



Australian Government

Australian Fisheries Management Authority

Southern and Eastern Scalefish and Shark Fishery Resource Assessment Group (SESSFRAG) Data Meeting 2024

Meeting minutes

21–23 August 2024

Hobart

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Agenda

Location: Hobart/MS Teams

Chair Name: Dr Cathy Dichmont

Agenda Item	Purpose	Presenter
1. Preliminaries <ul style="list-style-type: none"> a. Acknowledgement of Country, welcome and apologies b. Declarations of interest c. Adoption of Agenda d. Minutes from previous meetings 	For ADVICE	Dr Cathy Dichmont
2. Actions arising from previous meetings	For ADVICE	AFMA ¹
3. Data collection programs <ul style="list-style-type: none"> a. ISMP² annual report b. SIDaC³ annual report c. Trawl industry sampling proposal d. Fish ageing services annual report e. GABIA⁴ crew data collection 	For ADVICE	a. AFMA b. Mr Simon Boag c. Mr Simon Boag d. Dr Kyne Krusic-Golub e. Mr Neil MacDonald
4. CPUE analysis: <ul style="list-style-type: none"> a. Effect of effort error on CPUE time series used in previous assessments. b. Review of CPUE time series for Eastern School Whiting, Mirror Dory, Oreo basket and Silver Warehou 	For ADVICE	Dr Miriana Sporcic
5. Outcomes of Pink Ling, Blue-eye Trevalla and Deepwater shark group	For ADVICE	Dr Geoff Tuck
6. Outcomes of catch history project	For NOTING	Dr Paul Burch
7. Catch Data 2024 Catch report (Data to 2023)	For ADVICE	Dr Franzis Althaus
8. Dynamic B0 summary (Outcomes of MSE testing)	For NOTING	Dr Pia Bessell-Browne
9. Multi-Species Harvest Strategy - Management Strategy Evaluation outcomes	For NOTING	Dr Rich Little
10. Climate adaptation <ul style="list-style-type: none"> a. Climate change update b. Climate Risk Framework 	For DISCUSSION	Mr Daniel Corrie
11. EM project quantifying discards	For ADVICE	AFMA
12. MYTAC and data summary review	For ADVICE	AFMA
13. Stock assessment Q&A	For ADVICE	AFMA
14. SESSF Data and ISMP plans Recommended changes	For ADVICE	AFMA
15. Review of SESSF species data summary report (using PowerBI)	For ADVICE	AFMA
16. FRDC Biological parameters projects	For NOTING	Dr Karen Evans and Ms Rikki Taylor
17. ISMP trawl strata project	For ADVICE	Dr Paul Burch
18. 2025 Chairs' meeting dates	For ADVICE	Executive Officer
19. Other Business		

Agenda item 1. Preliminaries

1.a Welcome and apologise

Dr Cathy Dichmont (the Chair), welcomed members, invited participants and observers to the meeting with an Acknowledgement of Country.

Table1. Meeting attendees

Chair	Dr Cathy Dichmont	
SESSFRAG members	Mr Lance Lloyd, Scientific Member (GABRAG ⁵ Chair) Dr Paul McShane, Scientific Member (SERAG ⁶ Chair) Mr Sandy Morison, Scientific Member (SharkRAG Chair)	Dr Sarah Jennings, Economic member Ms Sally Weekes, AFMA member
Invited participants	Mr Simon Boag, Industry (second day apology) Ms Franzis Althaus, CSIRO Dr Rich Little, CSIRO Mr Neil MacDonald, Industry Dr Paul Burch, CSIRO Dr Pia Bessell-Browne, CSIRO Dr Karen Evans, CSIRO Dr Toni Cannard, CSIRO	Dr Robin Thomson, CSIRO Dr Geoff Tuck, CSIRO Dr Ian Knuckey, Fishwell Consulting Dr Kyne Krusic-Golub, Fish Ageing Services Ms Rikki Taylor, CSIRO Dr Keith Sainsbury, Sain Solutions Dr Miriana Sporcic, CSIRO
AFMA	Mr Daniel Corrie Dr Mark Grubert Ms Cate Coddington	Mr Tamre Sarhan Mr Henry Oak Ms Katrina Marchant
Observers	Mr Tim Emery, ABARES ⁷ Mr Daniel Wright, ABARES Dr Krystle Keller, ABARES Dr Andrew Penney, Pisces Australis	Ms Amelia Jensen, CSIRO Miss Olivia Wilks, CSIRO Ms Kristin Privitera-Johnson, CSIRO
Exec. officer	Ms Jennifer Power-Geary, AFMA	
Apologies	Dr Beth Fulton, Scientific member (CSIRO)	

⁵GABRAG –Great Australian Bight Resource Assessment Group, ⁶SERAG –South East Resource Assessment Group, ⁷ABARES –Australian Bureau of Agricultural and Resource Economics and Sciences

1.b Declarations of interest

SESSFRAG followed the conflict-of-interest management process (as outlined in *Fisheries Administration Paper 12*) and updated the Declarations of Interest (Attachment A) via email prior to the meeting.

SESSFRAG members considered potential pecuniary interests for industry and scientific attendees with agenda items listed in Table 2.

SESSFRAG recognised the relevant attendees' knowledge and ability to contribute to the discussions and agreed that it was appropriate for them to participate in the discussion but that formal recommendations would be finalised by the members with no conflicts.

Table 2: Agenda items with declared conflicts of interest

Agenda Item	Declared conflict
3. Data collection programs	Mr Simon Boag Dr Ian Knuckey Dr Kyne Krusic-Golub
11. EM project quantifying discards	CSIRO Dr Ian Knuckey ABARES
14. SESSF Data and ISMP plans	Mr Simon Boag Dr Ian Knuckey Dr Kyne Krusic-Golub Mr Neil MacDonald
17. ISMP trawl strata project	CSIRO

1.c Adoption of agenda

The RAG adopted the agenda (Page 4) as final with the noted change, agenda items 11 and 15 being swapped.

1.d Minutes of previous meeting

SESSFRAG endorsed the April 2024 Chairs Meeting minutes, as a true representation of the outcomes of that meeting.

Agenda item 2: Actions arising from previous meetings

The status of existing action items is detailed in **Attachment B**.

SESSFRAG noted that status of actions items detailed in Attachment B, discussing, and providing advice regarding the following items:

- Action item 29 SESSFRAG Chairs' 2021 Item 9- "AFMA to incorporate the process for periodic review of stock assessments in the document 'Total Allowable Catch (TAC) setting process – Guidelines for provision of data and stock assessment processes' for further consideration by SESSFRAG. Timeline is subject to other priorities."

Action Item 29 was discussed under other business.

- Action item 6 SESSFRAG Chair's Meeting 2024 Item 16- "AFMA amend the scope to the Multi-species Harvest Strategy Phase 2 to include the outcomes of the harvest strategy, climate change trends and shocks e.g., low recruitment scenarios and buffers work (undercaught TACs), Dynamic BO."

It was agreed to re-word this item to: "If MSHS Phase 2 is supported by FRDC, SESSFRAG should be provided a copy of the research proposal to ensure critical components are appropriately considered, including outcomes of the HSP review, climate impacts, buffers etc.,".

Agenda item 3: Data collection programs

SESSFRAG noted and provided advice on the summaries provided by AFMA, Atlantis Fisheries Consulting Group (Atlantis), Fish Ageing Services (FAS) and the Great Australian Bight Industry Association (GABIA) on various data collection and analysis programs relevant to the SESSF.

3.a ISMP annual report 2023

- The ISMP 2024 interim reports were not provided to SESSFRAG due to constraints in time and obtaining data.

Commonwealth Trawl Sector

- A port sampler has been employed based in convenient area which is expected to improve western biological targets.
- The digital data collection application 'E-observer' is close to finalisation which is intended to lead to efficiencies in error reduction, data collection, processing, storage, and requests.

Great Australian Bight (GAB)

- 2023 is an off year for onboard observers in the GAB and as such it was difficult to undertake port sampling with otolith and length targets not met by either observers or GABIA.
- 2024 has seen an improvement with targets on track to being achieved.

3.b SIDaC report

SESSFRAG discussed the difficulties of sampling School Shark and if there is potential for the Western Trawl Data Collection (WETDaC) program to consider on-board samplers to ensure all School Sharks available can be tagged and suggested that the SESSF Data Plan is updated to reflect this.

3.c Trawl industry sampling proposal

Mr Simon Boag presented the draft Western Trawl Data Collection Proposal (WeTDaC) report to SESSFRAG.

SESSFRAG noted AFMA engaged SETFIA to submit a costed project plan for the collection of biological samples in the CTS, initially starting with the western zones (ISMP zones 40 and 50 and five rebuilding closures). Biological samples of otoliths and lengths for four to nine species will be collected from two gear types (Trawl and Danish Seine).

SESSFRAG discussed the importance of the data being correctly collected and recorded so it does not lose its value by getting lost in the data processing and not allocated correctly, and ensuring people are trained appropriately.

3.d Fish Ageing Services (FAS) annual report

Dr Kyne Krusic-Golub provided an updated report on ageing work carried out during 2023-24 as a part of project RR2022/0812.

SESSFRAG noted and discussed:

- There had been an overall good achievement of targets
- Pink ling – older fish tend to come from the GHATF compared to CTS, similar to previous years
- Orange Roughy Cascade age distributions were similar to previous years and there was a plus group indicating the presence of older fish in this fishery. This information will be provided to the Working Group. Dr Kyne Krusic-Golub stated that there may be time to go back and look to add more historical data that were incorrectly aged at one point.
- Epigenetic ageing – the benefits of this ageing technique was discussed, particularly given the potential broader move to EM. It was noted that the costs of epigenetic ageing are uncertain (and potentially high) and that calibration to otolith age is difficult but may be achieved.
 - AFMA enquired if there were species other than School Shark that utilise epigenetic ageing.

SESSFRAG recommended:

- Epigenetic ageing of species be brought to the next SESSFRAG meeting for consideration in 2025 during the research priority section.

3.e GABIA Crew-Based data collection

Mr Neil MacDonald provided an update to the crew-based data sampling occurring in the GAB.

