



Australian Government
Australian Fisheries Management Authority



**Shark Resource Assessment
Group (SharkRAG)
Meeting No.2 2015**



Meeting Minutes

**Date: 18-19 November 2015
Venue: Parkroyal
Melbourne Airport**

Attendance

Name	Membership
Dr Brendan Kelaher	Chair
Mr David Power	AFMA member
Mr Ryan Keightley	Executive Officer
Mr Jason Pettit	Industry member
Mr David Stone	Industry member
Mr Kyri Toumazos	Industry member
Dr Robin Thomson	Scientific member
Professor Colin Simpfendorfer*	Scientific member
Ms Anissa Lawrence	Environment member
Dr Malcolm Haddon	Invited participant – scientific (CSIRO)
Mr Nic Martin	Invited participant – scientific (ABARES)
Dr Miriana Sporcic	Invited participant – scientific (CSIRO)
Mr Leigh Castle	Invited participant - Industry

* attended only 19 November 2015

Apologies

Dr Jeremy Prince	Scientific member
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Minutes

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1. Preliminaries		
1.1. Welcome & apologies	Dr Brendan Kelaher (Chair) welcomed members and invited participants and opened the meeting at 10:35am. The Chair welcomed Mr Leigh Castle, and noted an apology from Dr Jeremy Prince. The Chair noted that Professor Colin Simpfendorfer was unable to attend on 18 November 2015, but would attend on 19 November 2015. As there was only one scientific member in attendance the RAG noted that there was not a quorum on 18 November 2015, and <u>confirmed all RAG advice on 19 November 2015 when Professor Simpfendorfer was in attendance.</u>	

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1.2 Agenda	<p>The Chair asked the RAG if they had any additions or concerns with the draft agenda. Mr Stone requested agenda item 8.1 be removed from the agenda completely as there was not sufficient time to consider the paper. The Chair requested the RAG vote on how to proceed with adopting the agenda. Mr Stone reaffirmed his opposition to discussing item 8.1 at this meeting. The remaining RAG members agreed to discuss item 8.1 in the meeting, however they would not provide advice. The RAG agreed to consider the item for advice out of session via teleconference when a finalised report is available.</p> <p>The RAG adopted the agenda as final, noting agenda item 8.1 would be considered for discussion only.</p>	
1.3 Declaration of interests	<p>The RAG followed the declaration of interest procedures as outlined in AFMA's Fisheries Administration Paper 12, noting the standing list of declared conflicts of interests which were updated (Attachment 1).</p> <p>Members and invited participants declared interests specific to the agenda as follows:</p> <ul style="list-style-type: none"> • Drs Thomson, Sporcic and Haddon declared potential interests relating to research in agenda items 2 and 5; • Mr Marton declared a potential interest for ABARES relating to research in agenda item 5; • Mr Stone, Mr Toumazos, Mr Pettit and Mr Castle declared potential interests in agenda items 3, 4, 5, 6, 7 and 8 as active members in the fishery or as an industry representative. <p>These members and invited participants separately left the room while the RAG deliberated on their participation. The RAG agreed that members and invited participants were chosen for their relevant expertise and knowledge, so there is an expectation that members, in maintaining their expertise and knowledge, are likely to hold interest relevant to the fishery. The RAG agreed that the members participate in all agenda items and noted their declared interests.</p>	
1.4 Actions arising	<p>The RAG was updated on the status of outstanding actions arising from the 2014 and 2015 meetings as tabled in the paper.</p> <p>The following comments were noted:</p> <ul style="list-style-type: none"> • Action item 2, SharkRAG 2 2014 – Mr Toumazos noted concerns with potential compliance action if discards are not recorded in logbooks with 100 per cent accuracy now that electronic 	

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	<p>monitoring is implemented. Mr Power noted that there are tolerances for discarded bycatch species (not TEPs), and the expectation is that recorded discards are a best estimate only. It is clear there is a fundamental change in the monitoring of the fishery that is leading to changes in reporting and the data collected. Mr Pettit stated that it is common to run out of room on paper logbooks when recording all bycatch species. Dr Haddon noted that there is a project currently underway in the GAB considering grouping species that may be applied more broadly if successful. Mr Power also noted that there are major benefits of going to electronic logbooks, and this will be pushed strongly in the future for the GHAT when the electronic logbook program is fully supported and functional from AFMA's perspective.</p> <ul style="list-style-type: none"> • Action item 4, SharkRAG OOS May 2015 – Remove the item and invite Mr McMillan to the next SharkRAG face to face meeting to provide an update on his school shark project. • Action item 12, SharkRAG 1 2015 – AFMA's advice is that the new Marine Mammal Working Group (MMWG) will be the overarching group for all AFMA fisheries (there will still be sub-groups such as the Dolphin Sub-committee as an on need basis). As such, the MMWG will consider mammal research priorities. 	
1.5 Acceptance of minutes from May 2015 OOS meeting	The RAG accepted the SharkRAG 1 2015 minutes tabled as final.	
2. Updates		
2.1 Manager's update	<p>Mr Power noted he would discuss the manager's update items at agenda item 5.1. Mr Power announced that there will be a change to staffing in the GHAT team as he has accepted a new position outside Australia starting in January 2016.</p> <p>The Chair noted that Mr Power has done a great job in his role as GHAT manager, and thanked him for his hard work over the last three years. The RAG agreed affirming that he has had a positive impact in the fishery and he will be missed. Dr Sporcic and Dr Thomson personally thanked Mr Power stating he has been very effective at improving management in the fishery. Mr Power noted that Mr Keightley would be acting in the manager's role until permanent arrangements are finalised in early 2016.</p>	
2.2 ARC research update	Mr Keightley presented the ARC research update as tabled, noting the list of Fisheries Research and Development Corporation funded projects that are currently under way, and key dates for establishment of research priorities through the AFMA Research Committee and the	

