



Australian Government

Australian Fisheries Management Authority



Sub-Antarctic Resource Assessment Group (SARAG)

MINUTES
SARAG 48

1 APRIL 2014

SUB- ANTARCTIC RESOURCE ASSESSMENT GROUP (SARAG)

CHAIR: Professor John Buckeridge

Date: 1 April 2014

Venue: Australian Antarctic Division, Channel Highway, Kingston

Attendance

Members

Prof John Buckeridge – Chair

Dr Dirk Welsford, AAD

Dr Philippe Ziegler, AAD

Dr Malcolm Haddon, CSIRO

Dr Richard Hillary, CSIRO

Mr Les Scott, Industry Member

Ms Jo Fisher, AFMA

Ms Sarah Kirkcaldie, Executive Officer, AFMA

Observers

Dr Heather Patterson, ABARES

Ms Sally Wayte, CSIRO

Dr Jemery Day, CSIRO

Dr Paul Burch, AAD

Apologies

Mr Martin Exel, Industry Member

Introduction

Agenda item 1 - Preliminaries

The forty-eighth meeting of the Sub-Antarctic Resource Assessment Group (SARAG 48) was opened at 9:07am on 1 April 2014 by the Chair, Professor John Buckeridge. SARAG welcomed Ms Jo Fisher as the new Australian Fisheries Management Authority (AFMA) member on SARAG and noted that Ms Wayte was now an observer to SARAG and thanked her for her service as a member on SARAG. Members welcomed Dr Paul Burch to the meeting. Dr Burch is a post-doctorate who is working with Dr Welsford.

1.1 Declaration of interests

Professor Buckeridge asked members and observers to declare their professions and their interests on specific agenda items. Members and observers that declared an interest were requested to leave the room at the beginning of the meeting while the remaining members made a decision as to whether the member or observer could participate in the discussion and in the making of a recommendation or must remain absent from the meeting for the item.

Professor Buckeridge advised that he is also the Chair of the Southern and Eastern Scalefish and Shark Fishery Resource Assessment Group (SESSFRAG) and advised that he has no pecuniary interests in the sub-Antarctic fisheries.

Dr Haddon advised he is employed by CSIRO and is not undertaking specific research projects in relation to sub-Antarctic fisheries, although he does provide advice to other researchers in relation to stock assessments, particularly for the Macquarie Island Toothfish Fishery (MITF). Dr Haddon is also a member on the Northern Prawn Fishery RAG and Slope RAG. Dr Haddon advised that he has no pecuniary interests in the sub-Antarctic fisheries.



Mr Scott advised that he is the Managing Director of Australian Longline P/L which holds various fishing rights for, and operates vessels in the Australian sub-Antarctic fisheries and waters under the jurisdiction of Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Mr Scott further advised he is a member on SlopeRAG, South East MAC, the sub-Antarctic demersal longline member on the Threat Abatement Plan, industry representative on the Australian delegation to CCAMLR, Director of the Commonwealth Fisheries Association (CFA) and Director of the South East Trawl Fishing Industry Association (SETFIA). Mr Scott was not aware of any investigation or prosecution action by AFMA against his Company or of any legal action by his Company against AFMA.

Dr Welsford advised that he is employed by the Australian Antarctic Division (AAD) and was responsible for stock monitoring and assessment in the Heard Island and McDonald Islands (HIMI) Fishery and other CCAMLR fisheries and also data collection for the MITF. Dr Welsford advised that AAD get core funding but also seek grants from the Fisheries Research and Development Corporation (FRDC) and AFMA. However, members noted that Dr Welsford's salary was not connected to these grants.

Dr Ziegler advised that he is employed by AAD and is involved in the HIMI stock assessment. Dr Ziegler has no pecuniary interest in the sub-Antarctic fisheries and his salary is not connected to any research grants.

Dr Hillary advised that he is employed by CSIRO and is the Principal Investigator of the MITF stock assessment project. He also advised that he is a member of AFMA's Southern Bluefin Tuna Management Advisory Committee (SBTMAC) and Tropical Tuna RAG. Dr Hillary advised that he has no pecuniary interests in the sub-Antarctic fisheries.

Ms Fisher advised she is employed by AFMA and is currently acting Manager for sub-Antarctic fisheries. Ms Fisher advised she has no pecuniary interests in the sub-Antarctic fisheries.

Ms Kirkcaldie advised she is employed by AFMA and is a senior management officer in the Tuna and International section. She also advised that she is the Executive Officer for SouthMAC and the SBTMAC. Ms Kirkcaldie advised that she has no pecuniary interests in the sub-Antarctic fisheries.