SESSFRAG noted:

- Little data had been collected via the Crew Based Data collection program in recent years however Industry are now focusing their attention on improving this.
- Length based data has been collected for Deepwater Flathead, Bight Redfish and where possible Orange Roughy.
- GABIA has requested crew sample smaller unmarketable Deepwater Flathead separately as below average recruitment was one of the reasons the Commission opted for the lower TAC for this species.

SESSFRAG discussed:

- The importance of sampling catch randomly, both retained and discarded catch – focusing only on ‘smaller’ fish is not a valid sampling method.
- That the sampling protocol needs to be reviewed to ensure crew are collecting samples properly.

SESSFRAG recommended:

- That GABRAG consider the sampling issues for Deepwater Flathead and decide on a course of action for the assessment next year and the sampling.
- AFMA work with GABIA to ensure sampling is representative of the catch and protocols are being adhered to avoid potential data issues for assessments.

ACTION item 1 – EO to distribute Q1 and Q2 2024 ISMP reports to members.

ACTION item 2 - Simon Boag to revise the Shark industry data collection table (attachment 3C) to ensure all samples have the number of boat trips listed.

ACTION item 3 - FAS to update the registration and ageing data table for the SESSF zones 40 and 50 for 2021 to 2024 Silver Warehou samples.

ACTION item 4 - AFMA and CSIRO to discuss potential sampling of tissue during remaining Investigator cruises for the purposes of supporting epigenetic ageing trials.

ACTION item 5 - GABRAG during the next assessments of Deepwater Flathead and Bight Redfish to consider the settings in the assessments for discarding and selectivity.

ACTION item 6- AFMA to check and work with GABIA to ensure the sampling is representative of the catch (in reference to how GABIA members are sampling smaller fish).

Agenda item 4: CPUE analysis

Purpose of the agenda:

For SESSFRAG to note the presentation provided by Dr Miriana Sporcic on the CPUE series comparison and review of CPUE time series for Eastern School Whiting, Mirror Dory, Oreo basket and Silver Warehou.

4.a Effect of logbook data effort error on CPUE time series used in previous assessments

AFMA described a data issue where some shot date/time data in logbooks were not converted from UTC to Sydney time for some of the data collected in 2021, 2022. CSIRO was notified and supplied a list of shots for correction as time gets included in the DayNight term in the CPUE standardisations. To understand the potential impact on the previous standardisations from 2021-23, AFMA requested that CSIRO provide a comparison of the previous and updated CPUE series. Where the standardised CPUE series based on corrected data differed significantly from that used in assessments in 2023, AFMA sought advice on a way forward, including whether a re-assessment of impacted species/stocks would be warranted.

Dr Sporcic presented a summary of the identified records that resulted in a change in the Day Night term as:

- 2021: ECT 0%, GAB 1%, GHT 0% and SET 1% of records;
- 2022: ECT 0.4%, GAB 47%, GHT 5% and SET 26% of records.

Given the above, Dr Miriana Sporcic presented percentage differences between 2022-standardized CPUE index from analyses conducted in 2023 and 2024 for 19 species/stocks. This corresponded to Tier 1 or 4 species: Bight Redfish, Blue grenadier, Deepwater Flathead, Deepwater sharks east, Deepwater sharks west, Mirror Dory, Silver Trevally and western Gemfish, that were assessed in 2022 and/or 2023. The percentage difference between the revised 2022-CPUE index based on the corrected data provided in 2024 compared with same index from the 2023 analyses were categorized in three intervals: less than 5%,

between 5 and 15% or greater than 15% in absolute value. Percentage differences of greater than 15% of absolute value were Silver Trevally zones 10, 20 (15.1% reduction) and western Gemfish zone 50 (16.5% reduction). The percentage differences for the remaining stocks were (i) less than 5% (8) in absolute value and (ii) between 5-10% (9) respectively. The same percentage differences were also estimated for the remaining 31 species/stock combinations that were not assessed in either 2022 and/or 2023. Most of these differences were less than 5% (23), followed by between 5-15% (5) and greater than 15% in absolute value (3)

SESSFRAG did not consider that the impact of the data error was of significant concern. For the case of Silver Trevally, NSW another assessment in 2024 was due to be undertaken with the corrected series. If the updated result differs significantly from the 2023 assessment, then AFMA could seek further RAG advice at that point.

4.b Review of updated CPUE series

Dr Miriana Sporcic presented an updated CPUE series for species being assessed in 2024.

SESSFRAG noted and discussed:

Tier 1 stocks to be assessed this year School Whiting Danish Seine, School Whiting Trawl, Silver Warehouse West and Silver Warehouse East.

Tier 4 stocks to be assessed this year:

Mirror Dory West and Mirror Dory East with SESSFRAG discussing the appropriateness of the large change rule given the cyclical and high variability in the CPUE for this particular species.

Deepwater Sharks East and Deepwater Sharks West - The Working Group will be considering the reference years and will present to SERAG later this year.

- The depth distribution is similar to previous years.

Oreo-basket - Depth distribution shows there is more catch taken in less than 600 m relative to previous years.

Trigger species

- AFMA explained that Royal Red Prawn and Alfonsino are now classified as trigger species that need to be reviewed as they are due for their 6-year consideration for assessment.

Red Royal Prawn

- Catch and CPUE has increased significantly in the past two years due to the resumption of fishing, with the initial catch trigger of 50 t being exceeded quickly.
- Advice from SERAG will be sought regarding the need for an assessment.
- There appears to have been a shift in fishing depths – SESSFRAG recommended that this be explored to establish if it was a real shift or the result of a logbook depth reporting error.

Alfonsino

- While catch has varied over the time series, it remains very low in recent times given there is no fishing in the ECDWT sector.
- Recent ageing work on Alfonsino stocks in the Indian Ocean suggest they are longer lived than previously believed. While they are different stocks to that in Australia, SESSFRAG agreed that the implications of this research would be of interest for consideration if/when targeted fishing recommences and an assessment is required.

- The last assessment for Alfonsino was a Tier 3 which is a catch and age-based assessment that is no longer an accepted SESSF assessment method.

SESSFRAG Recommended:

- NSW DPI be provided the corrected data to inform its assessment for Silver Trevally. Should the outcomes of that assessment differ significantly from the 2023 assessment, AFMA to seek advice from SERAG about next steps.
- SERAG review appropriateness of the trigger for Royal Red Prawn and the issue relating to depth distribution of catches.
- SERAG to consider whether an assessment of Alfonsino is required and if so, what assessment method would be appropriate.
- SERAG consider the CPUE for Smooth Oreo given that it was not able to be completed in time for consideration by SESSFRAG.

ACTION item 7 – AFMA to consider the outcome of the 2024 NSW assessment of Silver Trevally in light of the data error and seek further advice from SERAG if the outputs differ significantly from the 2023 assessment.

ACTION item 8– SEMAC consider the appropriateness of the large change limiting rule for Mirror Dory given the cyclical nature of the species.

ACTION item 9– AFMA to investigate the logbook catch by depth for Red Royal Prawn for catches <330m for discussion at SERAG.

ACTION item 10- AFMA to investigate the NSW state catch of Red Royal Prawn increase whilst Commonwealth catch decreased for discussion at SERAG.

ACTION item 11- SERAG to consider whether an assessment of Alfonsino is required and if so, what assessment method would be appropriate noting that the last assessment was a catch and age based assessment that is no longer an accepted SESSF method, further that existing ageing data may be biased in light of recent Indian Ocean ageing research.

ACTION item 12- SERAG to consider Red Royal Prawn, given it has exceeded its trigger, whether it remains in the trigger category or becomes an assessed species.

Agenda item 5: Outcomes of Pink Ling, Blue-eye Trevalla and Deepwater Shark Working Group

In preparation for assessments of eastern Pink Ling, Blue-eye Trevalla (slope) and Deepwater Shark, a Working Group (WG) was established to ensure data, parameters and model structures were appropriate for this work. The outcomes of the working group were discussed.

SESSFRAG noted:

Blue-eye Trevalla

- CPUE analyses is ongoing including the WG considering catch of Pink Ling as a co-variate in the CPUE standardisation.

Deepwater Sharks

- The role of the WG was to consider and agree upon the catch and CPUE series and choose an appropriate reference period.
- There is a need to consider the reference period for the eastern and the western stocks, particularly the western stock.

Strata re-design

- The WG is to provide advice following the ISMP strata review, that was prompted by an investigation of high discard estimates for Oreo's in 2021 that revealed a 'hidden' deepwater strata may be influencing discard estimates.

Pink Ling presentation

Dr Pia Bessell-Browne provided a presentation to SESSFRAG of the Pink Ling East Stock assessment for 2024:

CPUE

- In the 2021 assessment Patrick Cordue (PC) included four CPUE series; Trawl, Non-trawl, FIS and Kapala. PC seems to have only actively fit to the Trawl and FIS series.

Trawl CPUE comparison

- PC took a different approach to his CPUE standardisation to what has been adopted by CSIRO, and these differences in CPUE series are apparent. This is particularly relevant to the use of linking vessels across different time periods in the assessment. It is challenging to replicate due to the lack of documentation of PC's method.
- The WG agreed to proceed with the CSIRO standardisation and will revisit if the change results in substantial differences to model results.
- The RAG considered the discrepancy between the report and what has been done in the current assessment suggesting a process issue. It was also suggested that AFMA store model input files after an assessment so that someone else can run the model and thereby understand any discrepancies between the report and subsequent assessments. It was suggested this issue be further considered by SERAG.
- It was noted that what has been produced would not have been possible if PC had not provided the input files as there was a large amount of information that was not in the assessment reports or documented.

Ages

- PC used a combination of age frequency and conditional age-at-length data.
- This limited data available to estimate growth within the model.
- It is unclear what criteria was used to decide on the use of age frequencies and conditional age-at-length data.
- The Working Group agreed to transition using conditional age-at-length data rather than a mix of age composition and conditional age-at-length data.

Data input summary

- When comparing between the data used in PC's assessment and the data available there was clear differences, particularly for length composition data for the Trawl onboard fleet. There were limited years of data used in the PC assessment. Some of this was used to calculate age frequencies however the PC assessment had no data for the trawl port fleet and only 3 years of length data for the non-trawl port fleet.
- Age data from the early 1980's was excluded from the PC assessment.