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	Commonwealth Fisheries Research Advisory Body.	
2.3 Industry update	<p>The RAG noted the following fishery updates from industry members present:</p> <p>Mr Toumazos, hook and gillnet concessions, South Australia and Bass Strait:</p> <ul style="list-style-type: none"> • There are good catches of gummy shark in South Australia, but the main problem is not having enough flexibility to catch fish in the most efficient way; • Automatic longline systems for shark fishing are not developed yet and they are expensive and need require more deckhands; • Concerns for the future of the fishery, noting there is only one full time gillnet fisher left in South Australia. <p>Mr Pettit, shark hook sector, South Australia:</p> <ul style="list-style-type: none"> • As an owner operator employing one deckhand his business is going well and is fishing at his capacity; • If there is a shift to large boats with a larger capacity, smaller operators might get pushed out of the fishery; • Considers that most dolphin interactions occur on setting the gillnets while the net is in the water column; • Has concern over the smaller fish they catch and the lower size limit is excessively small. AFMA should consider increasing the size limit to 50 cm. <p>Mr Stone, EO of Sustainable Shark Fishing Assn, Lakes Entrance, VIC:</p> <ul style="list-style-type: none"> • Some of the best catches in years are occurring in Eastern Bass Strait with records being broken (1 250 fish in a shot) and very low school shark catch; • Summer should be exceptional if the fishery continues as it is. Fish caught are all of mixed lengths; • Western Bass Strait has had lower catch rates with colder water, but is picking up now; • There have been extra discards of elephant fish as it is not economically viable to land them; • Suggests a high degree of uncertainty of the future of the Industry considering the proposed changes in management; • Operators have seen more dolphin activity around vessels (not at the bow, under boat) at 	<p><u>ACTION 1</u> - AFMA to consider increasing the lower size limit of gummy shark based on Mr Pettit's comments.</p>

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	<p>night feeding on squid, and they are investigating the potential that LED lights are attracting dolphin prey species under the boat. Some operators are trialling turning off lights where possible.</p> <p>Mr Castle, scalefish and shark hook concessions, Tasmania:</p> <ul style="list-style-type: none"> • Gummy shark catches on the east coast have been poor over winter due to cold green water; • There is a good gummy shark fishery on west coast of Tasmania, but they currently cannot access the water they are in due to 130 m and 183 m closures; • The 20 per cent ratio is forcing operators to move away from areas of high gummy shark catch as they also contain high school shark. Fishers have to actively avoid school shark at all times. • Concerns over the complex layers of management that are currently in place in a limited entry, quota managed fishery. This is limiting investment in the fishery. 	
3. Recommended Biological Catch recommendations		
3.1 School shark	<p>Mr Keightley introduced the item stating that the most recent stock assessment for school shark, completed in 2009, resulted in a biomass estimate below the default B_{LIM} of 20 per cent of unfished levels, and as such, the RBC for 2016-17 is proposed to be 0 tonnes. Mr Power noted that the current recommendation is for the RAG to consider recommending a TAC at a level required to cover unavoidable bycatch while supporting rebuilding of the stock. The 2015-16 unavoidable bycatch TAC was set at 215 t.</p> <p>The RAG noted that there are continuing positive signs suggesting that school shark populations are rebuilding. This is based on an overall increasing trend in trawl CPUE and increased pupping in a historically important pupping area (Pittwater, Tasmania). This is consistent with anecdotal evidence and catch reports from industry that unavoidable school shark catch is also increasing.</p> <p>The RAG expressed concern over the potentially high catch of school shark by State fisheries and would like a reliable measure of total catch along with information on size frequency. The RAG strongly recommended that species-specific catches are reported for sharks and that efforts are made to ensure the state catch of school shark is minimised.</p> <p>The RAG noted concerns about total mortality given increasing discards, and questioned whether</p>	

