



**Australian Government**

**Australian Fisheries Management Authority**

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

**FINAL MINUTES**

**SOUTHMAC 43 (VIDEO CONFERENCE)**

**1 JULY 2024**

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

**CHAIR:** Geoff Richardson

**Date:** 1 July 2024

**Venue:** Video Conference, 1300-1520.

### Attendance

Name	Position
<b>Members</b>	
Geoff Richardson	Chair
Dr Lyn Goldsworthy	Conservation Member
Rhys Arangio	Industry Member
Malcolm McNeill	Industry Member
Sally Carney	AAD Member
Selina Stoute	AFMA Member
<b>Executive Officer</b>	
Kelvin Montanaro	AFMA Graduate, assisting with EO duties
<b>Observers</b>	
Brad Milic	Industry, Australian Longline Fishing Pty Ltd
Danait Ghebregabhier	Manager Antarctic Fisheries, AFMA
<b>Apologies</b>	
Dr Philippe Ziegler	Scientific Member

### Introduction

#### Agenda item 1 – Preliminaries

##### 1.1 Welcome and apologies

SouthMAC 43 was opened at 1:00pm AEST on 1 July 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.

The AFMA member welcomed Mr Richardson as the new Chairperson and thanked the contribution of the outgoing SouthMAC Chair, Dr Rachel Baird. The AFMA member further welcomed Sally Carney to SouthMAC as the new AAD member. Dr Philippe Ziegler was noted as an apology.

Members noted that the meeting was being recorded for the purpose of developing the meeting minutes.

##### 1.2 Declaration of interests

The Chair asked members and observers to advise and/or update their previously declared interests. Interests declared at the meeting are reflected in the standing register at [Attachment A](#).

Having regard for the interest declared and the agenda, the Chair proposed that industry members and observers held a potential conflict of interest in Agenda Item 4 regarding the Macquarie Island Toothfish Fishery (MITF) longline season extension trial. The Chair then asked for all industry members and observers to disconnect from the meeting to enable the remaining members to:

- Freely comment on the declared interests;
- Discuss if the interests precluded the members from participating in any discussions; and

- Agree on any actions to manage declared conflicts of interests (e.g. the member may be allowed to participate in the discussions relating to the matter but not in the formulation of final advice).

Remaining members **agreed** that Agenda Item 4 should include all members for discussion, after which industry members would be asked to leave. A formal recommendation would then be made by remaining SouthMAC members, and provided to industry as advice when invited to return.

### **1.3 Adoption of agenda**

The agenda ([Attachment B](#)) was adopted without amendment.

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

SouthMAC discussed the progress of actions arising from its previous meetings. A summary of their status and SouthMAC 43 discussions is provided in [Attachment C](#).

## **Agenda item 3 – Member updates**

### **3.1 Member update**

SouthMAC noted the following verbal updates from Members:

#### *Industry*

Both Industry Members advised that fishing in the HIMI Fishery and the MITF Fishery for the current season is tracking as usual. The Austral Industry Member advised that both fishing vessels have experienced a medical emergency and mechanical issues, respectively, which have since been resolved.

#### *AAD Member*

The dates of the 43rd CCAMLR meeting will be from 14-25 October 2024. The meeting will consider notifications to fish in the Ross Sea and East Antarctic Fisheries in the 2024-25 season and the Heard Island and McDonald Islands (HIMI) Fishery stock assessments for Patagonian toothfish and Mackerel icefish. The meeting will be preceded by the Annual Meeting of the Working Group on Fish Stock Assessments (WG-FSA) and Working Group on Incidental Mortality Associated with Fishing (WG-IMAF) from 30 September to 11 October. The AAD Member also noted that Australia's proposal to undertake exploratory fishing has now been submitted to the CCAMLR Secretariat.

