



Australian Government

Australian Fisheries Management Authority



**Sub-
Antarctic
Resource
Assessment Group
(SARAG)**

**FINAL MINUTES
SARAG 60**

22 AUGUST 2019

SUB- ANTARCTIC RESOURCE ASSESSMENT GROUP (SARAG)

CHAIR: Dr Malcolm Haddon

Date: 22 August 2019

Venue: Australian Antarctic Division, Channel Highway, Kingston

Attendance

Members

Dr Malcolm Haddon, Chair
Dr Rich Hillary, CSIRO
Dr Jemery Day, CSIRO
Dr Philippe Ziegler, AAD
Dr Dirk Welsford, AAD
Mr Malcolm McNeill, Industry Member
Mr Rhys Arangio, Industry Member
Dr Heather Patterson, ABARES#
Ms Fiona Hill, AFMA
Ms Sarah Kirkcaldie, Executive Officer, AFMA

Observers

Mr Trent Timmiss, AFMA
Mr Martijn Johnson, Industry
Mr Dale Macchette, AAD*

*Agenda items 10 only

#Telephone - Agenda items 1-6 only

Introduction

Agenda item 1 - Preliminaries

The sixtieth meeting of the Sub-Antarctic Resource Assessment Group (SARAG 60) was opened at 9:10 am on 22 August 2019 by the Chair, Dr Malcolm Haddon. Dr Haddon welcomed members and observers including Mr Rhys Arangio, Ms Hill and Dr Jemery Day to their first SARAG meeting as members and also observer Mr Johnson from Australian Longline Pty Ltd.

1.1 Declaration of interests

Dr Haddon asked members and observers to state their name and profession and declare any conflict of interest that they may have on specific agenda items.

Dr Haddon advised that he is a CSIRO Honorary Fellow and involved in Fisheries Research and Development Corporation (FRDC) projects. He declared he has no pecuniary interest in the sub-Antarctic fisheries.



Dr Hillary advised that he is employed by CSIRO and is the Principal Investigator of the Macquarie Island Toothfish Fishery (MITF) stock assessment. 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.

Dr Jemery Day advised that he is employed by CSIRO and works on the MITF stock assessment. Dr Day advised that that he has no pecuniary interest in the sub-Antarctic fisheries.

Mr McNeill advised he is the Managing Director of Australian Longline P/L which holds various fishing rights in, and operates vessels in, the sub-Antarctic fisheries and New and Exploratory fisheries under the jurisdiction of Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Mr McNeill further advised he is a member of Sub-Antarctic Management Advisory Committee (SouthMAC) and Board member of the Coalition of Legal Toothfish Operators (COLTO). Mr McNeill was not aware of any investigation or prosecution action by AFMA against his Company or of any legal action taken by his Company against AFMA.

Mr Arangio advised that he is employed by Austral Fisheries P/L (Austral Fisheries) that owns Statutory Fishing Rights (SFRs) in the Australian sub-Antarctic fisheries and waters under the jurisdiction of CCAMLR. Mr Arangio further advised he is the Executive Officer of COLTO, as well as being a member of SouthMAC and AFMA's Commonwealth Fisheries Marine Mammal Working Group. He was not aware of any investigation or prosecution action by AFMA against his Company or of any legal action taken by his Company against AFMA.

Dr Welsford advised that he is employed by the Australian Antarctic Division (AAD) and no research grants contribute towards his salary. Dr Welsford advised that AAD uses core funding but also seek grants from FRDC and AFMA for work in the Sub-Antarctic. It was noted that Dr Welsford's salary was not connected to the FRDC grants. Dr Welsford further advised he is the Scientific Committee representative to CCAMLR, Chair of the Working Group for Fish Stock Assessments (WG-FSA) and a member on the Torres Strait Scientific Advisory Committee.

Dr Ziegler advised that he is employed by AAD and is the Fishery scientist responsible for Heard Island and McDonald islands Fishery (HIMIF) work including the HIMI stock assessments. Dr Ziegler has no pecuniary interest in the sub-Antarctic and his salary is not connected to any research grants noting that he is a co-investigator on a current FRDC project and future FRDC projects. Dr Ziegler informed members that he is also a member SouthMAC.

Ms Hill advised she is employed by the Australian Fisheries Management Authority (AFMA) as the Manager for sub-Antarctic fisheries at AFMA. Ms Hill advised she has no pecuniary interests in the sub-Antarctic fisheries.

Ms Kirkcaldie advised she is employed by AFMA as a Senior Management Officer and advised that she is also the Executive Officer for SouthMAC and 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 is the Editor of the Australian Bureau of Agricultural Resource Economics and Sciences (ABARES) Fishery Status Reports. Dr Patterson noted that she had no pecuniary interest in the sub-Antarctic fisheries.



Mr Trent Timmiss advised he is employed by AFMA as a Senior Manager, Tuna and International fisheries and that he is also the member on the Tropical Tuna MAC (TTMAC) and SBTMAC. Mr Timmiss advised that he has no pecuniary interests in the sub-Antarctic fisheries.

