



Australian Government
Australian Fisheries Management Authority



Southern and Eastern
Scalefish and Shark Fishery
 Slope Resource Assessment Group (SLOPERAG)

MINUTES

CHAIR: MR SANDY MORISON

24 - 26 SEPTEMBER 2014

CSIRO

CASTRAY AVE

HOBART TAS 7000

Slope Resource Assessment Group (SlopeRAG)

Minutes

Chair: Mr Sandy Morison

Date and Location: 24 – 26 September 2014, CSIRO, Hobart

Attendance

Members

Mr Sandy Morison	SlopeRAG Chair
Dr Geoff Tuck	CSIRO
Mr Tom Bibby	Industry
Mr John Jarvis	Industry
Mr Simon Boag	Industry
Dr Sarah Jennings	UTAS, Economics
Dr Marcus Finn	AFMA
Mr Les Scott (Thursday only)	Industry

Apologies from members

Mr Ross Bromley	Executive Officer, AFMA
Dr Jeremy Prince	Biospherics Pty Ltd

Observers and invited participants

Ms Michelle Wilson	AFMA, A/g SlopeRAG Executive Officer
Dr Judy Upston	CSIRO
Dr Malcolm Haddon	CSIRO
Mr Lee Georgeson	ABARES
Mr Malcolm Poole (Wednesday afternoon only)	Recreational representative
Mr Simon Robertson (Agenda Item 5)	Fish Aging Services
Dr Alan Williams (Agenda Item 5)	CSIRO
Mr Paul Hamer (Agenda Item 5)	Fisheries Victoria
Mr Johnathan Kool (Agenda Item 5)	GeoScience Australia
Mr Mark Green (Agenda Item 5)	CSIRO
Dr Franzis Althaus (Agenda Item 5)	CSIRO
Dr Sally Wayte (Thursday only)	CSIRO



1. Preliminaries

1.1 Welcome and Introductions/Apologies

- 1 The Chair opened the meeting by welcoming all attendees and noted apologies from Dr Jeremy Prince and Mr Ross Bromley. The Chair informed the group that the meeting is being recorded for the purposes of minute-taking. All in attendance introduced themselves and declared any interest pecuniary or otherwise.

1.2 Declarations of Interest

Name	Interest Declared
Mr Sandy Morison	SlopeRAG and ShelfRAG Chair, member of SEMAC and SESSFRAG. Consultant with an interest in funding for research purposes. Conducts fisheries related work consultancies for industry, companies and other Government departments. Had been recently engaged by an environment non-government organization to review an MSC pre-assessment of Orange Roughy in New Zealand.
Dr Geoff Tuck	CSIRO. Involved in Stock Assessments. Interest in obtaining funding for future research. Principle investigator on the SESSF stock assessment project and marine closures project.
Mr Tom Bibby	Commonwealth Trawl Sector boat and quota SFR holder. Chairman of SETFIA.
Mr John Jarvis	South East Trawl boat and quota SFR holder
Mr Simon Boag	SETFIA CEO, CFA vice-Chair, runs a consultancy firm. Sits on boards of Commonwealth Trawl Sector boat and quota SFR holding companies as a non-beneficiary director.
Dr Sarah Jennings	Resource Economist at the University of Tasmania. Interest in obtaining funding for future research. No pecuniary interest.
Dr Marcus Finn	AFMA. Manager of Commonwealth and GAB Trawl Fisheries section. No conflicts of interest pecuniary or otherwise.
Dr Judy Upston	Acquiring funding for research purposes
Dr Malcolm Haddon	CSIRO stock assessment scientist. Member of SESSFRAG, Northern Prawn RAG and sub-Antarctic RAG. No pecuniary interest.
Mr Lee Georgeson	ABARES. Interest in obtaining funding for future research. No pecuniary interest.
Dr Sally Wayte	CSIRO stock assessment scientist. No pecuniary interest.