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	<p>there is sufficient information on post-release mortality considering AFMA implemented a management measure to release all live caught school shark. The RAG supported pursuing research on the survivability of released sharks and recommended including this as a high priority in the research plan for 2016-17.</p> <p>The RAG considered the best estimate of unavoidable bycatch including discards is 215 t. This is based on landed catch from 2011 and ISMP estimates of discards of 9 per cent. The RAG did note that as the stock rebuilds it is likely that the unavoidable catch could increase. However, the RAG noted that without an updated assessment there is little basis to increase the unavoidable bycatch TAC. Dr Thomson noted that the TAC of 215 t was set to a rebuilding timeframe of 66 years and is considered to be conservative. The RAG recommended that as there is no new assessment, no signs that things are getting worse and the trawl CPUE is still above average, that an unavoidable bycatch TAC of 215 t was appropriate.</p> <p>The RAG agreed that they are looking forward to the results of the close kin mark recapture project, and discussed the potential for results to be incorporated into the planned school shark project in late 2017. Mr Power suggested that the RAG could potentially hold a special out of session meeting in early 2018 for the school shark assessment if there are delays in the close kin results, which would allow the results to be used for the 2018-19 fishing year.</p> <p>Mr Toumazos emphasised that leading up to the assessment it will be important to scrutinise and update the school shark assessment model and assumptions. Dr Thomson noted that this is the preferred option and she is planning on doing a complete overhaul of the assessment model before using it. The RAG supported starting reviewing the assessment model in 2016-17.</p>	
3.2 Sawshark	<p>Dr Sporic presented the tier 4 assessment for saw shark, noting that the RAG agreed at its last meeting to use trawl CPUE, not including discards, as the primary indicator of abundance. Discards were not included as there were many small shots and they were relatively stable.</p> <p>The assessment included state catch of 4 tonnes and had a target reference point set at 40 per cent of unfished biomass. The assessment resulted in an RBC of 535 t, noting a further increase in RBC from last year.</p> <p>The RAG noted they held no concerns with the sawshark stock and recommended an RBC of 535 tonnes. The RAG noted that separating the shark catches by species (common sawshark</p>	

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	<p>and southern sawshark) did not make a notable difference to the RBC proposal. The RAG supported using a multi-year TAC for three years with a discount factor of 15 per cent to be applied. The RAG supported undercatch and overcatch provisions up to 10 per cent.</p> <p>Breakout rules, serving as a review trigger, were recommended by the RAG as follows:</p> <ul style="list-style-type: none"> • If total mortality (including discards, state catch, and recreational catch) exceeds most recent RBC by more than 10 per cent (consistent with overcatch provisions, noting that Commonwealth catch would have to increase significantly to breakout); • If total mortality (including discards, state catch and recreational catch) is lower than 50 per cent of the most recent RBC; • If there is a greater than 25 per cent change in any of the most recent standardised trawl or gillnet CPUE values. <p>The RAG recommended that Dr Sporcic provide a short paper on whether the breakout rules are triggered each year to assist in the RAGs decisions.</p> <p>Industry members stated that while the increase in RBC is a good sign, the TAC is currently considerably under caught. Mr Stone noted that an increase in TAC would hopefully reduce levy price, meaning they will start to land more.</p> <p>Mr Toumazos questioned whether there is a need for overcatch provisions considering the species is considerably under caught. He noted that having overcatch has potential negative economic impacts on operators in the fishery. The RAG noted that it was unable to consider economic impacts on individual operators without further economic analysis.</p>	
3.3 Elephant fish	<p>Dr Sporcic presented the tier 4 assessment for elephant fish, noting that the RAG agreed at its last meeting to use gillnet CPUE, including discards, as the primary indicator of abundance. The RAG also agreed use the average discard rate from 2011-2014 (rate of 0.6009) for all years prior to 2011 (1986-2010) in the model*.</p> <p>Dr Sporcic presented two model runs, one including the previous recreational models catch estimates, and the other with updated recreational catch estimates. The RAG noted that this had a minimal effect on the estimated RBC, and accepted the assessment model with updated recreational catch estimates, resulting in an RBC of 306 tonnes.</p>	

