



Australian Government

Australian Fisheries Management Authority



Southern and Eastern Scalefish and Shark Fishery - Great Australian Bight Resource Assessment Group (GABRAG)

 GABRAG 18-19 NOVEMBER 2014
ADELAIDE

MINUTES

Attendees

Members

Mr Lance Lloyd, Chair
Dr Marcus Finn, AFMA Member
Ms Marcia Valente, Industry Member
Mr Jim Raptis, Industry Member
Mr Jeff Moore, Industry Member, GABIA
Mr Andy Moore, Scientific Member, ABARES
Dr Ian Knuckey, Scientific Member, Fishwell Consulting
Professor John Tisdell, Scientific Member (Economist),
University of Tasmania
Ms Michelle Wilson, Executive Officer GABRAG, AFMA

Observers/Invited Participants

Dr Malcolm Haddon, CSIRO
Dr Gavin Begg, SARDI
Dr Steven Lapidge, SARDI
Mr Stuart Bell, GAB Skipper
Mr David Hall, AFMA Commissioner

Agenda Item 1 - Preliminaries

1.1 Welcome and Apologies

Mr Lance Lloyd (the Chair) opened the meeting at 9:10 am and welcomed members and observers. The Chair noted that in keeping with normal practice, the meeting would be recorded to assist with preparation of the minutes. The Chair also noted that Mr David Hall, AFMA Commissioner would be observing a part of the meeting.

1.2 Declarations of Interest

The Chair asked the RAG members to declare any interests and acquire the agreement of the meeting that no individual's personal interest is being served by participation.

Participant	Interest Declared
Mr Lance Lloyd, Chair	Director of Lloyd Environmental, no pecuniary interest, SESSFRAG and GABMAC Member
Dr Marcus Finn, AFMA Manager	Employed by AFMA, no pecuniary interest or otherwise
Ms Michelle Wilson, AFMA, GABRAG EO	Employed by AFMA, no pecuniary interest or otherwise
Dr Ian Knuckey, Scientific Member	Director of Fishwell Consulting, interest in sources of funding for research purposes, research work for GABIA, agent of electronic logbook systems, scientific adviser to GABIA and SETFIA, Chair of Australian Seafood Co-products, scientific member on various SESSF RAGs, Squid RAG and Scallop RAG, involved in undertaking the Fishery Independent Surveys for the SET and the GAB, involved in the SESSF Review, involved in various oil and gas projects undertaken in the area of the GAB and is involved in the Western Gemfish project.
Dr Malcolm Haddon, Invited Participant	Employed by CSIRO – Interest in sources of funding for research purposes however, salary does not depend on this membership, involved in the SESSF Review, member of SESSFRAG, Sub-Antarctic RAG and Northern Prawn RAG; and scientific member for the Sub-Antarctic MAC.
Ms Marcia Valente, Industry Member	GAB boat and quota SFR holder
Mr Jeff Moore, Industry Member	Great Australian Bight Industry Association (GABIA) EO, board member of Commonwealth Fisheries Association, member of GABMAC, invited participant of



Participant	Interest Declared
	SEMAC
Mr Andy Moore, Scientific Member	Employed by ABARES - Interest in sources of funding for research purposes, member of SPF RAG, involved in the Gemfish stock structure project and the Western Gemfish Tier 1 assessment.
Prof John Tisdell, Scientific Member (Economist)	Employed by University of Tasmania - interest in sources of funding for research purposes, no personal pecuniary interest
Mr Jim Raptis	GAB boat and quota SFR holder. Noted that he has put forward a proposal to undertake the Fishery Independent Survey for the GAB

The meeting agreed that no conflict of interests would prevent the participation of any member present.

1.3 Adoption of Agenda

The Chair noted that the key items of the RAG agenda were the stock assessments and providing advice and alerting any concerns on the MYTACs for the applicable species. The RAG adopted the proposed agenda.

1.4 Actions Arising from Previous RAG Meetings

The RAG addressed the uncompleted action items on the standing list and advised on the progress of each item. Table 1 shows the progress of these action items.

Regarding action item 2/2012 #19, Mr Jeff Moore questioned the impact of gear type and the change in selectivity on the assessments over time. Dr Malcolm Haddon noted that if selectivity changes it can have a large effect on the data, particularly when there are not many boats in the fishery. Mr Jeff Moore noted that gear was different when trawling in the GAB first started and it would be beneficial to note historical gear used.

Action item 1: Jeff Moore to follow up what gear was historically used for trawling in the GAB.

Mr Jeff Moore questioned why Dr Ian Knuckey was responsible for particular items and whether it should have been performed by CSIRO under the current CSIRO contract. Dr Marcus Finn noted that the RAG can provide advice on the form of the data summary that is best for the fishery. However, what is undertaken would be a negotiation between AFMA and CSIRO about the time this work would take, the current contract, extra costs etc.

Dr Finn noted that the data summaries presented for the GAB at this meeting were in the same form as noted in the current CSIRO contract, and the same form as had been supplied to the GABRAG in the past. The additional work by Fishwell Consulting had been the result of a RAG request to get a clearer picture of discards in the GAB trawl



fishery. Given the co-management context in operation in the GAB, the work could either be paid for by GABIA, or by invoice by AFMA (from levy funds). Dr Finn noted that requests for work needed to go through the appropriate financial processes when being funded through the AFMA levy base.

Action item 2: AFMA, CSIRO, GABIA and Fishwell Consulting to negotiate on the form future data summaries will take based on requests from the RAG and what is covered under the current contract with CSIRO.

Regarding action item 2/2012 #16, it was noted that the PhD student, Mr Marcus Miller, has published journal articles of his work and these have been obtained by Ms Michelle Wilson.

Action item 3: Ms Michelle Wilson to send published articles from PhD student, Mr Marcus Miller, regarding the study of Ocean Jackets.

Table 2 shows the updated standing list of action items including the action items arising out of this meeting.

Agenda Item 2 – Management Items

2.1 Manager's Update

Dr Marcus Finn provided an update on the status of the fishery. It was noted that in future, AFMA aims to provide a written manager's update which will be sent out with the papers and then questions can be raised at the meeting.

The RAG was presented with a table of quota species comparing catch to date against TAC and the equivalent for the same time last year and end of last year, flagging the percentage of change. Dr Finn questioned the industry members about their views on the effort put into the fishery year to date. Industry noted that this year, one vessel left the fleet. Additionally, 2014 is a re-fit year for most vessels in the fleet suggesting that effort may be down on last year. Dr Finn noted that generally, the fishery appears to be tracking similarly to last year.

It was highlighted that the Western Gemfish data was quota catch from the Commonwealth Trawl Sector and did not incorporate catches from the Great Australian Bight. The RAG noted that the Commonwealth Trawl Sector discarded 60 per cent of Western Gemfish last year. It was noted that this was potentially due to market availability and quota lease prices.

Professor Tisdell noted the under caught TACs of GAB quota species and questioned whether it was influenced by the science or the economics. Industry members stated that they didn't believe the TACs were incorrectly allocated but the lack of catch is contributed to the small number of statutory fishing rights that are being utilised by vessels.