Mr Martijn Johnson advised he was attending as an observer to SARAG and is currently employed by Australian Longline Pty Ltd which holds various fishing rights in, and operates vessels in, the sub-Antarctic fisheries and New and Exploratory fisheries under the jurisdiction of Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Mr Johnson is not aware of any investigation or prosecution action by AFMA against Australian Longline Pty Ltd or any litigation entered in to by Australian Longline Pty Ltd.

Mr Dale Maschette advised that he works for the Institute of Marine and Antarctic Studies and conducts research that is funded by the FRDC and through the Industry Partnership Agreement. Mr Maschette advised that he has no pecuniary interests in the sub-Antarctic fisheries.

1.2 Apologies and observers

No apologies were received for SARAG 60.

1.3 Agenda

SARAG adopted the agenda with the addition of 'skate processing' which was discussed under agenda item 5.

Agenda item 2 – Adoption of minutes from SARAG 59

Members noted that the draft minutes from SARAG 59 held on 14 May 2019 were circulated for comment on 12 June 2019. Comments were received from Mr Malcolm McNeill, Dr Jemery Day and Mr Rhys Arangio. Members noted that the minutes from the SARAG 59 meeting are now finalised.



Agenda item 3 – Actions arising from SARAG 59

| Item | Action arising | Status |
|------|--|---|
| 1 | Tags - AAD agreed to investigate if tags from the trawl fishery could be used in the stock assessment (SARAG 58 Actions arising 57). | At previous SARAG meetings, AAD informed members that they had not fully investigated if tags from the trawl fishery could be used in the stock assessment. AAD had no further update and SARAG agreed to keep this as an action item. Action arising 1 |
| 2 | Macquarie Island Toothfish stock assessment – Dr Hillary to present a formal comparison of the old and revised MITF stock assessments at SARAG 60 (SARAG 59 Agenda item 6). | This action arising was discussed under agenda item 6. |
| 3 | Extension of Macquarie Island season – Industry to write to AFMA requesting an additional week to the MITF season extension (SARAG 59 Agenda item 7). | SARAG noted that this action item was completed, and industry wrote to AFMA on 21 May 2019 requesting an additional week to the MITF longline season. |
| 4 | Lost gear – AFMA and AAD to provide clarification on when gear is deemed lost (ie how many hours/days) (SARAG 59 Agenda item 9). | AFMA noted that gear is considered lost when the vessel stops searching and deems it lost. SARAG noted that in the stock assessment gear is deemed lost after seven days soak time as it would be unlikely that there is any fish left on the line. Members noted that AFMA maintains a separate spreadsheet for lost and recovered gear and that both should be reported from the vessels as separate incidents. |
| 5 | Skate stock assessment – AAD to prepare work on a skate stock assessment and present it to SARAG 60 (SARAG 59 Agenda item 10). | AAD noted that they have looked at the available data and have agreed to do a Generalised Yield Model (GYM) assessment for the three major species. SARAG noted that currently AAD have length, weight and external maturity data. However, there is no age data which will prove to be a challenge as well as the lack of growth data. Action arising 2 |
| 6 | Offal dumping – Industry agreed to draw the perimeter line and AAD agreed to overlay fishing effort and provide the results to AFMA (SARAG 59 Agenda item 14). | SARAG noted that this action was completed and in the HIMIF offal can now be dumped within the EEZ but outside the perimeter described by co-ordinates in the SFR conditions. Members noted that industry utilised the new rule and saved the vessel |



| | | |
|---|---|--|
| | | about 48 hours. Industry thanked AFMA for the condition change. |
| 7 | Whale research – The EO to provide Dr Tixier’s papers sent to the Australian research Council project (SARAG 58 Agenda item 21). | Members noted that this action item was completed, and the papers were distributed on 14 August 2019. |
| 8 | Close kin genetics trial – CSIRO to provide an update on this project to SARAG 60. | SARAG noted that the samples are on the boat and that CSIRO will be putting together a proposal when the number of samples is known. CSIRO agreed to provide a report at future meetings as they begin to process samples. |

Agenda item 4 – Correspondence

SARAG noted the following correspondence which had been received out-of-session since the last meeting in May 2019:

- An email dated 12 June 2019 from Sarah Kirkcaldie seeking comments from members on the draft minutes from SARAG 59; and
- An email dated 30 July 2019 from Sarah Kirkcaldie seeking comments from members on the draft agenda for SARAG 60.

Agenda item 5 - Fishing operations update

Mr McNeill and Mr Arangio provided SARAG with verbal updates on fishing operations in the HIMIF, MITF and CCAMLR Exploratory fisheries.

