althaus	CSIRO Assessment Scientist. Acquiring funding for research purposes. CSIRO representative on the Fisheries Statistics and Information Working Group.
Mr Ross Bromley	Principle of Girella Fisheries Services. Engaged by SSIA as SIDaC manager. Engaged by SETFIA as western orange roughy project manager. Member of Victorian Rock Lobster RAG. EO of Eastrock. Client representative of various MSC Certificates. No interest, pecuniary or otherwise.
Dr Peter Yates	Employed by DCCEEW. No interest, pecuniary or otherwise.
Mr Ryan Keightley	Employed by DCCEEW. No interest, pecuniary or otherwise.
Dr Krystle Keller	Employed by ABARES. No pecuniary or other interest.
Dr Daniel Wright	Employed by ABARES. No pecuniary or other interest.
Dr Tim Emery	Employed by ABARES. No pecuniary interest in the fishery.
Mr Andy Warmbrunn	Fishery Manager, Tas DNRE. No pecuniary or other interest
Dr Ashley Fowler	NSW DPI, Fisheries scientist. Involvement in NSW assessments. Potential interest in the acquisition of funding for research/assessment purposes concerning cross-jurisdictional stocks.
Dr Geoff Liggins	NSW DPI, Fisheries scientist involved in NSW resource assessments. Potential interest in the acquisition of funding for research/assessment purposes concerning cross-jurisdictional stocks.
Dr Karina Hall	NSW DPI Senior Research Scientist. Project lead on FRDC 2019-030. An updated understanding of Eastern School Whiting stock structure and improved stock assessment for cross-jurisdictional management
Ms Sally Weekes	Employed by AFMA, Senior Manager Demersal and Midwater. No pecuniary or other interest.
Dr Lianos Triantafillos	Employed by AFMA, Manager Gillnet, Hook and Trap. No interest, pecuniary or otherwise.
Ms Michelle Henriksen	Employed by AFMA, Senior Management Officer, No pecuniary or other interest.
Ms Jennifer Power-Geary	Employed by AFMA, Senior Management Support Officer. No pecuniary or other interest.
Ms Audrey Kent	Employed by AFMA, Senior Management Support Officer, No pecuniary or other interest.
Ms Rebecca Jol	Employed by AFMA, Senior Management Support Officer, No pecuniary or other interest.
Dr Rudy Kloser	Sole Operator. Contractor for SETFIA/CSIRO for fisheries surveys. Honorary Fellow at CSIRO
Dr Stephanie Brodie	Employed by CSIRO and through the organisation either has in the past or may in the future, receive funding for research related to the fishery.
Dr Haris Kunnath	Employed by CSIRO. PI on AFMA Project 2024/0810 '*Industry based cost effective acoustic monitoring program of Blue Grenadier fishery to support management decisions – 2024 survey.'*
Dr John Morrongiello	Employed by University of Melbourne, No pecuniary or other interest.
Dr John Stewart	NSW DPI, Principal Research Scientist. No pecuniary or other interest.
Dr Kyne Krusic-Golub	Currently the service provider for supplying the age data for the SESSF . Project 2022-0812 No other pecuniary interests other than securing future funding.