Bridging from CASAL to Stock Synthesis

- The first step in bridging from CASAL to Stock Synthesis (SS) was to attempt to match the assessment results in 2021 using:
 - The same data;
 - Growth parameters fixed to the same values;
 - Age based selectivity fixed to the same values;
 - Estimation of R_0 and recruitment deviations.
- This approach would help outline any potential impacts of differences in software and decisions the WG have made.
- The biomass and stock status trends were closely matched and the WG approved bridging to continue to other data and parameters.

Summary of results

- Inclusion of additional years of age data (not lengths) resulted in differences in biomass estimates.
- Inclusion of age data at the start of the model (1980s) prevent high recruitment estimates (PC turned off recruitment deviation estimation instead).
- The WG endorsed the progress to data and supported bridging to an alternative model structure. Parametrisation aiming for delivery at the first SERAG meeting later this year.

Next steps

- Continue bridging towards a finalised base case;
- Include depth weighted onboard length data;
- Transition to length-based selectivity;
- Include discard data and retention functions for the trawl fleet;
- Time block trawl retention rather than selectivity to account for the trip limits due to the perception this would have been what impacted discarding rather than what was being selected by the gear for fishing practices; and
- Update FIS series from FIS1 to FIS3.
- Dr Miriana Sporic will lead development of a Line CPUE index (which may be included as a sensitivity).
- Once these steps are completed this work will be bridged to include data from 2021 to 2023.

SESSFRAG discussed and recommended:

- The importance of AFMA archiving and ensuring work undertaken by other agencies/companies or departments is clearly documented. SESSFRAG noted that necessitating clear documentation as well as the provision to AFMA of how data has been utilised may prevent issues or extra work in the long term and could be implemented into contracts before data are provided. SESSFRAG recommended AFMA and CSIRO discuss offline how they might like to transfer documentation between agencies. Further AFMA should be provided the input files to facilitate repetition of any assessment/data process that has been undertaken by CSIRO.

ACTION item 13- AFMA to revise section into the TAC guidelines document regarding the need to ensure that all supporting analyses for assessment are archived appropriately so that an assessment can be replicated in the future. AFMA to raise this with broader AFMA research team noting this is an issue that applies across Commonwealth fisheries, not just the SESSF.

Agenda item 6: Outcomes of the Catch History Project

Dr Paul Burch presented the outcomes of this project, outlining the context that uncertainty around catch histories for SESSF stocks consumes RAG time that could be better spent for other purposes and results in confusion among stakeholders and the public. The aim of this project is to document agreed and potential catch histories for SESSF quota species. Candidate catch histories will be discussed in the assessment RAG prior to the next assessment of each quota species so the RAG can select the appropriate catches

SESSFRAG noted that a draft report had been provided to members, with the objective being to:

- Document current accepted and potential alternative catch histories used for assessments (not actually to undertake catch reconstructions themselves)
- Document any alternative catch histories.
- Presents the unmodified catch data from the AFMA database.
- Update the report as additional information is identified (prior to the next stock assessment for a particular stock).
- Source literature/spreadsheets will be made available to SESSFRAG.

Catch series for 2024 assessments

- Pink Ling and Deepwater Shark catch reconstructions are ready for feedback from SERAG.

- Silver Warehou and School Whiting are underway. They have catch histories from earlier Tier 1 assessments. There are some uncertainties due to mixed species reporting i.e. Blue/Sliver Warehou as “Tassie Trevally” and School/Stout Whiting being caught together in NSW as “Trawl Whiting” which will be presented to SERAG for consideration.
- Mirror Dory, Oreo Basket are pending for SERAG 1 2024.

Deepwater Shark

- Investigation by Thomson et al in 2022¹ found early catches of Deepwater Shark were not recorded due to a lack of market until the liver oil market was developed in the 1990s. This report provided catch extrapolation to cover that period of missing data.
- Advice from this report was that *Deania* species were both targeted and retained. As a vulnerable species based on ERA assessment, SERAG should consider undertaking the Deepwater Shark assessment just on the *Deania* species.
- SESSFRAG noted that the logbook catch by depth shows most historical catch occurred in depths greater than 700m which is currently mostly closed to trawling except for some Orange Roughy fishing areas.
- SERAG 1 need to agree to a catch reconstruction in time to produce the model for SERAG 2, SESSFRAG agreed that this task should be provided to the Working Group to ensure this is addressed in a timely manner.

Blue-eye Trevalla

- A few uncertainties will be taken to the Working Group for consideration. There are catches that date back to the late 1960’s however advice is needed on how to separate slope and seamount data from the early state data. A decision needs to be made about what to do with the lack of catches in NSW records between 1960-1978 and the impacts of Orca depredation to the CPUE.

SESSFRAG discussed:

- The implications of the exploratory Orange Roughy research programme inside the deepwater closure over the past four years, including inside the Murray Dogfish closure in 2024, on the catch series of deepwater sharks.

SESSFRAG recommended:

- The Pink Ling, Blue-Eye Trevalla and Deepwater Shark Working Group should recommend a catch series for each species (group) that is appropriate for consideration and agreement by SERAG.
- Reconstruction of catches for the Deepwater Shark modelling using CPUE and logbook effort reporting.
- The investigation of catches from the past 4 years (including 2024) in the Deepwater and Murray Dogfish closures associated with Orange Roughy fishing.

ACTION item 14- Dr Paul Burch to add the updated Deepwater Shark extrapolation plots of catches from Thomson et al 2022 into the catch report before SERAG 1.

ACTION item 15- The Pink Ling, Blue-Eye Trevalla and Deepwater Shark Working Group to recommend a Deepwater Shark catch series and CPUE series to SERAG for use in Dynamic Teir 4 assessment.

ACTION item 16- AFMA and CSIRO Investigate the catches of the last 4 years (including 2024) of Deepwater Shark in the deep-water closures associated with Orange Roughy fishing.

¹ Thomson RB, Daley RK, Dowling N and Althaus F (2022) The SESSF Deepwater Shark basket: exploitation history, data exploration, and FishPath outcomes for *Deania* spp. Presented to AFMA’s SERAG meeting. 29-30 November 2022. CSIRO, Australia.

Agenda item 7: Catch data

Ms Franzis Althaus presented the changes/issues relating to SESSF data and sought SESSFrag advice on the treatment of a number of data issues.

SESSFrag recommended:

- that the continuing issue with invariant depths being recorded in logbooks be investigated to check that it is not something to do with e-logs.
- that the discrepancies between logbook and CDR data be investigated in light of the twofold increase in some species' total catch, noting that it could be due to logbook errors, typos or the split of stocks.

ACTION item 17 – AFMA to investigate the invariant depth issue and make sure the origin of this issue was not e-logs.

ACTION item 18 – CSIRO to analyse discrepancies between the total CDR to logbook catch comparisons in table 1 and table 2 of the data summary report particularly for species involved in Tier 1 and Tier 4 assessments.

Agenda item 8: Dynamic B_0 Summary

Purpose of the agenda:

SESSFrag to note the presentation provide by Dr Pia Bessell-Browne on the MSE results investigating the performance of dynamic reference points.

SESSFrag noted:

- The presentation by Dr Pia Bessell-Browne on evaluating the performance of dynamic B_0 harvest control rules under time varying productivity.
- Traditionally stock assessments assume many parameters are stationary, but it is known that parameters can vary through time which can be exacerbated by factors such as climate change. The drivers are often unknown and can be linked to a biological parameter in an assessment which can make time variation more challenging for those parameters that are not directly informed.
- Often there is insufficient data to support estimation of time varying parameters and new approaches are needed to include time variation in future assessments moving forward.
- Dynamic B_0 is the theoretical biomass trajectory that would have resulted if no fishing of the stock had occurred throughout its history, but other parameters had remained as estimated in the assessment.
- Management Strategy Evaluation (MSE) is a computer simulation tool that allows testing of the performance of various alternative assessment and management scenarios.
- This project tests the performance of current Harvest Control Rules (HCRs) and those based on Dynamic B_0 with and without time variation in Operating Model (OM) recruitment.

MSE specifications

- The operating model used was Ratpack and the estimation model is Stock Synthesis.
- Examples of three species were examined (Tiger Flathead, Silver Warehou and School Whiting) as they represent a variety of life history characteristics, however, were not perfect replications for these species i.e. for Silver Warehou the decline in recent recruitment deviations was not included so different time varying trend could be implemented and compared.
- Four Harvest Control Rules were tested: Static B_0 , Dynamic B_0 and two intermediate options of Dynamic $B_{0\text{-target}}$ and Dynamic $B_{0\text{-slide}}$ where the limit reference point was not permitted to prevent drop towards 0. This was used to address conservation concerns of fishing a species down to low population sizes.

- The project looked at the impacts of two time-varying parameters: unfished recruitment (R_0) and natural mortality (M). Two trends in time variation over ten years remained constant at a low level labelled 'linear change' and 'cyclical trend' which was a 25-year slow decline, increasing again to the starting level.

Results

- The estimation model estimates of $B_{t=0}$ still change through time when R_0 declines by 50% and remains low even when using a static B_0 HCR and static interpretation of B_0 .
- The results suggest that even if we continued applying static B_0 based HCRs we should be all looking for retrospective patterns in B_0 , which may suggest there is time varying productivity changes occurring.

Summary

- Differences between static and dynamic B_0 HCRs are only evident when there is directional change in productivity.
- Dynamic B_0 HCRs reduce absolute population size although only achieves a small increase in catch.
- Increased bias introduced with the dynamic B_0 HCRs prevents expected performance, so it does not reach B_{Targ} in the OM.
- Dr Pia Bessell-Browne recommends dynamic B_0 trends be routinely reported in stock assessments as it provides an indication if time trends are occurring in productivity.
- The preference of Harvest Control Rules depends on the policy objectives.