Mr McNeill stated that the ALPL vessel *Antarctic Chieftain* has completed one trip to HIMIF and has just returned to the grounds for its second trip. Members noted that catch rates were down this year when compared to last year for ALPL. Mr McNeill noted that the vessel had also caught one seabird (Grey petrel). Members noted that the *Antarctic Chieftain* gear loss had been higher this year and recovery has been hard due to bad weather. It is anticipated that the vessel will grapple for lost gear at the end of the longline season. ALPL indicated that whale numbers had been higher in 2019 with 2-4 (and up to 6) whales sighted around the vessel. The skipper observation indicated that 20 out of 120 sets were depredated. Mr McNeill stated that the ALPL vessel *Antarctic Discovery* will be heading to HIMIF once it unloads from its last MITF trip as it is unlikely that the *Antarctic Chieftain* could catch all the remaining HIMIF quota. Members noted that the *Antarctic Discovery* will spend about 30-35 days at HIMIF before returning to prepare for a trip to the Ross Sea exploratory fishery departing port around 20 November 2019. It is anticipated that the vessel will then go to East Antarctica in early 2020.

Members noted that in terms of catch the MITF season had been successful for ALPL with one tonne more than the quota caught. The distribution of catch was also close to the voluntarily agreed split of catch between Aurora trough, Northern Macquarie Ridge and Southern Macquarie Ridge. Members noted that 15 Porbeagles had been killed this season as a result of interactions with fishing gear and that there appeared to be a link between number of Porbeagles and good catch rates. Mr McNeill stated that they did not require the longline



season extension even though the company lost two weeks fishing time with a medical evacuation and mechanical breakdown.

Mr McNeill noted that the new ALPL vessel *Antarctic Aurora* is expected to do its first trip either to East Antarctica or Ross Sea at the end of 2020.

Mr Arangio from Austral Fisheries noted that no Mackerel icefish had been caught since the last meeting and that all their vessels are currently on their second HIMIF longline trips. Members noted that catch rates had been similar to last year but that there had been an improvement in the last few weeks. Mr Arangio noted that they will likely leave around 200-300 tonnes of quota uncaught and also that two Southern Elephant Seals had been caught during the 2019 longline season. Members noted that the vessels had also seen more whales than in previous seasons with observation around 30% of the lines in April-May. Members noted that the vessels had lost a little bit more gear than last year but had recovered around 24,000 hooks plus some old Spanish illegal, unreported and unregulated gear. Austral Fisheries is expecting to have all vessels fishing in the Fishery until 30 November 2019.

Mr Arangio noted that Austral Fisheries' new vessel is hoping to begin fishing on 1 May 2020.

Mr Arangio noted that the company currently releases skates alive if they have any chance of survival but do retain a percentage (1-2 tonnes per trip) that don't have any chance of survival. The retained skates are currently mealed and put in offal tanks before being discharged. Members noted that the French utilise the skates they retain, and Austral Fisheries would like to do the same thing. Mr McNeill noted that ALPL do the same with rattails. AFMA noted Austral Fisheries' intention to retain skates that have no chance of survival and indicated that they will continue to monitor bycatch limits to ensure they are not exceeded. Mr Arangio noted that they will probably not be utilising skates until next season when boxes and labels will be available. **AFMA agreed to brief the observers on Austral Fisheries' intentions regarding skates (Action arising 3).**

SARAG also noted the update provided by the AFMA observer section.

Deployments

Since SARAG 59, five fishing voyages have been completed in the Southern Ocean Fisheries:

- Four HIMIF voyages and
- One MITF voyage.

Tagging

Since SARAG 59

- 2356 toothfish have been tagged at HIMI (462 recaptured);
- 407 toothfish have been tagged at Macquarie Island (124 recaptured); and
- 658 skates were also tagged at HIMI (14 recaptured).



Observer feedback

No issues with tagging or general assistance, or vessel observer obligations have been reported. Any voyage specific feedback from an observer is provided directly to the company by the Technical Co-ordinator.

Internet access

Internet access via WIFI was available for all observers for all five of the completed voyages. The feedback received from observers has been that they regularly experienced intermittent access, trouble with uploading/downloading weekly reports and interaction reports, and Fishlog patches, which appeared to be the case across all vessels in both fisheries and was most likely to do with weather conditions.

New Observers

Henry Wilson and Ben Kelly recently completed their first Southern Oceans voyage. Both observers indicated that they appreciated the support they received from the crew and look forward to their next Southern Oceans deployment. From a program perspective, Ben and Henry proved to be well suited to the role and collected dependable quality data displaying the skills and mind set needed for such a demanding role.

Thank you to crew from both companies for providing support and co-operation to ensure their first voyage was a good introduction to Southern Ocean deployments. It takes time and resources to recruit and train new observers suitable to deploy on the Southern Oceans vessels. It is not always easy to retain them past their first trip as for some the length of trips is not always conducive to family life.

AFMA observers Jack Morcomb, Pat Ward, Jayden O'Neill and Capfish DCO Carika Van Zyl are new to the program and are currently deployed on their first deployments at HIMI and MITF. AFMA worked with Capfish to pair new observers with experienced observers.