### **3.2 AFMA update**

SouthMAC noted the written update provided by AFMA ([Attachment D](#)) and noted the following comments in relation to specific update items:

- *AFMA management response to increased risk of High Pathogenicity Avian Influenza (HPAI) outbreak in Commonwealth fisheries* – there is currently no specific review timeframe for the approach AFMA has adopted to reduce the risk of the outbreak in longline fisheries, however SFR conditions will be monitored and reviewed periodically to take into account changes in risk of the outbreak. Industry requested that SFR conditions for the HIMI Fishery requiring crew handling of seabirds and marine mammals are also reviewed for consistency and noted that it is AFMA's intention to do so. Industry sought further guidance from AFMA out of session on how live seabirds that land on fishing vessels can be assisted off given the change in SFR conditions and observer handling protocols.

- *Fishery Assessment Plans (FAP)* - the Conservation Member requested clarification on any research activities that are underway to meet the object in the HIMI FAP to assess the effects of fishing on habitats.

**ACTION** – AFMA to provide clarification on any research activities that are underway to meet the object in the HIMI FAP to assess the effects of fishing on habitats.

- *The MITF ecological risk assessment* – the Conservation Member requested to see the results of the MITF ERA.
- *Amendment of gear specifications in the Fisheries Management (Heard Island and McDonald Islands Fishery) Regulations 2002* – The Austral Industry Member advised that industry is not concerned about the higher penalty implications of moving the gear specifications from the regulations to SFR conditions noting that other SFR conditions carry the same penalty and given this is likely to be a permanent change in the fishery i.e. that gear was not likely to be changed mid-trip. The AFMA Member noted that it would be useful to have this input as the process to amend the regulations progresses.

#### **Agenda Item 4– Macquarie Island Toothfish Fishery longline fishing season extension trial**

SouthMAC noted the information provided in the agenda paper to inform its consideration of a new season extension trial, including that at its 70<sup>th</sup> meeting on 28-29 May 2024, SARAG (SARAG70):

- a. considered: i) outcomes of the 2022 and 2023 season extension period, including a summary of seabird observation data; ii) a presentation from Dr Julie McInnes on a brief overview of two seabird datasets relevant to Macquarie Island; and iii) AFMA’s proposed approach to trial a longline season extension; and
- b. having considered the additional information, SARAG70 supported a new season extension trial inclusive of a second week with the possibility of a third week. SARAG also supported, with some additions, AFMA’s proposed management arrangements for the trial including seabird interaction limits and minimum hook deployments.

SouthMAC further noted that the AAD’s Protected Species and Areas Section (AAD) was consulted on the proposed arrangements since the SARAG70 meeting and have provided feedback for added clarification on the management responses that apply to seabird interactions with fishing gear. This feedback was provided to SouthMAC on 27 June (Attachment E).

Having regard for advice from SARAG, AFMA and AAD, SouthMAC discussed the potential arrangements for the longline fishing season extension trial focusing on the following trial components:

##### ***Seabird interaction limits – arrangements for all other seabirds (‘other’ seabirds)***

SouthMAC noted the need for added clarification on the definition and process for considering exceptional circumstances that would allow the trial to continue in the event that the proposed 3-seabird limit for ‘other birds’ is triggered during the extension period within a single fishing season. SouthMAC agreed that it is challenging to try and identify scenarios that would constitute ‘exceptional circumstances’ as by definition, it would be something difficult to predict in advance. SouthMAC considered an alternate approach that if the limit for ‘other seabirds’ is triggered, the trial would cease for that fishing season and SouthMAC would then review the circumstances of the interactions and

consider whether to recommend to AFMA that the trial recommence the following season. SouthMAC noted advice from AFMA that it would then be a decision of AFMA to recommence the trial in future seasons.

### ***Consideration of post-trial arrangements***

AFMA advised that the proposed arrangements tabled with SARAG70 defined the completion of the trial to be when all minimum hooks had been reached across each of the three weeks. Consideration of post-trial arrangements and the potential transition of the season extensions into permanent arrangements for the fishery would then occur. SouthMAC discussed the original option put forward by Industry members to assess the success of each extension week individually, and to formally consider post-trial arrangements as the minimum number of hooks for each week is achieved, provided none of the seabird interaction limits are triggered. Industry expressed their preference for this approach as it aligns more with their initial proposal, the HIMI season extension process, and for their operation, would not add additional risk, whereby under the AFMA proposal, week 1 would be under trial for considerably more than the minimum 500,000 hooks agreed by SARAG. Industry advised that they had thought that was the approach agreed by SARAG70. Both Industry and AFMA agreed whilst there may have been a level of miscommunication and interpretation at SARAG, the SouthMAC meeting provided an important opportunity to further consider the views of members and develop a clear approach.