SESSFRAG discussed:

- Members discussed potential concerns for social license amongst wider stakeholders regarding the use of dynamic B_0 and the importance of ensuring its correct application. One participant questioned the value in continuing this process when it is so variable and stakeholder reactions in the past have been negative. Another participant stated that Dynamic B_0 (corrected later to a step change) has been implemented in the past for other species such as Jackass Morwong which was perceived to be justified at the time and has existed ever since. The importance of ensuring clear evidence for its use is considered and upheld before its implementation was emphasised. There is potential that trends in dynamic B_0 may be due to model misspecification, and it is important that these are identified. SESSFRAG suggested that trends in dynamic B_0 should be routinely reported in stock assessment reports.
- ABARES noted at the 2024 Chairs meeting that members requested an update on the review of the Harvest Strategy Policy and had been in communication with Department of Climate Change, Energy, the Environment and Water (DCCEEW). The ABARES participant offered to circulate, through the executive officer, the update of the harvest strategy review from DCCEEW noting feedback was welcome. SESSFRAG members agreed this would be helpful and the communication was circulated to members the next day. One participant spoke to the importance of managing expectations around when you can use Dynamic B_0 and how it works is an important part of the policy review. The Chair noted the importance of differentiating the context of Dynamic B_0 in policy and the context of this fishery.
- CSIRO noted that the current methods of low recruitment projections, which has not been MSE tested, might be a better way to deal with dynamic reference points.

Agenda item 9: Multi-Species Harvest Strategy – Management Strategy Evaluation Outcomes

SESSFRAG noted the summary of the outcomes of the Management Strategy Evaluation of the Multi-Species Harvest Strategy (MSHS) presented by Dr Rich Little.

Agenda item 10: Climate adaptation

Purpose of the agenda item:

For SESSFRAG to discuss updates on climatic conditions relevant to the SESSF and trial the application of AFMA's Climate Risk Framework (CRF) in the SESSF, including how trigger species are considered under the framework.

10.a Climate change update

SESSFRAG noted:

- A pre-recorded digital presentation providing an overview of the climate conditions of the SESSF by Dr Beth Fulton:
 - Water temperatures continue to increase and remain the hottest years on record and above what the system in the SESSF has seen historically.
 - There are changes in species composition as species move deeper or changing location in response to environmental conditions.
 - Changes in water temperature may impact productivity and this has been indicated in the observed condition of whales worsening.
 - Some species are experiencing prolonged heat exposure outside of their preferred temperature range.
 - A starting point would be to examine analogous years of prolonged exposure and think about how this may impact stocks, and what responses may be required at the fishery level.
 - Good evidence may be needed to justify the intensification of any activity within the fishery during years of prolonged heat exposure.
 - There should be consideration of opportunistically collecting data to understand the responses of the stocks and operators (e.g. shifting distributions, conditions, abundance, recruitment, mixes of fish in logbook records, observer records and behaviour).

10.b Climate Risk Framework

Mr Daniel Corrie updated SESSFRAG on the trial of the AFMA Climate Risk Framework (CRF) and its integration into the AFMA decision-making process:

- The CRF is a risk-based framework to ensure climate risks are accounted for when making decisions. The best available information on stock status and climate susceptibility is used to assess whether a stock is at risk (or stands to benefit) from climate change, and what mitigations options exist across the fishery.
- A Working Group has been established to oversee a trial of the framework, however, ultimately individual RAGs and MACs will be responsible for undertaking the risk assessment and providing advice to the AFMA Commission.
- Individual RAGs will be engaged later in 2024 as part of the trial for selected SESSF species.
- Implementation of the framework is subject to outcomes of the trial, which is expected to run until mid-2025.

Application of the CRF to Trigger species in the SESSF

- MSE testing as part of the multi-species harvest strategy suggested that climate change may undermine the Trigger species approach.
- At its 2024 Chairs' Meeting, SESSFRAG requested AFMA think about how the CRF could be applied to Trigger species to address this issue.
- Two options were proposed to SESSFRAG

- I. A species cannot be managed as a trigger species if it is assessed a high risk to climate under the CRF (this would be added as an additional criterion in the harvest strategy), or
- II. Trigger species are to be assessed under the CRF (as would all other species) and if the risk is high, the RAG would consider the appropriate response.

SESSFRAG discussed and recommended:

- SESSFRAG recommended option 2, noting the following:
 - Option 1 means species are automatically removed from the trigger species category and would require frequent assessments.
 - Option 2 provided the RAG the flexibility to consider the overall risk to the trigger species from climate via an established process and then respond accordingly (i.e. it's not an automatic exclusion).
 - The frequency of CRF reviews will be considered as part of the trial. Climate risk profiles are unlikely to change on a regular basis unless new information becomes available or a stock assessment has occurred, so there may not be benefit in completing this annually for all species.
 - CSIRO is exploring how to include climate risk into the Ecological Risk Assessment methodology to account for species that are not managed under quota.
- Members noted the wording of one of the criteria used to nominate a trigger species – *Stock status is estimated to be above the TRP, or $F < F_{MSY}$* – and agreed 'near target' would be a more appropriate threshold and is consistent with the criteria used to assess stock risk under the CRF.
- SESSFRAG recognised that this would require changes to the harvest strategy – the implications should be explored before making a decision.

ACTION item 19 – AFMA to consider the implications of changing the trigger species threshold in the SESSF Harvest Strategy from “above the TRP” to “near the TRP” to be more consistent with the thresholds used in the Climate Risk Framework.

Agenda item 11: Review of SESSF species data summary report (using PowerBI)

AFMA sought advice from SESSFRAG on the structure and content of the draft SESSF Species Data Report (draft Data Report) produced by AFMA.

SESSFRAG noted:

- The purpose of this document will be to provide SESSFRAG with the necessary information to monitor activity in the SESSF during non-assessment years and is an alternate, yet similar report, to the data summary reports that are provided by CSIRO.
- Summaries are based on data collected from logbooks, CDR's, and observer and Port sampling reports.
- The purpose is to monitor retained catches of target and byproduct species and compare these to TACs of current and previous seasons, monitor the composition and volume of discards by gear type, assist with the detection of changes in TEP species interactions relative to area and gear type, fishing effort and season, and provide a general idea of size and structure of species/stocks.

SESSFRAG discussed and recommended:

- Changes to some of the pages and how the data are being displayed:
 - Colour samples by landed or discarded rather than zone as it may be more informative. Alternatively, separate pages for colour by zone and samples by landed or discarded.
 - A vertical line could be placed on the length frequency plots in the same place every time to help to guide the eye.

- ABARES suggested when labelling the percentage of the TACs caught should read the ‘agreed TACs’ rather than the ‘actual’ as it is not currently accounting for over and undercatch.
- Inclusion of heat maps for effort.
- To be more explicit in the graph labels to indicate CDR or logbook data being used.
- If some of the graphs in the CSIRO reports could be reproduced for the years when they are not producing data (summaries of effort by method, zone, and depth).
- Removing the Freezer trawler labels from pages they are not relevant in.
- Clearly label the CPUE graphs to indicate they are not of the same statistical rigor of the CSIRO produced ones.
- Putting labels on the report to indicate that the report does or does not comply with the five-boat rule.
- Why Ocean Jacket was labelled under ‘incidental’ catch in the report.
 - AFMA explained that whilst fisherman are not targeting that species, some of the catch can be retained. It is this situation that led to species being labelled retained however would explore why Ocean Jacket is labelled ‘incidental’.
- Whether there was scope to include economic information such as GVP, market price and summary statistics.
- While PowerBI was interactive, it is currently difficult to provide access to members for this platform and hence it had to be provided by PDF.

ACTION item 20 – AFMA to investigate why Ocean Jacket has been included in the ‘incidental/ category of the summary report.

Agenda item 12: MYTAC analysis and data summary review

SESSFRAG noted the outcomes of the review undertaken by the Multi-Year Total Allowable Catch (MYTAC) Working Group and considered the recommendations for species identified for further review.

The WG recommended:

- Royal Red Prawns will be considered by SERAG given the catch trigger was exceeded.
- Smooth Oreo Cascade and Alfonsino will be considered by SERAG given they have reached their time trigger.
- Defer RBC advice and assessment to relevant RAGS for:
 - Bight Redfish and Deepwater Flathead to GABRAG due the length frequencies not being provided before the MYTAC meeting and the potential grading in the industry collected data.
 - Silver Trevally will go to SERAG once the outcome of the NSW DPI assessment is known.
 - Gummy Shark will be considered at SharkRAG in November.
- Maintain the RBCs for:
 - Blue Grenadier;
 - Tiger Flathead;
 - Orange Roughy (East); and
 - Pink Ling (West).

SESSFRAG supported the WG recommendations.

SESSFRAG also recommended that SERAG consider the ongoing need to constrain the Tiger Flathead TAC to reduce the total mortality of Jackass Morwong in light of the protection provided by the recently introduced trawl closures.

ACTION item 21 – SERAG to consider whether there is an ongoing need to constrain Tiger Flathead catch due to Jackass Morwong in light of the recent trawl closures.

Agenda item 13: Stock assessment Q&A

The purpose of this item is for stock assessors to seek advice from SESSFRAG on upcoming assessments and provide an opportunity for members to raise any questions or concerns.

SESSFRAG discussed:

- AFMA’s proposal for the Acoustic Optical Survey (AOS) of the Eastern Zone Orange Roughy stock (completed in July 2024) and subsequent assessment of the stock (to be undertaken in 2025) now follow a four-year cycle. This would see another AOS conducted in 2028 that informs a stock assessment in 2029 (and so on).
 - Members discussed the merits of collecting age data every second year to monitor recruitment given the impact of commercial fishing from late 1900s will start to present itself. Conversely the longevity of the species and depletion occurring over many years means that ageing over such a relatively small timescale may not show much. Further, if ageing was done and detected something, the assessment would only be two years away and if the AOS is not updated every two years then there would be no point updating the assessment with just ages.
 - **SESSFRAG recommended** that SERAG discuss Eastern Orange Roughy sensitivity tests of stock assessment and whether those adequately address the effect of fishing that will be appearing in the stock over the next 10 years (such as a low recruitment scenario). This discussion should include whether further data are required and provide advice if additional scenarios are needed, and action taken through the RAG process.
 - CSIRO noted the high discard rates for Silver Warehou on the east coast of Australia, further, Silver Warehou not having a useable port length frequency in the west since 2016. SESSFRAG noted this may be an issue.