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	<p>The RAG recommended an RBC of 306 t and supported a multi-year TAC for three years with a discount factor of 15 per cent to be applied. Breakout rules (serving as a review trigger) recommended were:</p> <ul style="list-style-type: none"> • If total mortality (including discards, state catch, and recreational catch) exceeds most recent RBC by more than 10 per cent; • If total mortality (including discards, state catch and recreational catch) is lower than 50 per cent of the most recent RBC; • If there is a greater than 25 per cent change in any of the most recent standardised gillnet CPUE values. <p>The RAG supported undercatch and overcatch provisions up to 10 per cent.</p> <p>Mr Power noted that a high proportion of elephant fish are discarded, and suggested Industry investigate new markets for the product, noting it could increase gross value of production in the fishery significantly. Mr Stone stated that PFD food services is currently looking for new species to market, so there may be good potential for elephant fish. Industry members noted that if there were to be an increase in landings due to new markets, then we would want flexibility to reassess the species mid-way through the MYTAC. The RAG noted there is flexibility in MYTACs, and this is captured in the breakout rules.</p> <p>*Dr Sporcic noted that this had not been incorporated into the assessment and reran the assessment including the RAGs recommendation when the meeting was not in session.</p>	
<p>4. Gummy shark recommendation on continuing multi-year total allowable catch (MYTAC)</p>		
4.1 Confirmation of SharkRAG October 2015 advice re breakout rules	<p>Mr Keightley introduced the item, reminding the RAG that had reviewed the breakout rules for gummy shark at its last meeting, and noted that they had not been triggered. The RAG noted that that the greater than 130 cm for line caught fish breakout rule is close to the trigger and agreed that this should be monitored. The RAG noted that more smaller and larger fish are caught on longlines than on gillnets.</p> <p>Mr Stone noted his concern over the length frequency breakout rule, and questioned the use of the gillnet to hook trial length frequencies. Dr Thomson noted that the trial's length frequency data would not be used next year, as we will have observer data from commercial fishing to replace it.</p>	<p>ACTION 2 – Professor Simpfendorfer to distribute the Pittwater pupping research paper to the RAG.</p>

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	<p>Mr Toumazos stated there is not likely to be any further increase in hook effort in South Australia, and expressed concern that if there is an increase in the gummy shark TAC from next year's assessment, they will not be able to catch it due to the school shark TAC restricting catch.</p> <p>The Chair summarised the RAGs advice, noting it held no concern with continuing the MYTAC, and supported maintaining the TAC at 1836 t.</p>	
5. GHAT strategic plan presentation		
5.1 2020 and beyond	<p>Mr Power presented a review of the current state of the GHAT, with key points as follows:</p> <ul style="list-style-type: none"> • The stock status in shark sector is very positive with gummy shark, elephant fish and sawshark classified green in the ABARES reports. • Management measures have been implemented in recent years to address Australian Sea Lion and dolphin interactions. • Noted a significant shift in the gillnet fishery over time, from being spread across the sector prior to 2010, to be concentrated in the Bass Strait from 2010 onward. Shows a fundamental change in South Australia moving to hook effort in recent years. • Net economic returns in the GHAT have been heading down since 2009, and negative since 2011. • The priority for AFMA and industry over the coming 1-3 years is to take actions to grow value in the fishery. This includes management reviewing and removing redundant management measures that impede efficient utilisation and industry to explore options to grow value through new markets and value adding. <p>The RAG questioned the ABARES participant whether the school shark classification would change to uncertain for biomass, considering the assessment is 6 years old and there are many management measures implemented to rebuild the stock. Mr Marton noted that this is considered and noted that as the rebuilding timeframe for the species is quite long (66 years), it would generally fall in the overfished status without any new evidence of stock biomass. The RAG suggested that the ABARES participant provide a presentation at the next SharkRAG meeting on the fishery status reports and the classification process.</p> <p>Mr Toumazos questioned the results of the most recent Australian Sea Lion report by Associate Professor Simon Goldsworthy, and asked whether AFMA has challenged the report. Dr Haddon noted that he held concerns with the report and had written to Associate Professor Goldsworthy seeking to discuss his concerns. Mr Power suggested that the best way forward would be for</p>	<p><u>ACTION 3</u> – Mr Power to distribute a copy of his presentation to the RAG (removing confidential information).</p> <p><u>ACTION 4</u> – ABARES to present at the next SharkRAG meeting on the fishery status report and the classification process.</p> <p><u>ACTION 5</u> – Industry to commission a review of the Goldsworthy report.</p>

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	<p>Industry to collaborate and commission a review of the report.</p> <p>The RAG discussed the future state of the fishery, focusing primarily on economic efficiency within the fishery and a focus on product marketing by industry. Mr Power questioned what AFMA and Industry can do to grow value in the future, and proposed the following items for considerations - remove unnecessary regulation, provide greater flexibility, seek new markets, value add and focus on greater utilisation. Mr Power presented a proposed three year AFMA timeline as follows:</p> <p>The RAG thanked Mr Power for his presentation and noted the three-year plan.</p>	