Mr Les Scott	<p>Managing Director: Petuna Sealord Deepwater Fishing P/L an Australian resident company which holds various fishing rights in, and operates vessels in the SESSF, GHAT, East Coast Deepwater Fishery, Coral Sea and International fisheries operating a vessel under an Australian Flag;</p> <p>Managing Director: Australian Longline P/L an Australian resident company which holds various fishing rights in, and operates vessels in the SESSF; and</p> <p>Advisor to PG&UM Rockliff – Petuna Fisheries who hold various fishing rights in the SESSF, GHAT, Commonwealth and State (Tasmania) Scallop Fishery, Small Pelagic Fishery, East Coast Tuna Fishery, Off Shore Fisheries and Tasmanian State Fisheries.</p> <p>RAG / Other Memberships</p> <ul style="list-style-type: none"> • SEMAC • Sub-Antarctic RAG • Threat Abatement Plan - (Sub-Antarctic demersal longline member) • Industry representative - Australian Delegation to CCAMLR. <p>Fishing Associations</p> <ul style="list-style-type: none"> • Director of CFA; • Director of SETFIA.
Ms Michelle Wilson	AFMA. Demersal and Midwater Trawl Fisheries section. No pecuniary interest or otherwise.
Mr Malcolm Poole	Recreational fisher. Treasurer and Board member Recfish Australia, member of Australian Recreational Fishing Foundation, Chairman Recreational Fishing Alliance of NSW, committee member on NSW Maritime Advisory Council.
Dr Alan Williams	CSIRO. Working on the FRDC Blue-Eye Trevalla Project
Mr Paul Hamer	Fisheries Victoria. Working on the FRDC Blue-Eye Trevalla Project
Mr Johnathan Kool	Geoscience Australia. Working on the FRDC Blue-Eye Trevalla Project
Mr Mark Green	CSIRO. Working on the FRDC Blue-Eye Trevalla Project
Dr Franzis Althaus	CSIRO. Working on the FRDC Blue-Eye Trevalla Project
Mr Simon Robertson	Fish Aging Services. Working on the FRDC Blue-Eye Trevalla Project



1.3 Adoption of Agenda

- 2 The Chair noted that since the RAG last met, a revised version of the Fisheries Administration Paper (FAP) 12 has been released which outlines the roles and responsibilities of RAGs and RAG members. The Chair proposed adding an item to the agenda to receive an update and discuss the revised version. The RAG agreed and adopted the remainder of the agenda.

1.4 Action items from SlopeRAG meeting November 2013

- 3 The status of action items from the November 2013 ShelfRAG meeting was discussed. Remaining uncompleted action items carried over from the previous meeting are listed in Table 1.

2. General updates

2.1 Manager's report on management issues

- 4 The AFMA Manager presented the following management issues and highlighted the key points:

Catch vs TAC

- A table was presented comparing catch to date against TAC and the equivalent for the same time last year and end of last year, flagging any species that are of concern including species that are under caught.
- It was noted that the issue of under caught TACs was originally brought up at the most recent SEMAC and consequently to SESSFRAG. SESSFRAG suggested that the issue may best be dealt at the individual RAG level on a species by species basis.
- AFMA noted that it will address this issue with the Commonwealth Fisheries Association, MACs and individual fishers.

Blue-Eye Trevalla

- The RAG previously recommended an RBC that was lower than previous years which went to the MAC and consequently saw the suggestion of a step down TAC over three years which was accepted by the Commission.
- The Commission took into account that the Tier 4 was conservative and noted that the RAG should monitor the step-down and recommend further work to improve the quality of the assessment.

In response to the AFMA Manager's update:

- there were concerns from CSIRO participants that doing just data summaries for Blue-Eye Trevalla is inadequate for determining whether Blue-Eye Trevalla should step down to the RBC resulting from the Tier 4 assessment.
- the RAG argued that Blue-Eye Trevalla should be noted as an issue that needs further examination.



- CSIRO participants noted that previous stock assessments were for the whole stock but the data used was from a subset of the stock. Therefore, the assessment is not representative of the whole stock.
- the ABARES observer mentioned that it has been challenging determining the stock status of Blue-Eye Trevalla for use in the ABARES fisheries status reports.

Pink Ling

- The Commission set the TAC this year as a global TAC rather than formally splitting into east and west but it did recommend that eastern landings be restricted to 349 t.
- AFMA introduced a 250kg daily allowance from the start of the season. At the same time, AFMA put a call to industry for ideas on how we could achieve the same catches in the east in a way that is flexible to industry. AFMA later adopted the idea of a 25 per cent ratio whereby upon application to AFMA, the boat would stop operating under the 250kg daily allowance and instead would be restricted to catching a maximum 25 per cent of their quota holdings in the eastern zone.
- At the last AFMA Commission meeting, the Commission considered splitting the Pink Ling Quota SFRs into western and eastern quota SFRs. The Commission recommended that AFMA continue with the current arrangements until at least 2015/16.
- AFMA noted it has received feedback from industry that a management arrangement that forces industry to discard fish more frequently is unfavourable.

