



Australian Government

Australian Fisheries Management Authority



**SESS Fishery Shelf Resource
Assessment Group (Shelf RAG)
Meeting # 2, October 2015**

Meeting Minutes

**Date: 28 – 30 October 2015
Venue: CSIRO, Hobart**

Attendance

Name members	Membership (type i.e. chair etc.)
Mr Sandy Morison	Chair
Mr Robert Curtotti	ABARES economic member
Dr Marcus Finn	Member, AFMA trawl fisheries manager
Dr Geoff Tuck	Scientific member, CSIRO
Mr Tom Bibby	Member, industry
Mr Malcolm Poole	Member, recreational
Mr Simon Boag	Member, SETFIA CEO, industry (from 10:30 am Wednesday)
Mr Ross Bromley	AFMA, RAG EO
Invited participants	
Mr Lee Georgeson	Invited participant, ABARES
Dr Simon Nicol	Invited participant, ABARES
Observers	
Mr David Power	A/g Senior Manager, AFMA
Dr Malcolm Haddon	Assessment scientist, CSIRO
Dr Jemery Day	Assessment scientist, CSIRO
Dr Richard Little	Assessment scientist, CSIRO
Dr Judy Upston	Assessment scientist, CSIRO
Dr Kevin Rowling	Observer
Mr Daniel Johnson	NSW DPI
Apologies	
Dr Ian Knuckey	Scientific member, Fishwell Consulting
Mr Tony Lavalle	Member, industry
Mr Robert Curtotti	ABARES, economics member

Minutes

Tuesday 27 October, 2015

1. Preliminary

1.1 Welcome and introduction and apologies

1. The Chair opened the meeting at 9:00 and welcomed members and other participants.



2. The RAG noted apologies from Dr Ian Knuckey, Mr Simon Boag (present from Wednesday morning), Mr Robert Curtotti and Mr Tony Lavelle.

1.2 Declarations of interest

3. The RAG followed the conflict of interest declarations as outlined in the revised Fisheries Administration Paper 12 (FAP12). A list of the full conflicts of interest declarations made by ShelfRAG members and other participants is provided in Attachment 2.
4. Mr Bibby (SFR owner) and Mr Poole (recreational fishing member) declared interests in the outcomes of RBC discussions. Mr Bibby and Mr Poole left the room in turn while the RAG considered their declared conflict of interests. The RAG agreed that Mr Bibby's and Mr Poole's expertise in the fishery warranted them being allowed to participate in the meeting however they may be asked to leave the room when RBC's are being decided.

1.3 Confirmation of minutes from September 2015 meeting

5. The RAG confirmed the September 2015 SlopeRAG meeting minutes subject to some minor amendments.

1.4 Adoption of agenda

6. The RAG adopted the draft agenda (**Attachment 1**) following an amendment to Item 8. Change to "Review of research needs and an update from ComFRAB"

1.4 Action items from SESSFRAG and previous ShelfRAG meetings.

7. RAG members reported on outcomes arising from action items from the 2014 ShelfRAG meeting. A list of outcomes is provided in **Attachment 3**.
8. Mr Poole referred the RAG to the paper mentioned by Dr Knuckey at the last ShelfRAG meeting; 'Knuckey and Ashby, Effects of Trawling Subprogram: Maximizing yields and reducing discards in the South East Trawl Fishery through gear development and evaluation'. Mr Poole asked if the RAG was going to make any recommendations on the options in the paper to reduce fishing mortality of small redfish, noting that a rebuilding strategy was currently being drafted. The RAG agreed that the paper had explored some options however a discussion on costs and benefits was best held by SEMAC and AFMA.



Action item 1 – AFMA

AFMA and SEMAC to note the results of 'Knuckey and Ashby, Effects of Trawling Subprogram: Maximizing yields and reducing discards in the South East Trawl Fishery' through gear development and evaluation and to use these results in developing options under the Redfish Rebuilding Strategy.

9. The Chair suggested that a section noting data gaps be included at the end of each stock assessment. He also suggested that AFMA develops an assessment template identifying key headings and requirements of each assessment. A template would prove useful if assessors other than CSIRO were contracted to undertake assessments.

Action item 2 – AFMA – prior to 2016 assessments

AFMA, in consultation with other RAGs and CSIRO, to consider developing a standard assessment template for provision of assessment reports to ensure that all relevant points are included in the assessment.

2. Eastern gemfish – RAG advice required on data needs for a Tier 1 assessment, specifically a spawning survey

10. Dr Tuck presented Dr Little's report that had previously been circulated to members: 'Sensitivity of eastern gemfish survey on stock assessment'.
11. The stock assessment for eastern gemfish is composed of four fleets:
 - a non-trawl fleet
 - a summer trawl fleet
 - a winter fleet that avoids the spawning run
 - a winter fleet that targets the spawning run
12. An index of abundance was originally developed by Punt et al. (2001) for the winter targeted spawning fleet. This index was continued in 2007 and 2008 from surveys of the spawning run. Discussion has occurred over the potential effect of including/omitting results from a spawning run survey from the stock assessment.
13. Two forms of sensitivity to the survey data were explored:
 - a) To explore the sensitivity of these survey data, the 2007 and 2008 CPUE index of abundance and age data were removed, and investigated what the spawning depletion level would have been estimate at, given these surveys were not conducted
 - b) a range of candidate surveys were added, being the index of abundance for 2015. The 2015 potential values for targeted spawning run indices of abundance were:
 - i. an index in 2015 that was at 2008 levels (new med)
 - ii. an index 10% higher than in 2008 (new high)
 - iii. an index 10% lower than in 2008 (new low)
 - iv. an index 40% higher than in 2008 (new v. high)
 - v. an index 40% lower than in 2008 (new v. low)



14. Inclusion of the 2007 and 2008 spawning surveys results in higher relative biomass estimates compared to if the survey data were not included (Figure 1). The surveys resulted in an uptick in the abundance index.
15. Different possible values of a survey index of abundance show that as the index increases, the spawning biomass correspondingly increases as well. The assessment seems to more easily fit a declining catch rate than an increasing one, likely because of a lack of age data to indicate that a recruitment event has occurred.