Industry was concerned that AFMA's proposed approach for post-trial arrangements to be considered once a minimum of 500,000 hooks have been set in week 3, would be disadvantageous as it would prolong the trial (~ 9 years) if subsequent weeks (i.e. week two and/or week three) are not fished each season, thus delaying the potential transition of the season extensions into permanent arrangements for the fishery. Industry were also concerned the week 1 trial would now require considerably more than the minimum 500,000 hooks in week 1 to complete the trial. The AFMA member advised that whilst AFMA acknowledges that operational conditions can vary, industry has advised that a season extension change would deliver economic and/or operational benefits to industry. Noting this, if AFMA is to proceed with the trial, there would be an expectation that it would be an industry priority to realise those benefits and complete the trial. Industry noted that they would be able to fish into the 3<sup>rd</sup> week only if there is uncaught quota remaining.

Noting advice from both industry and AFMA, SouthMAC discussed a phased approach to the trial whereby the consideration of post-trial arrangements for the two-week extension period (1-14 Sep) can commence once the minimum effort deployment of 500,000 hooks has been achieved in each of those weeks. This approach provides an opportunity to assess the risk to seabirds during the extension period meaningfully (i.e. based on information collected from fishing across multiple seasons), which SouthMAC considered important, within a timeframe that is more operationally realistic for industry.

As previously agreed under Agenda Item 1.2, to manage potential conflicts of interest, industry members and industry observers left the meeting while remaining SouthMAC members deliberated on its advice to the AFMA Commission.

The remaining SouthMAC members **recommended** proceeding with a longline fishing season extension trial in the MITF subject to the design and management arrangements proposed in Table 1. In supporting the trial, the members expressed their comfort with the level of consideration and proposed arrangements for the trial, including the monitoring arrangements to ensure continued collection of data, given their concerns of the potential risk to seabirds when the proposal was initially considered.

**Table 1.** Proposed longline fishing season extension trial arrangements for the MITF. ‘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. Changes marked are those recommended by SouthMAC43 to the proposed arrangements provided to SouthMAC members on 27 June that took into account outcomes of SARAG70, AFMA management advice and advice from AAD. Text in underline is additional text recommended by SouthMAC43 and text with strikethrough is recommended for removal by SouthMAC43.

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. <sup>1</sup>
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. <u>Consideration of post-trial arrangements for the two week extension period (1-14 Sep) 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.</u>
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	<b><i>Arrangements for the 5 identified species.</i></b>

<sup>1</sup> This clarification was added after the SouthMAC 43 meeting with the agreement of members.

	<p>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:</p> <ul style="list-style-type: none"> <li>• if the mortality occurs in week one of the trial extension period, the trial <del>in its entirety</del> 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 <del>further</del> fishing will be permitted in week two <u>in future seasons</u> 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 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 <del>further</del> fishing will be permitted in week three <u>in future seasons</u>.</li> </ul> <p><b><i>Arrangements for all other seabird species ('other' seabirds).</i></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><b><u>Option 1:</u></b> cease in its entirety; or</del></p> <p><del><b><u>Option 2:</u></b> cease for that season. 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>. by AFMA of any exceptional circumstances.</del></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 identify what additional mitigation measures <u>may be applied</u> <del>will be required</del> to address the cause.</p>

## Agenda item 6 - Next meeting

SouthMAC **agreed** to meet in early November 2024 via video conference to consider total allowable catches for the HIMI Fishery.

SouthMAC noted that an in-person meeting is currently not scheduled for 2024 but may be considered in 2025 as required and depending on members' preferences.

The Chair thanked all SouthMAC members and closed the meeting at 3:20 pm.

## Attachment A

Members, invited participants and observer's declarations of interests recorded at SouthMAC 43, 1 July 2024.