Orange Roughy

- The Orange Roughy Rebuilding Strategy 2014 has been developed and a draft will be forwarded to the Department of Agriculture and the Department of the Environment. A draft will also be distributed to SlopeRAG for comment and put out for public consultation.
- The Harvest Strategy Policy suggests the rebuilding strategy may require approval from the Minister for Environment.
- It was noted that this will be the first time that Orange Roughy will be managed by a rebuilding strategy under the Commonwealth Harvest Strategy Policy and Guidelines. It was previously under a Conservation Programme as the initial Orange Roughy listing occurred prior to the Commonwealth Harvest Strategy Policy being released.

4.1 Commission's comments on 2013 SESSF TACs

5 This was covered under Agenda Item 2.1.

5.1 ABARES Fishery Status Report 2013

6 The ABARES member informed the RAG that the 2013-14 Fishery Status Report is due for release on 22 October 2014. It was noted that overall there has been an improvement in biological and economic status for a number of stocks. However, further information is confidential until the release date.



6.1 SESSFRAG update

- 7 The Chair gave an update of the two SESSFRAG meetings that have been held since the last ShelfRAG meeting and made the following key points:
- Following the Pink Ling assessment and external reviews SlopeRAG noted the benefit of independent reviews of Tier 1 assessments. However, the cost constraints associated with this were noted. It is intended that AFMA will develop a paper on the mechanisms surrounding independent review.
 - The SESSF Harvest Strategy Framework has been revised and changes have been flagged including the potential for probabilistic advice.
 - There was acknowledgement that work needs to be done to improve understanding of the risks involved in towards MYTACs and multi-year RBCs.
 - As part of the move to multi-year RBCs, the role of the large change limiting rule was discussed and whether it is still appropriate.
 - SESSFRAG questioned what the breakout rules mean and what we should do if a species does break out. There were questions surrounding the usefulness of the breakout rules and how they are currently formulated.
 - There was agreement at SESSFRAG that if the breakout rules are based on CPUE then they should be based on the same CPUE series that was used to set the MYTAC.
 - The AFMA manager noted that the purpose of the breakout rules was to trigger a review of a species by the relevant RAG when something was occurring in the data that was clearly unexpected when the original stock assessment was completed. The manager noted that the breakouts were not intended to trigger a specific response, but were intended to trigger consideration by the RAG of the appropriate actions to recommend.
 - Discount factors were discussed and agreed by SESSFRAG that they are to remain in their current form until the RAG comes up with something better.
 - It was noted that the error level around the assessments is being explored as a basis for getting species specific discount factors.
 - It was agreed that exemptions from discount factors should remain with regard to closures.
 - Stock regionalisation was discussed and it was noted that SlopeRAG needs to provide comments on which species should be considered.
 - Research priorities were considered and agreed that the highest priorities were the FIS, the ISMP data, aging data and assessments.
 - It was noted that the RAGs need to consider the timing of MYTACs so the assessments do not coincide at the same time.

7.1 Observer Report (Tabled)

- 8 The 2013 calendar year observer report was distributed to all members prior to the meeting. The Chair noted that SESSFRAG agreed that observer coverage had improved and more targets were being met.
- 9 SlopeRAG had no further comments.



3. RAG Advice sought

3.1 Orange Roughy – incidental TAC for western and southern zones

- 10 The Chair reminded the RAG that at previous meetings there was agreement to continue with the same bycatch TACs for Orange Roughy in the western and southern zones. It was noted that the only additional data for this year is updated catch data and the species have not reached their TACs.
- 11 The RAG recommended that given there are no new assessments, the current bycatch TACs should be rolled over i.e Western Zone 60 t and Southern zone 35 t.
- 12 The RAG recommended that Orange Roughy for the western and southern zones be put on a three year bycatch MYTAC providing that the MYTAC does not prevent future work on the stock.
- 13 The AFMA member noted that the Commission will require a breakout rule to be associated with the MYTAC if this option is pursued.
- 14 The RAG recommended the breakout rule for Orange Roughy on a three year MYTAC should be that if 90 per cent of the MYTAC is caught this would trigger exploration of options for updating the assessments

Species	Assessment	Bycatch TAC (t)	Discount factor	Undercatch/Overcatch
Orange Roughy – western zone	N/A	3 year MYTAC 60 t per year	N/A	10%
Orange Roughy – southern zone	N/A	3 year MYTAC 35 t per year	N/A	10%

3.2 Orange Roughy – Cascade Plateau, TAC

- 15 It was noted that the current Orange Roughy TAC for the Cascade Plateau is 500 t however there has been little effort and zero catch for the past couple of years. The Cascade Plateau stock was scheduled for an assessment this year but given that there has been no new catch data, the assessment was postponed.
- 16 The RAG recommended that as there is no new data or information for the RAG to comment on, then the TAC of 500 t be continued.