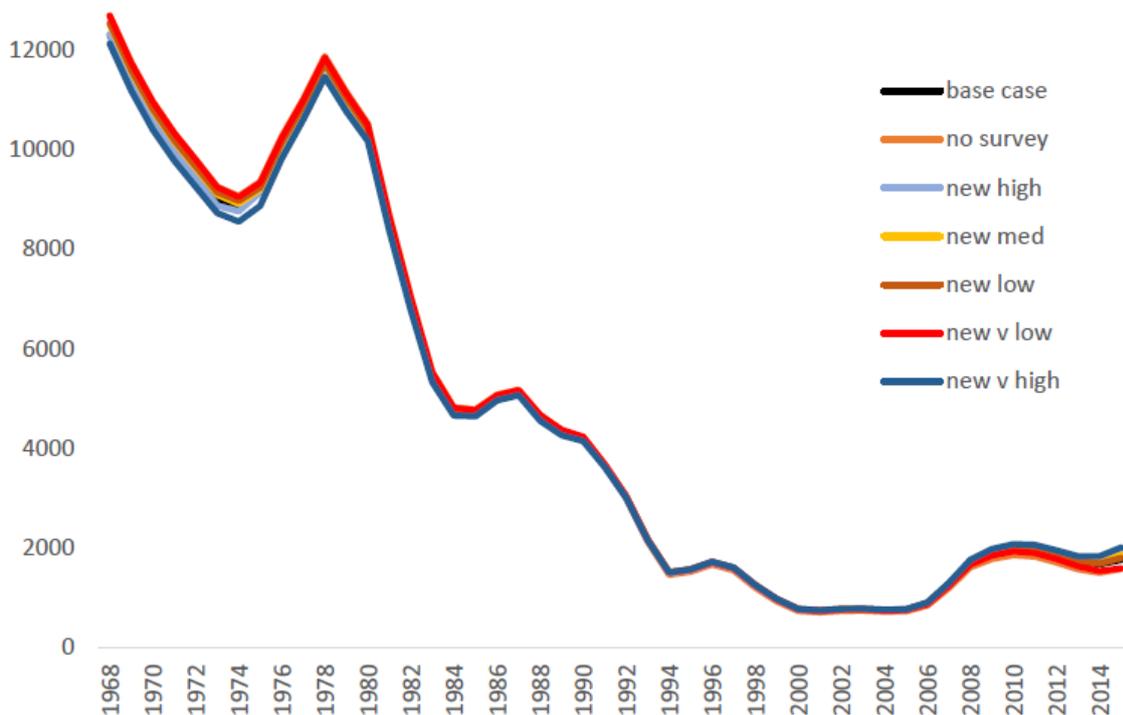


Figure 1. Spawning biomass (tonnes) estimated 1968-2015 by the assessment model when different values of a 2015 targeted spawning run index of abundance is used.

16. This analysis did not include new age or length data, and thus would not be able to indicate any new recruitment events that might have recently occurred. Inclusion of new age and length data from a 2015 survey would be expected to greatly improve estimates of recent recruitments and hence improve the accuracy and precision model projections into the near future.
17. Dr Rowlings noted that although a survey gives only a point estimate it has some value in the assessment as it is an observed value of abundance not a modelled outcome.
18. The RAG identified some risks and benefits in running a survey:
- the assessment shows more pessimistic outcomes if survey data are not included



- a continuing time series is a lot more informative and useful than a single data point
- repeating the survey may lead to the best outcome but there is a risk that the boats will not be able to find the gemfish or the survey may have large CVs reducing the survey's value to the assessment
- noting that results from including or excluding a survey it should be noted that high CVs from a survey may remove any differences seen in the assessment results
- biomass projections from the model presupposes average recruitment, this may not be the correct assumption
- the RAG suggested using current estimates of recruitment instead of the average
- a new survey point may inform estimates of the time to rebuild
- including a survey is unlikely to show the stock has rebuilt to above the limit reference point and is unlikely to change the RAG's understanding of current status
- the survey data may be useful in assessing if provisions of the Gemfish Rebuilding Strategy are being met
- noting that the last assessment was done in 2010 AFMA Management thought it would be useful to have a new assessment.

Action item 3 – Dr Little – next eastern gemfish assessment

Dr Little to run poor recruitment scenarios as part of the gemfish model runs.

19. The RAG considered three options:

- survey and assessment
- assessment update without a survey or
- do nothing,

and made the following comments:

- any assessment undertaken is not about setting an RBC but assessing stock status and seeing if rebuilding is taking place
- the RAG does not support killing fish that are under a Rebuilding Strategy in the course of a survey.

20. The RAG pointed out the eastern gemfish stock may now be at a new equilibrium and the stock may not rebuild under current arrangements meaning the targets outlined in the Gemfish Rebuilding Strategy may not be achievable.