For more information please contact Justine Johnston on 02 6225 5415, Justine.Johnston@afma.gov.au.

Macquarie Island Toothfish Fishery

Mr McNeill, Mr Arangio and Mr Johnson declared their interest under all agenda items. The members and observer left the room. SARAG discussed whether the members and observer needed to leave the room for any agenda items; it was agreed that, as their input was essential to the agenda items, they should remain in the meeting room for all discussions. It was further agreed that at any time if members felt that Industry should not be in the room they would be asked to leave.

Agenda item 6 – Macquarie Island stock assessment

Revised maturity-at-length for MITF

Dr Hillary presented a paper to members titled "Revised maturity-at-length for MITF". Members noted that in the MITF assessment maturity-at-length is used and that length is currently set at 1.4m, which means that at 50% of maturity the fish is 30 years old. This is at odds with other Patagonian Toothfish assessments.



Dr Hillary stated that 80,000 fish were sampled using the definition of maturity as used by AAD (if stage 2 then 2 years later are considered active spawners). Dr Hillary advised that the current data supports a maturity-at-length of 1m for 50% maturity, which means that at 50% maturity the fish is 13 years old. Members noted that it was difficult to verify this without histology but noted that the close-kin samples will directly inform “successful” sizes. SARAG noted that the new method is very similar to how maturity is calculated for toothfish in the HIMIF.

SARAG recommend that the MITF assessment use the new estimate of maturity-at-length.

Total Allowable Catch (TAC) options for 2019 recommendation

CSIRO’s second paper presented to SARAG 60 was titled “TAC options for 2019 recommendation”.

SARAG members noted that the MCMC of the old assessment had still not converged and therefore CSIRO could not produce a TAC recommendation using the Synthesis assessment.

SARAG noted that the new Macquarie Island stock assessment included the updated maturity estimates for Toothfish, essentially revising 50% maturity from around 30 years to around 13 years. Members noted that the change has not impacted most parts of the assessment but has resulted in a changed estimate of depletion from B_{70} to B_{85} . Dr Hillary explained that the assessment does not indicate more absolute fish are in the Fishery, but a much greater proportion of the biomass is estimated to be part of the spawning biomass.

Industry noted that the catch rates have been good in recent years, however, they are worried about the risk of fluctuating TACs. SARAG noted industry are considering taking a precautionary approach by not recommending the full TAC increase at the SouthMAC meeting.

Industry left the room and SARAG agreed to support a TAC up to 555 tonnes but noted industry concerns and agreed to support a lower TAC if it was proposed. SARAG encourage industry to spread effort across the three Macquarie Island Fishery areas. SARAG noted that this is two-year advice and a research program was required to complete the histology and close kin work required for confirmation of the changes to the size/age at 50% maturity, and also a potentially large project looking at the harvest control rule (noting this would joint project with the HIMIF).

SARAG thanked Dr Hillary for his presentations.



Fishery Assessment Plan 2020/21 – 2021-22

Members noted that AFMA had drafted a 2020/21 – 2021/22 MITF Fishery Assessment Plan (FAP) with only minor edits from the previous FAP (2018/19 – 2019/20). Members agreed that a tag rate of two tags/tonne was still appropriate and that industry would provide more up-to-date figures for the cost of the tagging work.

SARAG noted the draft MITF FAP and noted that it would also be provided to SouthMAC for discussion and then comments from SARAG and SouthMAC will be incorporated into the FAP before finalisation prior to the MITF season start on 15 April 2020.

Heard Island and McDonald Islands Toothfish Fishery

Agenda item 8 – William’s Ridge Southern Indian Ocean Fisheries Agreement (SIOFA) update

The AFMA observer noted that the sixth Meeting of the Parties (MoP) to the SIOFA was held in Mauritius from 1-5 July 2019. Members noted that at this meeting, Australia was successful in achieving its highest priority at SIOFA, which was to protect the toothfish population on Williams Ridge, which forms part of the HIMI stock. SIOFA adopted a Demersal Stocks Conservation and Management Measure (CMM) which sets a total allowable research catch of 140t for toothfish on Williams Ridge, but also adopted a range of technical effort control measures, effectively reducing the available catch to a much lower level. These technical measures include use of grid cells to spread effort where each cell can only be fished once per season; and a maximum number of hooks and lines that can be set. Industry noted that with the grid system the total catch is likely to be around 50-60 tonnes. The European Union continues to contest the population linkages which exist between the HIMI stock and those occurring in Williams Ridge.

SARAG noted that Australia was also successful in strengthening the European Union’s proposal for a new measure on mitigation of seabird bycatch. The measures adopted are still not compatible with the HIMI arrangements, but do include the mandatory use of bird scaring lines and a prohibition of offal discharge south of 25°S. Also, a high-seas boarding and inspection measure was adopted which reflects the procedures in the Western and Central Pacific Fisheries Commission and represents a significant step forward in robust monitoring, control and surveillance in the Indian Ocean region.