Name	Membership	Declared interests
Geoff Richardson	Chair	No interests pecuniary or otherwise
Malcolm McNeil	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 a member of the Ross Sea Marine Stewardship Council 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 Senior Manager of Environment 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 and SouthMAC. 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.
Dr Lyn Goldsworthy	Conservation member	Dr Goldsworthy is a research associate at the Institute for Marine and Antarctic studies and the University of Tasmania. Dr Goldsworthy also conducts contract work, including for the Antarctic and Southern Ocean Coalition (ASOC) and Deep-Sea Conservation Coalition (DSCC). Dr Goldsworthy currently has no contract work relating to 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.
Kelvin Montanaro	Executive officer	AFMA employee, no interests pecuniary or otherwise.



Name	Membership	Declared interests
Danait Ghebrezgabhier	AFMA observer	AFMA employee, no interests pecuniary or otherwise.
Brad Milic	Industry observer	General Manager, Operations, at ALFPL which holds various fishing rights in, and operates vessels in, the sub-Antarctic fisheries and New and Exploratory fisheries under the jurisdiction of CCAMLR. Owns a consultancy business that currently has a contract with Atlantis Fisheries Consultancy Group, involved with their clients interests in the BSCZSF, and their fishery and cold chain MSC accreditation.



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

Teleconference 1300-1600

1 July 2024

### Draft Agenda

Chair: Geoff Richardson

Approximate time	Item	Purpose	Lead presenter
13:00	<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	AFMA
	<b>3. Member updates</b>		
	3.1 Member update	For noting	All*
	3.2 AFMA update	For noting	AFMA
13:20	<b>4. Macquarie Island Toothfish Fishery longline fishing season extension trial</b>	For advice	AFMA
15:50	<b>5. Other Business</b>	For discussion	Chair
15:55	<b>6. Next Meeting</b>	For advice	Chair
<b>Close 1600</b>			

\* Verbal update, no agenda paper provided

## Attachment C

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

Item	Action arising	Status as at SouthMAC 43
1	<b>Export Control Act</b> - AFMA to arrange a meeting with the Department of Agriculture, Forestry, and Fisheries on C2 provision requirements and provide an update to industry. (SouthMAC 41 Agenda Item 2).	<p><b>Ongoing</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.</p>



## Sub-Antarctic Fisheries Management Advisory Group (SouthMAC)

### Meeting 43

1 July 2024

#### Agenda item 3 Member Updates

Purpose: FOR NOTING

##### Recommendation

That SARAG:

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

##### AFMA update

###### CCAMLR New and Exploratory Fisheries application

1. The [Guide to CCAMLR New and Exploratory fisheries](#) (the Guide) was circulated in March 2024 inviting proposals from interested Australian parties wishing to participate in New and Exploratory fisheries in the CCAMLR Area for the 2024/2025 fishing season.
2. One proposal for New and Exploratory fisheries was received. The proposal was tabled at the CCAMLR Consultative Forum (CCF) meeting on 29 April 2024 where applicants were invited to present their proposals.
3. Pending Government officials support, the applicant will be invited to work with the AAD to develop a Fishery Operation Plan and research components of the proposal for submission to CCAMLR. This is referred to as a notification. Notifications are due to the CCAMLR Secretariat no later than 1 June 2024.

###### Ecological Risk Assessment for the Macquarie Island Fishery – Longline fishing

4. AFMA has been working with CSIRO to conduct the first ERA for longline fishing in the Macquarie Island Fishery (MITF). A draft report has been provided to SARAG for comment and will be considered at the August 2024 SARAG meeting. The last ERA completed in MITF was for demersal trawling in 2007 ([Demersal trawl](#)).
5. ERA's have also been completed in the Heard Island and McDonald Islands Fishery. They include
  - [Midwater trawl](#) (2018)
  - [Demersal longline](#) (2018)
  - [Demersal trawl](#) (2018)

###### AFMA management response to increased risk of High Pathogenicity Avian Influenza (HPAI) outbreak in Commonwealth fisheries

6. HPAI is an infectious disease that causes severe illness and death in poultry and wild birds. HPAI can also cause disease in other animals, including rare cases in people. HPAI has caused significant illness and deaths in poultry and wild birds on all continents except Australia and New Zealand.