- 17 Due to low effort, small catches and the lack of new data the RAG suggested that the Orange Roughy in the Cascade Plateau is suitable to be managed under a MYTAC.
- 18 The RAG recommended a 500 t per year 3 year MYTAC for Orange Roughy in the Cascade Plateau zone. The RAG also recommended a breakout rule that if greater than 20% of the TAC is caught in any one year this would trigger exploration of options for updating the assessments. This proposed breakout rule is based on the approximate catching capacity of one boat, and is intended to be triggered if effort and catches change in a year (i.e. a number of boats start to visit the cascade and take fish).

Species	Assessment	TAC (t)	Discount factor	Undercatch/Overcatch
Orange Roughy – Cascade Plateau	N/A	3 year MYTAC 500 t per year	N/A	10%

Mr Poole left the room at 3.05pm

3.3 Smooth Oreo – Cascade Plateau, TAC

- 19 The RAG recognised that there has been little fishing effort on the Cascade Plateau over the last few years resulting in no catch of Smooth Oreos. The RAG agreed that the Smooth Oreo Cascade Plateau zone TAC remain at 150 t and move to a three year MYTAC. The RAG recommended a breakout rule that if catches reached 20% of TAC this would trigger exploration of options for updating the assessments.

Species	Assessment	TAC (t)	Discount factor	Undercatch/Overcatch
Smooth Oreo – Cascade Plateau	N/A	3 year MYTAC 500 t	N/A	10%

4. Summary of breakout species and resultant actions from SESSFRAG

- 20 The AFMA Manager presented a summary of species triggering breakout rules and recommendations from SESSFRAG.

4.1 Pink Ling

- 21 The Pink Ling standardised CPUE for 2013 broke out above the 95 per cent confidence interval in the western zone but did not break out in the east where it was close to the predicted CPUE.



- 22 SESSFRAG noted that the 50kg management arrangements had contributed to reduced catch rates of Pink Ling in the eastern zone of the fishery, but that even with the measures in place and apparently depressing CPUE, the observed CPUE was still slightly above the CPUE predicted by the model.
- 23 SESSFRAG recommended not undertaking another Tier 1 assessment this year because trends in the CPUE appear to be positive and there is little new information that would alter the result.

4.2 Silver Warehou

- 24 The standardised CPUE for Silver Warehou broke out below the 95% confidence interval two years ago triggering an assessment and subsequently broke out again last year.
- 25 SlopeRAG 2013 noted that the breakout was not unexpected and it indicated something in the assessment is producing pessimistic estimates of stock status. SlopeRAG 2013 noted that the breakout rule will continue to be triggered until the problem in the model is rectified
- 26 SESSFRAG noted that:
 - age and length data is quite positive and telling us that the stock levels should be increasing but the CPUE is not showing this.
 - continually breaking out is a worrying trend but an assessment is due next year
 - the stock is sitting at 47 per cent of unfished biomass and the TAC is only 23 per cent caught.
- 27 Given the large change limiting rule SESSFRAG recommended no action this year because another assessment could only result in a maximum reduction of 50 per cent in the TAC, and as catches are below this level it would have little effect on the fishery.

Meeting closed at 4pm

Day 2 – Meeting commenced at 9am

5. FRDC Project Report

- 28 Alan Williams and his team gave a presentation on the FRDC funded project on Blue-Eye Trevalla. The primary objective of the project is to look at the spatial structure of the fishery and determine how that information can assist the stock assessment. It was noted that the project is half way through a two year timeframe so the following are interim results.
- 29 The project has observed logbook data, length frequency data, biological data and otolith data and covered the topics of life history, otolith microchemistry and larval dispersal modelling.
- 30 Dr Williams stated that FRDC were happy with most of the project aspects going through to the end but wanted the otolith work to be split into two stages unless there was significant support for the work to continue through to the end also.



- 31 It was agreed that SlopeRAG supports the continuation of the project and that the project outcomes could be of assistance in managing straddling stocks and other species that are under a bycatch TAC and rebuilding stocks.
- 32 CSIRO participants requested that, given the scarcity of collections of juvenile Blue-Eye Trevalla and the lack of knowledge about them, there would be a lot of benefits if AFMA observers were able to collect samples of juvenile Blue-Eye Trevalla to assist with the FRDC project.

