



**Australian Government**

**Australian Fisheries Management Authority**

# **Sub-Antarctic Fisheries Management Advisory Committee (SouthMAC)**

**FINAL MINUTES**

**SOUTHMAC 44 (VIDEO CONFERENCE)**

**5 NOVEMBER 2024**

## SUB-ANTARCTIC FISHERIES MANAGEMENT ADVISORY COMMITTEE (SouthMAC)

**CHAIR:** Geoff Richardson  
**Date:** 5 November 2024  
**Venue:** Video Conference, 1300-1500.

### Attendance

Name	Position
<b>Members</b>	
Geoff Richardson	Chair
Dr Lyn Goldsworthy	Conservation Member
Rhys Arangio	Industry Member
Dr Philippe Ziegler	Scientific Member
Sally Carney	AAD Member
Selina Stoute	AFMA Member
<b>Executive Officer</b>	
Rachel Downes	Executive Officer
<b>Observers</b>	
Brad Milic	Industry, Australian Longline Fishing Pty Ltd
Danait Ghebregabhier	Manager Antarctic Fisheries, AFMA
Sally Troy	AFMA Commissioner
Kelly Buchanan	Branch Head, Policy & Strategy Branch AAD
<b>Apologies</b>	
Malcolm McNeill	Industry Member

## Introduction

### Agenda item 1 – Preliminaries

#### 1.1 Welcome and apologies

1. SouthMAC 44 was opened at 1:00pm AEDT on 5 November 2024 by the Chair, Geoff Richardson. The Chair on behalf of all members and observers acknowledged the Traditional Owners of the land on which each participant was attending and paid respects to their Elders past, present and emerging.
2. Industry member, Malcolm McNeill, was noted as an apology.
3. Members noted that the meeting was being recorded for the purpose of developing the meeting minutes.

#### 1.1 Declaration of interests

4. Interests declared at the meeting are documented in [Attachment A](#).
5. The Chair invited all members and observers to declare any potential conflicts of interests with any of the agenda items for the meeting. The industry member and industry observer declared potential conflict of interest with respect to Agenda Items 4.1, 4.2 and 4.3. In response, the Chair proposed that the industry member and observer, be included in the discussions of each of those items but not participate in the formation of any recommendations. This approach was supported by the Committee.

### **1.3 Adoption of agenda**

6. The agenda (Attachment B) was adopted without amendment.

### **Agenda item 2 – Actions arising from previous meetings**

7. SouthMAC discussed the progress of actions arising from its previous meetings. A summary of their status and SouthMAC 44 discussions is provided in Attachment C.

### **Agenda item 3 – Member updates**

#### **3.1 Member update**

8. SouthMAC noted the following verbal updates from the industry member and observer:

##### *Austral*

9. Austral have experienced a normal fishing season at HIMI and have caught all their Patagonian toothfish quota as of 4 November, with both boats fishing right to the end. The Cape Arkona is heading back to port to unload, and the Isla Eden is currently recovering some lost gear before also heading back to port.

##### *Australian Longline Fishing (ALF)*

10. The industry observer reported good fishing seasons both at HIMI and MITF with good catch rates and good-sized fish and finished fishing earlier than usual. With regards to fishing at HIMI, they are looking forward to reviewing the progress of the voluntary Longline Research Haul initiative that industry undertook this year to spread fishing effort in the Fishery.
11. The Antarctic Discovery did its first trip this season with the upgraded electronic monitoring (EM) system at Macquarie Island as part of the Southern Ocean Fisheries EM Trial. The existing EM system on the Antarctic Aurora is also currently being upgraded as part of the trial.
12. Both boats are preparing for the new season of the CCAMLR New and Exploratory Fisheries which starts on 1 December.

#### **3.2 AFMA update**

13. SouthMAC noted the written update provided by AFMA (Attachment D) on the substantive work that is happening that is relevant to sub-Antarctic Fisheries and especially acknowledged the work that is underway to incorporate climate change information and risks into AFMA's management and decision-making framework.
14. With regards to the update on the *Live release of small toothfish*, SouthMAC noted SARAG 71's advice to date on this matter and acknowledged that, pending final SARAG advice, there is a role for the MAC to consider any implications of changes that may be required to current management arrangements in the HIMI and MIT Fisheries to allow for this practice. SouthMAC noted that the analysis recommended by SARAG will be added to the overall workplan that is being considered for prioritization and resourcing given the importance and urgency of the additional work associated with the HIMIF toothfish stock assessment. SouthMAC further noted that, in the interest of time, the MAC could consider this matter out-of-session once it was ready to be presented.

## Agenda Item 4 – Total Allowable Catches for the Heard Island and McDonald Islands Fishery

### 4.1 – Patagonian Toothfish TAC

15. SouthMAC noted:

- a) that SARAG 71, having considered further scientific analysis and an updated stock assessment, recommended rolling over the current TAC of 2,400 t into the 2024-25 fishing year. SouthMAC noted that SARAG 71, in making their recommendation, considered the following:
  - i. that the 2024 stock assessment model is an update of the 2023 assessment with one year of extra observations but no major structural changes;
  - ii. there has been a significant amount of supplementary work that characterises key sources of uncertainty within the model and has demonstrated that there is a downward bias in the recent year class strength (YCS) (a measure of recruitment) and SSB estimates from the base-case stock assessment model;
  - iii. given the current estimates of recent YCS underestimate the potential contribution of these year classes to future spawning biomass, the approach was considered precautionary;
  - iv. a detailed workplan for the next 12 months had been identified to continue to address the uncertainties within the model that currently limit its use for projections and catch recommendations;
  - v. the risk to the stock of rolling over the current TAC of 2,400 t for one year while this work is undertaken has been demonstrated to have a negligible impact on stock status in 2025.
- b) the Australian Government recommended to CCAMLR 43 that the 2023 CCAMLR catch limit of 2,660 t also be rolled over.
- c) SouthMAC noted that following the lack of consensus during the WG-FSA-IMAF (7-11 October 2024) on a catch limit for Patagonian toothfish in Division 58.5.2 (i.e. HIMI), the AFMA Commission agreed 'in principle', to a TAC for the 2024-25 fishing year of either 2,400 t or 2,120 t (meeting 16 October 2024) noting that it would make a final decision in November following the CCAMLR-43 and SouthMAC meetings.
- d) SouthMAC noted that CCAMLR-43 agreed a catch limit for Patagonian toothfish in the HIMI Fishery of 2,120 t for 2024-25 and 2025-26.

16. While acknowledging the significant ongoing work identified to address the uncertainties in the stock assessment, the Conservation Member expressed concern that the recommended catch limit of 2,120 t might not be sufficiently precautionary given the concerns raised at the WG FSA-IMAF and SC-CAMLR 2024 meetings. The Conservation Member advised that this concern has been expressed by some CCAMLR Members with respect to other CCAMLR toothfish fisheries. The Conservation Member sought reassurance that management will respond to recover the stock if its status were to decline further. Members acknowledged the scientific and management process in place to both deliver updated scientific information and agreed that information should be used to develop management responses. It was noted that since 2021, AFMA had set TACs lower than that agreed by CCAMLR and that SARAG had developed a stock assessment workplan

for the fishery. Working with SARAG, AAD and industry to ensure the completion of the workplan will be AFMA management's highest priority for the fishery.

17. The industry member acknowledged the significant work of the stock assessment team at AAD and the efforts of AFMA and the Australian delegation more broadly at CCAMLR 43 to achieve a catch limit for the HIMI Fishery. The industry member expressed disappointment that the domestic TAC of 2,400 t was not adopted by CCAMLR 43, although they understand why the decision was made to accept the lower TAC. The member noted that the recommended TAC is a \$9 million loss to the industry, in addition to previous TAC cuts which have cost around \$30 million in total. The industry member expressed confidence that the ongoing work on the stock assessment will provide more certainty in the coming years.
18. For the purposes of recommending the TAC, the industry member and industry observer left the meeting. The remaining SouthMAC Members, cognizant of SARAG's advice and the catch limit agreed by CCAMLR 43, **recommended** a TAC of 2,120 t of Patagonian toothfish for the 2024-25 HIMI Fishery fishing year.
19. Whilst supportive of the SouthMAC recommendation, the Conservation Member reiterated that they continued to hold some concern about the level of precaution of the catch limit and therefore noted the high importance of completing the stock assessment work plan and have an effective management process going forward.

#### 4.2 – Mackerel Icefish TAC

20. SouthMAC noted:

- a) the information provided in the agenda paper to inform its consideration of a mackerel icefish TAC for HIMI for the 2024-25 fishing year, including:
  - i. the results of the 2024 mackerel icefish stock assessment;
  - ii. the stock assessment re-estimated growth, which was last completed in 2017;
  - iii. SARAG 71 recommendation to set a mackerel Icefish TAC of 1,824 t for 2024/25 noting the TAC is derived using the most recent growth estimate (2018-2024);
  - iv. the CCAMLR 43 agreed catch limit for mackerel icefish of 1,824 t for 2024/25.
- b) that the recommended TAC for the 2024-25 fishing year is a significant increase from the 599 t catch limit previously agreed by CCAMLR 42 for the 2024-25 fishing year. This is due to the higher biomass estimate used in the projection.

21. For the purposes of recommending the TAC, the Industry Member and Industry observer left the meeting. The remaining SouthMAC Members **recommended** a TAC of 1,824 t of mackerel icefish for the 2024/25 HIMI fishing year.

#### 4.3 – Bycatch Limits

22. SouthMAC noted:

- a) the information provided in the agenda paper to inform its consideration of the bycatch limits outlined in **Table 1** below for HIMI for the 2024/25 fishing year, noting that there is

currently no updated assessment to indicate these levels should be revised. SouthMAC also noted:

- i. SARAG 71 recommendation to maintain the current bycatch limits for 2024/25
  - ii. CCAMLR 43 decision to retain the current bycatch limits for 2024/25.
- b) the ongoing work by AAD on the post-release survival of skates (*Bathyrāja irassa*). Noting the small sample size, the preliminary results of this research estimate the post-release survival of *B. irassa* caught between depths of 1200-1600 m at 26% (95% confidence interval of 13-46%). SouthMAC noted the AFMA Member’s advice that the update of the skate stock assessment will be a priority noting the outcomes of the recent research and it will be important to include this on the HIMI Fishery workplan.