HPAI, has reached Antarctica's mainland, the virus was detected in two brown skuas near Argentina's Primavera Base, marking the first confirmation of its presence on the continent.

7. There is a risk of the outbreak affecting seabirds that occur within our fisheries. AFMA has responded to this increased risk by amending protocols for observers in the Southern Ocean and removing conditions requiring the handling of seabirds in the Eastern Tuna and Billfish Fishery, Western Tuna and Billfish Fishery and Gillnet Hook and Trap fisheries in January 2024. Specifically, to collect feather samples and hold dead seabirds to obtain images via the electronic monitoring systems.
8. For Sub-Antarctic Fisheries, AFMA removed conditions that require the handling of dead seabirds from the [MITF management arrangements](#) at the start of the 2024/25 season. Paragraph 15(b)(i) and 15(b)(ii) were removed to help mitigate risks associated with HPAI. An excerpt of relevant elements of paragraph 15 before the changes is included below (sections removed are marked in bold):
  15. *If the boat nominated to this concession is involved in any incident that results in a seabird being caught, the concession holder must:*
    - a. *if the bird is alive, make every effort to ensure that the bird is released alive and that, wherever possible, any hooks are removed without jeopardising the life of the bird; or*
    - b. *if the bird is dead, ensure:*
      - i. ***if feasible, the dead seabird is brought aboard the boat;***
      - ii. *whatever assistance necessary is provided for the observer to:*
        - *take photographs or video footage of the dead seabird;*
        - ***keep whatever parts of the dead seabird the observer believes are necessary (including, in particular, leg rings of banded seabirds);***
        - *collect any other data and make any other observations requested by AFMA; and...*
      - iii. *any remains of the dead seabird that are not retained are discharged from the boat in a manner that does not attract seabirds to the boat.*
9. AFMA has included a new clause in MITF Statutory Fishing Right conditions 15a and 17a to require concession holders to 'comply with any AFMA direction provided in writing regarding Avian Influenza before handling dead or alive birds or marine mammals.'
10. The same changes are planned for the [HIMI management arrangements](#) in due course. Seabird handling conditions will be reinstated once the risks posed by the current outbreak of avian influenza have passed.

#### AFMAs Climate Adaption Program

##### *MITF Climate Change Adaption Workshop:*

11. The MITF Climate Change Adaption Workshop happened in conjunction to SARAG meeting 69 on the 22-23 August 2023. The MITF Climate Change Adaption Report was circulated to members for comment on 17 April 2024. One member provided comment by the due date of 1 May 2024. The [final workshop report](#) is now available on AFMA's website.

##### *Climate Risk Framework:*

12. AFMA has published a [Climate Risk Framework](#) which is intended as a transitional mechanism, to enable rapid integration of climate risk into TAC/E decision-making until such time as climate

impacts are more explicitly integrated into harvest strategies, stock assessments and/or Ecological Risk Assessments.

13. The AFMA Climate Risk Framework is a three-step process that seeks to:
  - Assess the climate risk to a species, based on the best available information,
  - Consider whether the stock assessment or harvest strategy already account for climate change effects, or if the TAC/E or management arrangements are already sufficiently precautionary, and if not,
  - Assess climate risk in relation to the stock status and identify appropriate precautionary adjustments.
14. The Framework has been approved by the AFMA Commission for trial implementation in key AFMA fisheries in 2024 and is one element of a broader program of climate adaptation work being undertaken by AFMA. Other activities include communication materials, standing agenda items on climate change in RAGs and MACs, development of fishery specific climatic and environmental indicator reports, and stakeholder workshops to discuss fishery specific adaptation responses to both positive and negative climate impacts.
15. HIMI was identified as a trial fishery. Recognizing the stock assessment priorities for the HIMI this year, AFMA is exploring whether MSE work being undertaken for the MITF could instead be including in the trial.
16. For more information, please contact Daniel Corrie on 0447 019 916, [daniel.corrie@afma.gov.au](mailto:daniel.corrie@afma.gov.au)

Management Strategy Evaluation (MSE) of alternative management procedures for Patagonian toothfish fished in the Macquarie Island Toothfish Fishery (MITF).