ACTION item 22 – SERAG discuss Eastern Orange Roughy sensitivity tests of stock assessment and whether those adequately address the effect of fishing that will be appearing in the stock over the next 10 years. This discussion should include whether further data is required and provide advice if additional scenarios are needed, and action taken through the RAG process.

Agenda item 14: SESSF Data and ISMP plans

The purpose of this item was for SESSFRAG to recommend any changes to the SESSF Data Plan (2024-25) or the ISMP Plans (2024-25 and 2025-26).

SESSFRAG recommended:

- Deferring the Pink Ling West ageing to prioritise Pink Ling East.
- Ageing of Silver Trevally samples in time for the next assessment given only one year of ageing data was included in the recent stock assessment.
- Adding a sampling target of 1000 lengths and 1000 biologicals for Orange Roughy Commonwealth Trawl Sector, Otter Trawl in the Southern zone as a medium ‘Medium priority’ due to their historically low catch.
- Orange Roughy Albany and Esperance sampling priorities be changed to ‘Low priority’ due to the low levels of catch.

ACTION item 23 – Dr Kyne Krusic-Golub to inform AFMA and CSIRO on completion of stock take of Silvery Trevally otoliths as numbers by year to inform the RAG if there is enough to be useful to age and utilise in the next assessment.

ACTION item 24 – Dr Kyne Krusic-Golub to restrict ageing of Pink Link to the Eastern stock only.

Agenda item 15: EM project quantifying discards

AFMA sought advice from SESSFRAG regarding how best to quantify discards from footage as part of the trial of Electronic Monitoring in the CTS and GABTS noting that the EM program needs to be achievable, cost effective and appropriate to the level of risk within the fishery.

SESSFRAG noted:

- Eight trawl/ Danish Seine vessels across the SESSF have EM systems installed as part of the trial
- Preliminary review indicates that data objectives outlined in the project plans can be met.
- Two potential discard review methodologies were presented:
 - 'Whole method': reviewing the entire on deck catch sorting activity to identify the presence of discard catch species. The species are identified (Key species or all species) and then allocated a percentage of the whole catch.
 - 'Snapshot method': analysing three EM video snap shots of the sorting activity to identify the presence of discarded catch species. The species are identified and allocated an expected percentage from the overall catch.
- A small sample of 15 shots were reviewed for a comparison of the two methodologies against logbook data and the results found the 'whole' methodology identified on average 15 more species than logbooks and 10 more species than the 'snapshot' method per shot.
- The number of species identified in logbooks is low due to grouping of species (i.e., mixed sharks).
- The cost to undertake the 'whole' methodology (18 minutes) will be approximately three times higher than the shot methodology (6 minutes).
- These methods have yet to be compared to observer data however after a preliminary review, the number of species that are identified through the observer process is closer to the snapshot methodology. This data will be analysed further.
- Taking length measurements can be time consuming and costly. Some vessels have been provided with measuring boards during this trial to build an image library for potential AI development. Some vessel-specific standards and training will be required to improve consistency.
- The next steps:
 - Finalise trial data processing protocols;
 - Work with ABARES for congruence analysis;
 - Work with observer teams to ensure there will be data to compare with (paired trials);
 - Continue reviewing footage;
 - Analyse and report on the data (there will be continued consultation with stakeholders before the final report is published).

SESSFRAG discussed:

- Industry asked if there was a cost difference for the proposed methods. AFMA stated that costing would be vessel specific however on average the 'whole' method takes three times longer. An industry member indicated support for the 'snapshot' method as it provides more information than what is available now.
- Concerns surrounding the effectiveness of the different methods:
 - The 'snapshot' method may not capture all the species present and therefore may not be comprehensive enough.
 - AFMA stated that if what observers do is considered the standard to reach then the snapshot method is closer to the number of species that are observed by observers in the field.
 - A member asked if five 'snapshots' instead of three might pick up more species. AFMA stated that it may pick up one or two more species, but this has not been tested.
 - The Chair suggested that the 'whole' method be performed and then on the same video the 'snapshot' method but using a 'sub-sampling' methodology (taking three or five sections of a certain number of seconds across the footage) then comparing the two counts of species.
- The footage differs from vessel to vessel and how this works with the methods proposed. AFMA explained that the methods would be assessed on a vessel-by-vessel basis due to differing infrastructure. Looking into camera angles and what works for the methods is a part of the trial.

- CSIRO mentioned a potential for a third method being AI and that a presentation on this could be provided to SESSFRAG at another point. SESSFRAG agreed this would be beneficial.

SESSFRAG recommended:

- Re-considering the ‘snapshot’ methodology to include suggestions discussed above with the goal of maximising the number of species be captured using this method.
- Providing a comparison with observer data and bringing that back for SESSFRAG to make a statistically informed decision.

ACTION item 25 – Dr Geoff Tuck to present AI work at the SESSFRAG Chairs’ meeting in 2025.

Agenda item 16: FRDC Biological parameters projects

Dr Karen Evans (CSIRO) provided update on the project ‘Biological parameters for stock assessments in South Eastern Australia – an information and capacity uplift’ funded by the Fisheries Research and Development Corporation (FRDC) and CSIRO.

SESSFRAG Noted:

- A multi-stakeholder workshop was held in May 2023 to discuss a set of topics related to the SESSF facilitated through postgraduate and early-to-mid career research projects.
- Further activities planned for the project include conducting an annual symposium to facilitate involvement in the projects, networking opportunities for the students, scientists, fisheries managers and Industry, and the opportunity to provide feedback and review of the projects. The symposium will also allow for the reporting on placement of SEA-MES voyages, evaluation of samples, any additional needs as well as an early indication of outputs relevant to stock assessments.
- Three student projects are underway with a fourth likely to begin in early 2025.

Ms Rikki Taylor provided a presentation on her PhD project to SESSFRAG, the aim of which is to identify emerging stocks in the SESSF and exploring different assessment options for these stocks.

SESSFRAG noted that the species identified to date include:

- Ocean Jacket
- John Dory
- Frostfish
- Jack Mackerel was identified as a species of interest however catch is low and may be beyond the scope of this project.
- Latchet is a species that may potentially take the place of Jack Mackerel in this project but is not confirmed.

SESSFRAG suggested latchet samples might be able to be facilitated from the GAB vessels.

SESSFRAG discussed whether stingarees should also be included in the list of emerging species given the quantities caught in the GABTF **and recommended** AFMA and CSIRO explore a method to investigate Stingarees and what attributes might be missing from the most recent ERA. Additionally, consideration should be undertaken to what the next steps should be and ways to facilitate further sampling for data.

ACTION item 26 – Dr Miriana Sporocic to investigate if an ERA has been completed and report to AFMA/CSIRO what attributes are missing for Stingaree’s.

ACTION item 27 – AFMA and CSIRO working with the Stingaree attribute information provided by Dr Miriana Sporocic will develop the next steps (e.g. collection of missing biologicals).

Agenda item 17: ISMP trawl strata project

Dr Paul Burch sought advice on selecting the revised stratification for the Integrated Scientific Monitoring program (ISMP) discard analysis used to estimate discarded catches based on the Bergh method in 2024 (i.e. Deng and Burch 2023²).

SESSFRAG noted the background to the issue being high discard estimates for ‘mixed’ Oreos in 2022 potentially being a result of relatively more observer effort in deeper waters on the coast than in past years, rather than an increase in discarding. The potential of a ‘hidden’ deepwater strata around Tasmania, if not accounted for, may have resulted in biased discard estimates.

Dr Burch proposed:

Although data is limited, it may be better to have low precision than high bias (low accuracy) as the management framework has rules for low precision (e.g. excluding discard estimates if they fail tests) but there are not rules for bias.

- Pool 4-years of data to estimate discards using current and depth-based strata. Essentially maintaining a data pool of shallow strata together and another for deeper strata. Then compare to the 1-year estimates to look for trends which if present, suggest that it is not appropriate to aggregate the data or across 4 years.

SESSFRAG discussed:

- The utilisation of EM to calculate discards and an option with CSIRO suggesting that this could increase the sample size however still required a way to stratify the data.
- What was to be done regarding Oreo discards estimates next year:
 - CSIRO suggested that the proposed work could be completed with some discard estimate options being taken to the Working Group and then to SERAG for consideration and advice, however, there are time constraints. Alternatively, this issue could be considered in further detail and presented next year, although a decision would need to be made this year to either apply the current strata or to not estimate discards this year. AFMA stated that it would prefer to address the issue properly even if it resulted in no updated estimates for 2024.

SESSFRAG recommended delaying the estimation of discards for 2023 and use the current method until 2025, carrying over the accepted discard estimates from 2022 (as is the standard practice for missing/invalid estimates) and that further analysis be undertaken on the proposed depth stratification to better understand the impacts of this on the estimation of discards.

Agenda Item 18: 2025 Chairs’ and Data meeting dates - completed day 2

SESSFRAG agreed on the tentative date ranges of 1-2 and 8–10 April for the 2025 Chairs’ meeting and 26-27 August for the 2025 Data meeting.

Agenda item 19: Other Business

SESSFRAG discussed and recommended:

- The TAC setting document timeframe criteria when considering when a peer review of a stock assessment may be sought:
 - Period reviews should be undertaken with the precise timing considered by individual RAGs as a part of their annual research prioritisation process.
- Issues with the distribution of large files to Members:
 - CSIRO are flexible with what methods they can use to move files however most methods are able to be utilised by most members.

² Deng, RA, Burch, P. 2023. Integrated Scientific Monitoring Program for the Southern and Eastern Scalefish and Shark Fishery - discards for 2022. Report for the Australian Fisheries Management Authority, CSIRO Environment.

- AFMA agreed that in consultation with members and CSIRO, that CSIRO should distribute their files prior to meetings.
- CSIRO asked for clarity for when documents, such as stock assessments, can become public after RAGs have seen them. AFMA stated that documents can be distributed once they have gone through the correct processes for comment and with then with permission from AFMA.