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6. Future of hooks in South Australia and species limits in the scalefish and shark hook sectors		
6.1 Future of temporary hook permits	<p>Mr Power introduced the item noting that that the temporary gillnet to hook permits granted to fishers in South Australia expire in February 2016. He explained that AFMA is seeking the RAGs advice on proposed arrangements to continue longline fishing arrangements in waters off South Australia.</p> <p>Mr Power noted that the proposal is to renew the permits from next year to be aligned with the fishing season. The permits are proposed to be transferrable, will continue to only be valid in waters relevant to South Australia, and must be linked to a gillnet SFR. He also emphasized that as per all permits, these will not be considered a permanent right.</p> <p>The RAG considered the performance criteria that were recommended by SharkRAG when AFMA granted the permits. Mr Power summarised the outcomes against each performance criteria as follows:</p> <ol style="list-style-type: none"> 1. <i>Ensure that Gummy Shark catch is sustainable and that hook caught Gummy Shark catch levels do not significantly impact Recommended Biological Catch (RBC) results from the current stock assessment</i> <ol style="list-style-type: none"> a. Catches of gummy shark have not exceeded the 400 t trigger b. Length frequency data indicates that gummy shark caught on longline have a broader selectivity than gillnet with more smaller and larger shark caught. The gummy shark tier one assessment is being conducted in 2016 and will include updated data on gummy shark selectivity on longlines. 2. <i>Ensure that School Shark can continue to rebuild:</i> <ol style="list-style-type: none"> a. SharkRAG has noted evidence from trawl CPUE that current measures are restricting school shark catch to levels that support rebuilding. b. AFMA implemented a measure in May 2015 that requires live caught school shark to be released. It was noted that this would have the greatest benefit in the longline sector where much of the school shark is hauled alive. 3. <i>Seabird bycatch minimised to levels acceptable under the Seabird Threat Abatement Plan:</i> 	

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	<p>a. Seabird bycatch has been low and within the trigger limits of threat abatement plan.</p> <p>4. <i>Incidental bycatch levels are recorded to assist in the understanding of the sustainability of the bycatch species taken:</i></p> <p>a. CSIRO has commenced an Ecological Risk Assessment (ERA) for demersal longline fishing inside 183 m. Results will be available in early 2016 and provided to SharkRAG out of session.</p> <p>b. The AFMA bycatch team will review any risks identified through the ERA and implement appropriate management measures if required.</p> <p>Mr Stone emphasized his concern with the broader size selectivity of line caught shark and its possible effect of reducing the gummy shark RBC in future. Mr Power agreed the length frequency data suggests that longline does have broader size selectivity than gillnet, however noted that the gummy shark assessment next year will consider this new selectivity data.</p> <p>Mr Toumazos noted his increasing concern over the South Australian state catch of school and gummy shark. He noted that the overcatch of these species must be addressed as a priority before the RBC recommendations next year for gummy and should not result in a reduced TAC for the Commonwealth fleet.</p> <p>Mr Stone noted concerns over asset value of the current shark hook SFRs. Mr Power noted this is for consideration by the MAC.</p> <p>Dr Thomson noted the discard rates as per Figure 2 of the school/gummy shark ratio paper and ISMP observed sets. She noted that in the Coorong the rate of discarding of school shark using shark hook is around 25-50 per cent. She further noted that there is higher discarding in the deeper water from the auto longline sector.</p> <p>Mr Stone noted concerns with survivability of hook caught school shark that are hauled quickly, particularly as a result of potential liver damage that is not evident on release. Mr Castle noted that manual shark longline hauling is quite slow due to crew safety issues so should mitigate any damage to the fish.</p>	

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	<p>Mr Toumazos stated that school shark will be incidentally caught regardless of the method, and gillnets are more efficient at catching them with a lower survivability than hook caught fish.</p> <p>Mr Power explained that electronic monitoring now gives more certainty of discard numbers; however, we will not get information on post release survivability. Professor Simpfendorfer explained that there is quite a bit of information historically that supports a reasonable (>70 per cent) post release survivability of school shark, including a tagging study undertaken by Dr Paul Rogers during the gillnet to hook trial. The RAG also noted that the current PhD project that Mr Toumazos is assisting with would provide some information on post release survivability through tagging.</p> <p>The Chair sought the RAGs advice, and summarised stating the RAG supports the proposal noting the following risks:</p> <ul style="list-style-type: none"> • the broader size selectivity of longline catch results in more large and small shark being caught may impact the RBC, noting that the gummy shark assessment in 2016 will account for this and provide an updated RBC; • it is crucial to continue collecting length measurements from longline caught shark to inform assessments; • the South Australian state overcatch of both gummy and school shark; • any potential impact on school shark rebuilding, noting the RAG encourages the continued release of live shark, linked with pupping closures. <p>Ms Lawrence suggested the permits be issued for a longer period (3-5 years) to save administrative costs of reissuing permits annually. Mr Power noted this is a good suggestion and is being considered as part of AFMA's broader red tape reductions.</p>	
6.2 Simplifying shark hook and scalefish hook SFRs	<p>Mr Keightley introduced the item, noting AFMA is seeking RAG advice on any sustainability concerns with the removal of the:</p> <ol style="list-style-type: none"> a) Gummy shark 100 kg trip limit on scalefish hook SFRs; b) Gummy shark 10 t trigger limit on automatic longline permits. 	<u>ACTION 6</u> – Dr Thomson to test multiple hypothesis for increasing hook catch of gummy shark in the next assessment.