Dr Patterson advised she is an employee of the Department of Agriculture and the author of the sub-Antarctic fisheries chapters in the Australian Bureau of Agricultural Resource Economics and Sciences (ABARES) Fishery Status Reports. Dr Patterson noted that she had no pecuniary interests in the sub-Antarctic fisheries.

Ms Wayte advised she is a CSIRO employee and was undertaking work on the MITF stock assessment and Management Strategy Evaluation (MSE). Ms Wayte also attends ShelfRAG. Ms Wayte advised that she has no pecuniary interests in the sub-Antarctic fisheries.

Dr Day advised he is a CSIRO employee and was undertaking work on the MITF stock assessment. Dr Day advised that he has no pecuniary interests in the sub-Antarctic fisheries.

Dr Burch advised that he is employed by the University of Tasmania and his salary is from a FRDC project. Dr Burch advised that he has no pecuniary interests in the sub-Antarctic fisheries.

Mr Scott declared his interest under all agenda items. The group then discussed whether the Industry member needed to leave the room for any agenda items; it was agreed that as his input was essential to most agenda items, he should remain in the meeting room unless a



specific conflict of interest was identified, at which point the member would be asked to leave the room for the duration of that particular discussion/recommendation.

1.2 Apologies

Apologies were received from Mr Martin Exel (Industry) and Mr Rhys Arangio (observer).

1.3 Agenda

The agenda was adopted. Mr Scott requested that the ABARES Fishery Status Reports be added to the agenda.

Agenda item 2 – Adoption of minutes from SARAG 47

SARAG noted that the draft minutes from SARAG 47, held on 29 August 2013, and the two teleconferences held in September and November 2013 had been circulated for comment. Members were asked to provide any comments by 15 April 2014. Once all comments have been received the minutes will be adopted as a true and accurate record of the discussions.

Agenda item 3 - Action arising from SARAG 47

SARAG discussed the status of action arising items from SARAG 47.

Action arising	Status
Peter Neave - Professor Buckeridge and Dr Haddon to write letter of thanks to Mr Peter Neave.	Members noted that a letter had been drafted and will be shortly sent to Mr Neave.
HIMI Fishery Research - Dr Welsford to test through MSE the potential effects on the HIMI Fishery stock assessments of moving the RSTS to every other year and an indication of the timing to undertake the work.	On-going.
HIMI Fishery Research - Dr Welsford to provide an outline of how the overcatch/undercatch issue could be addressed under MSE and an indication of the timing required to undertake the work.	On-going.
MSE – Natural mortality and sensitivity and movement and tagging evaluations to be provided for the MITF assessment by September 2013.	SARAG noted that this action would be discussed under Agenda item 9.
Benthic impacts research project – Dr Welsford to keep FRDC and SARAG up to date on project.	SARAG noted that this action would be discussed under Agenda item 11.
Electronic monitoring – AFMA to keep SARAG informed on the request for proposal	SARAG agreed that the current electronic monitoring technology was not sufficient to



process.	be able to provide the data that the Antarctic observers collect. Members recommended retaining the current two observers until technology improves.
Toothfish Tagging – AFMA to write to New Zealand again providing publicly available tagging information and requesting similar information.	Completed. SARAG noted that New Zealand had written to AFMA stating that they were willing to share data and had no tag re-captures to date. Members noted that AFMA would set up an annual informal agreement with New Zealand to share data.
Fisheries Assessment Plan - AFMA to work with AAD to develop a FAP structure that represents the need of the Fishery into the future.	Members noted that the 2014/15 FAP is to be discussed under agenda item 8. Members noted that there was no need to make significant changes to the 2014/15 FAP as a random stratified trawl survey was being conducted but that the FAP would need to be discussed at the next RAG meeting with a revised FAP presented in early 2015.

Agenda item 4 – Correspondence

SARAG noted the following correspondence which had been received out-of-session since the last meeting:

- an e-mail dated 25 February 2014 from Sarah Kirkcaldie regarding the Public Interest Disclosure Act 2013;
- an e-mail dated 20 February 2014 from Sarah Kirkcaldie advising members that AFMA's observer program will be market tested;
- an email dated 4 February 2014 from Sarah Kirkcaldie thanking members for their comments on the draft working definition of localised depletion for the small Pelagic Fishery;
- an email dated 30 January 2014 from Jo Fisher seeking comments on the Expression of Interest received from Rich Hillary for the project 'Stock assessment and management strategy evaluation for Sub-Antarctic fisheries:2015-2016';
- an email dated 17 December 2013 from Sarah Kirkcaldie seeking comments on the draft working definition of localised depletion for the Small Pelagic Fishery;
- an email dated 5 November 2013 from Sarah Kirkcaldie seeking comments on a revised key policy document by which AFMA administers Resource Assessment Groups; and
- various notices to Members about their appointments to SARAG.