ACTION ITEM #1 – AFMA

The AFMA Manager to request the observer section to collect samples of juvenile Blue-Eye Trevalla if sighted.

6. Blue-Eye Trevalla – data exploration and advice on further work

- 33 Dr Haddon noted that when working on Blue-Eye Trevalla, it became evident that recorded landings were 60 t higher than logbook catches. Dr Haddon noted that there was not much purpose continuing work without an update from the database.
- 34 The AFMA Manager noted that AFMA wanted advice from the RAG as to what work AFMA can do in clearing up the data and what work can be done in the meantime to improve the quality of the 2016 assessment.

ACTION ITEM #2 – AFMA and Dr Haddon

AFMA Manager to work with Dr Haddon in identifying any further work to be completed to improve the 2016 Blue-Eye Trevalla assessment and what needs to be done to clear up missing Blue-Eye Trevalla data from logbooks.

- 35 The Chair noted that Dr Haddon will also be working the issue of Orca depredation of Blue-Eye Trevalla. Dr Haddon noted that he will be obtaining more data which will hopefully provide a more detailed analysis of CPUE data when incorporating patterns of Orca interactions.

ACTION ITEM #3 – Les Scott

Les Scott to provide Dr Haddon with data on Orca interactions.

- 36 The industry member noted that if a case for regionalisation of Blue-Eye Trevalla stocks occurs from the FRDC work, it is important to investigate the impact of consequent management arrangements. Dr Haddon suggested that this point should go to the MAC for them to consider.
- 37 Industry also noted the following concerns:



- they are disappointed that no funding has gone into Blue-Eye Trevalla from AFMA to explore the resource and the issues industry have previously raised especially given that the TAC is scheduled to decline.
- it is important to understand the shift in the fleet dynamics in the east if measuring the strength of the fishery is based on CPUE.

38 The AFMA Manager (Dr Finn) responded to these concerns noting that AFMA has placed a small amount of funding aside for a workshop to consider methods of improving the Blue-Eye Trevalla assessment. Dr Finn also noted that as a result of Dr Haddon's preliminary assessment, AFMA were hoping to get advice from the RAG as to whether there is work AFMA could do prior to next assessment to improve the quality of the assessment. Some options may be reviewing the methods; reviewing Orca depredation data or looking at a stratification of areas.

39 The Chair advised the RAG that the Commission would like the RAG to advise whether there are any indications that may indicate the need to step away from the current step down TAC. It was noted that before doing this, the RAG needs to look at the analysis of the latest CPUE.

40 Industry noted that it would like CSIRO to investigate the effect of gulper shark closures on the east coast and how they impact the CPUE. Dr Haddon noted that Dr Tuck currently has a project underway regarding the impact of marine closures on stock assessments. Dr Haddon noted he can design analyses for that project that will relate to closures directly relating to Blue-Eye Trevalla.

ACTION ITEM #4 – Malcolm Haddon

Dr Haddon to design analyses for the impact of the marine closure project that relate to closures affecting Blue-Eye Trevalla and associated species to provide details to the October RAG meeting.

7. Orange Roughy – Eastern Zone Tier 1 Assessment

41 Agenda items 7.1 to 7.7 were covered collectively through the presentation from Dr Judy Upston and SlopeRAG discussion.

42 The Chair noted that he had received a letter from Dr Nick Rayns, Executive Manager Fisheries and highlighted the following points of what AFMA is seeking from the RAG:

- current biomass and future projections
- a recommended biological catch
- appropriate limit and target reference points, with consideration of whether maximum economic yield or maximum sustainable yield are appropriate management targets for a fishery that harvests a strongly aggregating fish stock.