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	<p><u>Gummy shark 100kg trip limit on scalefish hook SFRs</u></p> <p>Industry members expressed opposition to removing the 100 kg gummy shark limit on Scalefish Hook SFRs, as it would allow potentially 37 scalefish operators to target sharks, resulting in increased pressure on school shark. Mr Power noted that the trawl sector are catching up to 150 t of gummy shark annually and are able to target shark without any restriction. Dr Haddon noted that the trawl catch may in fact be an artifact of increased availability, and suggested that a targeting analysis should be conducted for trawl.</p> <p>Mr Castle suggested that the best way to approach the removal of the trip limit on scalefish hook SFRs would be to apply it to operators that are dual endorsed with a scalefish and shark hook SFR nominated to their boat, noting that any catch of scalefish and shark must be covered under quota. This would in effect alleviate any concerns with an increase in shark hook effort. Professor Simpfendorfer confirmed this would alleviate his concerns with increased bycatch of school shark.</p> <p>The Industry members agreed to this approach noting it would effectively only allow the 12 shark hook SFR holders to become dual endorsed, and allowing this will collect data to inform any future amendments. Mr Power noted that AFMA is currently pursuing dual jurisdiction trips throughout the SESSF to allow flexibility, and this would be a good approach.</p> <p>Professor Simpfendorfer stated that if this were to come into effect the gummy shark length frequency and 400 t breakout rule would need to be monitored and reconsidered next year with the assessment.</p> <p><u>Gummy shark 10 t trigger limit on automatic longline permits</u></p> <p>Industry members opposed the removal of the 10 t trigger on automatic longline permits and noted the following risks:</p> <ul style="list-style-type: none"> • Lower size selectivity of hook caught fish; • Dehooking damage resulting in lower survivability of released school and gummy shark, as well as potential survivability issues due to the faster hauling; • Impacts on school shark during a key rebuilding phase; • Potential for a considerable increase in hook effort for shark. 	

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	<p>Professor Simpfendorfer noted that he could see no sustainability concerns noting that all catch must be covered by quota and the size selectivity issue will be addressed in the assessment. Mr Toumazos stated that the size selectivity must be addressed in updated assessment next year with multiple hook catch scenarios.</p> <p>The RAG noted that selectivity effects will be addressed through the Gummy Shark assessment in 2016.</p>	
7. Deep water closure reviews		
<p>7.1 and 7.2 Review of Shark hook and deepwater gillnet closure (>183m) and West Coast Tasmania Shark Hook Boat Statutory Fishing Right and Gillnet Depth Closure (>130m).</p>	<p>Mr Keightley introduced the item, noting that AFMA is seeking advice on proposals to:</p> <ol style="list-style-type: none"> 1. amend the 130 m depth closure off Tasmania to allow fishing under: <ol style="list-style-type: none"> a. Shark Hook Boat SFRs; b. Gillnet Boat SFRs. 2. Amend the 183 m depth closure to allow fishing under: <ol style="list-style-type: none"> a. Shark Hook Boat SFRs; b. Gillnet Boat SFRs. <p>Mr Power presented maps showing effort, by gear type, with both the 183 m and 130 m closures overlain. The maps displayed effort both before and following implementation of the closures. Mr Power noted the maps show there is already substantial demersal longline (Scalefish Longline SFRs) and trawl effort occurring in both these closure areas.</p> <p><u>130 m closure shark hook and gillnet</u></p> <p>The RAG was informed that the area on the west coast of Tasmania outside 130 m was originally closed as large school shark were historically targeted in waters shallower than the remainder of the fishery. Mr Toumazos agreed and also suggested that during the 2006 school shark survey there was a higher proportion of larger male school shark caught in that area.</p> <p>The RAG was presented a map showing the overlap of the 130 m closure and the 183 m closures, and noted there is only a small area of waters closed to shark hook and gillnets between the two closures. Mr Castle also informed the RAG that the Tasman Fracture Commonwealth Marine Reserve currently in place covers much of the south-eastern area of the</p>	