23. For the purposes of recommending the TAC, the industry member and industry observer left the meeting. The remaining SouthMAC Member **recommended** maintaining the current bycatch limits for the 2024-25 HIMI Fishery fishing year (as listed in in **Table 1**).

**Table 1.** SouthMAC recommended HIMI Fishery bycatch limits for the 2024-25 fishing year

Species	Limit (t)
Caml grenadier ( <i>Macrourus caml</i> ) and Whitson’s grenadier ( <i>M. whitsoni</i> )	409
Bigeye grenadier ( <i>M. holotrachys</i> ) and ridge scaled rattail ( <i>M. carinatus</i> )	360
Unicorn icefish ( <i>Channichthys rhinoceratus</i> )	1,663
Skates and rays ( <i>Bathyrāja spp.</i> )	120
Grey rockcod ( <i>Lepidonotothen squamifrons</i> )	80
All other species (each)	50

## Agenda Item 5 – CCAMLR Updates

### 5.1– Summary of CCAMLR 43 meeting outcomes and revised Conservation Measures

24. SouthMAC noted the update from the AAD member on the outcomes of CCAMLR 43, including revised Conservations Measures which is provided in Attachment E.

### 5.2 – Exploratory Fisheries Update

25. This item was covered under agenda item 5.1.

## Agenda item 6 – HIMI Trawl Gear Modification Trial

26. SouthMAC noted;

- a) the written update in Attachment F on the progress of the HIMI Trawl gear modification trial that commenced in 2020;
- b) advice from SARAG 71 that it:

- i. deemed the trial complete on the basis of the results showing that the new trawl gear had a reduced skate bycatch rate and reduced overall environmental impact compared to using the currently permitted trawl gear; and
    - ii. recommended that AFMA progress the implementation of the new trawl gear, including consultation with SouthMAC, noting that AFMA needs to progress legislative amendments for the change to take effect.
  - c) that the specifications for the new ground gear are proposed to be implemented through SFR conditions, pending the amendment of the *Fisheries Management (Heard Island and McDonald Islands Fishery) Regulations 2002* to exclude gear specifications which is currently underway.
  - d) that the new trawl gear specifications are only applicable to commercial icefish fishing as the gear for commercial toothfish trawling would remain the same and the RSTS survey, which used the same gear configuration, needs to be kept standard across years.
27. SouthMAC briefly discussed the option of gear requirements not being prescriptive going forward to provide additional flexibility for industry to continuously evolve their fishing practices. Industry advised that the current ground gear specifications in the HIMI Regulations are based on what industry was using at the time of its implementation rather than scientific consideration. While the MAC understood the desire for flexibility and innovation in a timelier manner, it considered it important to retain some prescribed gear requirements for trawl ground gear to minimize the environmental impact. The MAC further noted the AFMA Member's advice that the implications of removing minimum gear requirements altogether would need to be considered by SARAG which was not done as part of the current process.
28. SouthMAC recalled that SARAG had previously noted that the condition of released skate bycatch was poorer in the new net, potentially as a function of net dimensions. With regards to this, SouthMAC noted the Scientific Member's recollection that while this observation was made at the time, the total estimated mortality of skates was lower with the new trawl gear resulting in a better outcome overall for skates. SouthMAC further noted the Industry Member's advice that this decline in condition was reported in the one observer report and that no other observer reports had raised it as an issue.
29. SouthMAC, noting the advice from SARAG 71 (in 26(b) above), **supported** the use of the new trawl gear on an ongoing basis. Specifically, to allow the use of the following ground gear:
- a) bobbins that are 400 mm in diameter to be used. Current regulation prohibits the use of bobbins that are less than 520 mm in diameter; and
  - b) rock hopper rubber discs that are 200 mm in diameter. Current regulation prohibits the use of rock hopper rubber discs that are less than 400 mm in diameter.

## Agenda item 7 – Other Business

30. The industry observer advised for AFMA's awareness, that the MSC Surveillance Audit for longlining at MITF is due in February before the next SARAG meeting. Milestones due at that time included providing evidence that an ERA and updated bycatch and discard workplan are scheduled with the finalised documents due in 2026. The AFMA member advised that there have been several delays

in progressing ERAs across fisheries due to competing demands and AFMA will meet with industry separately to discuss progress. The industry observer also noted that an ALF boat will be departing around 18 November to start fishing in the exploratory fishery.

31. The industry member noted that the HIMI marine reserve was finalised in September and that Austral were disappointed with the outcomes. The industry member noted that trawling grounds that have historically been fished have been taken from the fishery. The industry member advised that they were also disappointed that their submission, which comprised carefully developed zoning proposals had seemingly not been considered. The AAD observer provided information on the proclamation process for the marine reserve and advised that they would provide industry with more information after the meeting. The industry member thanked AAD for their work regarding the marine reserve.

### **Agenda item 8 - Next meeting**

32. SouthMAC noted that the next meeting would be agreed out-of-session.
33. The Chair thanked all SouthMAC members and closed the meeting at 3:00 pm.



## Attachment A

Members, invited participants and observer's declarations of interests recorded at SouthMAC 44, 5 November 2024.

Name	Membership	Declared interests
Geoff Richardson	Chair	Mr Richardson is the Chair of the Northern Prawn Fishery Management Advisory Committee (NORMAC). Mr Richardson has no interests pecuniary or otherwise.
Dr Philippe Ziegler	Scientific member	Dr Ziegler 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 principle and co-investigator on current FRDC projects. Dr Ziegler is also a scientific member of SARAG, and the Scientific Representative for Australia to CCAMLR.
Malcolm McNeill	Industry Member	Mr McNeill is the Managing Director of Australian Longline Fishing Pty Ltd (ALFPL) 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 is the Chair of the Ross Sea Industry Client Group. Mr McNeill remains a 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.
Rhys Arangio	Industry member	Mr Arangio is employed by Austral Fisheries P/L (Austral Fisheries) as the General Manager of Science and Policy. Austral Fisheries owns Statutory Fishing Rights (SFRs) in the Australian sub-Antarctic fisheries, which include waters under the jurisdiction of CCAMLR. Mr Arangio is the Executive Officer of COLTO, as well as being a member of SARAG. He was not aware of any investigation or prosecution action by AFMA against his Company, nor of any legal action taken by his Company against AFMA and has an interest in all agenda items.

Name	Membership	Declared interests
Dr Lyn Goldsworthy	Conservation member	Dr Goldsworthy is a research associate at the Institute for Marine and Antarctic Studies, University of Tasmania, and a Member of the Centre for Marine SocioEcology. Dr Goldsworthy also conducts contract work for the Deep-Sea Conservation Coalition (DSCC). Dr Goldsworthy has no pecuniary interest in sub-Antarctic fisheries.
Sally Carney	AAD member	AAD employee and works with colleagues undertaking research in HIMI including stock assessments for the HIMI Fishery. Has no pecuniary interest in Antarctic fisheries.
Selina Stoute	AFMA member	AFMA employee, no interests pecuniary or otherwise.
Rachel Downes	Executive officer	AFMA employee, no interests pecuniary or otherwise.
Danait Ghebregabhier	AFMA observer	AFMA employee, no interests pecuniary or otherwise.
Brad Milic	Observer	Senior Manager of Policy and Resource at Australian Longline Fishing 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 CCAMLR. Mr Milic owns a consultancy business that currently has a contract with Atlantis Fisheries Consultancy Group, involved various aspects of the Commonwealth Scallop fishery, auto longline/gillnet fishery and Tasmanian exploratory fishery. Mr Milic is an industry member on the Sub-Antarctic Resource Assessment Group (SARAG)
Kelly Buchanan	Observer	Branch Head, Policy & Strategy Branch AAD. Has no pecuniary interest in Antarctic fisheries.
Dr Sally Troy	Observer	AFMA Commissioner.



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## 44<sup>th</sup> meeting of the Sub Antarctic Fisheries Management Advisory Committee (SouthMAC)

Teleconference 1300-1630

5 November 2024

### Draft Agenda

Chair: Geoff Richardson

Approx time	Item	Purpose	Presenter
13:00 (30 mins)	<b>1. Preliminaries</b>		
	1.1 Welcome and apologies	For action	Chair
	1.2 Declaration of interests	For action	Chair
	1.3 Adoption of agenda	For action	Chair
	<b>2. Actions Arising</b>	For noting	Executive Officer
	<b>3. Member Updates</b>	For noting	All Members
13:30 (90 mins)	<b>4. Total Allowable Catches for the Heard Island &amp; McDonald Islands Fishery</b>		
	4.1 Patagonian Toothfish TAC	For advice	AFMA Member
	4.2 Mackerel Icefish TAC	For advice	AFMA Member
	4.3 Bycatch limits	For advice	AFMA Member
15:00 (15 mins)	<b>Break</b>		
15:15 (30 mins)	<b>5. CCAMLR Updates</b>		
	5.1 Summary of CCAMLR 43 meeting outcomes and revised Conservation Measures	For noting	AAD Member*
	5.2 Exploratory Fisheries update	For noting	AAD Member*

Approx time	Item	Purpose	Presenter
15:45 (30 mins)	<b>6. HIMI Trawl Gear Modification Trial</b>	For advice	AFMA Member
16:15 (15 mins)	<b>7. Other Business</b>	For discussion	Chair
	<b>8. Next Meeting</b>	For decision	Chair
16:30	<b>Close of meeting</b>		

\*Verbal update

## Status of action items arising at previous SouthMAC meetings.

Item	Action arising	Status as at SouthMAC 44
1	<p><b>Export Control Act</b> - AFMA to arrange a meeting with DAFF on C2 provision requirements and provide an update to industry. (SouthMAC 41 Agenda Item 2).</p>	<p><b>In progress. Suggest this item be removed from MAC action list as it relates to an arrangement outside of the <i>Fisheries Management Act 1991</i>. AFMA will continue to progress directly with Industry.</b></p> <p>AFMA met with DAFF on 21 February 2023 to discuss reporting requirements related to export of toothfish from HIMI. Delegation of approvals to AFMA observers and food safety standards were also discussed.</p> <p>At SouthMAC 42 industry noted that a C2 form is provided to DAFF on a monthly basis, and that their view is this form provides raw data (whole green weight, bycatch) that does not clearly illustrate what the vessel is actually carrying (retained processed weights). Noting that this requirement is only for vessels landing fish in Mauritius, this item remains open to explore improvements to data provision approaches to DAFF.</p> <p>At SouthMAC 43 industry requested to be introduced to the relevant individual at DAFF to explain that the C2 form does not provide the information they need. This is currently being progressed.</p> <p>SouthMAC 44 noted the update provided on this item and the discussion at the meeting that the scope has widened to include other requirements relating to the Export Control Act that currently apply to HIMI vessels that unload in Mauritius, such as identifying improved arrangements for the signature of the HIMI Export permit declaration form in the event there is no AFMA observer on board to sign it. SouthMAC noted these issues are currently the subject of discussions between Industry, AFMA and DAFF.</p> <p>SouthMAC 44 agreed to <b>close</b> this action item.</p>



## Sub-Antarctic Fisheries Management Advisory Committee

### Meeting 44

5 November 2024

#### Agenda item 3 Member Updates

Purpose: FOR NOTING

##### Recommendation

That SouthMAC:

1. **NOTE** verbal updates from Industry, Conservation and Scientific Members; and
2. **NOTE** the written update from AFMA in this paper.