21. The RAG does not support a survey and agrees that funds would be better spent exploring inclusion of data from different fleets into the assessment and looking at different recruitment scenarios in the assessment. These options are less risky than a survey and may be more useful when investigating rebuilding timeframes.

22. Mr Johnson informed the RAG that NSW DPI collects gemfish catch data from NSW charter boats and these should be available when requesting State data. The RAG recommended that CSIRO include a request for these data when making their yearly State catch data request.



Action item 4 – CSIRO –at the time of the next State data request CSIRO include a request for charter boat gemfish data when making their yearly State catch data request.

3. Jackass morwong, east – Tier 1 assessment

23. Dr Tuck presented the jackass morwong east Tier 1 assessment.
24. The RAG noted that the model structure remained unchanged from that described at the September meeting.
25. The model fits to the data are reasonable, however tuning to the port collected samples led to issues with the estimation of Danish seine (DS) selectivity. There was a clear conflict between the DS discard rates (high, often well over 0.3) and the larger than expected observed onboard discard lengths. The model wanted more small fish to discard than was seen in the discard lengths (very small sample size). This led to an unrealistic flat selectivity curve for Danish seine.
26. To overcome this problem, the estimated discard mass for Danish seine was added into the landings, and the onboard data and discard rates were removed as inputs. While a broad assumption, it should be recalled that Danish seine generally comprises <5% of the total catch (only 11 t in 2014).
27. Results:
- The model fits to most data reasonably well. Abundance indices from the fishery independent survey were re-estimated by Dr Day and are reasonably flat, albeit with large CVs.
 - The RAG pointed out that recruitment was below average for the last eight years, even after a new average recruitment was calculated following the decision to apply a regime shift.
 - The RAG reviewed the sensitivities and agreed that the main sensitivity is to M (fixed at $0.15y^{-1}$) but no other parameter gave the RAG cause for concern.
 - The RAG agreed to accept this assessment as the eastern jackass morwong base case.
28. The 2016 eastern spawning biomass is 36.5 per cent of the 1988 equilibrium stock biomass (c.f. 35 per cent in 2012 for last assessment)
29. Noting that depletion is relative to 1988 female spawning biomass and that the RBCs were calculated under the assumption of normal model estimated recruitment the RAG accepted the following eastern RBCs:
- eastern RBC is 314 t
 - long term eastern RBC is 407 t
 - three year eastern RBC projections are;
 - 2016, 314 tonnes



- 2017, 320 tonnes
- 2018, 327 tonnes.

30. Dr Haddon emphasised that when giving RBC advice the number and complexity of fleets in the assessment and recruitment uncertainty should be considered. If recruitment estimates from the last few, where values are taken from the stock-recruitment curve and not estimated, are instead of a similar low value to the last estimated values, the RBC would most probably be reduced.

3. Jackass morwong, west – Tier 1 assessment

31. Dr Tuck informed the RAG that the western jackass morwong model structure remained the same as described at the September meeting. He also advised that eastern growth parameters were used in the west due to a small amount of length and age data from the west.

32. The RAG noted that the assessment for the western stock is increasingly uncertain because;

- there are only sporadic age data available
- length compositions are based on very low numbers of sampled fish
- the catch in the western region is now very low.

33. The RAG considered the model fits to the data and was concerned with the poor fit of the base case model to the index of abundance (CPUE). The RAG noted the strong conflict between the length data and CPUE index. Francis' (2011) view is that modelled estimates of biomass should reflect observations (e.g. from CPUE or surveys). This does not occur for the base case model. Recommendations from Shelf RAG to use the growth parameters from the eastern jackass morwong assessment and to remove age records where samples were inadequate have not resolved this issue.

34. The poor fit to the CPUE index occurs on tuning the CPUE index as part of the adopted tuning method. If the age and length data are tuned (the first steps of the tuning process) and the CPUE is not tuned (CVs fixed at 0.1) then the model fit to CPUE shows the declining trend of the observations. The spawning biomass trend in comparison to the base case (fully tuned) model is shown in Figure 2.