Industry members also noted that the catch of Deepwater Flathead and Bight Redfish are predominantly retained and there is very little discarding. However, the under caught TAC of Bight Redfish could also be contributed to a lack of availability as well as



deliberately limiting what they land in order not to flood the market. There was concern from Dr Knuckey that Bight Redfish are showing a similar trend to the Redfish on the east coast of Australia and are becoming less available to the fishery.

The RAG agreed that it will be interesting to see what results the next fishery independent survey produces.

Dr Finn also covered the following topics:

General Fishery Management

- The Great Australian Bight Trawl Sector is in relatively good position
- Management costs are low (2013/14 budget is approximately 3 per cent of GVP)
- There are comparatively few closures
- Few interactions with Threatened, Endangered and Protected species
- High research support

Seabirds

- No logbook interactions in the past 12 months
- AFMA Observers perform five minute observation periods as part of their duties. In 2014, 431 of these observations were performed which reported 10 interactions with seabirds.
- AFMA performed seabird specific compliance activity in early 2014.
- AFMA completed a trial of pinky buoys in trawl fisheries. In using the 600 mm size, pinky buoys were shown to reduce interactions by 75 per cent. The trial also showed that there was a low probability of interactions at night and few interactions when there is zero discharge of offal.
- As a result of the pinky trial, Seabird Management Plans have been modified to make the minimum acceptable size of pinkies to be 600 mm and the option provided of not having to set pinkies at night.

Under caught TAC's

- The focus is predominantly in the Commonwealth Trawl Sector. However, consideration is now given to wider than the Southern and Eastern Scalefish and Shark Fishery.

Research and Levies

- The Great Australian Bight Trawl Sector will undertake a Fishery Independent Survey in early 2015. This will cause a large impact to a relatively small budget. There is an expectation that levies will be substantially higher in 2014-15.

2.2 Revision of FAP 12

Dr Marcus Finn provided an update to the RAG on the revision of the *Fisheries Administration Paper No. 12: Resource Assessment Groups – Roles, Responsibilities and relationship with AFMA Commission, AFMA Management and Management Advisory Committees* (FAP12). The key points were noted:



- FAP 12 guides the RAGs responsibilities, structure and how they're formed and was reviewed in May 2014.
- The aim of the review was to clarify the roles and responsibilities between MACs and RAGs and how advice flows through the relevant committees to the AFMA Commission.
- The RAG is an advisory body not a decision making body.
- Advice from the RAG, MAC and AFMA Management go to the AFMA Commission directly.
- The RAG has a role in providing advice on strategic research priorities to the ARC.
- The RAG has a role in providing advice on strategic research priorities as well as setting the recommended biological catches (RBCs).
- Invited participants of the RAGs are obliged to adhere to the same requirements of the RAG members.
- Members and participants should be aware the conversations are confidential until the minutes have been made public.
- One of the main changes to FAP 12 is the change to the conflict of interest and that it is not just monetary or pecuniary but includes broader conflicts such as membership on committees etc.
- The main role of the RAG is to peer review scientific data and information and provide advice on fish stocks, non-target species and the marine environment. This advice needs to pursue AFMA's legislative objectives.
- Where relevant the RAG should advise on maximising net economic return for the fishery.
- Key outputs of the RAG are RBCs and where relevant, the RAG should consider alternative harvest strategy options and identify information gaps.
- Members of the RAG are not here to advocate for a particular organisation or sector and should act with the best interests for the fishery as a whole.

The RAG also discussed what is covered for RAG members compared to MAC members as well as the application of the *Public Information Disclosure Act* (PID Act) to the committees.

Action item 4: AFMA to recirculate advice to RAG members regarding the *Public Information Disclosure Act 2014*.

Action item 5: AFMA to follow up what benefits apply to the RAG such as insurance etc. and inquire if AFMA are working on aligning these benefits/compensations.

2.3 Orange Roughy Rebuilding Strategy

Dr Marcus Finn advised the RAG that AFMA has been developing a draft Orange Roughy Rebuilding and highlighted the following key points:

- Orange Roughy was listed as 'Conservation Dependent' in 2006 and has been managed under a conservation programme since.
- While Orange Roughy has been listed as a species, the *Orange Roughy Conservation Programme* managed the species into zones and this will also be the case in the *Orange Roughy Rebuilding Strategy*.
- The draft rebuilding strategy has been through Slope RAG and to the Department of Agriculture and the Department of the Environment for comment.



- A key change from the conservation programme to the rebuilding strategy is that the conservation programme was a fundamental statement that there would be no targeting fishing of Orange Roughy in Australia other than the Cascade Plateau, while the rebuilding strategy aims to accommodate the potential for individual zones to rebuild to a commercially harvestable level.

It was noted by the industry members that AFMA need to be careful that the wording does not suggest that all stocks were overfished and that the status of the GAB stock has always been unknown.

The RAG discussed Orange Roughy in the GAB and how it may relate to the other stocks of Orange Roughy as well as how the outcomes of the other stocks may influence the management of the GAB stocks. It was also suggested that the spatial dynamics of the GAB Trawl Sector may mean it is not possible to get a useful Tier 1 or acoustic data for the GAB.

Dr Ian Knuckey questioned what the process was to de-list a species from being conservation dependent. Dr Finn noted that AFMA has had informal conversations with the Commonwealth Department of the Environment about the potential for Orange Roughy stocks to rebuild but the process to de-list is the same as the process for listing the species in that a delisting is nominated by an individual or organisation and then goes through the process of a final recommendation to the Minister by the Threatened Species Scientific Committee.

It was highlighted that it might help with marketability and social acceptance of the fish if industry proposes to de-list Orange Roughy rather than AFMA. Dr Ian Knuckey stated that GABIA need to weigh up whether it is in their best interest to approach de-listing or keep their current situation. The RAG agreed that sufficient evidence needed to be obtained and provided if industry wished to de-list a species.

The RAG was informed that the draft Orange Roughy Rebuilding Strategy would be sent for comment within the next week.

Action item 6: AFMA to send the draft *Orange Roughy Rebuilding Strategy* to the RAG for comment.

2.4 Other Rebuilding Strategies

Dr Marcus Finn advised the RAG that AFMA has reviewed the rebuilding strategies for School Shark, Eastern Gemfish and Blue Warehou. It was noted that these largely do not apply to the GAB. Dr Finn advised the RAG that these have been to the Department of Agriculture and the Department of the Environment as well as out to the public for consultation. AFMA are currently in the process of incorporating the comments provided and aim to publish the strategy shortly.

Action item 7: AFMA to get the GHAT team to send the School Shark Rebuilding Strategy to the RAG or highlight the points that may apply to the GAB.



2.5 Closure Review

Dr Marcus Finn advised the RAG that a review of closure areas has been undertaken for the South East Trawl and the Great Australian Bight Trawl Sector. It was noted that the closures within the Great Australian Bight Trawl Sector all still remain valid and are fulfilling a purpose. Dr Finn requested feedback from the RAG on the current closures in the Great Australian Bight Trawl Sector.