##### AFMA update

###### Longline fishing season extension trial

1. At its meeting on 9-10 July 2024, the AFMA Commission approved a trial of a longline fishing season extension from 1 September to no later than 21 September in the MITF subject to arrangements outlined in **Table 1**.
2. The approved arrangements incorporate advice from the Protected Areas and Species Section of the Australian Antarctic Division (AAD) which was requested by AFMA and received following the SARAG 70 meeting. The advice from this section was considered by SouthMAC (meeting 43, 1 July 2024)
3. A summary of the advice on the proposed longline seasons trial arrangements from [SARAG 70](#), [SouthMAC 43](#) and AAD are summarised in **Table 2** (end of document).
4. In making its decision, the AFMA Commission noted the extensive discussions held by SARAG about the parameters of the trial, as well as the advice from SouthMAC, and welcomed the thorough scientific approach taken to accounting for the increased risk to seabirds from fishing into September.
5. While the Commission is highly cognisant of the potential risks, including reputational risk to AFMA and industry, it considered that:
  - The trial presents a reasonable balance between providing operational flexibility for industry while mitigating any additional risk of seabird interactions.
  - There is a high level of technical assurance for the trial through the involvement of seabird experts and officers from the Australian Antarctic Division (AAD).
  - This is a further extension of fishing that has already occurred in the first week of the extension period with no interactions.
  - The consequences of interaction under the trial are clear and provide an incentive for industry to maintain high levels of vigilance about mitigation.
  - There will be ongoing analysis by appropriate scientific experts under the guidance of the Sub-Antarctic RAG of AFMA's observer data as it relates to seabird abundance.

6. The Commission noted, with appreciation that industry has demonstrated the capability to avoid seabird interactions over a sustained period and have also indicated their ability to deploy additional measures should seabird abundance be higher than anticipated.
7. Overall, the Commission decided to approve the trial of a longline fishing season extension from 1 September to no later than 21 September in the MITF subject to the arrangements outlined in **Table 1**.
8. Finally, the Commission noted that, if the trial runs to completion, post-trial arrangements will need to be developed. Such arrangements would be developed through the SouthMAC and Sub-Antarctic RAG process and be subject to AFMA Commission approval and periodic review over time.

**Table 1.** Proposed longline fishing season extension trial arrangements for the MITF as agreed by the AFMA Commission.

Trial component	Detail
Purpose	Consistent with AFMA objectives to maximise net economic returns and have regard to the impact of fishing on non-target species, the purpose of the trial is to test whether longline fishing in the extension periods can be undertaken without adding unacceptable additional risk to seabirds.
Starting two-week extension period	1-14 September. Week one is 1-7 and week two is 8-14 September.
Possible third week inclusion to the extension period.	Once a minimum of 250,000 hooks have been set in the period 8-14 September (week 2), over at least three fishing seasons, SARAG will discuss the results to date of that trial extension period. If the RAG is satisfied that any new data does not increase the level of risk to unacceptable levels, then AFMA Management will consider extending the trial period to 21 September, following consultation with SouthMAC.
Implementation	Fishing in the trial will be authorised through Scientific Permits granted under section 33 of the <i>Fisheries Management Act 1991</i> . Only SFR holders in the MITF will be eligible to participate in the trial.
Minimum effort required to complete the trial	500,000 hooks set within each week (1-7, 8-14 and, if included, 15-21 of September). To avoid doubt, hooks set within week one in 2022 and 2023 count towards the minimum number of hooks to be set in that week for the trial.  Consideration of post-trial arrangements for the two-week extension period (1-14 September) can commence once the minimum effort deployment of 500,000 hooks has been achieved in each week. This means that a minimum of 500,000 hooks need to be set in week one and a minimum of 500,000 hooks need to be set in week two.  To avoid doubt, all trial arrangements continue to apply until such time as ongoing arrangements are developed and implemented for the fishery. <sup>1</sup>
Monitoring and analysis	As far as practical having regard for other data collection priorities, the AFMA observer program is to include daily seabird abundance counts during the season extension and standard season. AFMA's observer data must be analysed by appropriate scientific experts under the guidance of SARAG.
Seabird interaction limits <sup>2</sup>	<b><i>Arrangements for the 5 identified species.</i></b> If one of the 5 identified species is caught and killed by fishing gear during the trial, fishing will cease for that season. Continuation of the trial will be subject to the following rules:

<sup>1</sup> This clarifying point was provided to the AFMA Commission to assist with their decision making and not expressly considered by SouthMAC. AFMA Management has informed the AFMA Commission that this is the case. not expressly considered by SouthMAC however AFMA Management has notified SouthMAC of its inclusion.

<sup>2</sup> 'Identified' seabird species are: Wandering albatross, Black-browed albatross, Grey headed albatross, Grey petrel, Soft-plumaged petrel. 'Other' seabird species are species that are not an 'identified' species.

- if the mortality occurs in week one of the trial extension period, the trial will cease.
- if the mortality occurs in week two of the trial, the second week of the extension period will be removed from the trial. The trial may continue in week one, but no fishing will be permitted in week two in future seasons and there will be no consideration of including week three in the trial.
- if week 3 is added to the extension period and the mortality occurs in week three of the trial, the third week of the extension period will be removed from the trial. The trial may continue in week one and two, but no fishing will be permitted in week three in future seasons.

***Arrangements for all other seabird species ('other' seabirds).***

If three of the 'other seabirds' are caught and killed by fishing gear during the trial extension period within a single fishing season, the trial in its entirety will cease for that season. Recommencement of the trial in the next or future seasons will be considered by SouthMAC and decided by AFMA based on a review of circumstances of interactions.

Ecological Risk Assessment for the Macquarie Island Fishery – Longline fishing

1. AFMA has been working with CSIRO to conduct the first Ecological Risk Assessment (ERA) for longline fishing in the Macquarie Island Toothfish Fishery (MITF). The last ERA completed in MITF was for demersal trawling in 2007 ([Demersal trawl](#)).
2. The draft results of the longline fishing ERA were considered by SARAG 71(see page 14 of **attachment 4.1b – SARAG Meeting Record**). A final ERA report addressing SARAG's comments will be provided to SouthMAC for consideration.
3. In summary the draft ERA is based on data from 2019 to 2023. Since that time, CSIRO has updated parts of the ERA methodology. In summary a total of 43 species across all ecological components were assessed in the draft ERA. Seven species were evaluated at level 2. Six seabird species were evaluated at medium risk following a PSA. These comprised of three Albatross species: Southern Royal Albatross *Diomedea epomophora*, Wandering Albatross *Diomedea exulans* and the Black-browed Albatross *Thalassarche melanophris*. The remaining three species comprised of Petrels, i.e., Cape Petrel *Daption capense*, Southern Giant Petrel *Macronectes giganteus* and Northern Giant Petrel *Macronectes halli*. The protected Porbeagle Shark *Lamna nasus* was evaluated at low risk following a bSAFE analysis.

AFMAs Climate Adaption Program

4. AFMA's Climate Adaptation Program is implementing a range of measures to incorporate climate change information and risks into decision making frameworks, to ensure that management of Commonwealth fisheries is adaptive to the impacts of climate change.
5. At its November 2023 meeting, the AFMA Commission approved a proposal to proceed with a trial implementation of AFMA's draft Climate Risk Framework (CRF). The initial draft CRF was developed throughout 2023 in consultation with key stakeholders as an approach to integrate climate risks into formal decision-making processes at AFMA.
6. AFMA established a Working Group to support the trial implementation of the CRF and provide strategic advice to the AFMA Commission and AFMA Management on the development, coordination and implementation of the CRF across Commonwealth fisheries. The Working Group membership includes Dr Beth Fulton, Dr Alistair Hobday, Dr David Smith and Dr Keith Sainsbury, with administrative support from AFMA's Climate Adaptation team.
7. The Working Group met with industry representatives, management and scientific stakeholders at a meeting on 9 October 2024 to consider the trial application of the CRF to Patagonian toothfish in the MITF. The meeting provided an opportunity to leverage the expertise of the CRF Working



Group, better understand the impacts of climate on toothfish in the MITF and consider how climate impacts can be incorporated in the MSE testing of the harvest strategy.