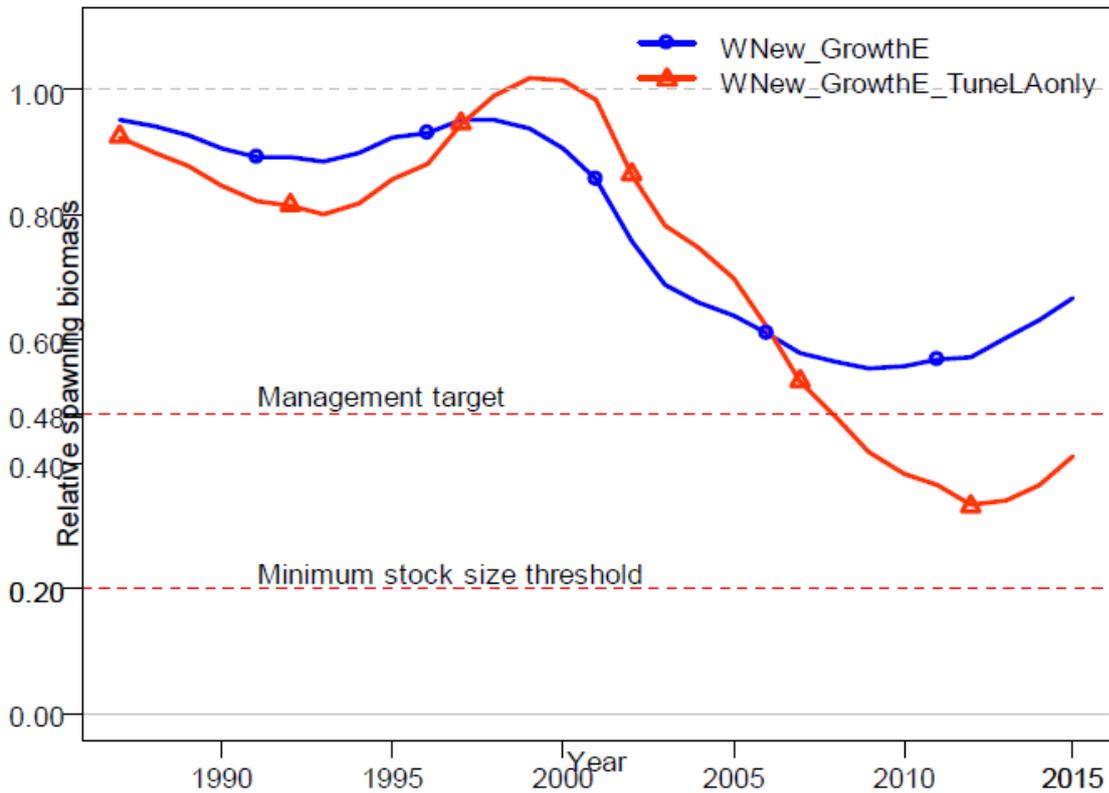


Figure 2. Trajectories of relative spawning biomass for the base case model (WNew_GrowthE; blue) and a model where only length and age data are tuned (WNew_GrowthE_TuneLAonly; red).

35. However, while fits to the catch rate series may appear better this model has a considerably poorer fit to the length data. This suggests that a strong conflict exists between the input catch rate data and the length data.
36. The RAG considered using an alternative assessment that better reflects the CPUE index (i.e. Tier 4) however as the catch from the west is very low the RAG was concerned that the CPUE index is not a good index of abundance. The RAG also noted that the model fit to the early CPUE, particularly 1986 – 1990, was especially poor.
37. The RAG considered three options for the western jackass morwong base case:
- accept the assessment as is for the base case
 - tune the model to better fit length and age data
 - drop the early CPUE series (first five data points) and retune the model.
38. The RAG was not comfortable in tuning the model to the age and length data as it steps outside the standard methods of tuning (Francis 2011) that has been generally adopted by the RAG. The RAG was also hesitant in adopting c) and suggested it be run as a sensitivity.



39. Drs Haddon and Tuck undertook to re-run the CPUE standardisation and model omitting the first five data points and report back to the RAG. This work was undertaken while other RAG business was conducted and the results, although reported later in the meeting, are recorded here.
40. Dr Haddon reported that he found that omitting the first five CPUE data points from the CPUE standardisation made little difference to the trend of the remaining data points.
41. Dr Tuck reported that he had tried to retune the model removing the early CPUE data points but this did not remove the conflict with the age and length data. Removal of the early CPUE made little difference to the depletion estimate (up from 69 per cent of B_0 to 71 per cent).
42. Noting the above concerns with the data and that the outcomes from the 2015 assessment were reasonably consistent from those from the 2012 assessment, the RAG agreed to accept the 2015 western jackass morwong assessment as the base case:
- the 2016 western spawning biomass is 69 percent of unfished biomass (c.f. 67 percent in 2012)
 - the western female unfished biomass in 1986 is estimated to be 1 349 tonnes and 936 tonnes in 2016
 - the 2016 western RBC is 249 tonnes, the long term RBC is 159 tonnes
 - noting the assumption that the model takes future recruitment directly from the stock-recruitment curve, the RAG accepted the RBC projections in Table 1.

Table 1. Base case RBCs and depletion estimates

Year	RBC -east	Depletion	RBC - west	Depletion
2016	314	0.36	249	0.69
2017	320	0.37	231	0.65
2018	327	0.38	216	0.61

43. Bearing in mind that the eastern zone biomass is below target and that jackass morwong is managed under a single global quota, the RAG cautioned that there may be some risk to the sustainability of the eastern stock if a large amount of the 'western' quota is caught in the eastern zone.



Species	Assessment	RBC (t)	Discount factor	Under/over catch
Jackass morwong	Tier 1	1 year, 563 MYRBC Year 1, 563 Year 2, 551 Year 3, 543	N/A	Over and under catch 10%

44. The base case model estimates average discard rates however this does not include Danish seine catches or discards; average weighted discards for the last four years should be used when calculating the jackass morwong TAC.

4. Report on western gemfish stock structure

45. Mr Andy Moore from ABARES was unable to attend this meeting due to illness so Dr Nicol gave the presentation in his stead. The final report is not yet available and the interpretations of the results are not considered to have been finalised.
46. Gemfish are caught in the Commonwealth and GAB trawl fisheries and are managed as a western and eastern stock bounded by a line at Lat 47°S. The western gemfish Tier 1 has been hampered in the past by fisheries in the GAB and the SET having different fishing histories and when analysed separately gave difference results compared to treating both fisheries as a single stock. An earlier study by Colgan and Paxton (1997) indicated that there was clear separation between eastern and western stocks, though it wasn't clear where the boundary between the two was. The study used limited samples in some locations and older genetic markers and it was unclear if these differences were biological or a sampling artefact. The current study was designed to 1) replicate the original 1997 study using some of the same genetic markers (mitochondrial D-loop control region) and biological samples (stored at the Australian Museum); 2) collect additional contemporary samples from across the distribution and screen with modern day markers with much high levels of discriminatory power (microsatellites and Single Nucleotide Polymorphisms SNP); and collect some information on the spawning locations of western gemfish. The use of genetic information to determine stock structure is required to allow development of sound management strategies to underpin sustainable management of the gemfish resource.
47. Gemfish were sampled off:
- Great Australian Bight
 - Kangaroo Island
 - Robe – Beachport
 - Portland
 - Western Bass Strait
 - Southwest Tasmania
 - East coast between Sydney and Flinders Island.