ACTION item 28 – AFMA to update both the peer review and archive sections of the TAC Setting Document to reflect that periodic reviews of stock assessments, or part of assessments, should be undertaken with the precise timing considered by individual RAGs as part of the annual research prioritisation process, and to make it clear when documents such as assessments can be made public. The document to be sent to SESSFRAG for finalisation.

ACTION item 29– AFMA and CSIRO to coordinate the distribution of larger files to members before each meeting.

Close of meeting

The Chair thanked SESSFRAG members and attendees for their contribution and closed the meeting at 10:43 am Friday 23 August 2024.

Attachment A - Register of Interest

Participant	Organisation	Conflict
Dr Cathy Dichmont	Cathy Dichmont Consulting	<p>Director of Cathy Dichmont Consulting.</p> <p>Chair of ComRAC (FRDC), QLDRAC and NSW RAC</p> <p>Contracted by various state and Commonwealth agencies to undertake various reviews and consultancies not related to SESSF.</p> <p>No pecuniary interest in the SESSF.</p>
Mr Lance Lloyd	Lloyd Environmental	<p>GABRAG Chair</p> <p>Member of GABMAC</p> <p>Board Chair, AwF – Aquaculture without Frontiers (Australia) Ltd.</p> <p>Director; Lloyd Environmental Pty Ltd.</p> <p>Research Fellow; Federation University Australia</p> <p>No pecuniary interest.</p>
Dr Paul McShane	Global Marine Resource Management	<p>Chair of SERAG and a member of SEMAC and SESSF-RAG.</p> <p>No pecuniary interest in the SESSF.</p> <p>Principal of Global Marine Resource Management Pty Ltd.</p> <p>Adjunct Professor (Fisheries and Aquaculture) College of Science and Engineering, James Cook University</p>
Mr Sandy Morison	Morison Aquatic Sciences	No pecuniary or other interest in the SESSF.
Dr Sarah Jennings	Independent economics consultant	<p>Adjunct Senior Researcher, TSBE</p> <p>Economics member of SERAG</p>

Participant	Organisation	Conflict
		<p>Economic member of SEMAC</p> <p>Member of AFMA EWG</p> <p>Independent economics consultant</p> <p>No pecuniary or other interest in the SESSF.</p>
Dr Beth Fulton	CSIRO	Ecosystem and climate scientist, Portfolio Leader for Integrated Marine Management. Adjunct with the University of Tasmania (Deputy Director for the Centre of Marine Socioecology). Acquiring funding for research purposes
Mr Simon Boag	<p>SETFIA (trawl)</p> <p>SSIA (sharks)</p> <p>SPFIA (SPF)</p>	<p>EO SETFIA (trawl)</p> <p>EO SSIA (sharks)</p> <p>EO SPFIA (SPF)</p> <p>Industry member on both SERAG and SEMAC.</p> <p>SSIA is engaged by AFMA to collect shark industry biological data.</p> <p>Atlantis undertakes work to assist shared marine space developers (wind, oil etc) understand the fishing industry.</p> <p>Atlantis undertakes other work within the fishing industry from time to time including on MSC assessments.</p> <p>SETFIA is the PI on the orange roughy east AOS.</p> <p>SETFIA is engaged by participants within the W ORS research fishery to collect biological samples.</p> <p>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.</p> <p>Investment committee member of a large fund that owns fishing rights including SBT, ling and flathead.</p>
Mr Neil MacDonald	GABIA	<p>PECUNIARY INTEREST</p> <p>Director NMAC(SA) P/L</p> <p>ORGANISATION SUPPORT</p> <ul style="list-style-type: none"> • Executive officer Great Australian Bight Industry Association (GABIA) • Executive officer Charter Boat Association South Australia (CBASA)

Participant	Organisation	Conflict
		<ul style="list-style-type: none"> Executive officer Southern Fishermen’s Association (SFA) Executive officer Saint Vincent Gulf Prawn Boat Owner’s Association (SCGPBOA) Executive officer Marine Scale Net Fishers Association (MSNFA) Committee support services South Australian Rock Lobster Management Advisory Committee & Research Sub-Committee (SARLAC) Support services South Australian Professional Fishers Association <p>COMMITTEE MEMBERSHIP</p> <ul style="list-style-type: none"> Great Australian Bight Management Advisory Committee (AFMA) - Member Great Australian Bight Research Advisory Committee (AFMA) - Member Gulf St Vincent Prawn Fishery Management Advisory Committee (SVGPBOA) - Member Gulf St Vincent Prawn Fishery Research Sub-Committee (SVGPBOA) - Member Lakes & Coorong Fishery Management Advisory Committee (LCFMAC) - Member Australian Council of Prawn Fisheries - Director
Dr Paul Burch	CSIRO	Employed by CSIRO, assessment scientist. GBATF Data Working Group. Acquiring funding for research purposes.
Ms Franzis Althaus	CSIRO	Employed by CSIRO, Assessment scientist. Acquiring funding for research purposes. Leading the data component of the SSSF stock assessment project.
Dr Roy Deng	CSIRO	Employed by CSIRO, Assessment scientist. Acquiring funding for research purposes
Dr Toni Cannard	CSIRO	Employed by CSIRO, Assessment scientist. Acquiring funding for research purposes
Dr Pia Bessell-Browne	CSIRO	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 Miriana Sporcic	CSIRO	Assessment scientist. Acquiring funding for research purposes Project Leader CSIRO Ecological Risk Assessments
Dr Robin Thomson	CSIRO	Assessment scientist. Acquiring funding for research purposes

Participant	Organisation	Conflict
		<p>PI on close kin project for school shark.</p> <p>PI in CKMR Design for selected SESSF species and methods development.</p>
Dr Geoff Tuck	CSIRO	<p>Involved in Stock assessments.</p> <p>Interest in obtaining funding for future research.</p> <p>Principle investigator on the SESSF stock assessment project.</p> <p>Project leader CSIRO Marine Visual Technologies project team on automated catch detection and species identification.</p>
Dr Rich Little	CSIRO	<p>Employed by the CSIRO and through the organisation has in the past, and may in the future, receive funding for research related to the fishery. Assessment scientist.</p> <p>Project leader CSIRO Marine Visual Technologies project team on automated catch detection and species identification.</p> <p>Project leader Southeast Australian Marine Ecosystem Survey (SEA-MES).</p> <p>Principle Investigator for the Species Distribution project.</p>
Ms Karen Evans	CSIRO	<p>Employee of CSIRO.</p> <p>No pecuniary interest in Australian south east scalefish and shark fisheries.</p> <p>Has been a PI on multiple projects focused on Australian fisheries in the past funded through AFMA and FRDC, leads the FRDC-CSIRO project “FRDC-CSIRO project: Biological parameters for stock assessments in South Eastern Australia – an information and capacity uplift” and is a team member on the FRDC-CSIRO project “South East Australian Marine Ecosystem Study”.</p> <p>Was a past member on the AFMA Commonwealth Fisheries Marine Mammal Working Group.</p>
Amelia Jensen	Student – University of Tasmania / CSIRO	<p>Student working with the University of Tasmania and CSIRO.</p>
Olivia Wilks	Institute for Marine and	<p>Student working with the University of Tasmania and CSIRO.</p>

Participant	Organisation	Conflict
	Antarctic Studies, Honours student	
Dr Ian Knuckey	Fishwell Consulting	<p>Positions:</p> <p>Director – Fishwell Consulting Pty Ltd</p> <p>Director – Olrac Australia (Electronic logbooks)</p> <p>Chair – Northern Prawn Fishery Resource Assessment Group</p> <p>Chair – Tropical Rock Lobster Resource Assessment Group</p> <p>Chair – Victorian Rock Lobster and Giant Crab Assessment Group</p> <p>Chair – Gulf of St Vincent’s Prawn Fishery MAC Research Scientific Committee</p> <p>Scientific Member – Northern Prawn Management Advisory Committee</p> <p>Scientific Member – Gulf of St Vincent Prawn Fishery Management Advisory Committee</p> <p>Scientific Member – Tropical Tuna Resource Assessment Group</p> <p>Member – The Agri Collective</p> <p>Current projects:</p> <p>FRDC 2018-021 – Development and evaluation of multi-species harvest strategies in the SESSF</p> <p>FRDC 2019-027 – Improving and promoting fish-trawl selectivity in the SESSF and GABTS</p> <p>FRDC 2022-007 – Trials of oceanographic data collection on commercial fishing vessels in SE Australia</p> <p>FRDC 2023-063 – Design of a fishery independent longline survey for chondrichthyans in Northern Australia</p> <p>FRDC 2024-012 – Capturing fisher ecological knowledge of climate change: a Southern and Eastern Scalefish and Shark Fishery case study</p> <p>AFMA 2020-0807 – Bass Strait Scallop Fishery Survey – 2020-22</p> <p>NSW 2021-1238 – Developing a harvest strategy framework for Aboriginal cultural fishing in NSW</p>

Participant	Organisation	Conflict
		<p>Traffic Project – Shark Product Traceability</p> <p>Sea Cucumber – Design and implementation of various sea cucumber dive surveys.</p> <p>Australia Bay – Queensland Gulf of Carpentaria Developmental Fin Fish Trawl Fishery</p> <p>WAFIC Project – Strategic Review of Western Australia’s Shark Fisheries DAWE Project – Multi-sector fisheries capacity building</p>
Dr Kyne Krusic-Golub	Fish Ageing Services	<p>Director – Fish Ageing Services Pty Ltd</p> <p>No pecuniary or financial interest in the fishery other than securing funds for potential projects related to age and growth studies.</p> <p>Current Related Projects</p> <p>AFMA 2022-0812 – Fish ageing for SESSF quota species 2023-26.</p> <p>Project collaborator on FRDC 2019-030. An updated understanding of Eastern School Whiting stock structure and improved stock assessment for cross-jurisdictional management</p> <p>Project co-investigator on FRDC 2022-047. Developing and validating novel methods to estimate age- and size-at-maturity in South Eastern Australian fisheries.</p>
Dr Keith Sainsbury	Sain Solutions Pty Ltd	<p>Director- SainSolutions Pty Ltd</p> <p>Shares through self-Managed super fund</p> <p>No fishing concessions or shares in fishing companies</p>
Mr Daniel Wright	ABARES	Employed by ABARES. No pecuniary interest in the fishery. Any future interests in projects or research will be declared as required.
Mr Tim Emery	ABARES	Employed by ABARES. No pecuniary interest in the fishery. Any future interests in projects or research will be declared as required.
Ms Krystle Keller	ABARES	Employed by ABARES. No pecuniary interest in the fishery. Any future interests in projects or research will be declared as required.
Ms Sally Weekes	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Mr Dan Corrie	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Dr Mark Grubert	AFMA	Employed by AFMA, no interest, pecuniary or otherwise