It was noted that there needs to be a discussion about the extent of the Orange Roughy Research Zones and whether they're all applicable to grounds for Orange Roughy and not restricting fishing for other species.

Dr Ian Knuckey suggested changing the reasoning for the Orange Roughy closures within the Great Australian Bight Trawl Sector from “protect Orange Roughy stocks” to “monitor Orange Roughy stocks” due to the uncertain nature of the stock status.

Mr Jeff Moore also suggested that depending on the outcome of the review of the Commonwealth Marine Reserves, the Far West and Salisbury Canyon closures in the west should be reviewed and potentially removed. This is based on the fact that the Far West closure would be encompassed by the Commonwealth Marine Reserve and the Salisbury Canyon would be serving the same purpose as what is served by the Marine Reserve.

Action item 8: AFMA and GABIA to review the Far West and Salisbury Canyon closures upon implementation of the South West Commonwealth Marine Reserve.

Agenda Item 3 – Stock Assessments

3.1 Deepwater Flathead Data Summary and CPUE Standardisations

Dr Malcolm Haddon presented the data summary and CPUE standardisations to the RAG. The following key points were made:

- the distribution range is standard
- there is little non-trawl catch (although 83t reported as taken by Danish Seine in 12/13 season)
- depth of catch is approximately 100 – 150 m which is consistent with previous years
- there is a healthy tail in the port length frequency data
- geometric mean CPUE and standardised mean CPUE are following a similar trend
- the predicted trajectory of Deepwater Flathead CPUE fell within the 95 per cent confidence interval error bars

Dr Haddon noted that the data used in the assessment is only up to April but the assessments for the Great Australian Bight Trawl Sector normally use a full financial year of data. It was highlighted that standardisations try to account for missing data such as missing months and in the past a couple of missing months has not made much of a difference to the outcome.



Mr Jeff Moore highlighted the increase in catch for the period of 1994 – 98 was driven by a CPUE increase. Mr Moore noted that this time period coincides with the ‘pilchard kill’. The RAG noted that it was believed that big catches occurred in those years because the fish would aggregate around and consume high numbers of dying pilchards. Mr Moore also highlighted that another spike in catches around 2002 – 05 was prior to the introduction of quota in the Great Australian Bight Trawl Sector in approximately 2006/07.

Dr Haddon highlighted that the age frequency plot shows stocks are getting older which suggests that the gear is relatively selective. However, industry members noted that they believe juveniles are occurring in different grounds which are not being targeted.

Dr Finn paid particular thanks to CSIRO and Fishwell Consulting for processing crew data so quickly. Dr Knuckey noted that there were a few different codes used the crew data. Also, if the crew correct the shot catch weight recorded then almost all of the data would be usable. Dr Knuckey proposed hiding particular fields in the e-log. The RAG agreed that this could be useful. Mr Jeff Moore also highlighted the great effort that industry makes and the large amounts of data that they produce.

Summary – The RAG observed that Deepwater Flathead did not break out of the 95 per cent confidence interval error bars. The RAG agreed that it is comfortable with current RBC and MYTAC and agree that unders and overs should carry over.

Action item 9: Individual operators to hide menu options on their Olfish systems to prevent inappropriate codes from being chosen.

Action item 10: Dr Malcolm Haddon to follow up an explanation for the 2012 discards of Deepwater Flathead.

Action item 11: Dr Malcolm Haddon to work with Dr Robin Thomson to check where early length data and length data from 2006-08 is and why it is not included in the data summary

3.2 Bight Redfish Data Summary and CPUE Standardisations

Dr Malcolm Haddon presented the data summary and CPUE standardisations to the RAG. The following key points were noted:

- reported catches of Bight Redfish have decreased
- depth records are approximately 100 – 150 m which is slightly shallower than previous years
- the port length frequencies show the fish are getting smaller
- the distribution of catches highlights the spatial grouping of the species
- predicted CPUE follows the long term average but still has not broken out of the 95 per cent confidence interval error bars

The RAG discussed the decreased catches of Bight Redfish. Industry members suggested that decreased reported catches may partially be due to the trouble they were having with data input into e-logs. Industry members also suggested that decreased catches could be due to environmental reasons. Dr Haddon agreed that environmental reasons and variables could move the fish off the depth contour that is targeted. It was highlighted that the lack of catches has decreased but there were no particular variables



of concern. However, the industry members highlighted that they have been avoiding them due to a lack of market but not to the degree that we see in the reported catches.

It was noted that the catches of Bight Redfish do not spread as far west or east as they used to. Industry members suggested that this could be due to a decrease in the fleet over the past few years.

It was also noted that when comparing the CPUE (geometric and standardised) against the results of the fishery independent surveys for the Great Australian Bight Trawl Sector, the results were more variable than they were for the Deepwater Flathead.

The RAG highlighted that an assessment will be undertaken for Bight Redfish next year and we need to make sure we have everything to obtain the best assessment possible.

Summary – The RAG observed that Bight Redfish did not break out of the 95 per cent confidence interval error bars. The RAG agreed that it is comfortable with current RBC and MYTAC and agree that unders and overs should carry over.

Action item 12: AFMA to liaise with Kyne Krusic-Golub to make sure that age data for Bight Redfish is ready for next year's assessment.

3.3 Western Gemfish Data Summary and CPUE Standardisations

Dr Malcolm Haddon presented the data summary and CPUE Standardisation for Western Gemfish to the RAG. This was divided into the catch for the Great Australian Bight Trawl Sector as well as the Commonwealth Trawl Sector as GABRAG is responsible for setting the TAC for the quota zone in the Commonwealth Trawl Sector.

Great Australian Bight Trawl Sector

Dr Malcolm Haddon highlighted the following key points about Western Gemfish in the Great Australian Bight Trawl Sector:

- most catches of Western Gemfish catch are between 200 m and 300 m
- the number of records shows fluctuation and then drops away
- standardised catch rates decrease over winter but this may not be because of the species but rather could mean that the boats are not targeting Western Gemfish in those months
- year, depth and vessel are the variables with the biggest impact on catch rates
- generally no concern about Western Gemfish stocks in the Great Australian Bight Trawl Sector

Mr Stuart Bell noted that some targeted Gemfish shots in the Great Australian Bight Trawl Sector will have high discards due to encountering many small fish. This causes fishing behaviour to change such as depth to avoid the smaller fish. Mr Bell also noted that generally just a portion of the shot will be discarded and not the entire shot.

Dr Marcus Finn highlighted that the RAG needed to provide advice on the Western Gemfish triggers in the GAB Trawl Sector. It was noted that the catch in the Great



Australian Bight Trawl Sector did not reach the trigger level. The RAG agreed that the triggers are still applicable and do not need to be reviewed.

Commonwealth Trawl Sector

Dr Malcolm Haddon highlighted that there is considerable discarding occurring within the Commonwealth Trawl Sector (CTS). Industry members noted concern about how the TAC was set and whether it was based on catch history. There was particular concern that there could be potential for the CTS to report higher discards in order to obtain more quota. Dr Haddon confirmed that the discards which are incorporated into the assessment come from the ISMP report, and that reporting in logbooks by individual operators would not influence this number.