48. Methods

- Used mitochondrial (mtDNA D-loop), and nuclear DNA (microsatellites, SNP) markers
- Collected information on gonad stage and length frequency.

49. Summary from nuclear genome analyses:

- confirmed genetically distinct east and west stocks
- defined location of the boundary between east and west with an overlap zone (hybrid zone) off western Bass Strait
- identified migrant fish in both east and west (i.e. western fish in the eastern stock and vice versa). Migrants carried the nuclear DNA from one population and the mtDNA from the other. Given the high level of genetic separation between both populations these data suggest that the migrants are first generation hybrids that cannot back cross with either parental stock.

50. Summary from mtDNA analyses:

- The project found similar results to the nuclear DNA but with additional stocks off western Tasmania and western Bass Strait. However, further analysis suggests that two stocks are more likely, with the same stock boundaries as the nuclear DNA.
- Comparison of contemporary and historical samples demonstrates changes in haplotypes (not just haplotype frequency but fixed differences) over the last 25 years. The likely explanation for this pronounced change is genetic drift, which suggests that the genetically effective population size in some gemfish populations is far smaller than expected. This result is not expected in large populations like gemfish and is usually only seen in very small populations. These data were analysed to determine the effective population size of several gemfish locations. The results did indeed show small effective population sizes in some locations. Genetic drift is caused by a small effective population size. The population decline observed as a result of historical heavy fishing in the east may explain this change in haplotypes, though there may be other reasons. Further investigation seems warranted.

51. Gonad and length frequency analyses:

- based on limited gonad staging data there is some evidence for spawning populations off Kangaroo Island and the west of the Great Australia Bight
- there is limited evidence of spent fish off western Tasmania.

52. Project summary:

- there appears to be several reproductively isolated populations of gemfish
- the Portland/Robe and GAB fisheries should be managed as a single stock. Western Tasmania and the east coast should be managed as another stock
- there is evidence for hybridization between both stocks but not backcrossing with parental lineages
- there appears to be evidence for a small effective population in some gemfish stocks.



5. Mirror Dory – Tier 4 assessment

53. Industry member, Mr Bibby, informed the RAG that in his view mirror dory abundance had not changed.

54. Dr Haddon explained the data and CPUE standardisations:

Eastern zone

- Zone 10 dominates the eastern catch
- standardized CPUE is unsteady and declines between 1990 and 2000 and then rises again to peak in 2009
- most changes in the CPUE are due to vessel effect
- most catch is taken by board trawl and there are a small number of Danish seine records
- when catch rates drop discards increase due to small fish (unmarketable) entering the fishery.

Western zone

- Zone 40 and 50 CPUE is noisier and flatter than eastern CPUE
- mirror dory are caught in deeper water in the west
- depth and vessel effect have the most effect on the CPUE
- discards are < 1 per cent
- there are few age data.

55. Discards were not included in Dr Haddon's original Tier 4 analysis. The RAG accepted that there were so few discards in the west that including them would be inconsequential, however eastern discards were significant and the RAG requested Dr Haddon included discards in the eastern analysis and report back to the RAG. Dr Haddon revised the assessment overnight and presented the revised version on Wednesday morning (Figure 3). Weighted average discards from the last four years were included in the catch and catch rate.



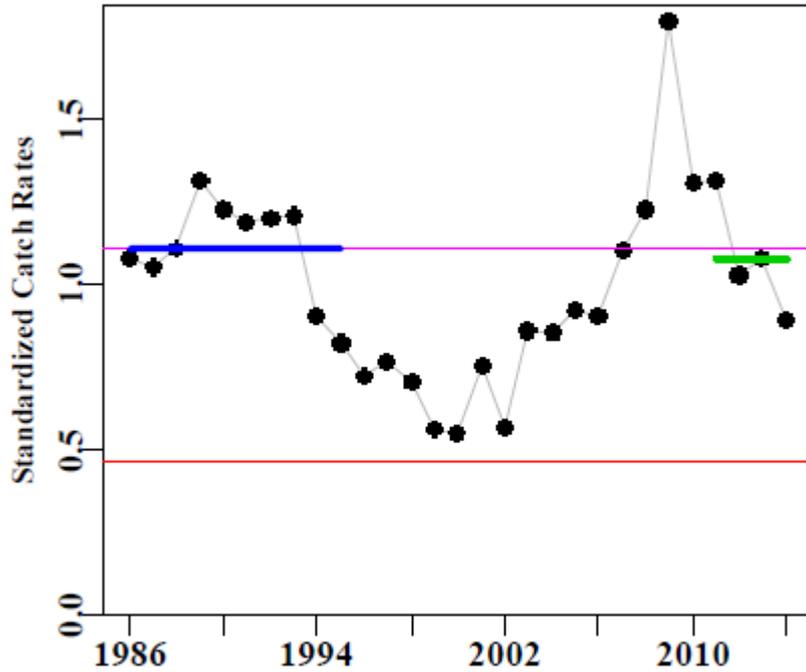


Figure 3. Standardized eastern catch rates with upper fine line representing the target catch rate, the lower line the limit catch rate and the green line the current (average of the last four years) catch rate.