17. As part of the AFMA funded project titled: *Macquarie Island toothfish stock assessment and Management Strategy Evaluation 2023-24* CSIRO has commenced preliminary work to support MSE of alternative management procedures for Patagonian toothfish fished at MITF. MSE provides the opportunity to test the performance of alternative management procedures and decision rules (harvest strategies) as well as the potential impact of climate change on the effectiveness of future management procedures.
18. CSIRO presented an updated on the progress of the project at SARAG 70 and sought input on the management objectives, range of uncertainty, robustness tests and performance measures to be integrated in the MSE. SouthMAC input will also be sought on these components.
19. Subject to contract finalisation, this work is set to continue under a further funding proposal titled: *Stock assessment and MSE of the Macquarie Island toothfish fishery: 2025-2026 (Attachment A)*. This proposal has been supported by SARAG, SouthMAC and the AFMA Research Committee (a sub-committee of the AFMA Commission).

Amendment of gear specifications is the *Fisheries Management (Heard Island and McDonald Islands Fishery) Regulations 2002*.

20. AFMA is working with the Department of Agriculture, Fisheries, and Forestry to repeal the gear specifications contained in Part 4 of the [\*Fisheries Management \(Heard Island and McDonald Islands Fishery\) Regulations 2002\*](#). 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. Progressing this amendment has become

increasingly more relevant following the commencement of the trial of modified trawl gear in the HIMI Fishery.<sup>1</sup>

21. Amending regulations is lengthy process and can require considerable resourcing. The Department leads the process with AFMA's support. Legislative drafting must be undertaken by the Office of Parliamentary Counsel (OPC). OPC drafting resources are prioritised by parliament and allocated to drafting 'bids' from across Government department's (forming the legislative drafting programme). Ministerial policy approval is required prior making a bid for OPC drafting resources.
22. There is some risk that the proposed approach will be not be supported by Government. This is because inserting the gear requirements into SFR conditions will trigger a different offence regime. If the department considers this risk to be high, the fall-back position would be to amend the specifications in the regulation as required.
23. Currently under s168 of the *Fisheries Management Act 1992* (FM Act), regulations may be made which carry a maximum offence of 25 penalty units. The requirements in Part 4 of the Regulations (Regulations 8, 9 & 10) are linked to offences carrying the maximum amount of 25 penalty units. By repealing these regulations, and moving the obligations to SFR conditions, a breach of a condition will constitute an offence under section 95(1)(d) or 95(1)(f) of the FM Act. A person who contravenes these sections (in circumstances where a foreign boat is not used), commits an offence punishable, on conviction, by a fine not exceeding 250 penalty units. In other words, by moving the obligations from the Regulations to the SFR conditions, the maximum penalty will increase 10 times. Further, a breach of the SFR conditions will be subject to the infringement regime under Part 5 of the Regulatory Powers (Standard Provisions) Act 2014. Currently a penalty unit is \$313.

#### Sub-Antarctic Fisheries Electronic Monitoring trial

24. AFMA is working to progress an electronic monitoring (EM) trial in the Sub-Antarctic Fisheries. Subject to further consultation with industry the trial has the scope to include upgraded Archipelago Asia Pacific (AAP) EM systems and a non-AAP system. The trial also includes an Artificial Intelligence Machine Learning (AIML) objective that will be pursued in collaboration with CSIRO. As part of the trial, a Sub-Antarctic Fisheries Business Reference Group (SAFBRG) will be established by AFMA to provide advice and guidance to the project. The SAFBRG will include AFMA, industry, and science representatives. Currently, a project plan and SAFBRG terms of reference are being finalised based on feedback provided by stakeholders during an informal meeting in Hobart on 30 May. These documents will be circulated once finalised and SAFBRG approval is received.