SARAG discussed the Public Disclosure Act implications and members expressed concern that there did not appear to be anything about protecting the person accused of the wrong doing. Other concerns raised included the cost of defending someone accused of wrong doing and also that it appeared that RAG members had no indemnity. SARAG members requested that AFMA clarify if SARAG members have indemnity (**Action arising 3**).

Action arising 3: AFMA to clarify if SARAG members have indemnity.

5 – Fishing operations – update

Mr Scott provided SARAG with a verbal update on Australian Longline's Pty Ltd fishing operations in the HIMI Fishery and MITF. The Executive Officer gave a verbal update on Austral's operations in the HIMI Fishery which had been provided by Mr Rhys Arangio.

Mr Scott stated that Australian Longline Pty Ltd was the only company fishing in the MITF and was using auto-longline. The vessel is expected to commence fishing on 1 May 2014. Mr Scott noted that his company would not commence fishing in the HIMI Fishery until early May 2014 stating that the restriction on fishing in April did not make it beneficial to fish.

The Executive Officer read out an email from Mr Arangio, Austral Fisheries regarding their fishing operations. The email stated that since the last meeting, both Austral Fisheries longliners have been in Mauritius tied up. Members noted that both longliners are due to depart Mauritius on 5 April 2014 for the start of HIMI Fishery longline season.

SARAG noted that in November 2013, the Southern Champion caught the small amount of remaining 2012/13 toothfish quota and began fishing for 2013/14 icefish on 1 December 2013 (approximately 230t caught in December). Members noted that the Southern Champion is currently back at HIMI and was fishing for icefish (as at 11 March 2014 approximately 300t onboard). However, SARAG noted that the Southern Champion was currently heading to Albany to unload due to a broken crank.

Industry had noted that unicorn icefish bycatch had become an issue but had recently improved. Members noted that there was no market for unicorn icefish.

Macquarie Island Toothfish Fishery

Agenda item 6 – Stock assessment and TAC recommendations

Dr Day presented a paper entitled 'Stock Assessment of the Macquarie Island fishery for Patagonian Toothfish (*Dissostichus eleginoides*) using data up to and including August 2013'.

Dr Day advised that the assessment makes use of the Stock Synthesis assessment software and fits to data obtained from the tag-recapture program since 1995, to length composition information for the years 1994 – 2012, and to age-at-length data obtained from aged otoliths (1997 – 2010). Members noted that more recent otoliths are expected to be aged by AAD once the 2014 HIMI Fishery stock assessment is completed so new data should hopefully be available for the next stock assessment.

The new input in this assessment included catch for 2013, length-frequencies for 2013, tag recaptures for 2013 and iteratively re-weighting the likelihood contributions from the length and age compositions and recruitment variability. CSIRO also removed the non-random fish



from the length frequency distributions. Industry questioned the total 2013 catch of 408tonnes in the document and AAD agreed to confirm the figure (**Action arising 4**).

Re-weighting the current assessment resulted in considerable moderation of the recruitment oscillations which were a feature in the 2012 and 2013 base case.

Industry noted that shake off was an important issue at MITF. Dr Haddon noted that this would only be an issue if the same size fish is shaken off but if it is random then it shouldn't affect the assessment. CSIRO noted the issue of shake off.

Members noted that the model designates five different fleets (Aurora Trough trawl, Northern Valley trawl, Aurora Trough longline and Northern and Southern Macquarie Ridge longlines). Dr Day noted that the fits to the length composition data are generally good and the fits to the age-at-length data appear to be reasonable, although the model appears not to be growing fish fast enough (larger fish are predicted to be older than they are observed to be). The model fits the tag-recaptures data well, with good accord between the total number of expected recaptures and those observed.

Mr Scott left the room for the discussion on the recommended TAC for the 2014/15 fishing season.

SARAG noted that the outcomes from the assessment are very similar to those in the 2013 assessment. The projected 2014/15 catch from these scenarios ranges from 400t to 440t. SARAG agreed that it is important to maintain fishing across the entire fishery and recommended a TAC of 410 tonnes for the 2014/15 season to be taken in approximately the following proportions: 250 tonnes (maximum 260 tonnes) from the Aurora Trough, between 96 - 128 tonnes in the southern Macquarie Ridge and 32 - 64 tonnes in the northern Macquarie Ridge.