SARAG noted that the European Union have submitted an updated benthic fishing impact assessment (BFIA) to the MoP, however this was not approved by the MoP.

SARAG noted that the way the William’s Ridge catch is incorporated into the HIMI stock assessment and setting of catch limits would need to be investigated further. Members noted that a five tags/tonne is now a requirement for vessels fishing at William’s Ridge which may help to identify fish movement from William’s Ridge to the HIMIF.

SARAG thanked industry for all their hard work in helping the Australian delegation achieve the results that they did at MoP.



Agenda item 9 – Patagonian Toothfish stock assessment

AAD presented the paper titled “An integrated stock assessment for the Heard Island and McDonald islands Patagonian Toothfish (*Dissostichus eleginoides*) fishery in division 58.5.2”.

Members noted that the 2019 HIMIF stock assessment indicates that the spawning stock biomass estimate has declined since the last assessment. The 2019 stock assessment estimates the stock status at B_{51} in 2019, compared to B_{62} in 2017 as based on the 2017 assessment. Members noted that changes to inputs made since the last assessment, such as to the maturity and length-weight relationships, have contributed to the lower depletion estimate. The current biomass estimate (B_{51}) is slightly above the target reference point of B_{50} , however, members noted that the stock is forecast to continue to decline to around B_{46} over the next two years under most recruitment scenarios before recovering in the longer term

SARAG noted that in the 2019 Patagonian Toothfish assessment, future recruitment is projected based on the entire data series for year class strengths estimated in the current assessment model. Members noted that there is concern that this may be overestimating future recruitment as recent year class strengths (1998-2013) are estimated to be below average and lower than the earlier part of the fishery. Members noted that the catch limit satisfying the CCAMLR decision rule is highly sensitive to which time period of year class strength is chosen for the projections.

SARAG noted that since the last SARAG meeting, AAD scientists have attended the CCAMLR Working Group on Statistics, Assessment and Modelling (WG-SAM) and conducted a review of the 2019 assessment with independent scientists including André Punt and Tony Smith. Members noted that the aim of the independent review was to improve understanding of the model and its assumptions and identify improvements and make recommendations for further work. The overall conclusion of the review was that the assessment is a complex one but that no substantive issues warranted immediate change to the current assessment. The review identified several ways in which the assessment outcomes could be more clearly communicated and/or illustrated. The reviewers noted that the CCAMLR decision rule is quite different from most other harvest strategies used in Australian fisheries. SARAG noted that short-term, medium-term (2 years) and long-term (5 years) recommendations developed by the independent review. SARAG noted that CASAL 2 will be required to complete some of the medium-term recommendations. Members further noted that the long-term goal of completing a Management Strategy Evaluation (MSE) of the CCAMLR decision rule (harvest control rule) and plausible alternatives is achievable in the next 5 years.

SARAG supported the recommended future work, including work on maturity as well as developing a MSE on the decision rule and transitioning to a newer version of CASAL which will provide greater flexibility, such as the development and evaluation of a sex-based model. Members noted that Australia will discuss the CCAMLR decision rule with other interested members at this year's CCAMLR meetings.

SARAG agreed that the 2019 assessment represents the best scientific advice available and supported the recommendation of a TAC of 3030 tonnes for the 2019/20 and 2020/21 seasons, noting a new assessment will be presented in 2021. SARAG highlighted the need to urgently investigate the behavior of CCAMLR decision rules.



Agenda item 10 – Mackerel Icefish stock assessment

SARAG noted that scientists from AAD prepared a stock assessment for Mackerel Icefish in Division 58.5.2 for peer-review and consideration by the WG-FSA and CCAMLR Scientific Committee.

SARAG noted that in the 2019 Random Stratified Trawl Survey (RSTS) only 5 shots in Gunnari Ridge were completed instead of the recommended 18. Members noted that two of these shots were the 6th and 9th largest shots in the history of the RSTS. The presence of these two very large hauls compared to the remaining hauls in the Gunnari strata lead to a multi-modal distribution of the bootstrapped biomass. Consistent with the previous advice provided by WG-FSA when such a situation has arisen, these hauls were removed from the assessment, resulting in a normal distribution of the bootstrapped biomass.

Members noted that the 2019 assessment was nearly identical to the previous assessment with updated length-weight. Members noted that there is a large 2+ and 3+ cohort in the Fishery and the preliminary assessment uses the 1+ to 3+ cohorts in the forward projections using a GYM. These projections recommend catch limits of 527 tonnes for 2019/20 and 406 t for 2020/21.

AAD predicted that if the RSTS had been completed the estimated 2019/20 TAC would have been around 1,000 - 1,150 tonnes.

Industry stated that they typically leave around 15 tonnes of Mackerel icefish for RSTS but only had 12 tonnes in 2019 noting that they could have utilised the over-catch provision but did not want to do that this year. **Industry agreed that in future they will leave 35 tonnes for the RSTS and members agreed that this should be included in the Fisheries Assessment Plan (Action arising 4).**

SARAG supported sending the paper and recommendations to WG-FSA and CCAMLR Scientific Committee.