56. The RAG accepted the Tier 4 Mirror Dory assessment and RBCs:

- eastern RBC 362 tonnes
- western RBC 129 tonnes.

Consistent with the 2014 RAG advice the RAG did not recommend a MYTAC given the apparently cyclical nature of Mirror Dory stock status and catches, and concerns that a MYTAC will not be able to respond to relatively rapid changes in biomass.

Species	Assessment	RBC (t)	Discount factor %	Under/over catch
Mirror dory	Tier 4	East - 362 West - 129	15	Over and under catch 10%

6. Review of MYTACs

57. Dr Finn sought the RAG’s recommendation on MYTACs not considered at SESSFRAG:

- John dory:** John dory is in first year of a three year MYTAC. The RAG noted that Commonwealth and State catch and discards were below the TAC. The



RAG found there was no additional information that would provide a basis for the RAG to change its' previous advice. The RAG recommended that the MYRBC remain unchanged.

- b) **Ocean perch:** The RAG noted that inshore and offshore ocean perch (OP) have been identified as separate species but are managed under a single TAC. Inshore OP is mostly discarded (80%). Offshore OP standardised CPUE is relatively flat. Both species are due for a Tier 4 assessment in 2016. The RAG found there was no additional information that would provide a basis for the RAG to change its' previous advice. The RAG recommended that the MYRBC remain unchanged.

Table 2. SESSF MYTAC/RBC advice

Species	Assessment	RBC (t)	TAC (t)	Discount factor %	Under/over catch %
John dory	N/A	203		5	Overcatch – 10% Undercatch – 10%
Ocean perch - inshore	N/A	102		15	10/10
Ocean perch - offshore	N/A	283		15	10/10

Note: ocean perch inshore and offshore are managed under a single TAC.

7 & 8. Report on SESSF research projects review of research needs and an update from ComFRAB

58. Dr Finn directed the RAG to the research paper previously circulated and drew the RAG's attention to outcomes from the ComFRAB meeting on 22 October 2015.
- FRDC's August 2015 call for applications included the following ComFRAB scopes:
 - identification of factors which impact on the profitability of individual operators, fishery sectors and the GAB trawl fishery as a whole
 - determine why some TACs in the SESSF and ETBF are under caught and propose options to resolve this where necessary.
 - ComFRAB assessed preliminary EOI against these scopes at its' 22 Oct meeting and supported a number of project proposals for further development into full proposals for final consideration at its March 2016 meeting.
 - ComFRAB also considered the under-caught TAC priorities (the ComFRAB research scope included in FRDC's call and the additional SESSF RAG priority scope) 'to investigate the decline or lack of recovery of low biomass



stocks given periods of low catches and expected recovery'. ComFRAB recommended 2016-17 funds be set aside to fund a project focused on under-utilised TACs with an initial scoping workshop facilitated by an independent facilitator, and including an economist and a non-fishing consultant.

59. SESSFRAG 2015 recommended that:

- the three five year research priorities are as follows:
 - the continuation of the SESSF Fishery Independent Survey
 - a project to investigate/explore possible drivers of declining CPUE trends in the fishery is included in the ARC annual research call for interest in November. The RAG was of the opinion that a project investigating poor stock recovery dovetails nicely with this project and recommended that the two projects are undertaken together
 - conduct stock assessments as per the assessment schedule.

60. The RAG thought it was difficult to keep up to date with current AFMA research projects and requested that AFMA draw up a SESSF current projects list to be circulated to each of the RAGs.

Action item 5 – AFMA – ongoing

To assist in keeping the RAG informed of current research projects AFMA is to draw up a list that will be circulated to the RAGs.

61. Noting the large range assessments undertaken in the SESSF the RAG supported:

- a strategic review of the appropriateness of assessments
- a species by species review of data needs of each assessment:
 - what data needs to be collected
 - is the ISMP collecting the right data
 - are there savings to be made and can they be directed into other areas e.g. Tier 5 development
- what type of assessment gives the most valid result?

62. The RAG also discussed developing a project to document decisions and comments from the RAG and industry regarding changes in the CPUE series and updates to assessment procedures. The RAG agreed that these could be recorded as a list and distributed to the RAG or as an annotation at the end of each assessment.

63. The Strategic Monitoring and Assessment Review Project (SMARP) is scheduled for completion by June 2016. Dr Tuck said that one of the major time users when undertaking an assessment is the transfer and smoothing of data from AFMA to CSIRO. Dr Finn told the RAG that this was being addressed in the project, along with documenting changes to the database.

Action item 6 - AFMA – next SESSFRAG meeting

AFMA to report on the progress of the Strategic Monitoring Assessment Review Project at the next SESSFRAG meeting,



School whiting

64. The RAG suggested that school whiting was a candidate for a new Tier 1 assessment in 2016. The RAG identified the following as questions that should be explored in a new assessment:

- is the stock above the limit reference point
- is 1 500 tonnes the best estimate of a long term RBC?