Attachment B – Progress against action items from previous SERAG meetings

Complete/Redundant	Underway	Yet to start	Advice required

	Meeting and Agenda Item	Description	Responsible entity	Timeframe	Status
	November 2022 Agenda Item 12: SESSF Research Priorities	AFMA to develop a research plan to support data collection in rebuilding species closures.	AFMA	As soon as possible	Underway AFMA revised the eastern boundaries of the Flounder/Kingfisher and Babel Island Trawl Closures to follow the 200-metre isobath more closely. The changes reduce the size of the closures by 32 per cent and 7 per cent, respectively, and took effect on 16 May 2024. SETFIA submitted a research proposal on data collection in the rebuilding closures at the 2024 SESSFRAG data meeting.
	September 2023 Agenda Item 5: Blue-Eye Trevalla (slope) assessment	CSIRO to include catch records for Blue-Eye Trevalla (slope) prior to the traditional reference period (1997) when undertaking the 2024 assessment.	CSIRO	SESSFRAG data meeting 2024	Underway Catch records for Blue-Eye Trevalla (slope) prior to the traditional reference period (1997) have been incorporated into the 2024 assessment to be presented at agenda item 10.
	September 2023 Agenda Item 9: Cascade Orange Roughy	CSIRO and FAS to investigate if Cascade Orange Roughy sampled in 1999, 2004, 2020 and 2021 were from spawning aggregations.	CSIRO/FAS	As soon as possible	Yet to start AFMA will convene a working group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting. Both SERAG and SEMAC support a proposal by AFMA to categorise Cascade Orange Roughy as a "trigger species" starting on 1 May 2025. This would be accompanied by additional concession conditions to improve observer coverage on the rare occasions that this stock is fished. The proposal will now go to the AFMA Commission for consideration.
	September 2023 Agenda Item 9: Cascade Orange Roughy	CSIRO to explore the potential use of Orange Roughy otolith weight as a proxy for age to reduce analysis costs (noting the need for validation and ground	CSIRO	As soon as possible	Yet to start Paul Burch (CSIRO) will progress this investigation in early 2025. AFMA will also convene a working group to consider ageing and assessment

		truthing of the otolith weight/age relationship every few years)			priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
	September 2023 Agenda Item 14: Western Orange Roughy Research Program (WORRP	CSIRO and FAS to examine otolith weight frequencies, fish length frequencies and maturity data from Orange Roughy sampled through the WORRP. CSIRO to determine if there is now sufficient data to undertake an assessment of Western Orange Roughy.	CSIRO/FAS	As soon as possible	Yet to start AFMA will convene a working group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
	October 2024 Agenda item 3: Pink Ling (East) Tier 1 base case	CSIRO to develop a formal process to evaluate estimates of natural mortality for Tier 1 assessments prior to the SESSFRAG Data meeting 2025.	CSIRO	SESSFRAG Data meeting 2025	Yet to start Work to be undertaken in 2025.
	October 2024 Agenda item 4: Selection of data inputs and reference periods for Dynamic Tier 4 assessments	Miriana Sporcic (CSIRO) to run the CPUE series excluding shots with <20% BET. This will be presented to the Pink Ling/Blue-eye Trevalla working group before SERAG 2, 2024.	CSIRO	SERAG 2 2024	Completed The working group was presented with four Blue-eye Trevalla standardised CPUE time series (spanning the years 2002–2023) when it met on 13 November 2024. The group ultimately chose the series that included Pink Ling catches as a covariate and all available of Blue-eye Trevalla catch records, but only from 2005 onwards. The decision to exclude data from 2002–2004 was made on the basis that this represented a period of gear transition (from dropline and manual longline to auto-longline) that confounded the CPUE series.
	October 2024 Agenda item 10: RRP trigger value and assessment options	AFMA to correct erroneous depth records for Royal Red Prawn operations prior to any new assessment.	AFMA	SESSFRAG Chairs' 2025	Yet to start Work to be undertaken in 2025.
	October 2024 Agenda item 12: Rebuilding species review and TAC advice	Paul Burch to investigate Jackass Morwong logbook discards and work with AFMA/ABARES to produce an updated discard value for Jackass Morwong in time for the next Fishery Status Report.	CSIRO	Mid 2025	Yet to start Work to be undertaken in 2025.

Attachment C – Actions items arising from SERAG 2, November 2024

Agenda Item	Description	Responsibility
3	CSIRO to review boundary conditions for Tier 1 assessments (before they are conducted) and seek advice at SESSFRAG data meetings where necessary.	CSIRO
18	AFMA to distribute John Stewart's report "*Identifying biological stocks of Silver Trevally and Ocean Jackets for assessment and management"* when accessible on the FRDC website.	AFMA
20	Paul Burch (CSIRO) to inform SETFIA of revised length and otolith collection targets for Western Orange Roughy by 31 March 2025.	CSIRO
23	AFMA to clarify depredation fields have been incorporated into electronic logs for Blue-eye Trevalla. Confirm what fields are being collected with SERAG and provide guidance on utilising fields with Industry.	AFMA
24	AFMA to outline the process for deleting video recordings of RAG meetings and the associated AI-generated transcripts.	AFMA