Members noted that once the stock assessment has been considered by CCAMLR a TAC recommendation for Mackerel Icefish will be provided to SouthMAC before being considered by the AFMA Commission.



Agenda item 11 – Bycatch limits for 2019/20 season

SARAG noted that no new assessments of bycatch species have been conducted since the limits were previously set for the 2018/19 season. **SARAG recommended that bycatch limits from the current fishing season be rolled over to the 2019/20 fishing season.**

SARAG recommended the following bycatch limits for the 2019/20 season:

Heard Island and McDonald islands Fishery bycatch species:

| | |
|--|------------------------------|
| <i>Macrourus caml</i> and <i>M. whitsoni</i> | 409 tonnes |
| <i>M. halotrachys</i> and <i>M. carinatus</i> | 360 tonnes |
| Unicorn Icefish (<i>Channichthys rhinoceratus</i>) | 1 663 tonnes |
| Skates and Rays (<i>Bathyraja spp.</i>) | 120 tonnes |
| Grey Rockcod (<i>Lepidonotothen squamifrons</i>) | 80 tonnes |
| All other species | 50 tonnes (for each species) |

Members noted that these limits were based on earlier stock assessments and that the recommended bycatch limits will be provided to SouthMAC before being considered by the AFMA Commission.

Agenda item 12 – New vessel access to season extensions

SARAG noted that Industry have two new vessels coming into the HIMIF during the 2019/20 season, one owned by ALPL and one owned by Austral Fisheries. Members noted that both companies have indicated that the new vessels may want to fish the HIMI longline season extensions and noted that under current arrangements they would not be able to fish during the season extension as they will not have the opportunity to '*demonstrate full compliance with CCAMLR Conservation Measure 25-02 in the previous season*'. Members noted that this Conservation Measure is unique to the HIMIF and no other CCAMLR fisheries have the same restriction.

Members noted that it is the intention of Australia to propose to remove this restriction at the upcoming CCAMLR meeting, noting that it is not in any other Conservation Measure and the risk to seabirds will continue to be managed through the 3-bird limit.

Agenda item 13 – Fishery Assessment Plan 2019/20 – 2020/21

Members noted that AFMA had drafted a 2019/20 – 2020/21 HIMI Fishery Assessment Plan (FAP) with only minor changes from the previous FAP (2017/18 – 2018/19). Members agreed that a tag rate of two tags/tonne was still appropriate and that the RSTS should include a requirement to have a minimum of 35 tonnes of icefish quota available. SARAG noted that the



current RSTS stations are still appropriate and the RSTS should take around 20 days to complete.

Members further noted that both the HIMI and MIT FAPs should refer to product weight not glazed weight and the description of the RSTS should say it is a multispecies survey that concentrates on Patagonian toothfish and Mackerel icefish.

Members noted that the HIMI FAP would also be provided to SouthMAC for discussion and then comments from SARAG and SouthMAC will be incorporated into the FAP before finalisation prior to the HIMIF season start on 1 December 2019.



CCAMLR & Exploratory Fisheries

Agenda item 14 – Update from WG-EMM & WG-SAM

SARAG noted that the following papers were submitted to the 2019 CCAMLR Working Group on meetings of the Ecosystem Monitoring and Management (WG-EMM) and WG-SAM.

Working Group on Ecosystem Monitoring and Management (24 June - 5 July 2019):

- Using the krill risk assessment to allocate catches at Small-Scale Management Unit (SSMU) scale;
- Tools to access biophysical datasets for use in spatial management in the Southern Ocean;
- Components of a revised krill management procedure; and
- Revised target strength models for Antarctic Krill, and updated algorithms for estimating krill biomass using the swarms method.

Working Group on Statistics, Assessments and Modelling (17-21 June 2019):

- Work to support HIMI Stock Assessment: revised maturity function and estimates of mortality from longline gear loss,;
- Exploratory fisheries: Standardisation of catch rates and population parameters;
- East Antarctic Research fishing: Progress report;
- East Antarctic Research fishing: Updated research plan;
- .

SARAG noted that Australia has a research plan in place for areas 58.4.1 and 58.4.2 with France, Japan, Korea and Spain and that Australia is also in initial discussion with Russia to see if they are interested in joining the research plan.

Agenda item 15 – Papers to WG-FSA, SC & Commission

AAD indicated that the following papers will be submitted to **WG-FSA**:

- HIMI Report on the 2018 Random Stratified Trawl Survey;
- HIMI Updated Mackerel icefish assessment;
- HIMI Toothfish Stock assessment 2019;
- HIMI season extension trail analysis;
- East Antarctic Research fishing: Updated research plan
- East Antarctic Research fishing: Update on Ageing; and
- Antarctic Toothfish stock connectivity.

AAD further indicated that the following papers will be going to the **Scientific Committee**:

- Establishing a mentoring program for SC-CAMLR.