SARAG noted that the distribution of catches was a voluntary agreement with Industry and the RAG appreciated Industry's efforts to abide by the agreement. SARAG encouraged Industry to maintain as much effort in the north as possible although noted the time restraints and difficult terrain.

SARAG discussed the bycatch limits and agreed that a 50 tonnes limit for any other single species taken in the fishery should continue to be applied. SARAG noted that there are very low levels of bycatch in the MITF. Members noted that the 50 t limit for any one species is consistent with the approach adopted by CCAMLR and in the HIMI Fishery.

SARAG members agreed to recommend the following TAC limits in the MITF for determination by the AFMA Commission:

- Patagonian oothfish at 410 tonnes; and
- 50 tonnes for any other single species taken in the fishery.

Mr Scott re-joined the meeting and was informed of SARAG's recommendation, and agreed to adopt the voluntary spread of effort across the three regions.

SARAG noted that the stock assessment raised the following points of discussion and plans for future work:

- While the fish at MITF are thought to be one stock, the northern area is estimated to contain a larger proportion of the stock than in the south and the



spawning stock status in the north is well above 50% unfished, whereas in the south it is slightly below 50%.

- More exploration is needed of the interaction of movement parameters with the other components of the model.

Action arising 4: AAD to confirm the Macquarie Island catch in 2013.

Agenda item 6.1 – MSE report

Dr Hillary presented two additional papers to SARAG: ‘Appropriate growth models for Macquarie Island toothfish’ and ‘Exploration of impact of unaccounted for tag dynamics on the key stock assessment quantities of the Macquarie Island toothfish fishery’.

Appropriate growth models for Macquarie Island toothfish

SARAG noted that the accurate characterisation of the distribution of length-at-age is a vital part of any integrated stock assessment and this paper explored the potential influence of individual variation in growth, sexual dimorphism and cohort-specific growth on growth models. SARAG agreed to continue with the current method but noted a more detailed comparison of external and assessment-derived growth estimates should be performed. SARAG agreed that more aging work is required and that, as discussed at Agenda Item 6, more otoliths from MITF would be aged later in 2014. AAD agreed to provide a list of samples available and CSIRO will determine which samples are most important to age (**Action arising 5**).

Exploration of impact of unaccounted for tag dynamics on the key stock assessment quantities of the Macquarie Island Toothfish fishery

SARAG noted that the tag-recapture program is a major source of information on population abundance and overall fishing mortality in MITF. The paper presented MSE approaches that were used to explore the likely impacts of not accounting for key issues such as tag-induced mortality, tag loss and growth retardation on abundance. Members noted that although all these factors together may lead to likely over-estimates of current abundance level, only post-tag mortality and post-tag induced growth retardation (PTGR) are probably important factors.

SARAG noted that post-tag mortality is easy to deal with in the assessment and just requires members to agree on an appropriate level of post-tag survival probability. Members discussed post-tag mortality and agreed that although it wasn't zero, the value assumed by CCAMLR (10%) was probably too high. Members noted that Australian observers do all the tagging and are very careful including holding tagged fish in a tank for up to 30 minutes (to ensure viability). It was agreed that Dr Hillary would look at recapture rates in the first year and SARAG would discuss this at the next meeting (**Action arising 6**).

SARAG noted that further work was required on PTGR to determine if the current approach actually causes bias in the estimates of fishing mortality and what are the actual estimates in the MITF.

Action arising 5: CSIRO to indicate to AAD which otoliths are most important to age for future stock assessments.

Action arising 6: SARAG to discuss recapture rates at the next meeting.



Agenda item 7 – Fishery Assessment Plan

SARAG discussed the draft MITF Assessment Plan and agreed to the following:

- a tagging rate of two tags per tonne of toothfish caught which is consistent with the 2013/14 FAP; and
- to remove all trawl operations requirements as Industry will not be trawling in the 2014/15 season.

Members noted that the final MITF FAP will be finalised prior to the fishing season commencing on 1 May 2014.

Heard Island and McDonalds Islands Toothfish Fishery

Agenda item 8 – Fisheries Assessment Plan

Members noted the final HIMI Fishery Assessment Plan (FAP) for the 2013/14 fishing season had been signed by AFMA and Industry. The FAP specifies a tagging rate of 2 tags per 3 tonnes of toothfish caught.