It was noted that the unstandardised catch rate for the CTS shows a gentle decline but the standardised catch rate is generally flat with one significant drop in catch rates. It was suggested that this drop could have been as a result of changes in exporting of Gemfish to Japan in approximately 2001.

It was noted that the breakout rule for the Western Gemfish is whether the CPUE has broken out of the 95 per cent confidence intervals. Dr Haddon noted that the breakout rule for Western Gemfish relates to CPUE but the estimate of CPUE for the last year is highly uncertain due to the very high estimated discard rate. Therefore, it is hard to implement and have certainty of this particular breakout rule when there are such high discards. It was noted that should the discards be included in the catch rate calculations then the CPUE would have broken out high and not low. Dr Finn suggested that the RAG should have a discussion about how it has broken out in relation to the MYTAC of the CTS.

The RAG discussed the landed and discards catch of Western Gemfish as well as variables which influence this such as quota and landing prices. Dr Finn noted to the RAG that while discards are high, the estimate of total mortality does not exceed the RBC. It was noted that the discarded and retained catch for zone 40/50 shows predominately small fish. In addition the length and age data shows that most samples are young fish and suggests there is recruitment to the fishery. It was suggested that the MYTAC may be too conservative given the degree of recruits.

The RAG noted that in the absence of a breakout rule that can be applied to the data, analysis of the available data will need to occur and identify any signs of concern. This includes the fact that there is a Tier 4 Assessment, standardised catch rates, length frequency data, age data and discard data. Given analysis of these variables, the RAG agreed that they were comfortable with where the MYTAC is and that it should be maintained.

Summary – The RAG agreed that while the breakout rule could not be applied to the data, however, the length and age data as well as the standardised catch rates and total mortality, supported the RAG in being comfortable with the RBC set last year and it still being applicable.

Action item 13: RAG to meet out of session to decide a new breakout rule for Western Gemfish.



Action item 14: Dr Malcolm Haddon to look at catch composition of Western Gemfish shots next year.

3.4 GAB Orange Roughy

The RAG discussed Orange Roughy in the GAB and highlighted the following key points:

- No Orange Roughy were taken outside of research quota last year
- No Orange Roughy have been taken year to date
- The lack of catches indicates that the bycatch TAC seems to be sufficient and still fulfilling the purpose.

The RAG agreed to maintain the current Orange Roughy TAC's of:

- 50 tonne Albany/Esperance bycatch quota
- Research quota within the research zones
- 10 tonne trigger outside of the research zones

Dr Marcus Finn noted that the 10 tonne trigger outside of research zones has been carried over to the Orange Roughy Rebuilding Strategy from the Orange Roughy Conservation Programme.

Dr Ian Knuckey noted that the Orange Roughy research that has been undertaken this year appears to have been performed without appropriate planning. Industry members agreed that in future years, better planning needs to be undertaken. However, it was also a positive that the research undertaken this year produced approximately 300 otoliths and length frequencies from the Racetrack/Hamburger Hill and approximately 350 otoliths and length frequencies from the Kangaroo Island Hill. More specifically, this is the first time that samples have been obtained from the Kangaroo Island Hill since 2002.

Industry members questioned the circumstances in which the GAB Orange Roughy fishery could be re-opened. Dr Finn explained that in all circumstances, AFMA would rely on evidence to make future decisions. It was highlighted that Orange Roughy was declared as Conservation Dependent and AFMA put in closures to prevent targeted fishing except for the Cascade Plateau due to there being a stock assessment for that area. Industry members highlighted that the GAB stock was never declared overfished and the status of the stock is uncertain. Dr Finn re-confirmed that AFMA's process for setting a TAC was to conduct an assessment that gave a clear indication of the status of a stock, and then use that information to set a recommended biological catch (RBC) that was clearly sustainable.

Dr Finn also noted to the RAG and specifically industry that a research program has been undertaken in the GAB for numerous years and the RAG needs to consider whether the data could potentially be used one day in an assessment. If the data is not sufficient to be used in an assessment, then it could be suggested that the effort from industry be applied somewhere else.



Industry members believed that the fish will re-enter the fishery to a commercial fishing capacity one day. AFMA re-confirmed that when that day occurs, the fishery needs to have the appropriate data for AFMA to make an informed decision.

Additionally, GABIA expressed to the RAG that it wishes to amend the northern boundary of the Kangaroo Island Hill Closure to allow fishing of ling and grenadier providing there was no detrimental impact on the chance of catching Orange Roughy. It was highlighted that specifically, GABIA would like to go to the MAC with in principle support of the RAG. Dr Finn noted that even if the MAC recommended that the closure be amended, AFMA would go back to the RAG in or out of session once the proposed changes were mapped. The RAG agreed with this approach.

Action item 15: GABIA to send AFMA the proposed changes to the boundaries of the Kangaroo Island Hill Closure for AFMA to map and consequently for the RAG to consider out of session.

Agenda Item 4 – Non-Quota Species

4.1 Update on the Western Gemfish Project

Mr Andy Moore provided the RAG with an update on the Western Gemfish stock structure project. It was noted that the objectives of the project came out of the Tier 1 assessment which showed that catch rates of Western Gemfish between zones 40/50 and what was in the GAB looked very different. This caused uncertainty as to whether these fish should be considered as a single unit or whether they should be split apart. This project aims to clarify the stock structure between east and west and whether there is any structuring within the western stock such as multiple stocks or multiple spawning zones.

Mr Moore noted that original data from Colgan and Paxton showed that all haplotypes that came from New Zealand and the east coast of Australia were of a single stock and that all eastern South Australia, Great Australian Bight and Western Australian samples showed they were a completely different haplotype to another population. It was noted that this was unusual for marine fish which tend to move around a lot and produce many planktonic offspring which would normally suggest variability in gene flow. This project has found fixed differences in haplotype frequency differences between populations.

Mr Moore highlighted that original samples have been obtained from the Colgan and Paxton study from the Australian museum, while new samples have been obtained through sampling by AFMA, industry and Fishwell Consulting. Most of the repeat work on the mitochondrial data has been performed and now microsatellites will be used to find further delineation.

For the molecular work, the project targeted to obtain 100 samples in one year for each of the locations comprising of 50 summer samples and 50 winter samples. For the gonad/length frequency work, the target was 50 summer samples and 50 winter samples over 2 years as well as obtaining multiple samples over multiple years off Western Tasmania. It was noted that due to currents within the area and subsequent larval distributions, the convergence zone may move around. Sampling over several years will help to identify if this is the case.



Mr Moore also highlighted that currently 816 samples across all zones in both summer and winter have been obtained. It was noted that the geographic information needs to be obtained from industry to understand exactly where the samples were taken. It was also highlighted that from preliminary results:

- gonad stage data is showing larger fish in the GAB compared to other sites
- mitochondrial work is confirming previous results of Colgan and Paxton that New Zealand and Australian east coast stock is a single unit and the fish in the GAB, some of western Tasmania and South Australia/Victoria sampling site are a different unit
- A group of samples from western Bass Strait is showing distinctly to be Eastern Gemfish
- Eastern haplotypes are being identified in the SA/Vic sampling zone which Colgan and Paxton did not pick up

It was noted that all new samples as well as the previous Colgan and Paxton samples should be processed by the end of the year. However, additional genetic samples from the Western Bass Strait and the west coast of Tasmania still need to be collected. Mr Moore noted that these samples need to be collected to potentially identify changes in the convergence zone over time (approximately two years).