65. Mr Johnson informed the RAG that collecting data to get a NSW standardised CPUE index is a mammoth task and CPUE data are unlikely to be available in time for a Tier 1 assessment in 2016. Advice to the RAG from CSIRO assessors was that this would probably not preclude doing a Tier 1 assessment next year. The RAG recommended that a 2016 Tier 1 school whiting assessment be included in the priority list for consideration at the next SESSFRAG meeting.

Action item 7 – SESSFRAG – next SESSFRAG meeting

The RAG recommended that a 2016 Tier 1 school whiting assessment be included in the priority list for consideration at the next SESSFRAG meeting.

Western gemfish

66. The RAG recommended that SESSFRAG consider if there were enough data to support a western gemfish Tier 1 assessment. The RAG also recommended that SESSFRAG consider how to deal with the GAB and SET split and if the current Tier 4 method of assessing the CTS part of the stock is appropriate.

Action item 8 – SESSFRAG – next SESSFRAG meeting

SESSFRAG consider if there were enough data to support a western gemfish a Tier 1 assessment. Also SESSFRAG consider how to deal with the GAB and SET split and if the current Tier 4 method of assessing the CTS part of the stock is appropriate.

Ocean jackets

67. Noting landings of around 450 tonnes for each of the last seven years Mr Poole queried if the RAG should discuss ocean jackets at this meeting. The RAG was of the view that they did not require consideration noting:

- ocean jackets are included in the SESSF data summary and CPUE standardisations
- the fishery is characterised by population boom and busts however the CPUE rose quickly from 2002 and has remained constant at high levels since 2007
- they are not a quota species
- the SESSF Ecological Risk Assessment notes that ocean jackets are at low risk
- the Fisheries Review will explore options for ocean jackets but low risk and stable/rising CPUE provide little incentive for inclusion in the quota system.



10. Roland Pitcher – Report on FRDC project: Implications of current spatial management measures on AFMA ERAs for habitats

68. Dr Pitcher gave a report on his work with the National Environmental Research Program – Marine Biodiversity Hub:

- The project mapped species assemblages in waters less than 2000 metres deep based on 40 environmental variables and found:
 - fishing effort post 2007 was assessed and it was found that 6 per cent of the study area was trawled
 - the most trawled areas are on the Slope and Shelf areas off south eastern Australia
 - most assemblages are only lightly trawled however there are some, depending on location, that are more heavily trawled
 - gravel habitats are the most sensitive areas to trawl impacts
 - impact from long line fishing and scallop dredging was low
 - the footprint of the oil and gas industry was small
 - areas other than seamounts contain cold water coral assemblages.

69. The project established that the footprint of fishing is smaller than expected and that negative trends have been halted and are probably improving. The project identified the assemblages most exposed to impacts from fishing and identified those that need future work.

The Chair closed the meeting at 14:00

Signed (Chairperson):

Date:

List of Attachments

- 1) Shelf RAG October 2015 Agenda
- 2) Shelf RAG September 2015 Declared conflicts of Interest
- 3) Action items from September Shelf RAG 2015
- 4) Data needs identified at this meeting
- 5) Action items from this meeting



Attachment 1. ShelfRAG agenda

Southern and Eastern Scalefish and Shark Fishery Slope Resource Assessment Group (Shelf RAG) Agenda

Venue: Freycinet Room, CSIRO, Castray Esplanade, Hobart

Day 1: Tuesday 27 October

Time: 9:00

Chair: Mr Sandy Morison

Time	Item	Presenter
9:00	1. Preliminaries 1.1 Welcome and introductions/apologies 1.2 Declarations of interest 1.3 Confirmation of minutes from September ShelfRAG meeting 1.4 Adoption of agenda 1.5 Action items from September 2015 meeting	Sandy Morison
10:00	2. Eastern gemfish – RAG advice required on data needs for a Tier 1 assessment, specifically the need for a spawning survey.	Rich Little/Geoff Tuck
10:30	<i>Morning tea</i>	
10:50	3. Tier 1 assessment – Jackass morwong 3.1 Discussion 3.2 Finalisation of base case 3.3 East and west RBC advice 3.4 Unders and overs	Robin Thomson
12:30	<i>Lunch</i>	
13:15	4. Report on western gemfish stock structure project	Andy Moore
14:30	<i>Afternoon tea</i>	
14:50	5. Tier 4 assessment – Mirror Dory 5.1 Industry update	Simon Boag/Tom



	5.2 Overview of recent data 5.3 Tier 4 assessment and discussion 5.4 RBC advice 5.5 Unders and overs	Bibby Malcolm Haddon CSIRO
15:50	6. Review of MYTACs 6.1 Flathead 6.2 Western gemfish 6.3 John dory 6.4 Ocean perch 6.5 Royal red prawn 6.6 School whiting 6.7 Silver trevally	Marcus Finn
17:00	<i>Meeting adjourned</i>	

Day 2: Wednesday 28 October

Time: 9:00

Time	Item	Presenter
9:00	7. Report on SESSF research projects	Marcus Finn
9:30	8. Review of research priorities	Marcus Finn
10:30	9. Meeting overview and wrap up, including review of meeting action items	Sandy Morison
10:55	<i>Morning tea</i>	
11:15	10. Roland Pitcher – Report on FRDC project: Implications of current spatial management measures on AFMA ERAs for habitats	Roland Pitcher
12:00	<i>Meeting close</i>	