SARAG agreed that a detailed discussion on the HIMI FAP is required at the next SARAG meeting to ensure that subsequent FAPs represent the needs of the fishery into the future.

The discussions need to include all current research in the fishery and ways that current research could be adjusted to better meet the needs of the fishery, with careful consideration of cost-effectiveness.

Agenda item 9 – Update on HIMI Fishery monthly review meetings

Members noted that at CCAMLR XXXII issues had been raised regarding the HIMI Fishery stock assessment. These issues included the interpretation at CCAMLR XXXII of the CCAMLR decision rules relating to maintaining stock levels above 50% during that 35 year period, the stock assessment software (CASAL) validation, the lack of aging data and concerns regarding bottom fishing. SARAG noted that HIMI Fishery monthly review meeting group had been formed to address the concerns raised.

Members noted that the review meeting group had developed a comprehensive science workplan and was progressing well. For example, AAD had recently employed two officers to age otoliths so that the results can be included in future stock assessments. AAD thanked industry for their generous funding contribution to this work. Members also noted that two post doctorates were also about to commence work at AAD to undertake relate work, including investigating tagging distribution (examining the fact that the tags were not random when first released now area they are re-captured – sentence needs a bit of rewording), is the data consistent. Dr Welsford noted that his FRDC project regarding bottom trawling had nearly been completed which would assist Australia at CCAMLR XXXIII.



SARAG noted that AAD would circulate the workplan for SARAG comment (**Action arising 7**)

Members also noted that an advocacy plan had also been developed at the monthly review meetings. The advocacy plan identifies key countries and what needs to be discussed with them prior to CCAMLR 2014 (scientific and technical).

Action arising 7: AAD to distribute HIMI Fishery monthly review group's workplan to SARAG for comment.

Research

Agenda item 10 – Research issues

SARAG discussed the status of current research projects and possible future research.

SARAG noted that the expression of interest for the CSIRO project 'Stock assessment and management strategy evaluation for sub-Antarctic fisheries 2015-2016' to enable the ongoing stock assessment work at Macquarie Island was presented to the AFMA Research Committee (ARC) on 26 February 2014. Dr Hillary informed the group that he has confirmation from the ARC secretariat to go ahead to full proposal.

Members noted that the sub-Antarctic fisheries currently have a five year Strategic Research Plan that expires in 2015. SARAG agreed to update the Strategic Research Plan and also develop an Annual Research Plan for 2015/16 to identify research priorities. It was agreed that AFMA would draft the new five year Strategic Research Plan and circulate it to SARAG for comment (**Action arising 8**).

SARAG noted the timelines associated with AFMA's and FRDC's research cycles.

Action arising 8: AFMA to draft new Five Year Strategic Research Plan and circulate it to members for comment.

Agenda item 11 – Benthic impacts research project

SARAG noted the presentation from AAD on the project titled "Demersal fishing interactions with marine benthos in the Australian EEZ of the Southern Ocean: an assessment of the vulnerability of benthic habitats to impact by demersal gear".

SARAG noted that the two external reviewers, chosen because of their expertise in the field, have evaluated the report and provided feedback. Members noted that the report still has to go through the FRDC process.

SARAG noted that the overall project conclusions were that trawling has caused significant disturbances where it has occurred but it has been spatially constrained and that longlining has occurred in areas with low biomass. Dr Welsford noted that a framework has now been developed that can be used in other areas and can be replicated. The project has already influenced CCAMLR and led to extension of HIMI Marine Reserve.

Dr Welsford concluded that therefore, the net overall risk to biomass diversity at HIMIF is low and mitigated by the marine reserve and fishing pattern.

Dr Welsford acknowledged the project was a team effort and thanked FRDC, Austral fisheries Pty Ltd, Australian Longlining Pty Ltd, Graeme Ewing, Andrew Constable, Ty Hibberd, Robert Kilpatrick, Peter Neave, Martin Tucker and the AFMA observers for their assistance with the project.



SARAG thanked Dr Welsford for his presentation and completion of the report and Industry indicated that they would like to see the report more widely published.

Environment

Agenda item 12 – Review of environmental interactions and gear loss

SARAG noted that since the last meeting in August 2013 there have been two wildlife interactions resulting in death in the HIMI Fishery. In September 2013:

- a fur seal was hauled to the surface with a hook through the tail section on the vessel the *Austral Leader 2*. The seal may have been fouled hooked on the bottom as it appeared to have been deceased for some time with eye sockets eaten out by lice and discolouration and withering of the skin; and
- a fur seal was hauled to the surface with a hook and a small Patagonian toothfish in its mouth on the vessel *Austral Leader 2*.