Research

Agenda item 16 – Replicate longline survey

SARAG noted that AAD have started progressing the project to design and conduct a replicate longline survey, however, **AAD and industry need to have further discussions on the objectives and benefits of conducting a replicate longline survey (Action arising 5).**

Agenda item 17 – Whale depredation research

SARAG noted that Dr Paul Tixier held a workshop on Wednesday 21 August 2019 to discuss progress on the project titled “Developing global solutions to marine mammals – fisheries interactions”. Members noted that the 4-year project had been progressing for 2.5 years and also includes a desktop study of four other toothfish fisheries, which is nearing completion. At the workshop Dr Tixier explained that he is working with other institutes in France, South Africa and South Georgia and that they are collecting standardised data. Members noted that in the current season at HIMIF there has been a higher number of sperm whale sightings although it was recorded that they had all disappeared by the end of June.

Dr Tixier has requested that industry continue to do photo identification noting that eight individual have now been identified in the HIMIF. Of these eight whales, four of them have been sighted at Kerguelen. Dr Tixier is continuing the recording work in Australia using moorings and portable devices and it was noted that France is also setting up an array of listening devices.

SARAG agreed that Dr Tixier’s work is valuable and noted that Industry will be discussing with COLTO on the potential for a phase 2 project that is a more formalised global project.

Agenda item 18 – Annual Research Statement

SARAG noted that each year AFMA asks individual fishery RAGs to consider their fishery’s five-year strategic research plan to identify their research needs. AFMA has requested that SARAG identify:

1. Potential AFMA funding in 2020-21 (essential stock assessment/monitoring related research); and
2. Potential FRDC funding in 2020-21 (more innovative type projects).

SARAG discussed a number of projects including future work from the stock assessment that needs to be completed, whale project, bycatch assessments (including skates) if bycatch increases and starts to reach the limit, testing of the CCAMLR decision rule (for both HIMIF and MITF). It was agreed that these projects would likely be conducted through the Industry Partnership Agreement. Members noted that the HIMIF Patagonian Toothfish stock assessment moving to CASAL 2 will need to be funded and this should be included in the annual research statement. It was agreed that an expression of interest should be sent out seeking



scientists to update the HIMIF stock assessment to CASAL 2 and also to undertake the MITF stock assessment.

Agenda item 19 – Recent research

Members noted that this agenda item is an opportunity to discuss any planned research, any research currently happening and any recently completed research.

Members noted that yesterday an update was provided on the Toothfish Response to Environmental variability (TREV) project. SARAG noted that Stuart Corney, Nicole Hill and Jess Melbourne-Thomas are conducting a qualitative study that is looking at the effects on Patagonian Toothfish catch rates. The benefit of this project will be the ability to adapt to what changes are occurring in the Fishery.

SARAG noted that the Department of Environment is currently developing the next Antarctic Science Strategic Plan. The objective of the Plan is to ensure that Australia gets fair access to the Southern Ocean and meets the challenges of global change, natural resource sustainability, biodiversity conservation and managing human impacts on the Antarctic continent.

CSIRO noted that they were meeting with AAD to discuss a new project that is looking at the drivers of catchability. If the project is conducted researchers would be putting acoustics on vessels and doing prey-field observations. Members noted that AAD and CSIRO are meeting in the week to discuss this project further and whether it complements the TREV project and provides enough additional insights to support funding.

Environment

Agenda item 20 – Climate Change Project

SARAG noted that the Adaptation of Commonwealth Fisheries to Climate Change project (FRDC project 2016-059) commenced in early 2018 with the formation of a steering group composed of diverse fishery, government and environmental stakeholders. The first workshop was carried out in November 2018, where 45 stakeholders helped develop impact pathways to understand the various ways in which climate change may impact a fishery and its management. Impact pathways are scenarios that describe the various ways in which physical and ecological changes impact a fishery, how the fishery and markets might respond, and what impact that might have on management. Members noted that these impact pathways are currently being used to develop a risk assessment methodology, which will be applied to two test case: the Northern Prawn Fishery and the Southern Bluefin Tuna Fishery.

Members noted that a second stakeholder workshop is planned for late September 2019 to review the outcomes of the risk assessment on case study fisheries, consider how the methodology can be applied to other fisheries, and consider adaptation strategies. The completion of the project is expected by June 2020.

AAD requested that at a future SARAG meeting there is a focused discussion on climate change (Action arising 6). Members noted that climate change is an increasing priority at CCAMLR and material to take to CCAMLR would be useful.