Attachment 2; ShelfRAG Declared Conflicts of Interest

Members	Position	Declaration of interest
Mr Sandy Morison	Chair	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.
Dr Marcus Finn	AFMA member	AFMA. Manager of Commonwealth and GAB Trawl Fisheries section. No pecuniary interest.
Mr Ross Bromley	RAG, EO	Executive Officer AFMA. Demersal and Midwater Trawl Fisheries section. No pecuniary interest.
Dr Geoff Tuck	Scientific member	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 Robert Curtotti	Economic member	ABARES. Interest in obtaining funding for future research. Also member of SquidRAG. No pecuniary interest.
Mr Tom Bibby	Industry member	Commonwealth Trawl Sector boat and quota SFR holder. Chairman of SETFIA.
Mr Malcolm Poole	Recreational fishing member	Recreational Fishing Alliance of NSW - Committee member RECFISH Australia - Treasurer and Board member RFANSW - NSW Recreational Fishing Safety Officer Member of Australian Recreational Fishing Foundation (ARFF) Member NSW DPI Baitfish Working Group. Recreational member on SEMAC NSW Fish Habitat Partnership Treasurer No pecuniary interest or otherwise.
Dr Simon Nicol	Invited participant	ABARES. No pecuniary interest.
Mr Lee Georgeson	Invited participant	ABARES. No pecuniary interest.
Mr David Power	A/g Senior Manager, AFMA	No pecuniary interest.
Dr Malcolm Haddon	Assessment scientist, CSIRO	CSIRO, assessment scientist. No pecuniary interest.
Dr Jemery Day	Assessment scientist, CSIRO	CSIRO, assessment scientist. No pecuniary interest.
Dr Richard Little	Assessment scientist, CSIRO	CSIRO, assessment scientist. No pecuniary interest.
Dr Judy	Assessment	CSIRO, assessment scientist. No pecuniary interest.



Upston	scientist, CSIRO	
Dr Kevin Rowling	Observer	CSIRO, assessment scientist. No pecuniary interest.
Mr Daniel Johnson	NSW DPI	No pecuniary interest.

Attachment 3. Action items arising from the ShelfRAG September 2015 meeting

No.	Action item	Person responsible	Timeframe	Outcome
1	Circulate the revised ISMP program to ShelfRAG for comment.	AFMA	As soon as possible	Will be done at budget time and sent to SESSFRAG
2	Explore the effect of different recruitment scenarios on redfish rebuilding times.	AFMA/CSIRO	Subject to agreement with AFMA re funding	Ongoing discussions between ASFMA and CSIRO
3	Monitor size the LF sampling and size composition of redfish.	AFMA/CSIRO	Ongoing	In ISMP targets
4	Undertake an analysis of redfish targeting and trends.	CSIRO	As soon as possible	Dr Haddon has some funding from FRDC that may allow some analysis of redfish data to look at targeting. Hopefully this will be done in time for the 2016 ShelfRAG meetings.
5	Explore the effect of different recruitment scenarios on redfish rebuilding times.	AFMA/CSIRO	Subject to funding and time constraints	See item 2
6	Circulate Dr Knuckey's	Ross Bromley	As soon as	Done



	paper "Maximizing yields and reducing discards in the South East Trawl Fishery through gear development and evaluation. Knuckey, I.A. and C.J.T. Ashby. 2009).		possible	
7	Dr Knuckey to liaise with Dr Thomson to obtain then include state blue warehou catches in the data set.	Dr Knuckey and Dr Thomson	As soon as practicable	Mr Morison sent some data to Dr Thomson. State commercial catches are included in the data.
8	Dr Little to write a paper for the next RAG meeting exploring pre assessment requirements of a new updated eastern gemfish assessment, including a spawning survey.	Dr Little	October ShelfRAG meeting	Presented at this meeting

Attachment 4. Data needs identified at the 2016 ShelfRAG meetings

Species	Details	Timeframe
All species	Increase sampling in western Bass Strait	As soon as possible



Attachment 5: Action items arising from this meeting

No.	Action item	Action person	Time frame
1	AFMA and SEMAC to note the results of; Knuckey and Ashby, Effects of Trawling Subprogram: Maximizing yields and reducing discards in the South East Trawl Fishery through gear development and evaluation, and to use these results in developing options under the Redfish Rebuilding Strategy.	AFMA/SEMAC	
2	AFMA, in consultation with other RAGs and CSIRO, to develop a standard assessment template for provision of assessment reports to ensure that all relevant points are included in the assessment.	AFMA	Prior to 2016 assessments
3	Dr Little to run poor recruitment scenarios as part of the gemfish model runs.	Dr Little	As soon as possible
4	CSIRO include a request for charter boat gemfish data when making their yearly State catch data request.	CSIRO	At the time of the next State data request
5	To assist in keeping the RAG informed of current research projects AFMA is to draw up a list that will be circulated to the RAGs.	AFMA	
6	AFMA to report on the progress of the Strategic Monitoring Assessment Review Project at the next SESSFRAG meeting,	AFMA	Next SESSFRAG meeting
7	The RAG recommended that a 2016 Tier 1 school whiting assessment be included in the priority list for consideration at the next SESSFRAG meeting.	SESSFRAG	Next SESSFRAG meeting
8	SESSFRAG consider if there were enough data to support a western gemfish a Tier 1 assessment. Also SESSFRAG consider how to deal with the GAB and SET split and if the current Tier 4 method of assessing the CTS part of the stock is appropriate.	SESSFRAG	Next SESSFRAG meeting

Attachment 6. Data needs identified at this meeting

Species	Details	Timeframe
All species	Increase sampling in western Bass Strait	As soon as possible