In addition, all locations need more summer samples taken for the gonad and length frequency work and the project would also benefit from another winter sample for comparison.

Mr Moore noted that this project could not have progressed without the input from industry. Mr Moore also acknowledged the vast amount of work that Fishwell Consulting has done to get the project underway.

Specific further sampling requirements were discussed by the RAG especially with regard to observing the gonad stage. It was agreed that this would be discussed out of session. It was also agreed that Mr Moore should write a description for port samplers on how to perform gonad analysis and sampling of female Western Gemfish.

Action item 16: Mr Andy Moore to produce a one page description for port samplers of how to sample Western Gemfish including gonad analysis of female Western Gemfish.

4.2 Fishwell Analysis of Discards

Dr Ian Knuckey completed a boat by boat analysis for retained and discarded species from the Great Australian Bight Fishery. The analysis produced the proportion of species for each vessel using observer and logbook data. Dr Knuckey gave particular thanks to Dr Matt Koopman for his contribution to this work. The RAG noted that:

- Logbook data was taken from the years 2012 and 2013 calendar years. Over these years, 7356 shots from six vessels were analysed. The shots were spread across all months with January having the highest number of records for both years and July having the lowest for both years.



- Observer data consisted of 412 records taken from five vessels during 2012 only. These records were taken in March, May, August, October and November.
- Overall, retained catch was dominated by Deepwater Flathead.

Industry members noted that the catch composition per boat is not surprising given where in the fishery the boats currently fish and how.

When observing the discard data, it was noted that the observer data provides accurate information across fine scale species composition. However, industry collected data does not back this up in the years that observers are not on the boats as most vessels currently do not report to as fine a detail.

Mr Jeff Moore noted that it would be beneficial for AFMA to perform quarterly reporting on how the boats are reporting similar to what is currently being performed for length frequencies. Dr Marcus Finn noted that a member of his team is already putting together a boat specific report for the Commonwealth Trawl Sector and the Great Australian Bight Trawl Sector that will benchmark discard reporting the specific boat against observer data and the rest of the industry.

It was agreed by all members that industry need to report discards in greater detail to allow for better assessment of discards in the fishery. The RAG discussed what categories industry could report in and agreed on the following groupings:

- Latchet
- Ocean Jacket
- Gemfish
- Grenadier
- Sponges
- Skates/Rays
- Dogfish including Spurdogs
- Other Sharks
- Stingarees
- Other finfish
- All quota species individually (Deepwater Flathead, Bight Redfish, Orange Roughy, School Shark, Gummy Shark, Saw Shark, Elephant Shark).

Dr Ian Knuckey noted that we need to have a process to roll these new categories out once agreed including informing AFMA Executive of the RAG's intention, consulting with skippers to make sure nothing major has been forgotten, adjusting Olfish to reflect these categories and present the crew with a one pager on how to estimate discards as accurately as possible.

Dr Marcus Finn noted that logbooks state the legal requirements for the reporting of discards and that these may need to be amended prior to any arrangements asking for a different recording method being implemented.

Action item 17: Dr Marcus Finn to work on ensuring GABRAG's recommendation to categorise discards can be implemented without breaking the legal requirements of filling in logbooks.



Action item 18: AFMA to follow up the legal requirements of reporting of discards and that appropriate CAAB codes are available for the proposed discard groupings.

Action item 19: AFMA and GABIA to update the Boat Operating Procedures Manual with agreed discard categories and produce a one pager of instructions to crew on discard reporting.

Action item 20: Fishwell Consulting to update Olfish for appropriate discard categories.

Dr Knuckey also presented a graph of catch of deepwater species by depth and longitude. The RAG discussed the results with reference to crew sampling requirements. The RAG agreed that based on the catches observed in Dr Knuckey's analysis, the crew sampling requirements for Grenadier and Gemfish will remain the same but the crew requirements for sampling Hapuka, Ling and Ribaldo can be deleted. The RAG also agreed that when AFMA observers visit A. Raptis and Sons Pty Ltd to perform sampling on Grenadier and Gemfish, then it is advised they perform opportunistic sampling of Hapuka, Ling and Ribaldo.

Action item 21: Dr Marcus Finn to ask the observer section to opportunistically sample Hapuka, Ribaldo, Blue-Eye Trevalla and Ling when performing port sampling of Grenadier and Gemfish.

Agenda Item 5 – Economics

5.1 Presentation on MEY

Professor John Tisdell initiated conversation within the RAG about the economics of the Great Australian Bight Trawl Sector. In particular, conversation was sparked by the issue of under caught TAC's and whether there was an economic driver for this issue.

Professor Tisdell noted that for the benefit of the RAG, it would be best to try and align the economics with the science. It was noted that the science that is presented to and observed by the RAG occurs in time series models. Professor Tisdell recommended gathering economics information such as beach price and fuel price and building up a time series of this information that the RAG can observe each year and use to answer economic related questions. It was noted that a time series of information could assist in answering questions such as:

- What quantity of a particular species is being sold in major fish markets?
- What is the price in China for a particular species given exchange rates?
- What are the input costs and how are they changing?

Professor Tisdell highlighted that to do a time series model for particular variables, industry need to assist in what is called a model industry. It was noted that this does not involved private disclosure of data but providing an average of what can be expected for different variables.

Another option, although a more complex option, is to build a multi-species fisheries model which assists in answering the question of how do you maximise the performance or profit of the fishery in a multi-species situation.



Industry members questioned whether impediments can be factored into the model such as in the case of where regulation prevents the utilisation of a species. Professor Tisdell noted that constraints can be built into the model. It was highlighted that the Great Australian Bight Trawl Sector is a unique fishery in how it operates and the two biggest costs are fuel and crew. Mr Jim Raptis highlighted that specifically, restrictions apply around the use of foreign vessels and foreign crew in Australian waters. Additionally, Mr Raptis noted that another large cost is the upgrading of equipment on the vessels and that not enough profit is currently being made to modernise the fleet.

Professor Tisdell highlighted that the RAG should be bringing the most up to date economic data to each meeting. With this, a sensitivity analysis could be run to predict optimal outcomes and answer questions such as what would the cost of labour need to be to make 'x' amount of profit?

There was concern from industry members that a list of prices will not be sufficient to answer economic questions due to there being many factors that are not within their control and cannot be controlled. Professor Tisdell noted that these types of models provide you with the elasticity of demand and can also build in the variables into the model such as market availability and demand.