Participant	Organisation	Conflict
Ms Cate Coddington	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Mr Tamre Sarhan	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Mr Henry Oak	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Mr Nathan Jackson	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Miss Audrey Kent	AFMA	Employed by AFMA, no interest, pecuniary or otherwise
Ms Jennifer Power-Geary	AFMA	Employed by AFMA, no interest, pecuniary or otherwise

Attachment B- Action Items

Completed/Redundant	Underway	Advice required	Not yet started
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Action Items from previous SESSFRAG meetings

No.	Ag. Item / Meeting Date	Action Item	Agency / Person	Timeframe	Progress as of SESSFRAG Data meeting 2023
29	9 SESSFRAG Chairs' 2021	AFMA to incorporate the process for periodic review of stock assessments in the document 'Total Allowable Catch (TAC) setting process – Guidelines for provision of data and stock assessment processes' for further consideration by SESSFRAG. Timeline is subject to other priorities.	AFMA	As soon as practicable	<u>Advice Required</u> A draft document which now includes the periodic peer review of stock assessments (section 1.8) is provided at Attachment A . AFMA seeks SESSFRAG's approval on this revision.
31	16 SESSFRAG Chairs' 2021	AFMA to compare discard data reported in logbooks, to those recorded by the ISMP program, to determine the accuracy of operator reported discards.	AFMA	Include in future discard reviews to SESSFRAG	<u>Underway</u> A PowerBI dashboard to compare discard data from logbooks and the ISMP will be developed during the next iteration of the SESSF species data summary prepared by AFMA.
8	8 SESSFRAG Data 2022	AFMA to trial an industry data collection program to supplement the ISMP program, with a focus on the western part of the Commonwealth Trawl Sector (CTS).	AFMA	As soon as possible	<u>Underway</u> Simon Boag will present a trawl industry data collection proposal at the 2024 SESSFRAG data meeting
22	9 SESSFRAG Data 2022	AFMA to investigate discrepancies in logbook and CDR data for Bight redfish, deepwater sharks, school shark and eastern school whiting in recent years and report back to the relevant RAGs in 2022	AFMA	As soon as possible	<u>Completed/Redundant</u> A logbook catch of 200 tonnes of School Shark was corrected in the AFMA database in December 2022. The specifics of the other discrepancies were not sufficiently documented to allow AFMA to resolve. However, data used to inform the

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					Bight Redfish assessment was accepted in 2022 and data for deepwater sharks (East and West) and Eastern School Whiting is being reviewed in 2024 prior to their respective assessments so that if any issues are detected AFMA will investigate at that time. On this basis, AFMA is closing this action.
2	2 SESSFRAG Chairs' 2023	Dr Beth Fulton to draft a document on climate change and its potential implications that can be considered by SESSFRAG at its March 2024 meeting. The outcomes of this discussion may require further amendment to the Overview of TAC setting process document (or another document).	AFMA & CSIRO	SESSFRAG Chairs' meeting 2024	<u>Completed</u> Beth Fulton provided an update on this work at the 2024 Chairs' meeting during agenda item 15.
3	3 SESSFRAG Chairs' 2023	AFMA to summarise the potential impacts of the structural adjustment on the economics of the SESSF and what this means in terms of research and data collection for the Chairs' meeting in 2024. Previous indicators produced by the Economic Working Group should also be considered.	AFMA	SESSFRAG Chairs' meeting 2024	<u>Not started</u>
10	12 SESSFRAG Chairs' 2023	To assist with a holistic view of the SESSF in terms of species caught and interacted with, AFMA to include an agenda item for the data meeting to include (a) catch composition data for non-quota species so that any large changes are identified, and appropriate management action can be progressed which may include, for example, a stock assessment, and (b) protected species interactions.	AFMA	As soon as possible	<u>Underway</u> AFMA is developing Power BI dashboards showing catch composition data for non-quota species and protected species information. These will be presented by Ms Katrina Marchant at the 2024 SESSFRAG data meeting.
13	12	AFMA and CSIRO to review the recommendations from the ABARES congruence analysis of logbook and EM data and determine what additional work is required.	AFMA to progress	As soon as possible	<u>Underway</u>

No.	Ag. Item / Meeting Date	Action Item	Agency / Person	Timeframe	Progress as of SESSFRAG Data meeting 2023
	SESSFRAG Chairs' 2023		through SharkRAG		This action item will be progressed through SharkRAG in 2024.
2	3 SESSFRAG Data Meeting 2023	AFMA to liaise with SSIA/SETFIA regarding the adoption of the AFMA electronic observer data collection system.	AFMA/ SSIA/ SETFIA		<u>Underway</u> SSIA – Complete – the process needed to begin using the system has been implemented. SETFIA – AFMA will liaise with SETFIA on the potential use of this system once an industry-based biological sampling program has been developed.
3	3 SESSFRAG Data Meeting 2023	AFMA to include the GABIA crew-based data collection summaries in the ISMP annual report.	AFMA		<u>Underway</u> A summary of the GABIA crew-based data collection program will be presented to the 2024 SESSFRAG data meeting but work remains on incorporating this data into the AFMA database.
5	3 SESSFRAG Data Meeting 2023	SSIA to investigate the reasons for and address the oversampling of shark vertebrae given that there are costs associated with collection, processing and storage of samples, and report back to SESSFRAG.	SSIA		<u>Completed</u> Most of the over-sampling relates to Gummy Shark in Bass Strait. SSIA is addressing this issue by reducing sample batches from this area from 80 to 60 Gummy Sharks. Simon Boag to provide an update on the SIDaC program at Agenda Item 3
7	3 SESSFRAG Data Meeting 2023	Fishwell, FAS and CSIRO to collaborate and identify catch locations/zones for old GAB orange roughy samples.	Fishwell/ CSIRO/ FAS		<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.

No.	Ag. Item / Meeting Date	Action Item	Agency / Person	Timeframe	Progress as of SESSFRAG Data meeting 2023
8	3 SESSFRAG Data Meeting 2023	FAS to work with GABIA and Fishwell on the utility of using fish length to otolith weight ratios to provide information on stock status for non-assessed Orange Roughy.	FAS/ Fishwell/ GABIA		<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
9	4 SESSFRAG Data Meeting 2023	AFMA to work with the relevant data collection programs and start collecting tissue samples for CKMR analysis for Redfish and Blue-eye Trevalla and report back in around six months' time regarding progress.	AFMA		<u>Underway</u> <i>Blue eye trevalla</i> : Complete - collection for a trial period by SSIA has been included in the co-management arrangement. <i>Redfish</i> : Underway - AFMA and CSIRO have developed a CKMR sampling plan for Redfish, but no samples have been collected by AFMA observers as yet. There is potential for the collection of biologicals and tissue samples from Redfish during the remaining SEA-MES voyages.
10	7 SESSFRAG Data Meeting 2023	CSIRO to investigate age and length data to see if it is informative of the status of the eastern Orange Roughy stock.	CSIRO		<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
12	8 SESSFRAG Data Meeting 2023	AFMA to update the climate indicator report based on SESSFRAG recommendations including the addition of the number of fishable days, interpretation information for the SAM box and the Antarctic oscillation webpage and relating to only the total productivity eaten by the SESSF stocks.	AFMA		<u>Completed</u> This has been incorporation in the reports for 2024. The updated report should be available for consideration by the assessment RAGs later in 2024.

No.	Ag. Item / Meeting Date	Action Item	Agency / Person	Timeframe	Progress as of SESSFRAG Data meeting 2023
15	9 SESSFRAG Data Meeting 2023	AFMA and CSIRO to discuss the implications of not having updated discard estimates available for some Tier 4 assessments and propose a way forward, for consideration by SESSFRAG in 2024.	AFMA/ CSIRO		<u>Underway</u> AFMA and CSIRO have begun discussions on this action item will progress it further once the discard strata redesign work has been completed.
17	11 SESSFRAG Data Meeting 2023	The following research priority be included in the plan for the SESSF – Improving the understanding of how key species in the SESSF might respond to climate change by the collection of data during the next 12 to 18 months given predictions of unusually high (and perhaps record high) water temperatures.	AFMA		<u>Underway</u> Given the timing of potential funding sources, this priority is being pursued as a rapid response project outside of the ARC process. An update on the status of this proposal will be provided to the 2024 data meeting.
18	11 SESSFRAG Data Meeting 2023	FAS seek advice from SERAG 2023 on the addition of cascade Orange Roughy otolith samples to the ageing plan.	FAS/ SERAG		<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
1	4 SESSFRAG Chair's Meeting 2024	MHS project team to present results of MSE testing for 'trigger species' approach. In that regard, SESSFRAG should then consider how trigger species impacted by climate change can be effectively addressed under the AFMA Climate Risk Framework.	CSIRO	SESSFRAG Data meeting 2024	<u>Underway</u> Mr Dan Corrie will provide an update on this work at the 2024 SESSFRAG data meeting.
2	8 SESSFRAG Chair's Meeting 2024	Paul Burch to circulate the draft catch history report to RAGs before the SESSFRAG data meeting 2024.	CSIRO	SESSFRAG Data meeting 2024	<u>Underway</u> A copy of the draft catch history report will be provided to members and Paul Burch will speak to the report at the 2024 SESSFRAG data meeting.