8. Outcomes of the Working Group meeting will be provided to SouthMAC following consideration by SARAG at its May 2025 meeting.
9. For more information, please contact Daniel Corrie on 0447 019 916, [daniel.corrie@afma.gov.au](mailto:daniel.corrie@afma.gov.au)

#### Sub-Antarctic Fisheries Electronic Monitoring trial

10. The Southern Ocean Fisheries Electronic Monitoring Trial is now underway. The aim of the project is to undertake a comprehensive trial to understand the feasibility and applications of using EM as an independent data collection and logbook data validation tool in the Southern Ocean Fisheries (SOF). The objectives of the project include:
  - i. To deploy electronic monitoring systems on three commercial fishing vessels operating in the SOF to collect required fishing data for a period of up to one year.
  - ii. To determine to what extent EM can be used to collect and verify current data requirements as previously identified by the fishery/SARAG.
  - iii. To undertake a cost analysis for the use of EM and supplementing data collection programs to collect required fishery data in the SOF.
  - iv. To determine the potential of artificial intelligence machine learning (AIML) applications in the SOF.
11. The first meeting of the Southern Ocean Fisheries Business Reference Group (SOFBRG) held on 25 July to:
  - i. confirm and finalise the Terms of Reference for the Southern Ocean Fisheries Business Reference Group (SOFBRG).
  - ii. note the final Southern Ocean Fisheries Electronic Monitoring Trial Project Plan.
  - iii. consider updates on the progress of EM hardware installations across trial vessels. The Antarctic Discovery has successfully completed its system upgrade, which includes upgrades for artificial intelligence (AI) development. The Antarctic Aurora is scheduled for installation in November 2024, and the Cape Arkona is planned for installation in January 2025.
  - iv. note CSIRO update on the AIML seabird detector and counter, Jonathan, which was initially tested on the RV Investigator in May this year. This involved the deployment of cameras and a processor that could detect birds in near real-time on the vessel. These records are now being compared with co-incident human observer counts on the vessel and in the lab. The next version of the Jonathan software will be deployed on RV Investigator in November 2024.
12. The next SOFBRG meeting is scheduled for November 2024.

#### Fishery Assessment Plans (FAP)

13. The FAP for the HIMI Fishery for the 2024-25 and 2025-26 fishing years is due to be developed once TACs have been set for the Fishery by the AFMA Commission and will be provided to SARAG and SouthMAC members. The FAP is made pursuant to Section 9 of the [Heard Island and McDonald Islands Fishery Management Plan 2002](#) and requires AFMA, in consultation with the RAG, MAC and SFR holders, to develop and implement a FAP that sets out the monitoring program for the fishery.

#### Live release of small toothfish

14. Industry has sought clarification from AFMA and AAD on whether it would be permissible to release small live Patagonian toothfish (*Dissostichus eliginoides*) in the HIMI Fishery. Industry advises that these small toothfish (less than 1 kilogram) have little commercial value and that approximately 1000 kilograms of small toothfish may be caught each trip. Having reviewed CCAMLR obligations,

AFMA is of the view that live releases of toothfish with a high expectation of survival would be permissible under CCAMLR rules and not count towards the CCAMLR agreed TAC.

15. AFMA is also reviewing domestic arrangements for any impediments and/or considerations to allowing the release of small toothfish that have a high expectation of survival.
16. At their meeting on 28-29 August, AFMA Management sought SARAG advice on any scientific (sampling) related considerations in allowing the live release of small toothfish caught using longline that have a high expectation of survival (see Agenda Item 12 in **attachment 4.1b**, SARAG 71 Meeting Record). SARAG noted the advice from the AAD at the meeting that they do not foresee any scientific implications in releasing small toothfish as they make up a very small proportion of the catch, however minor changes may be required to the current sampling method to ensure that the fish are being captured in the random sampling undertaken by the observers (including whether the fish need to be tagged before they are released).
17. SARAG 71 recommended that the AAD and CSIRO undertake an analysis of historical data for HIMIF and MITF, respectively, of small fish under 1kg to better understand the proportion of catch that they make up. This analysis will also inform the changes required to current sampling protocols as well as any other relevant onboard processes to ensure data on small fish continues to be captured and survival of released fish is maintained.
18. SARAG noted that SouthMAC will be consulted on this matter following SARAG's advice on any changes to sampling protocols having considered the results of the recommended analysis.
19. It is AFMA's intention, subject to resourcing, is to continue to progress this matter subject to SARAG and SouthMAC advice.

**Table 2.** Summary of advice on proposed longline fishing season extension trial arrangements for the MITF from SARAG70, SouthMAC43 and the Protected Areas and Species Section of the Australian Antarctic Division (AAD).

Trial component	Detail as supported by SARAG 70	AFMA management advice to SouthMAC 43 inclusive of advice from the AAD	SouthMAC 43 recommendation
Purpose	Consistent with AFMA objectives to maximise net economic returns and have regard to the impact of fishing on non-target species, the purpose of the trial is to test whether longline fishing in the extension periods can be undertaken without adding unacceptable additional risk to seabirds.	No change	No change
Starting two-week extension period	1-14 September. Week one is 1-7 and week two is 8-14 September.	No change	No change
Possible third week inclusion to the extension period.	Once a minimum of 250,000 hooks have been set in the period 8-14 September (week 2), over at least three fishing seasons, SARAG will discuss the results to date of that trial extension period. If the RAG is satisfied that any new data does not increase the level of risk to unacceptable levels, then AFMA Management will consider extending the trial period to 21 September once 300,000 hooks have been set in the week 2.	SARAG70 recommended two-step process for extended the trial to week 3, with an AFMA decision to extend the trial occurring (once 250,000 hooks had been set in week two over at least three seasons) ahead of requiring a further 50 000 hooks to be set. The intention of such an approach was to ensure that an extension, if approved, would occur in the very next season the prerequisite conditions had been met. Upon reflection, AFMA Management did not consider it necessary to have the two-step process to achieve this outcome	No change to AFMA proposed approach
Implementation	Not applicable. AFMA did not seek SARAG advice from SARAG on this aspect of the trial.	Fishing in the trial will be authorised through Scientific Permits granted under section 33 of the <i>Fisheries Management Act 1991</i> . Only SFR holders in the MITF will be eligible to participate in the trial.	No change to AFMA proposed approach
Minimum effort required to complete the trial	500 000 hooks set within each week (1-7, 8-14 and if included, 15-21 of September).	For clarity and in responses to a suggestion from AAD to identify when the trial is to commence, AFMA Management added: 'To avoid doubt, hooks set within week one in 2022	SouthMAC accepted the proposed approach but recommended that consideration of post-trial arrangements for the two-week extension period (1-14 Sep) commence once the minimum effort deployment of 500,000 hooks has been

		and 2023 count towards the minimum number of hooks to be set in that week for the trial’.	achieved in each of those weeks. This means that a minimum of 500,000 hooks need to be set in week one and a minimum of 500,000 hooks need to be set in week two.
Monitoring and analysis	As far as practical having regard for other data collection priorities, the AFMA observer program is to include daily seabird counts during the season extension and standard season.	For clarity AFMA Management added that AFMA’s observer data must be analysed by appropriate scientific experts under the guidance of SARAG.  AAD recommended replacing the word ‘data’ with ‘abundance’.	No change to AFMA and AAD additions.
Seabird interaction limits	<p><b>Arrangements for the 5 identified species.</b></p> <p>If one of the 5 identified species is caught and killed by fishing gear in week one of the trial extension period, the trial in its entirety will cease.</p> <p>If one of the 5 identified species is caught and killed by fishing gear in week two of the trial, the second week of the extension period will be removed from the trial. The trial may continue in week one, but no further fishing will be permitted in week two and there will be no consideration of including week three in the trial.</p> <p>If week 3 is added to the extension period and one of the 5 identified species is caught and killed by fishing gear in week three of the trial, the third week of the extension period will be removed from the trial. The trial may continue in week one and two, but no further fishing will be permitted in week three.</p> <p><b>Arrangements for all other seabird species (‘other’ seabirds).</b></p> <p>If three of the ‘other seabirds’ are caught and killed by fishing gear during the trial extension</p>	<p>Having regard for advice from the AAD and other improvements to clarify process, AFMA proposed the changes below (underline text is new text). It was AAD’s initial preference for option 1.</p> <p><b>Arrangements for the 5 identified species.</b></p> <p><u>If one of the 5 identified species is caught and killed by fishing gear during the trial, fishing will cease for that season. Continuation of the trial will be subject to the following rules:</u></p> <ul style="list-style-type: none"> <li>• if the mortality occurs in week one of the trial extension period, the trial in its entirety will cease.</li> <li>• if the mortality occurs in week two of the trial, the second week of the extension period will be removed from the trial. The trial may continue in week one, but no further fishing will be permitted in week two and there will be no consideration of including week three in the trial.</li> <li>• if week 3 is added to the extension period and the mortality occurs in</li> </ul>	<p>SouthMAC accepted the proposed approach from AFMA and AAD with an alternate option 2 (see below – underline text is new text). SouthMAC also recommended several editorial improvements that added clarity to the arrangements for the 5 identified species but did not change the substance.</p> <p><b>Arrangements for all other seabird species (‘other’ seabirds).</b></p> <p>If three of the ‘other seabirds’ are caught and killed by fishing gear during the trial extension period within a single fishing season, the trial in its entirety will:</p> <p><del>Option 1: cease in its entirety; or</del></p> <p><b>Option 2:</b> cease for that season.</p> <p>Recommencement of the trial in the next or future season will be considered by SouthMAC and <u>decided</u> by AFMA based on a review of <u>circumstances of interactions</u>. <del>by AFMA of any exceptional circumstances.</del></p>

	<p>period within a single fishing season, the trial in its entirety will cease, pending review by AFMA of any exceptional circumstances.</p>	<p>week three of the trial, the third week of the extension period will be removed from the trial. The trial may continue in week one and two, but no further fishing will be permitted in week three.</p> <p><b>Arrangements for all other seabird species ('other' seabirds).</b></p> <p>If three of the 'other seabirds' are caught and killed by fishing gear during the trial extension period within a single fishing season, the trial in its entirety will:</p> <p><b>Option 1:</b> cease in its entirety; or</p> <p><b>Option 2:</b> cease for that season.</p> <p>Recommencement of the trial in the next or future season will be considered by SouthMAC, based on a review by AFMA of any exceptional circumstances.</p>	
Seabird interaction report	<p>If a seabird is caught and killed, AFMA will seek further information from industry on the potential cause of the interaction and, if relevant, whether industry could address the cause.</p>	<p>AAD recommended that following change:</p> <p>If a seabird is caught and killed, AFMA will seek further information from industry on the potential cause of the interaction and, <u>identify what additional mitigation measures will be required to</u> address the cause.</p>	<p>SouthMAC recommended:</p> <p>If a seabird is caught and killed, AFMA will seek further information from industry on the potential cause of the interaction and, identify what additional mitigation measures <u>may be applied</u> <del>will be required</del> to address the cause.</p>

### Outcomes from the 43<sup>rd</sup> meeting of CCAMLR

The 43rd meeting of the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR-43) was held 14-25 October 2024 at the CCAMLR Headquarters in Hobart, Tasmania.