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	<p>130 m closure.</p> <p>Dr Thomson suggested the RAG review historical length frequency, sex and catch rates inside the closure for all methods to investigate whether large females are caught in that region.</p> <p>Professor Simpfendorfer noted there were no sustainability concerns with removing the 130 m closure to allow shark hook and gillnet fishing, noting there are other protection measures in place for school shark. Mr Toumazos agreed and suggested the closure was implemented ad hoc following the 2006 Ministerial Direction to recover overfished stocks.</p> <p>Mr Marton suggested that if the closure were removed, SharkRAG should monitor catches and size of school shark caught in this area annually. Mr Castle also suggested that operators fishing in the area should be required to have an e-monitoring system installed.</p> <p>The Chair summarised stating the RAG supports the removal of the West Coast Tasmania Shark Hook Boat Statutory Fishing Right and Gillnet Depth Closure. It was noted there is across industry support for removing the closure. Scientific members endorsed the removal of the closure noting they would like to see the historical data in the closure, but agreed the existing measures in place alleviates any concerns for school shark rebuilding. The conservation member also supported the removal of the closure, noting the protection already in place for school shark, and the area is outside of key gulper shark habitat.</p> <p><u>Gillnetting deeper than 183 m</u></p> <p>The RAG considered and did not support a proposal to allow gillnet fishing in waters deeper than 183 m. The RAG held concerns over high levels of bycatch, including of conservation dependent species such as school shark, gulper sharks and blue warehou.</p> <p>Mr Stone further emphasised that there has been no desire from the gillnet sector to fish deeper than 183 m.</p> <p><u>Hook fishing deeper than 183 m</u></p> <p>The RAG noted that this closure effectively prohibits the 12 Shark Hook SFRs from targeting</p>	

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Item No.	Discussion	Action Items / Rec's
	<p>shark in water deeper than 183 m. Mr Castle informed the RAG that the shark hook method was originally developed specifically to target sharks in the deeper water.</p> <p>The RAG considered concerns with bycatch of school shark and gulper sharks, however noted that there are already management measures in place for hook fishing to protect both species. Professor Simpfendorfer noted potential concerns with longline size selectivity for school and gummy shark, however suggested that the operators would be catching the shark with longline in the shallower water anyway.</p> <p>The RAG noted that allowing shark hook in waters deeper than 183 m might increase effort towards scalefish species; however, considered this low risk as any scalefish catch (e.g. pink ling, blue eye trevalla and ocean perch) is required to be covered under quota.</p> <p>Ms Lawrence noted that she held some concern from a Conservation view relating to the risk of bycatch of gulper sharks; however, agreed there are sufficient measure in place to mitigate these risks.</p> <p>The RAG considered its concerns and recommended allowing shark hook SFR holders to fish in waters deeper than 183 m, subject to these operators having an e-monitoring system installed and they abide by management measures implemented to protect school shark and gulper sharks. The RAG suggested that it annually monitors catch and effort in the deeper water if shark hook SFR holders were allowed to fish in waters deeper than 183 m.</p> <p>Mr Toumazos recommended that this would not apply to the temporary hook permits in South Australia, particularly as they must be linked to a Gillnet SFR. The RAG endorsed Mr Toumazos' recommendation.</p>	
8. 6000m net review		
8.1 Proposal to remove net length restrictions	Mr Stone opposed the discussion of this item on the basis the RAG did not have time to properly consider this item, and emphasised that the discussion by the RAG must not be construed as advice. The RAG agreed to discuss the item but not to provide any advice.	ACTION 7 – Dr Sporcic to review the 6 000m net trial data and report, and analyse whether there are any differences in bycatch

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	<p>Mr Power noted that the draft report still needs to be reviewed by CSIRO, and AFMA is seeking comments on a way forward to finalise the report. He noted that he would present a broad summary of the raw data but not draw any conclusions.</p> <p>The RAG was presented the observed gillnet retained and discarded catches for the last three years, highlighting there were:</p> <ul style="list-style-type: none"> • 121 trips covering 1 254 shots observed over three years (1 May 2012 – 30 June 2015) over 38 boats; • 51 695 (194 500 kg) gummy shark observed retained; • 52 270 (146 700 kg) draftboard shark observed discarded. • Very low bycatch of snapper (763 kg retained, 161 kg discarded) • Low dolphin bycatch with 5 dolphin observed on nets 4 200m or less, and 2 dolphin on nets longer than 4 200m. <p>Dr Haddon noted that there were no sustainability concerns from using 6 000m nets but the assessment would need to be updated to calculate CPUE based on net length rather catch per shot. The RAG noted that the 2016 gummy shark assessment would use net length to calculate CPUE. Dr Haddon and Professor Simpfendorfer noted the main questions regarding the impacts of longer nets related to whether they resulted in higher catch rates for bycatch of species like school shark and dolphins. Professor Simpfendorfer and Dr Haddon noted that there were no concerns or 'red flags' in the trial data regarding bycatch. Mr Power stated that from a management point of view, AFMA would consider the report results on impacts on bycatch, noting that bycatch is managed through a number of different measures currently in place.</p> <p>The RAG considered the data available from the trial and noted that observed bycatch was highest for draughtboard sharks and Port Jackson sharks (80 per cent of bycatch released). It was noted that survivability of these species is extremely good with close 100 per cent survivability when released (based on Associate Professor Reina's research). The scientific members noted that dolphin interactions and other bycatch rates were very low and with the data available it is unlikely that significant differences will be detected with further analysis. However, the RAG did consider it was analysing the data further and recommended that CSIRO explore further data analysis to determine if any differences in bycatch rates can be detected.</p>	<p>rates for presentation to the RAG in January 2016.</p>