#### Fishery Assessment Plans (FAP)

25. The FAPs for the MITF 2024/25 and 2025/26 fishing seasons (**Attachment B**), and the HIMI 2023/24 fishing season (**Attachment C**) have been finalised and circulated to SARAG and SouthMAC members. The MITF FAP now includes details provided at SARAG69 on:
  - a. information regarding cost sharing for HIMI and MITF research activities

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<sup>1</sup>At SARAG 59 in May 2019, Austral proposed modifying trawl gear regulations to increase industry productivity by reducing bycatch and benthic impacts while improving operational efficiency. SARAG and SouthMAC agreed to trial new gear targeting icefish to reduce skate bycatch. After two trips using the new gear on the Cape Arkona, SARAG 63 received preliminary data showing promising results, prompting further trials. By SARAG 65 in May 2022, AAD was tasked with analysing data from 2020-21 and 2021-22 seasons. Recent industry updates suggest the new gear results in higher icefish catch, lower skate bycatch, and increased operational efficiency.

- b. update the company name for Australian Longline Fishing Pty Ltd;
  - c. observer seabird observations frequency has been amended from “once daily” to “as directed each day”.
- 26. The FAP sets out how monitoring responsibilities (tagging) for the 2024/25 and 2025/26 fishing years will be shared between the holders of Statutory Fishing Rights (SFRs) for the Fishery and how these responsibilities may be traded among operators.
- 27. The observer duties undertaken on vessels operating in the MITF are similar to those which apply to Australian vessels operating in the Heard Island and McDonald Islands Fishery. The duties also meet the standards adopted by the CCAMLR.

Live release of small toothfish

- 28. 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. It is AFMA’s intention, subject to resourcing, to now consider this matter in more detail which will include:
  - a. Seeking advice from the SARAG on any scientific (sampling) related considerations in allowing the live release;
  - b. Reviewing AFMA’s domestic arrangements for any impediments and/or considerations to allowing the release of small toothfish that have a high expectation of survival; and
  - c. Developing protocols, if necessary, for releasing live toothfish.
- 29. SARAG 70 noted a request from industry to also consider this option for the MITF.





# AFMA Research Application

(Please complete all sections)

## SECTION 1 – ADMINISTRATIVE SUMMARY

<b>Project title:</b>	<b>Stock assessment and MSE of the Macquarie Island toothfish fishery: 2025-2026</b>		
<b>Applicant:</b>	CSIRO Environment		
<b>Contacts</b>			
<u>Administrative</u>			
Title/Name:	Loren Sammons	Phone:	+61 3 6232 5335
Position:	Contract Manager	Email:	Loren.Sammons@csiro.au
Organisation:	CSIRO	Postal address:	
<u>Principal Investigator</u>			
Title/Name:	Dr. Rich Hillary	Phone:	+61 3 6232 5452
Position:	Senior Principal Research Scientist	Email:	Rich.Hillary@csiro.au
Organisation:	CSIRO	Postal address:	
<u>Co-investigator (s)</u>			
Title/Name:	Dr. Pia Bessell-Browne	Phone:	
Position:	Fisheries Scientist	Email:	<a href="mailto:pia.bessell-browne@csiro.au">pia.bessell-browne@csiro.au</a>
Organisation:	CSIRO	Postal address:	
<u>Co-investigator (s):</u>			

Title/Name:	Dr. Philippe Ziegler	Phone:	
Position:	Scientist	Email:	<a href="mailto:Philippe.Ziegler@aad.gov.au">Philippe.Ziegler@aad.gov.au</a>
Organisation:	AAD	Postal address:	

Planned Start and End Date			
Start Date:	1/11/2024	End Date:	30/5/2026

## SECTION 2 – PROJECT SUMMARY

### PROJECT BUDGET:

Financial Year	AFMA	Applicant	Other
24/25	\$117,378	\$29,345	\$0
25/26	\$78,468	\$19,167	\$0
Totals	\$195,846	\$48,962	\$0

## SECTION 3 – PROJECT DESCRIPTION

### Background

The custom-designed integrated stock assessment for the Macquarie Island toothfish fishery has been successfully applied over three assessment cycles (2019, 2021 and 2023) to both assess the status of the stock, and generate the recommended management advice to SouthMAC via the SARAG. One of the main objectives of this project is to conduct the next scheduled stock assessment in 2025, as well as continue the ongoing development of the model structure, data inputs and assessment outputs given recommendations from the SARAG over time.