The Australian delegation was led by the Australian Antarctic Division of the Department of Climate Change the Environment, Energy and Water, and included representatives from the Department of Foreign Affairs and Trade, Department of Agriculture and Fisheries and Forestry, Australian Fisheries Management Authority, Attorney-General's Department, Tasmanian State Government, conservation NGOs, the fishing industry and academia.

#### ***Outcomes relating to Australia's fishing interests:***

- Catch limits for the toothfish and icefish fisheries within Australia's exclusive economic zone around Heard Island and McDonald Islands (HIMI) were agreed for two seasons:

	2024/25	2025/26
Icefish	1,824t	1,723t
Toothfish	2,120t	2,120t

- CCAMLR agreed to undertake a comprehensive review of the Decision Rules through a scientific Management Strategy Evaluation, to provide long-term certainty and precautionary management for all toothfish fisheries. Australia will participate actively in this work.
- The stock assessment and catch limits for the Ross Sea (subareas 88.1 and 88.2) were adopted by the Commission. In line with the approach taken in 2023, the access paragraph was removed from the relevant conservation measures. As such, all notified vessels (including 2 Australian vessels and vessels from Russia and the UK) will participate in the Ross Sea fishery.
- Australia's notifications to fish in Division 58.4.2 in East Antarctica were endorsed. One member continued to block the exploratory fishery in Division 58.4.1, as it has done since 2018.
- Australia's proposal (co-sponsored by Japan and Korea) to clarify the requirements for standardised sampling gear for research plans for exploratory toothfish fisheries (CM 21-02), was not agreed by the Scientific Committee or Commission.

### **Outcomes relating to the krill fisheries:**

- Some Members again blocked updated catch limits for the East Antarctic krill fishery, following further analysis presented by Australia and Japan to further support the Scientific Committee's endorsement in 2023.
- A suite of proposals, co-sponsored by Australia, aimed at improving the management, transparency and operational standards of Antarctic krill fisheries were again blocked.
- Discussions on the Antarctic Peninsula region krill fishery focused on harmonising strengthened fishery management arrangements (including a data collection plan proposed by Australia) with a Marine Protected Area. Most Members supported progressing a harmonised approach, however, one member continued to push for increased catch limits without any intention of agreeing to an MPA. Concerningly, the Commission could not reach consensus on the extension of CM 51-07 for the 2024/25 season, which requires fishing effort to be spatially distributed across the krill fishery.

### **Other outcomes:**

- Australia's proposal for a Code of Conduct to ensure safe and respectful behaviour at CCAMLR events (cosponsored by France, Republic of Korea, and the US) received broad support from most Members, but was blocked by two members.
- Consensus was again not achieved on the proposal for an East Antarctic Marine Protected Area (EAMPA) led by Australia, the European Union and its Member States. The EAMPA proposal continued to receive strong support from most CCAMLR Members, with Chile joining as a co-sponsor. Consensus was not achieved on any other MPA proposals. Australia joined as a co-sponsor to the Weddell Sea MPA Phase 2 proposal led by Norway.
- The Commission agreed to de-list the *El Shaddai* from the Contracting Party IUU vessel list, as requested by the Republic of South Africa.
- The United Kingdom was elected to the Chair for 2025 and 2026.
- Other appointments included: Dale Maschette (Australia) as Co-Convenor of the Working Group on Statistics, Assessments and Modelling; Adam Berry (New Zealand) as Chair of the Standing Committee on Implementation and Compliance; and Maximo Gowland (Argentina) as Chair of the Standing Committee on Administration and Finance.

In terms of updated conservation measures, I have provided a table of updated measures to the MAC.

## Conservation Measures updated at CCAMLR-43

CM	Title
<i>Measures on compliance</i>	
10-03	Port inspections of fishing vessels
<i>Revised measures on general fishery matters</i>	
23-01	Five-day catch and effort reporting
24-05	Fishing for research purposes pursuant to CM 24-01
25-02	Minimisation of the incidental mortality of seabirds in the course of longlining
25-03	Minimisation of the incidental mortality of seabirds and marine mammals in the course of trawling
<i>Revised measures on fishery regulation</i>	
32-09	Prohibition of directed fishing for <i>Dissostichus spp.</i> except in accordance with specific conservation measures
33-02	Limitation of by-catch in Division 58.5.2
33-03	Limitation of by-catch in new and exploratory fisheries
41-01	General measures for exploratory fisheries for <i>Dissostichus spp.</i>
41-03	Limits on the fishery for <i>Dissostichus spp.</i> in Subarea 48.4
41-04	Limits on the fishery for <i>Dissostichus mawsoni</i> in Subarea 48.6
41-05	Limits on the fishery for <i>Dissostichus mawsoni</i> in Division 58.4.2
41-06	Limits on the fishery for <i>Dissostichus eleginoides</i> in Division 58.4.3a
41-07	Limits on the fishery for <i>Dissostichus mawsoni</i> in Division 58.4.3b
41-08	Limits on the fishery for <i>Dissostichus eleginoides</i> in Division 58.5.2
41-09	Limits on the fishery for <i>Dissostichus mawsoni</i> in Subarea 88.1
41-10	Limits on the fishery for <i>Dissostichus mawsoni</i> in Subarea 88.2
41-11	Limits on the fishery for <i>Dissostichus mawsoni</i> in Division 58.4.1
42-02	Limits on the fishery for <i>Champsocephalus gunnari</i> in Division 58.5.2
51-01	Precautionary catch limitations on <i>Euphausia superba</i> in Subareas 48.1–48.4
51-02	Precautionary catch limitation on <i>Euphausia superba</i> in Division 58.4.1
51-03	Precautionary catch limitation on <i>Euphausia superba</i> in Division 58.4.2
51-04	General measures for exploratory fisheries for <i>Euphausia superba</i>
<i>Protected Areas</i>	
91-02	Protection of the values of Antarctic Specially Managed and Protected Areas





## Sub-Antarctic Fisheries Management Advisory Committee

Meeting 44  
2024

5 November

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### Agenda item 6: HIMI Trawl Gear Modification Trial

**Purpose:** FOR DISCUSSION AND ADVICE

#### Recommendation

That SouthMAC:

1. **NOTE** that the trial of modified trawl gear in the HIMI Fishery commenced in November 2020, following SARAG's consideration of an Industry proposal in 2019 to trial lighter trawl gear with smaller bobbins and rock hopper rubber discs (High lift Bastard net + lighter rig) than currently allowed, aiming to reduce skate bycatch, reduce benthic impact and improve operational efficiency (**Attachment A**). Industry has provided updates throughout the trial, including preliminary summaries of the data (**Attachment B**) and discussion paper (**Attachment C**).
2. **RECALL** that SouthMAC 40 considered an update on the trial at its meeting on 6 May 2022, and noted the preliminary results that showed lower skate bycatch with a higher ratio of mackerel icefish to skates when using the lighter new gear, and that the new gear also appeared to have reduced impacts on the benthos. SouthMAC 40 recommended for AFMA to pursue amending the Regulations to relocate trawl gear specifications to a more appropriate legislative instrument.
3. **NOTE** that SARAG 71 considered the status of the project at its meeting on 28-29 August 2024, including an update on the trial from industry. SARAG supported adopting the new trawl gear and deemed the trial complete, given the lower bycatch and reduced overall environmental impact shown by the trial results. SARAG recommended that AFMA progress the implementation of the new trawl gear, including consultation with SouthMAC (see Agenda Item 8.3 of SARAG 71 Meeting Record, **Attachment 4.1b**, page 16).
4. **DISCUSS** and **PROVIDE ADVICE** on recommending the use of the new trawl gear on an ongoing basis. Specifically, to allow the use of:
  - a. bobbins that are 400 mm in diameter to be used. Current regulation prohibits the use of bobbins that are less than 520 mm in diameter; and
  - b. rock hopper rubber discs that are 200 mm in diameter. Current regulation prohibits the use of rock hopper rubber discs that are less than 400 mm in diameter.

#### Key Issues

5. Industry put forward a proposal in 2019 seeking to trial modified trawl fishing gear due to concern over the level of skate bycatch when trawling for mackerel icefish. Industry was further concerned that the skate bycatch limit (120 tonne) could be reached before the end of the season if the icefish quota increases in future years. Industry further pointed out that the

minimum gear requirements in the HIMI Regulations restrict Industry's ability to utilise trawl gear technology that minimises the impact of fishing on non-target species and the environment. Furthermore, the Regulations have not kept up with the gradual variation of trawl ground gear that has occurred over time, for example the transition from using bobbins to chains or weight and wire rope.

6. [SARAG 59](#) supported a 12-month trial which commenced in November 2020 under a scientific permit. Since the start of the trial, Industry have continued to provide periodic updates to SARAG on the progress of the trial, including preliminary summaries of the data collected. At its most recent meeting SARAG 71 SARAG supported adopting the new trawl gear and deemed the trial complete. SARAG recommended that AFMA progress the implementation of the new trawl gear, including consultation with SouthMAC, noting that AFMA needs to progress legislative amendments for the change to take effect.
7. SouthMAC is now being asked to consider advice from SARAG and provide advice on allowing the new trawl gear to be used in the fishery on an ongoing basis.
8. Relevant trawl gear specifications under Part 4 of the [Fisheries Management \(Heard Island and McDonald Islands Fishery\) Regulations 2002](#) (the HIMI regulations) are:
  - a. the mesh size used for mackerel icefish must be at least 90 mm at every part of the net (note this reflects CCAMLR CM 22-03);
  - b. the bobbin must be more than 520 mm in diameter; and
  - c. the rock hopper rubber disc must be more than 400 mm in diameter.
9. Specifications of the new gear that has been trialled, and now recommended for use by SARAG 71, that are not compliant with current specifications (above) are:
  - a. bobbins of 400 mm in diameter; and
  - b. rubber discs of 200 mm in diameter.
10. As advised at SouthMAC 43, AFMA is working with the Department of Agriculture, Fisheries, and Forestry (the Department) to repeal the gear specifications contained in Part 4 of the HIMI regulations. It is intended for gear specifications to then be implemented through Statutory Fishing Right (SFR) conditions. This will bring the fishery into line with other Commonwealth fisheries. Unlike regulations which require Ministerial approval and a Governor General decision, SFR conditions may be varied by AFMA.