Dr Knuckey noted that he understood that business knowledge is already in the heads of industry members but confirmed that the RAG obtaining a time series of economic information would be very beneficial to the industry. Dr Knuckey also noted that there is a template that is used in the Northern Prawn Fishery to calculate MEY. Some of the variables used based on \$/boat day include:

- Fuel costs
- Capital costs with depreciation
- Capital costs without depreciation
- Gear costs
- Total repairs and maintenance
- Proportion of variable costs in repairs and maintenance
- Marketing costs per kg
- Crew share of the catch revenue per kg

It was suggested that these same categories would be enough to get a time series started for the Great Australian Bight Trawl Sector. The RAG agreed.

Mr Andy Moore noted that ABARES have set aside funding to undertake an economic survey of the Great Australian Bight Trawl Sector in 2015. Dr Knuckey suggested to industry members that when they are providing ABARES with recent data, it would also be beneficial to supply ABARES with historical data if it is available.

Dr Marcus Finn noted that AFMA have been starting to think in this sphere and a letter will be sent to the MAC's shortly informing them that AFMA's intention is to request lease price information when quota trades are done. AFMA, through the economists, are trying to build a picture of the economics of fisheries management. Dr Finn noted that it would be worth economic data being presented to the RAG in data summaries in a similar format to the biological data.



The RAG agreed that it would be useful if Professor Tisdell could consider how this work could be undertaken and to consult with ABARES on what information they will be collecting. Dr Knuckey suggested that industry should provide the past 15 – 20 years' worth of economic data when providing information to ABARES. Mr Andy Moore highlighted that the more data received the better as long as industry were happy to do so. Industry members had concerns about the confidentiality of the data and what will be published. Mr Andy Moore reassured industry that no individual boat data would be published and Professor Tisdell recommended that the industry members provide information as a model company to avoid giving individual company data and rather data that is representative of the industry as a whole.

Action item 22: ABARES to consult with Professor John Tisdell about what they intend to do with the economic survey and what information they intend to collect.

Action item 23: AFMA to obtain economic data incorporated into next RAG in the form of a data summary

Action item 24: Dr Ian Knuckey to circulate the Northern Prawn Fishery economic template to the RAG

Agenda Item 6 - Other Business

Mr Jeff Moore requested that the RAG consider sending the RAG papers to the rest of the industry and not just RAG members given that the industry is so small. Dr Marcus Finn noted that AFMA can check but the RAG is bound by confidentiality and the general dissemination of all RAG papers might be a problem. Dr Finn agreed that in a small industry, all members having access to papers in advance of the meeting would allow early feedback. However, he needed to make sure this could happen in a fashion that allowed RAG discussions to remain confidential in the rare circumstances where it was required.

Action item 25: Dr Marcus Finn to enquire about RAG confidentiality rules and whether RAG papers can be sent outside RAG members and participants and to broader GAB industry operators.

Mr David Hall also suggested that it would be good if AFMA Commissioners received copies of the RAG and MAC agenda and perhaps papers also so they are aware of items being discussed.

The meeting closed at 5.30 pm



Day 2

The meeting opened at 08.40 am

Agenda Item 1 – Data and Research

1.1 Update on Research Cycles

The RAG allocated the available time to the other items on the agenda. The updated information was provided to the RAG in the meeting papers prior to the meeting commencing.

1.2 GAB Research and Assessment Plan

This was covered under *1.3 GAB Annual Research Plan and the SESSF Five Year Plan*.

1.3 GAB Annual Research Plan and the SESSF Five Year Plan

Dr Marcus Finn advised the RAG that advice was sought for the Annual Research Plan for the 2016/17 financial year. It was noted that FRDC have considered proposals for the 2015/16 financial year so the RAG needs to forecast research needs two years ahead. The RAG discussed and amended the GAB Research and Assessment Plan. The amended table can be found in Table 3.

Dr Finn noted that the standard monitoring work such as assessments, ISMP and data collection is already accounted for. The RAG did not identify any further strategic research needs.

The RAG did not have time to address the SESSF Five Year Plan. However, the plan and associated information was provided to the RAG in the meeting papers prior to the meeting commencing.

1.4 Update on ISMP

The RAG did not have time to address this agenda item. However, the associated information was provided to the RAG in the meeting papers prior to the meeting commencing.

Agenda Item 2 – GAB Orange Roughy Research

2.1 Update on GAB Orange Roughy Research

The RAG ran out of time to address this agenda item

Agenda Item 3 – Great Australian Bight Research Program

3.1 Update on the Great Australian Bight Research Program

Dr Steven Lapidge, Research Director of the Great Australian Bight Research Program, from the South Australian Research and Development Institute presented the RAG with an overview of the Great Australian Bight Research Program including an update on the progress of the project. Dr Lapidge noted the following key points:



- Currently in the Great Australian Bight, there are nine petroleum permits allocated across BP, Bight Petroleum, Chevron Australia and Murphy/Santos.
- As part of the regulatory approval of securing the petroleum leases, 3D seismic surveying was undertaken between November 2011 and May 2012.
- Drilling is expected to commence in the Great Australian Bight in the summer of 2015/16 but may be pushed back further.
- The drilling will take between 18-30 months to complete and aims to determine whether commercial quantities of hydrocarbon resources exist within the area.
- The proposed drilling area will occur in water depths of 1000 – 2500 m. At its closest point, the drilling area is 400 km west of Pt Lincoln and 370 km south west of Ceduna.
- The Great Australian Bight Research Program is a unique collaboration between BP, SARDI, CSIRO, University of Adelaide and Flinders University.
- The project is a \$20 million whole of ecosystem project involving \$14 million contribution from BP, \$3 million in kind contribution from SARDI and \$3 million in kind contribution from CSIRO.
- The project aims to inform sustainable development in the region and allow assessment of future impacts.
- The project started in 2013 and is currently meeting milestones despite its slow start.
- The ecological data will be made publicly available and the program will be overseen by a high-level independent science panel.
- The project is broken into the following 7 themes:
 - Oceanography
 - Open-water (pelagic) Ecosystem and Environmental Drivers
 - Seafloor (benthic) Biodiversity
 - Ecology of Iconic Species and Apex Predators
 - Petroleum Geology and Geochemistry
 - Socio-economic Analysis
 - Integration and Modelling

The RAG noted the update on these individual themes.

It was noted that as part of one of the themes, Dr Sean Pascoe from CSIRO will be undertaking a study on GAB fisheries and the potential impact of petroleum development.

It was also noted that a stakeholder science symposium will be held from mid-2015 and RAG members were encouraged to register their interest in attending with Dr Lapidge.

Action item 26: Professor John Tisdell to obtain a summary of Sean Pascoe's economic work of the Great Australian Bight.

Agenda Item 4 – Other Business

No other business was suggested by the RAG.



Agenda Item 5 – Next Meeting and Close

The Chair closed the meeting and thanked everyone for their participation and contributions. It was noted that being an assessment year, two meetings would be required at approximately the same time next year.

The meeting was closed at 1.30pm.



Table 1. Action items addressed with progress recorded.