In the HIMI Fishery in the 2012/13 season 6,729,650 hooks were set with two seabirds being killed as a result of interactions with fishing gear. Two other seabirds interacted with the gear but were released alive. A Southern giant petrel was also found dead on the foredeck after an apparent collision with a mast.

Members noted that in the 2013/14 MITF season 1,327,410 hooks were set with no wildlife interactions.

Members also noted that the gear loss at Macquarie Island and HIMI had significantly decreased compared to the previous season. Industry noted that in the HIMI Fishery they are now using stronger weighted line and have changed the way they haul gear which has resulted in the reduction of gear loss. At Macquarie Island, industry have had a major change of gear from trawling to longlining which also resulted in a significant cost saving.

Other

Agenda item 13 – Action list for MSC certified fisheries

SARAG noted that the Marine Stewardship Council (MSC) is required to annually review those fisheries with MSC certification including the HIMI Toothfish Fishery, HIMI Icefish Fishery and the MITF. Members agreed that Industry is responsible for updating the action lists for these MSC certified fisheries prior to an annual review meeting, with input and assistance from AAD and AFMA. Members noted that the action lists will be taken to the MSC annual review meeting which will held in Hobart in July 2014.

Agenda item 14 – Other business

SARAG discussed three 'other business' items.

12.1 CCAMLR published fishery report

AAD reported that the CCAMLR secretariat published online fishery reports that included confidential maps of catch and effort in the HIMI Fishery. AAD requested that the reports be removed immediately and requested that in future Australia should be asked before any fishery data are published. Members noted that the CCAMLR Secretariat was informed that



this posed a risk by potentially encouraging Illegal, Unreported and Unregulated (IUU) fishing in the identified areas, although fortunately the maps were on only on the website for a short time and it was unlikely that the maps were viewed by others. Industry indicated that they would request an explanation from the Secretariat as to how the maps were put on the website.

Action item 9: AAD to advise CCAMLR secretariat that no Australian data should be published on the CCAMLR website without approval from Australia.

12.2 CCAMLR New and Exploratory application

SARAG noted that Australian Longline Pty Ltd had submitted a new and exploratory pre-proposal to fish in CCAMLR statistical areas 88.1 and 88.2 in the 2014/15 season. The CCAMLR Consultative Forum will be discussing the proposal at its meeting on 16 April 2014.

12.3 ABARES Fishery Status Reports

Dr Patterson advised that ABARES had begun drafting the Fishery Status Reports and that the MITF and HIMI chapters will be sent to Dr Buckeridge and Dr Haddon for comment. Members noted that the Antarctic waters chapter will no longer be included, but ABARES will add a Ross Sea (CCAMLR statistical area 88.1 and 88.2) chapter if the new and exploratory application is successful and fishing in those statistical areas is undertaken.

Agenda item 15 – Next meeting

SARAG agreed to hold the next meeting during the first two weeks of September 2014 to discuss the HIMI Fishery TAC recommendations. Members noted that Dr Haddon may chair the meeting as Professor Buckeridge will be overseas in September.

The meeting closed at 4.35 pm.

Actions arising from SARAG 48

Item	Action arising	Action person
1	HIMI Fishery Research - Dr Welsford to test through MSE the potential effects on the HIMI Fishery stock assessments of moving the RSTS to every other year and an indication of the timing to undertake the work.	AAD
2	HIMI Fishery Research - Dr Welsford to provide an outline of how the overcatch/undercatch issue could be addressed under MSE and an indication of the timing required to undertake the work.	AAD
3	Public Disclosure Act - AFMA to clarify if SARAG members have indemnity.	AFMA
4	MITF catch 2013 – AAD to confirm the Macquarie Island catch	AAD



	in 2013.	
5	MITF otoliths – CSIRO to indicate to AAD which otoliths are most important to age for future stock assessments.	CSIRO
6	Recapture rates – SARAG to discuss recapture rates at the next meeting.	SARAG
7	HIMI monthly review meeting - AAD to distribute HIMI Fishery monthly review group's workplan to SARAG for comment.	AAD
8	Strategic research plan – AFMA to draft new Five Year Strategic Research Plan and circulate it to members for comment	AFMA
9	CCAMLR website - AAD to advise CCAMLR secretariat that no Australian data should be published on the CCAMLR website without approval from Australia	AAD