- 43 The Chair reminded the RAG that there was an Orange Roughy workshop recently and Dr Judy Upston has worked to implement the recommendations of that meeting.
- 44 It was noted that the objective of this agenda item was to get agreement on the base case and whether it is sufficient to proceed with. The Chair reminded the RAG of their responsibilities surrounding confidentiality. Mr Les Scott highlighted his conflict of interest as an Orange Roughy quota holder.
- 45 Dr Upston noted that the outcomes of the Orange Roughy workshop in May provided a road map of how to progress with the Orange Roughy assessment. The outcomes are noted in Attachment A.
- 46 Dr Upston gave a presentation of the preliminary assessment for Orange Roughy in the Eastern Zone. It was noted that the model specifications were:
- spawning biomass
 - males and females – two sex model
 - set maturity ogive to the estimated selectivity of the spawning aggregation
 - to use the Francis (2011) weighting approach
 - MCMC's to be completed for base case
- 47 It was also noted that the model assumptions for the base case were:
- stock structure is eastern zone and Pedra Branca all season
 - recruitments estimated from 1905 to 1980
 - Von Bertalanffy growth parameters are pre-specified
 - natural mortality, M is fixed in the model (0.04)
 - steepness of stock-recruit relationship (h) is 0.75
 - selectivity is estimated and assumed to be unchanged over time (1 area/fleet)
 - plus-group at age 80
- 48 It was also noted that the data and model inputs were:
- catch series
 - age compositions for male and female (1992 – 2010)
 - abundance indices (St Helens and St Patricks)
 - expected growth
- 49 The unexploited recruitment, selectivity and catchability coefficients were identified as estimated parameters and the abundance indices were explained to the RAG.
- 50 The RAG observed the table of catches and the indices of abundance were explained to the RAG. It was noted that for the acoustic survey:



- the table includes all the data considered for the assessment
- all survey results listed in the table are from the grid survey
- when constructing the averages from the snapshots, there is variability in the biomass between the shots.

- 51 The Chair suggested that for the final version, it would be beneficial to clearly identify which values were included and excluded.
- 52 It was noted that there were three components in the priors that were constructed for catchability. These were target strength, percentage of spawning biomass surveyed and random error.
- 53 Dr Upston provided an update on the re-aging project, the consideration of the source of the aging samples and reviewing the weighting by area. It was noted that this was still to be included into the assessment report.
- 54 Dr Upston advised the RAG that she has received preliminary results from 1995 and some results from 1992 from the re-aging work. It was noted that re-aging work was performed on 350 otoliths from each of four years in the age composition data – 1992, 1995, 2001 and 2004. This was performed using an aging error model to allow for aging bias for each year of the assessment.

ACTION ITEM #5 – Dr Judy Upston

Dr Judy Upston to provide re-aging data of Orange Roughy Eastern Zone to the RAG out of session.

- 55 Dr Upston advised the RAG that the investigation into the source of age samples could be reported on verbally. It was noted that the 1992 and 1995 samples appear to have come from fish factories and from several vessels. It was also noted that the samples were not sorted due to the large quantity of fish so with the support of the RAG, she intends to treat them as random samples.
- 56 The RAG suggested providing a comparison of re-ages against original ages in the final report.
- 57 Dr Upston also informed the RAG for information that the age samples were weighted by the catch ratio to produce a representative sample across areas for the distribution of the spawning aggregation.
- 58 Dr Upston noted that after running the base case, five sensitivities were run:
- investigated the effect of different weighting methods
 - tested a broader CV around the priors for q



- looked at no recruitment deviations, a scenario similar to the 2006 assessment 'no age' model and 2011 preliminary assessment
 - the maximum acoustic spawning biomass series
 - tested a lower steepness
- 59 The assessment results were presented to the RAG including the ending year expected growth, fits to the data, the spawning biomass depletion plot and the two sensitivities that were run.
- 60 The SETFIA member suggested amending the labels on the spawning depletion plot to reflect that the targets have not formally been suggested by the RAG for Orange Roughy and instead are the default reference points in alignment with the *Commonwealth Harvest Strategy Policy and Guidelines*.
- 61 The Chair highlighted some key points from observing the assessment:
- the level of variability in depletion estimates across the sensitivities is quite low and all fall in a narrow range.
 - The 2006 assessment predicted that the Eastern Orange Roughy stock would go above the limit reference point in 2014.
- 62 The base case assessment was well received from the RAG and believed to be consistent with conclusions reached at the workshop.
- 63 It was noted that further work that needs to be completed includes:
- analysis of re-aging data
 - include further details of the historical age samples in the stock assessment
 - complete MCMC's for the base case model
 - complete sensitivities for base case model as confirmed by the RAG.
- 64 The Chair suggested that it would be good to include into the assessment the previous trajectory from the 2006 assessment for comparison.
- 65 CSIRO participants suggested that the future recommended biological catches could be projected.
- 66 The RAG considered potential sensitivities and agreed that, other than those sensitivities listed, any further sensitivities could be decided by CSIRO as the RAG did not have any specific concerns.