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	<p>Mr Toumazos noted that the RAG should not consider catch rates of target species, and stated that it will be the operators' choice to use the net length that suits their operations efficiently. Mr Pettit and Mr Castle agreed stating that operators would work out what works best for them. Mr Toumazos further noted that there is currently no vessel in the fishery that would be capable of carrying more than 10 km of net due its weight, and noted that in Western Australia there is unlimited net, and the maximum length they use is generally 8 km even with much larger vessels.</p> <p>The RAG also noted potential public perception concerns with proposed unlimited net lengths, which must be considered in future discussions.</p> <p>Dr Sporcic noted that analyses would need to be conducted to address whether or not there are likely to be sustainability concerns and agreed to investigate the data and conduct further analysis for the report in late 2015. The RAG noted its discussion and suggested that it consider the report when more analysis is completed, and provide out of session advice in January 2016.</p>	
9. Other Business and meeting close	The Chair closed the meeting. Once again the RAG thanked Mr Power for his great work in his role as GHAT manager.	

Signed (Chairperson):

Date:

List of Attachments

- 1) Standing list of declared conflicts of interest
- 2) Actions arising from SharkRAG 2 2015 – 18-19 November

Attachment 1 - Standing list of declared conflicts of interest - as of 8 October 2015

Participant	Interest declared
Brendan Kelaher	SESSFRAG member. No other interests declared.
Robin Thomson	Undertakes CSIRO stock assessments. No pecuniary interests. Declared interest in Close Kin Mark Recapture project (research investigator).
Colin Simpfendorfer	Has potential pecuniary interest in research noting research interests are unlikely in particular to this fishery. Conducts assessments of Australian Sharks and Rays with FRDC funding.
Jeremy Prince	No interests declared, pecuniary or otherwise.
Anissa Lawrence	Managing Director TierraMar Consulting. Consultant for Sustainable Shark industry Alliance (SSIA), consultant for a number of NGOs in the fisheries context. Conservation member on SEMAC. No other declared interests pecuniary or otherwise. Environment member for SA Rock Lobster MAC.
David Stone	Executive Officer for Sustainable Shark Fishing Industry Inc. Declared interests in representing hook and gillnet industry member interests and in pursuing research for dolphin acoustic mitigation technology, and has a proposal to FRDC seeking funding. SESSFRAG observer. Declared interest in RBCs.
Jason Pettit	South Australian shark hook operator, SESSF quota holder. Declared interest in shark hook interests and RBC recommendations.
Kyri Toumazos	South Australia/Bass Strait, shark fisher, boats fishing with hooks and gillnets. SESSF quota holder. Southern Rock Lobster Board CEO, Declared interests in RBCs.
David Power	AFMA manager no interests declared, pecuniary or otherwise.
Ryan Keightley	AFMA management officer and SharkRAG EO, no interests declared, pecuniary or otherwise.

RAG Invited participants and observers declarations of interest

Malcolm Haddon	Potential scientific research interest. Sub-Antarctic RAG member, NPF RAG member. Interested in developing applications in research proposal paper.
Miriana Sporcic	No interests declared, pecuniary or otherwise.
Nicolas Marton	No interests declared, pecuniary or otherwise.
Leigh Castle	Tasmanian Shark hook, Scalefish hook and tuna minor line fisher. Owns SESSF quota and leases a vessel.

Attachment 2 – Actions arising from SharkRAG No. 2, 2015 18-19 November

Action	Agenda item	Description	Responsibility
1	2.3	AFMA to consider increasing the lower size limit of gummy shark based on Mr Pettit's comments.	Mr Power
2	4.1	Prof Simpfendorfer to distribute the Pittwater pupping research paper to the RAG.	Prof Simpfendorfer
3	5.1	Mr Power to distribute a copy of his presentation to the RAG (removing confidential information).	Mr Power
4	5.1	ABARES to present at the next SharkRAG meeting on the fishery status report and the classification process.	ABARES (Mr Marton)
5	5.1	Industry to commission a review of the Goldsworthy report.	Mr Toumazos (lead)
6	6.2	Dr Thomson to test multiple hypothesis for increasing hook catch of gummy shark in the next assessment.	Dr Thomson
7	8.1	Dr Sporcic to review the 6 000m net trial data and report, and analyse whether there are any differences in bycatch rates for presentation to the RAG in January 2016	Dr Sporcic