No.	Ag. Item / Meeting Date	Action Item	Agency / Person	Timeframe	Progress as of SESSFRAG Data meeting 2023
3	12 SESSFRAG Chair's Meeting 2024	AFMA, CSIRO and NSW DPI to discuss the status of Silver trevally assessments and then provide advice to SERAG who will make an out of session decision on the timing of this assessment.	AFMA/NSW DPI/ CSIRO	As soon as possible	<u>Completed</u> AFMA has been advised that NSW Fisheries undertakes annual stock assessments of Silver Trevally and will provide NSW Fisheries with Commonwealth data to inform these assessments as and when requested. AFMA has scheduled the next Commonwealth assessment of Silver Trevally for 2027 and will monitor the outcomes of the annual assessments by NSW Fisheries in the interim.
4	12 SESSFRAG Chair's Meeting 2024	AFMA and CSIRO to consider the harvest strategy framework in relation to the appropriateness of the 2020 assessment for a Smooth oreo non-cascade and present these finding to SESSFRAG. If found acceptable the assessment will occur in 2024, if not then the assessment will occur in 2026.	AFMA/CSIRO	As soon as possible	<u>Completed</u> A Tier 5 assessment of Smooth Oreo (other) was undertaken in 2015 followed by weight-of-evidence assessments in both 2019 and 2020. The latter exercise considered the results of an ecological risk assessment on the otter-trawl sub-fishery of the Commonwealth Trawl Sector in relation to Smooth Oreo. Fishing mortality (F) on this species was found to be below each indicator of F assessed through this process (i.e., F_{MSM} , F_{Lim} and F_{Crash}), yielding an overall risk score of "low". Concerns regarding the robustness of the Tier 5 assessment on Smooth Oreo (other) and potential violation of assumptions were also raised in 2020. AFMA considers that the weight-of-evidence assessment undertaken in 2020 considered all available information at the time and is

No.	Ag. Item / Meeting Date	Action Item	Agency / Person	Timeframe	Progress as of SESSFRAG Data meeting 2023
					akin to the six-yearly trigger species reviews that will occur in future. This being the case, the next review of Smooth Oreo (other) indicator data and assessment options will occur in 2026.
5	15.1 SESSFRAG Chair's Meeting 2024	AFMA to present the climate change framework with some species in consideration against that framework at SESSFRAG Data meeting 2024.	AFMA	SESSFRAG Data meeting 2024	<u>Underway</u> Mr Dan Corrie will provide an update on this work at the 2024 SESSFRAG data meeting.
6	16 SESSFRAG Chair's Meeting 2024	AFMA amend the scope to the Multi-species Harvest Strategy Phase 2 to include the outcomes of the harvest strategy, climate change trends and shocks e.g., low recruitment scenarios and buffers work (undercaught TACs), Dynamic B ₀ .	AFMA	As soon as possible	<u>Advice Required</u> AFMA proposes that this action item be reworded to: "If MSHS Phase 2 is supported by ComRAC, SESSFRAG should be provided a copy of the research proposal to ensure critical components are appropriately considered, including outcomes of the HSP review, climate impacts, buffers etc.,"
7	16 SESSFRAG Chair's Meeting 2024	AFMA to discuss with various policy-based bodies (taking some examples) (ABARES, DCCEW, DAFF-fisheries) to ensure in practice and philosophically with the multi species project will conform to their process.	AFMA	As soon as possible	<u>Not yet started</u> Examples are yet to be created and progressed to a point of discussion with policy-based bodies.
8	16 SESSFRAG Chair's Meeting 2024	Geoff Tuck to present outcomes of his previous project on spatial closures to inform future discussions addressing spatial closures in the context of harvest strategies and methods.	CSIRO	SERAG 2024	<u>Underway</u> Geoff Tuck is scheduled to present on this work at SERAG 1 in October 2024.

Action items raised by SERAG for consideration by SESSFRAG

SERAG 1 2023 Blue-eye Trevalla (slope)	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	<u>Underway</u> The early catch time series for Blue-Eye Trevalla (slope) is available and will be presented to the 2024 SESSFRAG data meeting for consideration.
SERAG 1 2023 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	SESSFRAG Data Meeting 2024	<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
SERAG 1 2023 Cascade Orange Roughy	CSIRO/FAS/AFMA to discuss an Orange Roughy ageing plan including ageing requirements for each Orange Roughy stock, and the order of priority for assessments.	AFMA/CSIRO/FAS	SESSFRAG Data Meeting 2024	<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
SERAG 1 2023 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 truthing of the otolith weight/age relationship every few years)	CSIRO	SESSFRAG Data Meeting 2024	<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.
SERAG 1 2023 Western Orange Roughy	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	SESSFRAG Data Meeting 2024	<u>Not yet started</u> AFMA will convene a Working Group to consider ageing and assessment priorities for SESSF Orange Roughy stocks prior to the 2025 SESSFRAG data meeting.

Attachment C – Summary of action items arising from SESSFRAG Data meeting August 2024

Agenda Item	Description	Responsibility	Timeframe
3	EO to distribute Q1 and Q2 2024 ISMP reports to members.	AFMA	As soon as possible
3	Simon Boag to revise the Shark industry data collection table (attachment 3C) to ensure all samples have the number of boat trips listed.	SETFIA/SIDAC	As soon as possible
3	FAS to update the registration and ageing data table for the SESSF zones 40 and 50 for 2021 to 2024 Silver Warehou samples.	Fish ageing services	As soon as possible
3	AFMA and CSIRO to discuss potential sampling of tissue during remaining Investigator cruises for the purposes of supporting epigenetic ageing trials.	AFMA/CSIRO	As soon as possible
3	GABRAG during the next assessments of Deepwater Flathead and Bight Redfish to consider the settings in the assessments for discarding and selectivity.	GABRAG	GABRAG 1 2024
3	AFMA to check and work with GABIA ensure the sampling is representative of the catch (in reference to how GABIA members are sampling smaller fish).	AFMA/GABIA	As soon as possible
4	AFMA to consider the outcome of the 2024 NSW assessment of Silver Trevally in light of the data error and seek further advice from SERAG if the outputs differ significantly from the 2023 assessment.	AFMA/NSW DPI	SERAG 1 2024
4	SEMAC consider the appropriateness of the large change limiting rule for Mirror Dory given the cyclical nature of the species	SEMAC	SEMAC 2025
4	AFMA to investigate the logbook catch by depth for Red Royal Prawn from catch <330m for discussion at SERAG.	AFMA	SERAG 1 2024
4	AFMA to investigate the NSW state catch of Red Royal Prawn increase whilst Commonwealth catch decreased for discussion at SERAG.	AFMA	SERAG 1 2024
4	SERAG to consider whether an assessment of Alfonsino is required and if so, what assessment method would be appropriate noting that the last assessment was a catch and age based assessment that is no longer an accepted SESSF method, further that existing ageing data may be biased in light of recent Indian Ocean ageing research.	SERAG	SERAG 1 2024

4	SERAG to consider Red Royal Prawn, given it has exceeded its trigger, whether it remains in the trigger category or becomes an assessed species.	SERAG	SERAG 1 2024
5	AFMA to revise section into the TAC guidelines document regarding the need to ensure that all supporting analyses for assessment are archived appropriately so that an assessment can be replicated in the future. AFMA to raise this with broader AFMA research team noting this is an issue that applies across Commonwealth fisheries, not just SESSF.	AFMA	As soon as possible
6	Dr Paul Burch to add the updated Deepwater Shark extrapolation plots of catches from Thomson et al 2022 into the catch report before SERAG 1.	CSIRO	SERAG 1 2024
6	The Pink Ling, Blue-Eye Trevalla and Deepwater shark Working Group to recommend a Deepwater Shark catch series and CPUE series to SERAG for use in Dynamic Teir 4 assessment.		SERAG 1 2024
6	AFMA and CSIRO Investigate the catches of the last 4 years (including 2024) of Deepwater Shark in the deep-water closures associated with Orange Roughy fishing.	AFMA/CSIRO	As soon as possible
7	AFMA to investigate the invariant depth issue and make sure the origin of this issue was not e-logs.	AFMA	As soon as possible
7	CSIRO to analyse discrepancies between the total CDR to logbook catch comparisons in table 1 and table 2 of the data summary report particularly for species involved in Tier 1 and Tier 4 assessments.	CSIRO	As soon as possible
10	AFMA to consider the implications of changing the trigger species threshold in the SESSF Harvest Strategy from “above the TRP” to “near the TRP” to be more consistent with the thresholds used in the Climate Risk Framework.	AFMA	As soon as possible
11	AFMA to investigate why Ocean Jacket has been included in the ‘incidental/ category of the summary report.	AFMA	As soon as possible
12	SERAG to consider whether there is an ongoing need to constrain Tiger Flathead catch due to Jackass Morwong in light of the recent trawl closures.	CSIRO	As soon as possible
13	SERAG discuss Eastern Orange Roughy sensitivity tests of stock assessment and whether those adequately address the effect of fishing that will be appearing in the stock over the next 10 years. This discussion should include whether further data is required and provide advice if additional scenarios are needed, and action taken through the RAG process.	SERAG	As soon as possible
14	Dr Kyne Krusic-Golub to inform AFMA and CSIRO on completion of stock take of Silvery Trevally otoliths as numbers by year to inform the RAG if there is enough to be useful to age and utilise in the next assessment.	FIS/AFMA/CSIRO	As soon as possible
14	Dr Kyne Krusic-Golub to restrict ageing of Pink Link to the Eastern stock only.	FIS	As soon as possible

15	Dr Geoff Tuck to present AI work on discards at the SESSFRAG Chairs' meeting in 2025	CSIRO	SESSFRAG Chairs' meeting 2025
16	Dr Miriana Sporcic to investigate if an ERA has been completed and report to AFMA/CSIRO what attributes are missing for Stingaree's.	AFMA/CSIRO	As soon as possible
16	AFMA and CSIRO working with the Stingaree attribute information provided by Dr Miriana Sporcic will develop the next steps (e.g. collection of missing biologicals).	AFMA/CSIRO	As soon as possible
19	AFMA to update both the peer review and archive sections of the TAC Setting Document to reflect those periodic reviews of stock assessments, or part of assessments, should be undertaken with the precise timing considered by individual RAGs as part of the annual research prioritisation process, and to make it clear when documents such as assessments can be made public. The document to be sent to SESSFRAG for finalisation.	AFMA	As soon as possible
19	AFMA and CSIRO to coordinate the distribution of larger files to members before each meeting.	AFMA/CSIRO	As soon as possible