GABRAG Meeting	Action Item	Action Person	Timeframe	Progress
	<i>GABRAG 2 – 3 December 2012</i>			
2/2012	#17 Update GABTF Operation Manual, Slope Species Sampling and amend 5b sampling size from 100 samples from a 50 kg catch to 100 sample from a roughly 300 kg catch (its ok for Gemfish and Blue Grenadier but it's not ok for the other species).	AFMA Manager and GABIA	Out of Session	In progress
2/2012	#19 Forward gear type and configuration time line to Neil Klaer.	Jeff Moore	Out of Session	Complete
1/2013	#1 Ensure that crew data is being submitted to CSIRO in a suitable database for input into the stock assessments. As a one off project paid by GABIA, the GABTF crew data was sent to Matt Koopman from Fishwell to enter into a database suitable for CSIRO. A similar process needs to be put in place for all of the SESSF.	AFMA Manager	Out of Session	Complete – to be improved for next year
1/2013	#2 Provide a data summary on the Danish seine vessel operating in the GABTF and forward logbook and observer data to Ian Knuckey.	Neil Klaer	Out of Session	Complete
1/2013	# 3 Examine logbook and observer data to obtain catch composition, length frequencies and trip summary of the Danish seine vessel operating in the GABTF, to investigate if this vessels catch is representative of a trawl vessels catch or does it differ.	Ian Knuckey	Out of session	Complete
1/2013	#4 Organise observers on the Danish seine vessel operating in the GABTF one trip a year (Gail Jeanette).	AFMA Manager	Out of session	Complete
1/2013	#5 Liaise with Tony Muollo the owner of the Danish seine vessel to obtain crew length frequency samples for Deepwater Flathead and Bight Redfish.	GABIA	Out of session	Complete
1/2013	#6 Include an agenda item on Western Gemfish triggers at the next RAG meeting for members to discuss whether they remain suitable with the additional information received over the past few years.	EO	25 November	Complete
1/2013	#8 Ask Professor Bronwyn Gillanders from University of Adelaide for any information on cuttlefish and forward information to the RAG and AFMA. This is due to	Jeff Moore	Out of Session	Not complete

Table 1. Action items addressed with progress recorded.

	cuttlefish remaining High Risk in ERA due to limited data.			
1/2013	#11 Install a provision on the new version of Olfish to record discards and length frequencies.	Ian Knuckey	Early 2014	Complete
1/2013	#12 Trial the new provisions in Olfish for a period of time and report back to the RAG whether it is feasible for the crew to input this data into Olfish.	Industry	Out of Session	Complete
1/2013	#14 Investigate the ISMP onboard data which is collected every financial year and why it isn't suitable to include in the Deepwater Flathead assessment.	Neil Klaer and AFMA Manager	25 November	Complete
1/2013	#16 Investigate the average discard of 100 kg in the GAB mid shore that has been recorded for two shots in the 2012 calendar year.	AFMA Manager	25 November	Complete
1/2013	#20 Coordinate with industry samples of Western Gemfish including otoliths, fin clips, length measurements and gonads to be utilised in the stock structure project.	Andy Moore (Jeff to action a shot in a spawning aggregation as soon as possible)	Out of session	Complete
1/2013	#24 Liaise with CTS operators in Portland that were catching Western Gemfish prior to 1992 and match the anecdotal evidence with the logbooks. If identified through liaison that the catches are consistent then the assessment will include catches prior to 1992, if the catches are inconsistent then the assessment will remove the catches prior to 1992.	Mark Chambers and Andy Moore	25 November	Complete
1/2013	#25 Ian Knuckey to send Neil Klaer additional data on Western Gemfish length frequency samples for 2011. Neil Klaer to forward on the data to Mark Chambers.	Ian Knuckey and Neil Klaer	15 November	Complete
2/2013	#1 AFMA Manager and Neil Klaer are to examine data and the ongoing issue of apparent missing data for last four financial years.	Neil Klaer, AFMA Manager		Complete
2/2013	#2 Skippers to provide whole western gemfish from any catches on winter spawning stock - any fish seen to be running ripe.	GABIA, GABTF skippers		Complete
2/2013	#3 Mark Chambers to provide the actual output estimates of Western Gemfish model	Mark Chambers	ASAP	In progress – Dr

Table 1. Action items addressed with progress recorded.

	to Neil Klaer for examination.			Malcolm Haddon to check that this has been completed
2/2013	#4 Minutes on Bight Redfish from GABRAG 1/2013 (31 Oct 2013) to be circulated out of session for more comments on Bight Redfish stock assessment update.	RAG EO	ASAP	Complete
2/2013	#5 Ian Knuckey to graph discards from Neil Klaer's 'discards & retained catch analysis' and compare to industry logbook data.	Ian Knuckey	Out of session	Complete
2/2013	#6 GABIA to gather data on species with set trigger levels (such as distribution, range, area of fishery, how much is taken in area of SESSF); GABIA to supply to RAG out of session so the RAG may determine if the RAG needs to re-visit any of the current trigger levels.	GABIA & RAG	Out of session	Complete
2/2013	#7 RAG EO to circulate presentation and John to take comments on how model could be improved to be more useful in future	John Tisdell & EO	Out of session	Complete
2/2013	#9 AFMA manager to check issues regarding FIS data collection and confidentiality issues and feasibility of the use of this data to inform SARDI seismic survey review The RAG agreed subject to issues related to FIS data collection and confidentiality to collaborate with SARDI to analyse and jointly publish the FIS data.	AFMA Manager	December 2013-January 2014	In Progress - ongoing
2/2013	#14 RAG to recommend that CSIRO perform an analysis of industry and ISMP recorded catches of sharks and rays in the GABTF	Chair & CSIRO	Out of session	Complete
2/2013	#16 Andy Moore to obtain an update from PhD student on study of Ocean Jackets & Latchet ecology and provide to RAG	Andy Moore	Out of session	Complete.
2/2013	#17 AFMA to complete draft of 2014-16 Bycatch and Discard Workplan with GABIA input and circulate to RAG for comment	AFMA (& GABIA & RAG)	December 2013	Complete
2/2013	#18 Ian Knuckey to provide GABRAG with an analysis of main GABTF species caught, spp discarded, sharks & rays, stingarees and sponges based on ISMP data, to inform which species should be detailed in section four of the GABIA Operational Procedures Manual and for e-log reporting of discards.	Ian Knuckey	Out of session	Complete
2/2013	#20 RAG to produce a two page table with future strategic priorities and B&D work plan projects combined.	RAG EO	Out of session	Complete