ACTION ITEM #6 – Dr Judy Upston

Dr Judy Upston to include in the final Tier 1 for Orange Roughy Eastern Zone:

- 2006 assessment trajectory for comparison



- run sensitivity around doubling the agreed catch history
- run different stock structures as sensitivities (East and Pedro Branca; East and South; East only)

ACTION ITEM #7 – AFMA

The AFMA Manager to clarify with AFMA Executive as to what timeframes they would like for determining future projections in relation to Orange Roughy Eastern Zone

67 There was discussion from industry which focused on the targets and limits reference points for Orange Roughy fishing. The following points were raised:

- Estimates for MEY for the Cascade Plateau Orange Roughy would not be transferable to other Australian Orange Roughy fisheries.
- Costs of fishing on aggregations of Orange Roughy are unlikely to be reduced by larger stock sizes so the 1.2 times MSY multiplier may not be an appropriate proxy for MEY.
- Larger catches within a short period may lower prices if they exceed normal market demand.
- For Orange Roughy, increases in TACs resulting from a target of MSY = MEY would likely to be small compared to volumes landed from NZ and volumes of other fish species and other substitutes.
- Other reports from industry, however, suggest a high price sensitivity to volume landed for a range of species.
- Cost structures are different for fisheries that operate over a restricted time (such as on a spawning aggregation) than for ones that operate all year.
- The optimal way to take Orange Roughy will depend (in part at least) on the size of any quota. For small amounts of quota, catching small quantities over the year would be preferable for some fishers. For large amounts of quota, utilising larger vessels and fishing spawning aggregations could be more profitable (but markets would also need to be different).
- If quotas are not large, fishing on aggregations increases the potential for catches to exceed quota holdings.
- Existing estimates of MEY for Orange Roughy should be re-examined to determine the assumptions behind them to types of fishing.
- At current biomass levels, the choice of a management target (e.g. B40 or B48) will not have any effect on RBCs. This will remain the case until Orange Roughy biomass rebuilds to a level higher than the inflection point (B35) used in the harvest control rules.

68 The Chair noted that the RAG will address the questions from AFMA Executive further at the next SlopeRAG meeting.



ACTION ITEM #8 – SlopeRAG

SlopeRAG to consider other questions raised in a letter from Dr Nick Rayns at the October SlopeRAG meeting in relation to Orange Roughy Eastern Zone.

Meeting closed at 4.45pm

Day 3 – opened at 9.05am

8. RAG to provide advice on the five year strategic research plan

69 The AFMA Manager presented the review of the SESSF five year strategic research plan to the RAG and sought advice. It was noted that the current five year strategic research plan runs from 2011 to 2015 and the next five year research plan will cover 2016 to 2020.

70 AFMA noted that it requires RAG input into the strategy section including identifying the priority areas and research needs. The aim of the plan is to ensure attainment of AFMA's two primary management objectives which are to ensure the ecological sustainability of the fishery and to maximise the economic efficiency of the fishery.

71 It was noted that the SESSF specific research priorities are broken into four broad areas:

- Assessment of target stocks in the fishery
- Assessment of the impacts of the fishery on the surrounding ecosystem
- Assessment of the economic performance of the fishery
- Identification, monitoring and appraisal of appropriate management actions

72 The RAG was asked the following questions in identifying future research areas:

- How have priorities for research changed (2011-15)?
- How are priorities likely to change (2016-20)?
- What are the key research issues to address?

73 The Chair suggested that the RAG's role has changed and should be reflected in the revised document. He also suggested that it could also be useful to have a template for evaluating the projects and priorities and include it into the revised document. The economic member suggested that the definition of ecosystem based fisheries management was limited and noted that the document needs to have the aspirational objectives given the time frame of the document.



74 The chair raised concern around the consistency of wording throughout the document and the confusion this may cause.

75 The Chair reminded the RAG to be aware of potential conflicts of interest when discussing research priorities given that there were research providers in the room. The Chair highlighted the following points on the annual research plan that were raised at SESSFRAG:

- In listing research priorities, there were some that were considered as essential such as the FIS, aging work and the observer work.
- There were differing views about the importance of the FIS. The Chair suggested that this could be because usable results from the FIS are not obtained for all species and some sectors may not get the benefit out of the FIS. Some sectors did not have a lot of confidence in the results of the FIS.
- There was a view that byproduct monitoring and assessment are not a high priority and can probably wait for the outcomes of the review of the Commonwealth Bycatch Policy and the Commonwealth Harvest Strategy Policy and Guidelines before pursuing any other type of work.
- The evaluation of MYTACs is important but tempering that view is the fact that many species' TACs are under caught.
- There was a suggestion that reviewing the habitat work is a priority given the amount of work that has been done in the past.
- The shark representatives suggested that work on pingers to reduce cetacean interactions needs to be done.