Agenda item 21 - Environmental interactions and gear loss

SARAG noted that the 2018/19 HIMI Fishery fishing season 4,796,165 hooks had been set (at 31 July 2019). There was one seabird, two seals and one porbeagle shark interaction with fishing gear that resulted in death (see details below):

- On 12 April 2019 a porbeagle shark was discovered dead in the trawl gear on the *Atlas Cove*;
- On 22 June 2019 a grey petrel was hooked and drowned while longline gear was being set on the vessel *Antarctic Chieftain*;
- On 16 August 2019 a Southern Elephant Seal came up with the line, the line broke as soon as the seal hit the surface and the fate of the seal was unknown but assumed dead on the vessel *Atlas Cove*; and
- On 21 August 2019 a Southern Elephant Seal was hauled tangled with the mainline on the vessel *Isla Eden*.

SARAG noted that during the 2019/20 MITF season 1,797,020 hooks had been set (at 31 July 2019) with no TEP wildlife interactions with fishing gear that resulted in a death. 15 Porbeagle sharks were killed as a result of interactions with fishing gear.

SARAG noted that there has been an increase in the amount of gear lost in the HIMI Fishery in 2019 compared to 2018. The amount of gear recovered has also increased when compared to the previous season. Gear loss in the MITF has also increased in the 2019/20 season compared to the previous season.

Exploratory fisheries had a significant increase in gear lost in the 2018/19 season when compared to the previous season.

Industry noted that it is still a priority to reduce lost fishing gear. SARAG noted that lost gear is also a major concern of COLTO. Industry further noted that they discussed the requirements at HIMIF at a recent COLTO meeting and that COLTO is considering the development of a voluntary code of conduct.

Other

Agenda item 23 – Other business

Industry noted that the Marine Stewardship Council audit will be conducted on 1 October 2019. **It was agreed that the 2019 MITF stock assessment should be given to the auditors for information as the RAG had agreed to use it for TAC advice.** It was further agreed that the 2019 HIMIF stock assessment should not be provided until it has progressed through CCAMLR.

SARAG noted that the proceedings from the 2nd Kerguelen symposium have now been published. Printed hardcopies will be distributed shortly and that the document can be cited as it has been peer reviewed.

Agenda item 24 – Next meeting



It is proposed to hold the next face-to-face SARAG meeting in early March 2020. The Executive Officer agreed to send out proposed dates after confirming the dates of the Tropical Tuna RAG and the Southern and Eastern Scalefish and Shark RAG meetings to ensure there are no clashes for members. The key item for discussion will be the strategic direction for the HIMI stock assessment.

The meeting closed at 4:20 pm on Thursday 22 August 2019.



Sub-Antarctic Resource Assessment Group (SARAG) Meeting 60

Final Agenda

Thursday 22 August 2019

9.00am – 5:00pm

Mawson Conference Room 2

Australian Antarctic Division – Channel Highway, Kingston

Introduction

- | | | | |
|-----|--|-------|-----------------|
| 1. | Preliminaries | | |
| 1.1 | Declaration of interests | Chair | For Discussion |
| 1.2 | Apologies | AFMA | For Information |
| 1.3 | Adoption of Agenda | Chair | For Decision |
| 2. | Minutes from SARAG 59 | AFMA | For Information |
| 3. | Action Arising | AFMA | For Discussion |
| 4. | Correspondence | AFMA | For Discussion |
| 5. | Update on fishing operations (HIMI, MITF, Exploratory, observers) | All | For Information |

Macquarie Island Toothfish Fishery

- | | | | |
|----|---|-------|--------------------|
| 6. | Macquarie Island stock assessments | CSIRO | For Recommendation |
| 7. | Fishery Assessment Plan 2020/21-2021/22 | AFMA | For Discussion |

Heard Island and McDonald Islands Fishery

- | | | | |
|-----|---|--------------|--------------------|
| 8. | William's Ridge SIOFA update | AAD/Industry | For Information |
| 9. | Patagonian Toothfish stock assessment | AAD | For Recommendation |
| 10. | Mackerel icefish stock assessment | AAD | For Recommendation |
| 11. | Bycatch limits for 2019/20 season | AFMA/AAD | For Recommendation |
| 12. | New vessel access to season extensions | AFMA | For Information |
| 13. | Fishery Assessment Plan 2019/20-2020/21 | AFMA | For Discussion |



CCAMLR & Exploratory Fisheries

- | | | | |
|-----|-----------------------------------|-----|----------------|
| 14. | Update from WG-EMM & WG-SAM | AAD | For Discussion |
| 15. | Papers to WG-FSA, SC & Commission | AAD | For Discussion |

Research

- | | | | |
|-----|----------------------------|--------------|-----------------|
| 16. | Replicate longline survey | AAD/Industry | For Discussion* |
| 17. | Whale depredation research | Austral | For Information |
| 18. | Annual Research Statement | AFMA | For Discussion |
| 19. | Recent research | All | For Information |

Environment

- | | | | |
|-----|--|------|-----------------|
| 20. | Climate Change project | AFMA | For Information |
| 21. | Environmental interactions and gear loss | AFMA | For Information |

Other

- | | | | |
|-----|----------------|-------|----------------|
| 22. | Other Business | Chair | For Discussion |
| 23. | Next Meeting | Chair | For Discussion |

* Verbal update, no agenda paper provided