Table 2. Updated standing list of action items

GABRAG Meeting	Action Item	Action Person	Progress
2/2012	#17 Update GABTF Operation Manual, Slope Species Sampling and amend 5b sampling size from 100 samples from a 50 kg catch to 100 sample from a roughly 300 kg catch (its ok for Gemfish and Blue Grenadier but it's not ok for the other species).	AFMA Manager and GABIA	In progress
1/2013	#8 Ask Professor Bronwyn Gillanders from University of Adelaide for any information on cuttlefish and forward information to the RAG and AFMA. This is due to cuttlefish remaining High Risk in ERA due to limited data.	Jeff Moore	Not complete
2/2013	#3 Mark Chambers to provide the actual output estimates of Western Gemfish model to Neil Klaer for examination.	Mark Chambers	In progress – Dr Malcolm Haddon to check that this has been completed
2/2013	#9 AFMA manager to check issues regarding FIS data collection and confidentiality issues and feasibility of the use of this data to inform SARDI seismic survey review The RAG agreed subject to issues related to FIS data collection and confidentiality to collaborate with SARDI to analyse and jointly publish the FIS data.	AFMA Manager	In Progress - ongoing
1/2014	#1 Jeff Moore to follow up what gear was historically used for trawling in the GAB	Jeff Moore	Not complete
1/2014	#2 AFMA, CSIRO, GABIA and Fishwell Consulting to negotiate on the form future data summaries will take based on requests from the RAG and what is covered under the current contract with CSIRO.	AFMA, GABIA, CSIRO and Fishwell Consulting	Not complete
1/2014	#3 Ms Michelle Wilson to send published articles from PhD student, Mr Marcus Miller, regarding the study of Ocean Jackets.	Michelle Wilson	Not complete
1/2014	#4 AFMA to recirculate advice to RAG members regarding the <i>Public Information Disclosure Act 2014</i> .	Marcus Finn	Not complete

Table 2. Updated standing list of action items

1/2014	#5 AFMA to follow up what benefits apply to the RAG such as insurance etc. and inquire if AFMA are working on aligning these benefits/compensations.	Marcus Finn	Not complete
1/2014	#6 AFMA to send the draft Orange Roughy Rebuilding Strategy to the RAG for comment.	Michelle Wilson	Not complete
1/2014	#7 AFMA to get the GHAT team to send the School Shark Rebuilding Strategy to the RAG or highlight the points that may apply to the GAB.	Marcus Finn	Not complete
1/2014	#8 AFMA and GABIA to review the Far West and Salisbury Canyon closures upon implementation of the South West Commonwealth Marine Reserve.	AFMA and GABIA	Not complete
1/2014	#9 Individual operators to hide menu options on their Olfish systems to prevent inappropriate codes from being chosen.	Each Operator	Not complete
1/2014	#10 Dr Malcolm Haddon to follow up an explanation for the 2012 discards of Deepwater Flathead.	Malcolm Haddon	Not complete
1/2014	#11 Dr Malcolm Haddon to work with Dr Robin Thomson to check where early length data and length data from 2006-08 is and why it is not included in the data summary	Malcolm Haddon	Not complete
1/2014	#12 AFMA to liaise with Kyne Krusic-Golub to make sure that age data for Bight Redfish is ready for next year's assessment.	AFMA/Kyne Krusic-Golub	Not complete
1/2014	#13 RAG to meet out of session to decide a new breakout rule for Western Gemfish.	Michelle Wilson	Not complete
1/2014	#14 Dr Malcolm Haddon to look at catch composition of Western Gemfish shot next year.	Dr Malcolm Haddon	Not complete
1/2014	#15 GABIA to send AFMA the proposed changes to the boundaries of the Kangaroo Island Hill Closure for AFMA to map and consequently for the RAG to consider out of session.	GABIA	Not complete
1/2014	#16 Mr Andy Moore to produce a one page description for port samplers of how to sample Western Gemfish including gonad analysis of female Western Gemfish.	Mr Andy Moore	Not complete
1/2014	#17 Dr Marcus Finn to inform AFMA Executive of GABRAG's intention to categorise discards.	Dr Marcus Finn	Not complete
1/2014	#18 AFMA to follow up the legal requirements of reporting of discards and that appropriate CAAB codes are available for the proposed discard groupings.	AFMA	Not complete

Table 2. Updated standing list of action items

1/2014	#19 AFMA and GABIA to update the Boat Operating Procedures Manual with agreed discard categories and produce a one pager of instructions to crew on discard reporting.	AFMA/GABIA	Not complete
1/2014	#20 Fishwell Consulting to update Olfish for appropriate discard categories.	Fishwell Consulting	Not complete
1/2014	#21 Dr Marcus Finn to direct the observer section to opportunistically sample Hapuka, Ribaldo, Blue-Eye Trevalla and Ling when performing port sampling of Grenadier and Gemfish.	Dr Marcus Finn	Not complete
1/2014	#22 ABARES to consult with Professor John Tisdell about what they intend to do with the economic survey and what information they intend to collect.	ABARES	Not complete
1/2014	#23 AFMA to obtain economic data incorporated into next RAG in the form of a data summary	AFMA	Not complete
1/2014	#24 Dr Ian Knuckey to circulate the Northern Prawn Fishery economic template to the RAG	Dr Ian Knuckey	Not complete
1/2014	#25 Dr Marcus Finn to enquire about RAG confidentiality rules and whether RAG papers can be sent outside RAG members and participants and to broader GAB industry operators.	Dr Marcus Finn	Not complete
1/2014	#26 Professor John Tisdell to obtain a summary of Sean Pascoe's economic work of the Great Australian Bight.	Professor John Tisdell	Not complete

Table 3. Updated GAB Research and Assessment Plan

		2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Bight Redfish*	TAC	2,000t	1,653t	1,556	2,334t	2,358t	2,358t	✓	TBC		
	Assessment	✓	x	✓	x	x	X	✓	x	X	
Deepwater Flathead*	TAC	1,300t	1,100t	1,500t	1,560t	1150	1150	MYTAC	MYTAC	TBC	
	Assessment	x (update)	✓	x	✓	✓	x	X	✓	x	
Western Gemfish	Assessment				✓	✓	x	x	?	x	
Western Gemfish	Stock structure project					✓	✓	Outcomes applied			
Orange Roughy	Assessment				x	x	x	x	Review data (consider data, and define what is required to move to assessment/evidence-based stock status)	x	
FIS		x	✓	x	x	x	✓	?	?	?	?
Research Workshop/sub-group					✓	✓	✓	✓	✓	✓	✓
MEY Study		Developed				Review sensitivity	Examine breakouts	GABIA/John T. to speak to Shaun Pascoe Re: focusing the BP research.			
MSE/FIS Review					x	✓**	✓***	✓			
GABIA Length Measurements	Industry onboard	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
ISMP (onboard)¹		x	✓	x	✓	x	✓	x	✓ - to validate previous year's industry data	x	✓
(onshore quota otoliths)		✓	x	✓	x	✓	x	✓	x	✓	x
Slope Species Monitoring		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

¹ Calendar year, not financial year **SARDI evaluation of GAB FIS ***SESSF strategic review

Table 3. Updated GAB Research and Assessment Plan

(onshore non quota LF & otoliths)											
Byproduct Monitoring						Latchet?	Ocean Jacket?	Ornate Angel?	Stingaree?		
BYCATCH	Seabird Management Plans	Developed	✓	✓	✓	✓	✓	✓	✓	✓	✓
LOGBOOK (e-logs & paper)	(discards recording)	Monitoring ✓	Audit ✓	✓	✓	✓	✓	Focus on industry-recording of discards	✓	✓	✓
RAG (meetings)		2	2	2	2	1	2	1	2	2	
MAC (meetings)		1	1	1	1	1	1	1	1	1	