## **Background - timeline of SARAG and SouthMAC advice on the trawl gear modification trial**

### **2019**

11. At [SARAG 59](#) (May 2019), Austral put forward a proposal (**Attachment A**) to modify the trawl fishing gear used to commercially target mackerel icefish to reduce skate bycatch and benthic impacts and increase operational efficiencies. The trawl gear modifications include:
  - smaller bobbins of 400 mm
  - smaller rock hoppers rubber discs of 200mm
  - new trawl net with larger mesh size to reduce bycatch
  - different ground rope configuration (smaller ground rope diameter) to target icefish whilst reducing skate bycatch
  - overall 30% lighter than the gear being used at the time

12. Austral further noted that their proposed gear modifications would require the use of smaller bobbins and rock hopper rubber discs than is currently allowed under the HIMIF Regulations which specify a minimum size (520mm for bobbins and 400mm for rock hopper discs). In considering the proposal, SARAG 59 was asked to consider:
  - the likelihood of the new gear reducing skate and other bycatch;
  - any environment impacts and/or benefits of the proposal; and
  - any other issues as relevant to SARAG
13. SARAG noted that the modified trawl gear is primarily for commercial icefish fishing and not for conducting the Random Stratified Trawl Survey (RSTS) due to the need to standardise survey gear across years.
14. SARAG members at the time did not express any concerns with using a lighter rig for mackerel icefish and AAD suggested that a trial could compare the two gear set ups. SARAG 59 supported Austral running the fisheries trial for 12 months either through statutory fishing right (SFR) conditions or a scientific permit. SARAG 59 supported implementation of the new gear requirements if the trial proves that the new gear specifications reduce bycatch.
15. While the trial is underway, AFMA would commence the process of amending the [Fisheries Management \(Heard Island and McDonald Islands Fishery\) Regulations 2002](#) (the Regulations) to remove the trawl gear requirements and implement any gear specifications through SFR conditions which are easier and quicker to amend if required.

## 2020

16. The trial commenced under Scientific Permit in November 2020. The trial was undertaken in December 2020/January 2021 and March/April 2021 with 54 shots completed using the new trawl gear on one fishing vessel.

## 2021

17. A preliminary summary of the raw data collected during the trial was presented to [SARAG 63](#) in April (an updated version of this presentation is provided in **Attachment B**). Whilst the data was not enough to support analysis to conclusively determine the difference between the gears, it showed a lower skate bycatch rate, and with a higher ratio of mackerel icefish to skates than when using the original gear (using data from a different fishing vessel from 2016/17-2020/21). The lighter gear also appeared to not be impacting the benthos as much with the skipper on the vessel reporting less sand and weeds in the net and also less damage to the mackerel icefish.
18. [SARAG 63](#) requested that the trial continue for a further 12 months given the insufficient amount of data for the new trawl gear and that if possible, both fishing vessels, using the differing gears, fish in the same period to allow for a direct comparison of the gear types.

## 2022

19. [SARAG 65](#) considered a further update from Industry on the progress of the trial in 2022 (**Attachment C** discussion paper) showing similar results to the data collected in 2021 in terms of improved catches of icefish, lower retention of skate bycatch in the new gear and greater fuel and operational efficiency while towing. In 2021, 59 icefish trawls were undertaken with the

Champion net (old net) and 57 with the new net design. SARAG noted that the new net is larger with a greater horizontal (50%) and vertical opening, lighter, and can be trawled faster resulting in shorter tows covering a greater footprint.

20. SARAG also noted AAD advice that a preliminary review of 12 paired hauls found that the bycatch CPUE was lower in the new net, which has an improved icefish:skate ratio. Interrogation of species composition found that *B. irrada* presence was substantially lower in the new net compared to the Champion net.
21. SARAG noted that skate condition is of interest, in addition to species volumes, and that the proportion of released skates was similar between the two nets, and that the condition of those skates was poorer in the new net, potentially as a function of net dimensions.
22. Referring to previous advice that the trial should comprise a minimum of 40 tows, that a more fulsome analysis of the results was pending, and not wanting to discourage innovation, SARAG recommended that the trial continue and noted that further information would enhance understanding of the performance of the new net.
23. SARAG requested that a presentation on performance of the new net be provided to the mid-year skate bycatch workshop. The workshop (industry, AFMA and AAD) on skate bycatch workshop was held on 10 August 2022 at which the results of the trial up to that point were presented and discussed. A comparison of the icefish trawl nets showed positive signs that the new bastard trawl net has lower skate CPUE than the older Champion net, however large catches were still evident.

## 2023

24. [SARAG 68](#) noted a further industry update at their meeting in May (**Attachment B**). Three years of fishing with the new gear type under a scientific permit had occurred. The first two years of data were encouraging, and that in 2022 side by side tows facilitated near direct comparison of the old trawl net against the trial net. Noting the discussions at SARAG 65 requiring completion of 40 tows, SARAG did not make any additional requests for data at this time and noted that at the conclusion of the trial the results should be passed to the MAC.
25. Austral clarified that the 2023 data presented in the update was compared against data collected in the first year of the trial only, as Dr Cleeland provided data in the second year of the trial. SARAG heard that icefish is highly variable between years. Comparison of skate bycatch between periods representing good or poor icefish catch rates was described, with monthly icefish catch compared between 2021 and 2023. In January 2023, when icefish catch was poor, skates were caught at a comparably lower proportion than in 2021 with higher icefish catch. Members noted that in February 2022, good icefish catches were reported, with a 10-day average catch of 11t of icefish against 400kg of skates, resulting in a 3.5% skate proportion of the total catch.
26. Similar catch rates were reported over 8 days in February 2023, and during that period there was a 5.5% skate proportion. While higher than 2022, it was lower compared to the old gear performance which had lower icefish catches and a skate bycatch proportion of 7%. Noting the discussions at SARAG 65 requiring completion of 40 tows, SARAG did not make any additional

requests for data at this time and noted that at the conclusion of the trial the results should be passed to the MAC.

27. SouthMAC has been supportive of the trial and has recommended that AFMA pursue amending the HIMIF Regulations to relocate trawl gear specifications to a more appropriate legislative instrument such as SFR conditions ([SouthMAC 40 Meeting Record](#)).

### **Attachments**

**Attachment A:** Trawl gear modification proposal paper by Austral (2019)

**Attachment B:** Trawl gear modification proposal presentation by Austral

**Attachment C:** Updated trawl gear modification proposal paper by Austral

## Discussion Paper (Austral Fisheries)

### Heard Island and McDonald Islands Fishery: Trawl Modification Trial

At SARAG 59 (May 2019), Austral put forward a proposal to modify the HIMI Regulations on trawl gear to be less restrictive so that industry could be more productive in modifying gear for reducing bycatch, reducing benthic impacts, increasing operational efficiencies. For reference, this original proposal is provided below in full. From this proposal, SARAG and SouthMAC agreed that a trial could be undertaken using a new net and ground gear to target icefish with the intent to reduce skate bycatch, under a Scientific Permit. Since this time, Austral have used this new trawl net and ground gear to target Icefish on two trips on the Cape Arkona. The Atlas Cove has continued to use the old gear in this time.

At SARAG 63 (April 2021), SARAG was presented with a preliminary summary which compared raw icefish and skate catch and effort data. This data indicated that the ratio of Icefish to skate catches with the new gear performed well against the old gear, however SARAG requested that further trials take place given the relatively low quantity of tows used with the new gear. AAD was tasked with analysing all relevant 2020-21 and 2021-22 season Icefish catch and effort data comparing both gear types to present to SARAG 65 in May 2022.

By way of (industry) update, the performance of the new gear once again performed well this season, and to aid with analysis, there were two trawlers fishing at the same time, with different gear, for 10 consecutive days. Analysis of this raw data over this 10 day period indicated:

- The new gear averaged 11.4t Icefish and 400kg skate retained per shot (3.5% skate ratio), and 28.5t/day Icefish.
- The old gear averaged 6.9t Icefish and 474kg skate retained per shot (6.8% skate ratio), and 24t/day Icefish.
- For the new gear, this equated to:
  - 19% more Icefish per day
  - 65% more Icefish per shot
  - Almost half the skate retained ratio of the old gear
  - Greater fuel and operational efficiency while towing
- **In 2023, when the Icefish fishery was catching Icefish at very similar rates, over this 8 day period, it averaged 6.2t/shot (5.5% skate ratio), and 28t/d with the new gear. With the sale of our one of our vessels we can no longer have both gears fishing at the same time.**

If the AAD analysis also supports this reduction in bycatch and improved efficiency, we would hope that the RAG considers this trial complete and a success and recommend to SouthMAC that the restrictive HIMI Regulations be modified to allow more flexibility with regard to trawl gear, as is suggested in the original SARAG 59 proposal below.

## SARAG 59 - Proposal for modifying HIMI Regulation on trawl gear (Austral Fisheries)

Austral would like to explore the possibility of broadening (or removing) the current HIMI Regulation on trawl gear (Part 4, Section 9) so that we have the ability to modify our current gear to reduce bycatch of skate while fishing for icefish, but at the same time, provide enough flexibility so that any future modifying of gear for either operational efficiencies, or reducing bycatch or benthic impacts can be made.

The HIMI Regulations state:

*(1) The holder of a statutory fishing right must not use either of the following for fishing in the area of the fishery:*

*(a) a bobbin that is less than 520 millimetres in diameter;*

*(b) a rock hopper rubber disc that is less than 400 millimetres in diameter*

These Regulations came into place in the 1990s when these were the actual measurements of our existing ground gear at the time on the Austral Leader, targeting toothfish, and so it eventually became a HIMI-wide Regulation. We believe that with the improvement in fishing gear technology over the years, that this Regulation is restrictive, and that environmental impacts could be further minimised with gear that currently is prohibited under the current Regulation. Another point to consider, is that we are currently allowed to use ‘no bobbins’ for ground gear (e.g. just chain; or weights and wire rope). That reinforces, to us, of the existing allowance of variation of ground gear, which we hope to be able to increase the flexibility around, to minimise environmental impacts; reduce catch of non-target species; and to improve both economic and operational efficiencies in the fishery.