76 With respect to the 5-year research plan, there were questions raised by the economic member about the economic priorities, particularly with respect to future proofing the fishery and noting that we need to make sure our assessments and management arrangements are robust and flexible enough for changes such as climate change and governance scenarios.

77 The RAG suggested that AFMA include a category for social licence and social science in the 5 year plan in addition to reflecting the outcomes of the Borthwick review.

78 The economic member raised a project idea of looking at the level to which the prices of different species and imported species are integrated, the extent to which they are substitutes for each other and the drivers for this. The economic member did note that this is a conflict of interest because it is work that she is trying to get underway but despite that, believes that it is important and should be reflected somewhere. The RAG agreed that this could be useful to undertake but not to be included in the SESSF research plan.

79 The Chair reminded members were still able to provide advice to AFMA outside of this forum.



Malcolm Haddon left at 10.30am

9. Other Business

9.1 Revised FAP 12

80 Given that most members were present for the overview of the revised FAP 12 at the ShelfRAG meeting, the Chair gave a quick summary for the benefit of the members who were not previously present.

81 The Chair noted the importance of being aware of the document and that the revised FAP 12 sets out:

- more details about responsibilities of RAG members
- updates to how to deal with conflicts of interest
- that discussions and documents are to be confidential

82 The Chair noted that it is a condition of being a RAG member that this document is abided by and it re-affirms the fact that the RAG is to make judgements for the benefit of the fishery based on scientific information.

9.2 Under caught species and stock regionalisation

83 The Chair suggested that it would be beneficial for the RAG to discuss stock regionalisation and under caught species. The RAG developed Table 1 to express reasons for why some species may be under caught and which species to suggest for stock regionalisation.



Companion species unavailable						✓	✓			✓
Cost to catch	✓ (winter fishery)		✓						✓	✓
Compliance costs			✓							
Search Capacity									✓	

Meeting closed at 11.45am

Table 2: Uncompleted action items carried over from SlopeRAG November 2013

No	Action item	Action person	Result
4.	Geoff Tuck to explore the appropriate + age group for the Blue Grenadier model.	Geoff Tuck	
7.	AFMA to request observer section to and industry to continue to collect data on Orca interactions	AFMA	Need to follow up
10.	AFMA will develop a proposal for a project to identify the existence of straddling stocks of Alfonsino and Orange Roughy. AFMA will include the proposal in a submission to the ARC and subsequently CommFRAB.	AFMA	Need to follow up



Table 3: Table of action items from SlopeRAG September 2014

No.	Action Item	Person Responsible	Timeframe
1.	AFMA Manager to work with Malcolm Haddon on identifying what Blue-Eye Trevalla data is missing from logbooks	AFMA Manager	By October 2014 SlopeRAG meeting
2.	AFMA Manager to request the AFMA Observer section to take samples of juvenile Blue-Eye Trevalla if sighted	AFMA Manager	By October 2014 SlopeRAG meeting
3.	Malcolm Haddon to design analyses for the impact of marine protected areas on the stock assessment project that relate to closures affecting Blue-Eye Trevalla and associated species and provide to SlopeRAG	Malcolm Haddon	By October 2014 SlopeRAG meeting
4.	Les Scott to provide the last two years information on orca depredations to Malcolm Haddon	Malcolm Haddon	By October 2014 SlopeRAG meeting
5.	Judy Upston to provide re-aging data of Orange Roughy Eastern Zone to the RAG out of session	Judy Upston	When complete
6.	<p>Judy Upston to include in the final Tier 1 for Orange Roughy Eastern Zone :</p> <ul style="list-style-type: none"> - 2006 assessment trajectory for comparison - run sensitivity around doubling the agreed catch history - run different stock structures as sensitivities through to MCMC (East and Pedro Branca; East and South; East only) 	Judy Upston	By October 2014 SlopeRAG meeting
7.	AFMA Manager to confirm with AFMA Executive as to what timeframes they would like for determining future projections in relation to Orange Roughy Eastern Zone	AFMA Manager	By October 2014 SlopeRAG meeting
8.	SlopeRAG to consider other questions raised by AFMA Executive at the October SlopeRAG in relation to Orange Roughy Eastern Zone	SlopeRAG	By October 2014 SlopeRAG meeting



Attachment A