For reference, we haven’t used bobbins for around 10 years, and our rockhopper discs are 550mm diameter (but over time wear down to around 500mm).

We are interested in moving toward a different ground rope configuration for Icefish fishing (Figure 1) with the aim of reducing unwanted bycatch, specifically skates, which are a potential limiter for the toothfish fishery in years with a moderate icefish TAC and will be a limiter in years with a high icefish TAC. This proposed gear is around 34% lighter (immersed weight) than our current gear. It has a smaller ground rope diameter for easier handling and improves the fit of this rig onto the net drum. The new trawl net that we have in mind also has a larger mesh size to help reduce unwanted bycatch. Unfortunately, while this rig is much lighter, the bobbins and discs are not permitted under the current Regulations because they are smaller than the specified measurements (bobbins 400mm and rubber discs 200mm diameter).

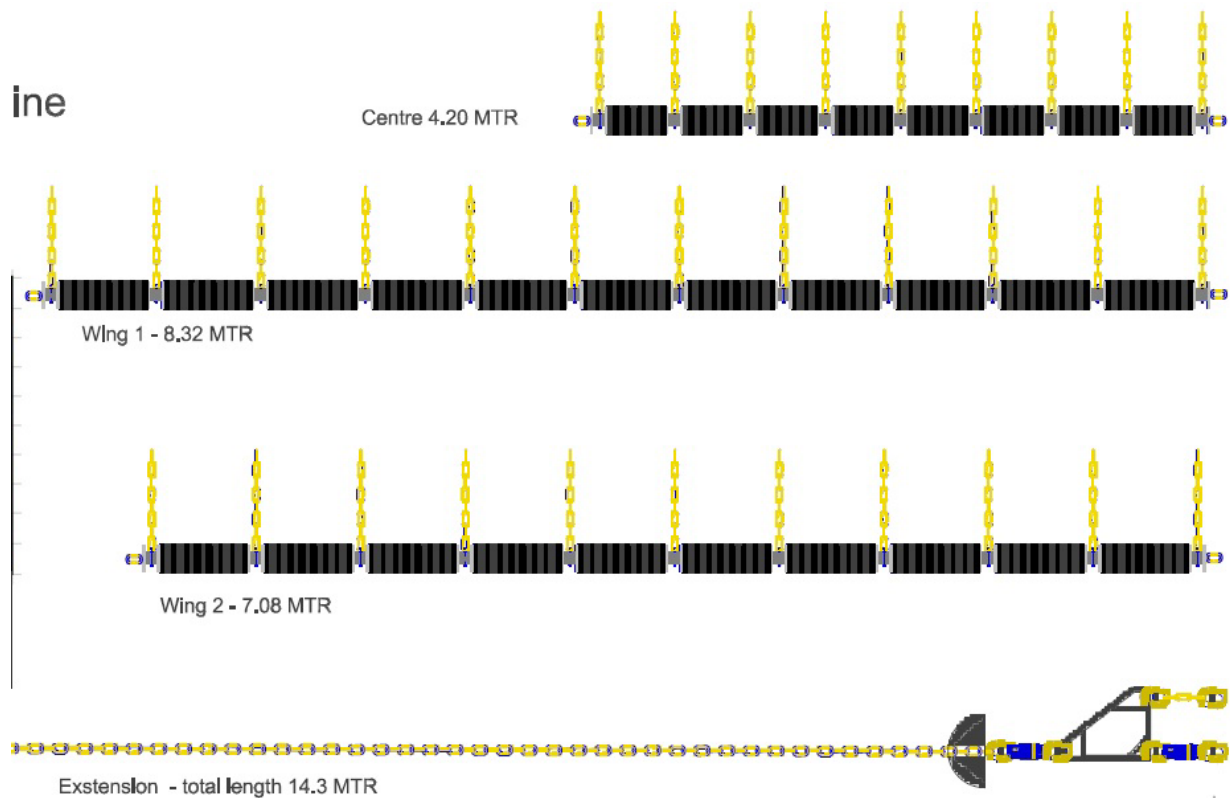


Figure 1: Proposed gear configuration prepared by Hampidjan Australia

We also note that the icefish fishery is confined to a very small area of the fishery, which has had repeated trawls over a long period, and so there will be minimal impact to the seabed regardless of bottom gear configuration when fishing over these same areas.

An alternative to removing the regulation, would be to amend it to specify that the current Regulation only applies to the toothfish fishery, or possibly to keep this Regulation in place but amend it to make it less prescriptive.

The current alternative approach for industry is midwater trawling, but the main problem with this method is there has to be a dense assemblage of icefish to make this a viable method of fishing. When the fishery is rather scattered, like it has been this year, we have been using bottom gear following the specifications in the Regulations, but as we have seen, this has its problems because of high skate and unicorn icefish bycatch. Historical data from midwater trawling on Gunnari Ridge and the Heard Island Plateau shows very minimal benthic impact, and bycatch levels of skates and unicorn icefish were also significantly reduced. These midwater trawls were usually fished on the bottom as well. We aim to achieve similar results with this new trawl and ground rope.

If the RAG and MAC are comfortable with this proposal, ideally, we are hoping to be able to use this new ground gear December 2019 at the earliest.



# Comparing the old “Champion trawl + rockhopper rig” against the new “High lift Bastard net + lighter rig”

## Summary:

- Compared raw C1 data from 2015/16 season through to current 2020/21 season
- Total tows with old gear (2016/17 - 2020/21) = 635
- Total tows with new gear (2020/21) = 54
- Given the low number of tows with the new gear, I have also examined the data and grouped it by icefish CPUE, by month, and by fishing season, to see if there were any obvious trends
- Kilograms used in analysis were ‘retained’ plus ‘released’ individuals (i.e. all individuals caught in the net). Weight of released individuals were calculated using average weight of retained for that tow.
- It should also be noted that the new configuration fishes a larger area than the old gear, which also must be taken into consideration when viewing this data:

	Headline length (m)	Groundrope length	Headline height	Door spread	Horizontal opening
Champion	38.5	18.3	5.5	185	25.0
Bastard	59.2	35.4	10.0	160	69.7
Difference	+154%	+193%	+182%	-14%	+279%

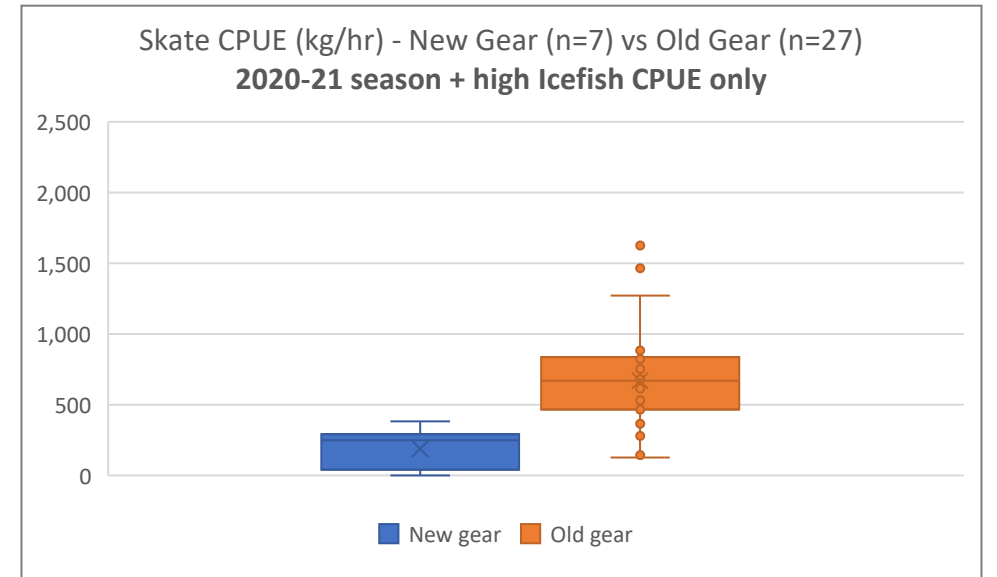
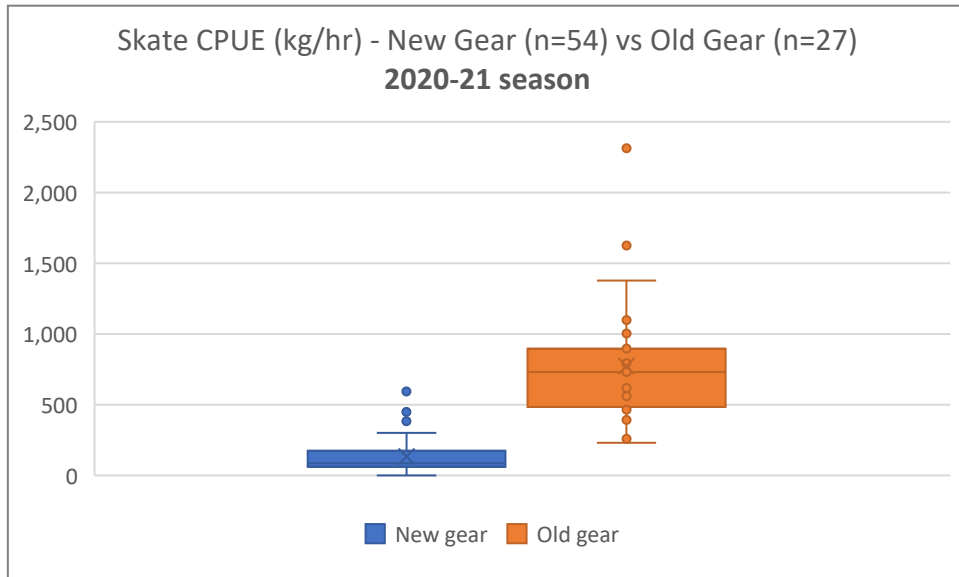
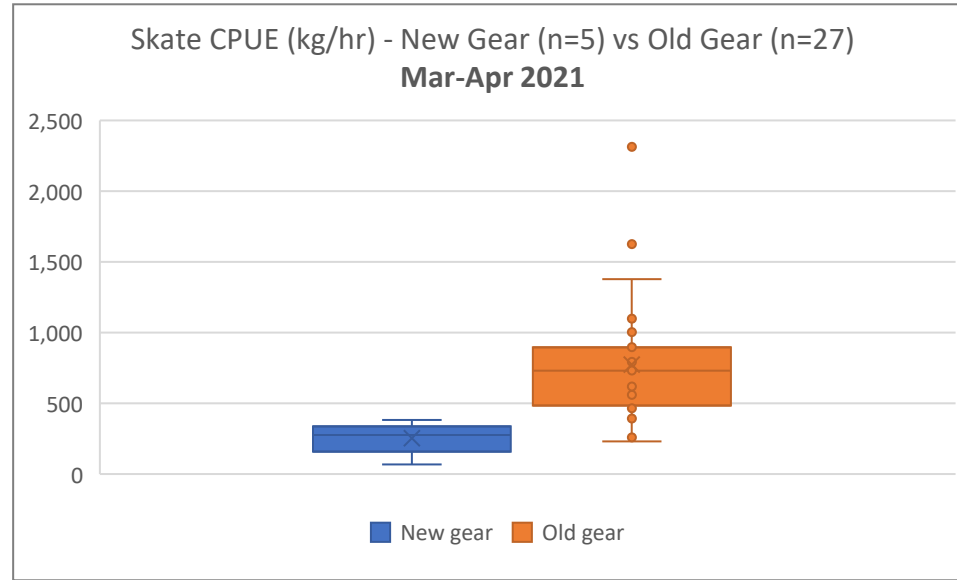
When only considering current season:

March-April 2021	Old gear (n=27)	New gear (n=5)
Mean Icefish CPUE	9,295 kg/hr	12,491 kg/hr
Mean Skate bycatch CPUE	754 kg/hr	223 kg/hr
Mean Toothfish bycatch CPUE	338 kg/hr	167 kg/hr

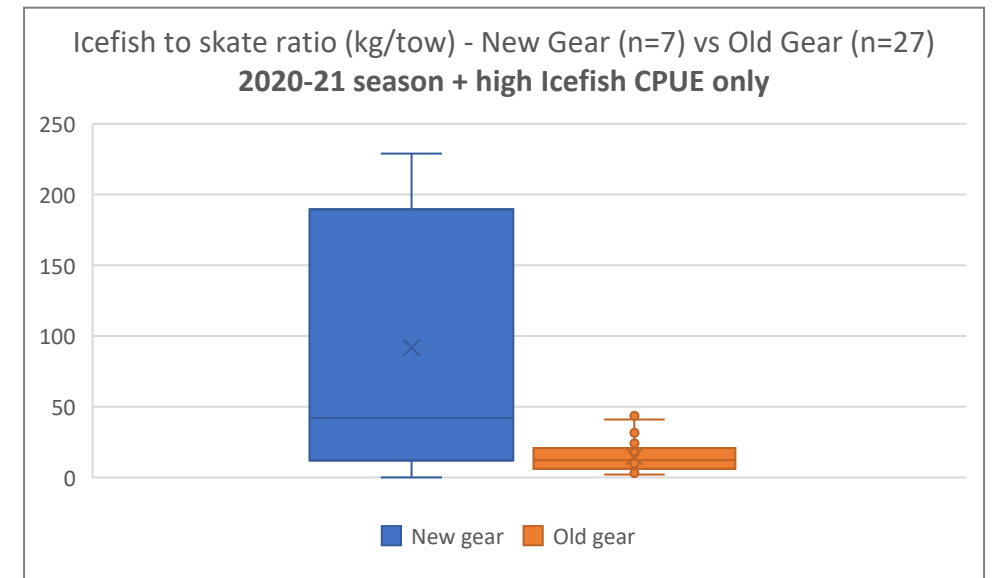
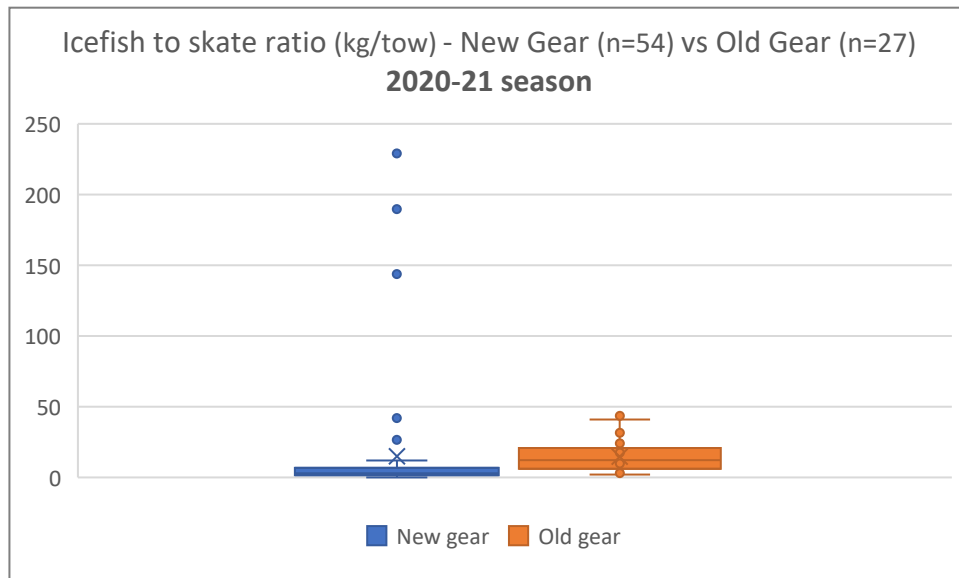
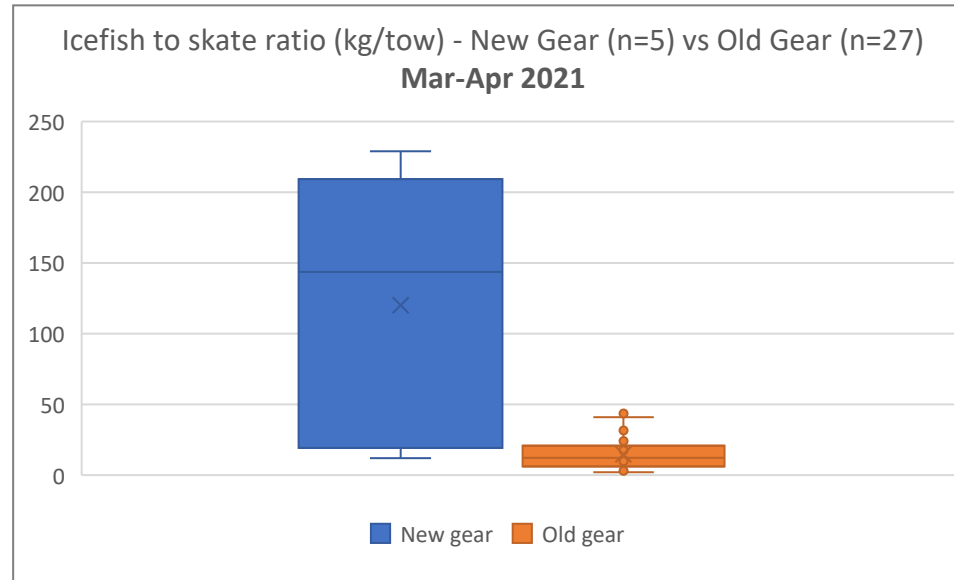
2020-21 Season (Dec-Apr)	Old gear (n=27)	New gear (n=54)
Mean Icefish CPUE	9,295 kg/hr	1,223 kg/hr
Mean Skate bycatch CPUE	754 kg/hr	118 kg/hr
Mean Toothfish bycatch CPUE	338 kg/hr	62 kg/hr

High Icefish CPUE tows (>1301 kg/hr)	Old gear (n=27)	New gear (n=7)
Mean Icefish CPUE	9,295 kg/hr	11,359 kg/hr
Mean Skate bycatch CPUE	754 kg/hr	204 kg/hr
Mean Toothfish bycatch CPUE	338 kg/hr	151 kg/hr

When only considering current season:



When only considering current season:



When considering all years 2016/17 to 2020/21:

(2023 January only). This shows that when Icefish fishing was generally not great at the start of this trip, Skate bycatch was very low

High Icefish CPUE tows (>1301 kg/hr)	New gear (n=7)	2023 new gear matching months (n 5)	Old gear matching months (n=78)	Old gear all months (n=181)
Mean Icefish CPUE	11,359 kg/hr	2607 kg/hr	4,141 kg/hr	4,549 kg/hr
Mean Skate bycatch CPUE	204 kg/hr	14 kg/hr	144 kg/hr	146 kg/hr
Medium Icefish CPUE tows (751-1300 kg/hr)	New gear (n=7)	2023 new gear matching months (n 1)	Old gear matching months (n=37)	Old gear all months (n=75)
Mean Icefish CPUE	1,031 kg/hr	1263 kg/hr	969 kg/hr	978 kg/hr
Mean Skate bycatch CPUE	192 kg/hr	24 kg/hr	59 kg/hr	69 kg/hr
Low Icefish CPUE tows (301-750 kg/hr)	New gear (n=19)	2023 new gear matching months (n 13)	Old gear matching months (n=130)	Old gear all months (n=170)
Mean Icefish CPUE	465 kg/hr	470 kg/hr	455 kg/hr	466 kg/hr
Mean Skate bycatch CPUE	121 kg/hr	10 kg/hr	76 kg/hr	77 kg/hr
Poor Icefish CPUE tows (<301 kg/hr)	New gear (n=21)	2023 new gear matching months (n 15)	Old gear matching months (n=198)	Old gear all months (n=209)
Mean Icefish CPUE	122 kg/hr	83 kg/hr	146 kg/hr	149 kg/hr
Mean Skate bycatch CPUE	81 kg/hr	4 kg/hr	55 kg/hr	57 kg/hr

\*Matching months means only the tows that took place in the same months were used for that analysis, to take into account any potential seasonal effect. For example, if the new gear tows took place in Dec, Jan and March, then the matching month tows are only looking at tows from Dec, Jan and March from previous years.