A continuing concern exists relating to the variability of the assessment recommended management advice— namely the recommended TAC from the CCAMLR Harvest Control Rule (HCR). In the most recent assessment, this resulted in around a 25% reduction in the

TAC driven by a reduced estimate of the mature biomass in the Northern region. The previous project has already instigated and funded research to explore alternative management strategies to the current CCAMLR HCR driven approach because of these concerns through management strategy evaluation (MSE). Initial work will be presented to the SARAG in the first half of 2024. This will be the first look the SARAG will have at both a suite representative Operating Models for toothfish *spp.* population and fishery dynamics, and alternative management strategies to be tested therein. As a result, this project will conduct further required and/or requested analyses on these initial MSE explorations and will report these to the SARAG with a revised set of management strategies in 2025.

As in previous projects, the continuation of the long-term mark-recapture data set – a crucial data input to both the assessment and any alternative management strategies – is a key objective of this project.

**Consultation** (*consultation with the relevant fisheries manager or senior manager when developing the application is highly recommended*)

Industry and management have been, and will continue to be, consulted regarding the stock assessment and management strategy evaluation. Other key agencies (such as AAD, AFMA, ABARES) will continue to provide valuable input and advice to the assessment and management strategy evaluation process, through workshops, project group meetings that include industry participation, and resource assessment group meetings.

## Objectives

1. To provide an updated integrated stock assessment to the SARAG in the next scheduled assessment year (2025)
2. To provide the SARAG with updated MSE analyses of the suite of alternative management strategies initially explored in the previous project
3. To continue monitoring the stock through the mark-recapture program

## Needs

We will apply the current custom designed stock assessment model for the next assessment of stock status and management advice for this resource. We will also further refine the MSE framework and explore the potential for alternative management procedures that can be used for toothfish fisheries in the year following the next scheduled assessment.

## Planned outcomes, benefits and extension

A revised stock assessment in 2025 to be used in recommending the TAC for the following two years.

Continuation of data processing from the tagging program which, along with the observer and otolith data, are key inputs to the stock assessment.

The MSE testing of alternative management procedures for toothfish stocks will have clear benefits not just to this stock, but to all the other toothfish stocks Australia managed within Australia's jurisdiction.

## **Methods**

Data processing, minor modification and running the stock assessment model.

Calculation of recommended TAC options given the currently implemented CCAMLR harvest strategy.

MSE work to explore possible utility of alternative management procedures for toothfish stocks.

## **Performance Indicators**

Working papers, presentations, project updates and active attendant contributions to the SARAG. Peer-reviewed papers.

## **Risk Analysis**

The nature of the deliverables of the project make potential staff changes or other such unforeseen issues a risk. This risk is mitigated by the following:

1. The adopted and implemented software framework for the assessment (TMB and R generically) are used by a number of CSIRO stock assessment and MSE practitioners; as a result, it would not be dependent on the skills and computational preferences of the project staff.

## **Related Projects and Research Capacity**

"Macquarie Island toothfish stock assessment and Management Strategy Evaluation 2023-2024": previous project

## **SECTION 4 – SCHEDULE OF PAYMENTS**

As a general rule, up to 10% of the total project cost may be provided as an initial payment and a minimum of 30% of the total project cost must be left for the draft and/or final report.

<b>Milestones</b>	<b>Deliverable date</b>	<b>Schedule of AFMA payment(s)</b>
Initial payment on signing of contract	1/11/2024	\$15,000
Delivery of 2025 assessment & updated MSE	31/5/2025	\$102,378
Final MSE update	1/12/2025	\$38,468
Draft final report	15/5/2026	\$20,000
Final report	30/5/2026	\$20,000
<b>TOTAL</b>		<b>\$195,846</b>

## SECTION 5 – DESCRIPTION OF MILESTONES

Details on each milestone must provide sufficient information to justify the milestone cost. The description field will describe the work to be completed for that milestone with the justification field elaborating further on the categories of cost - for example salary splits, details of travel.

**Milestone:** Initial payment **Date:** 1/11/2024

<b>Financial Year</b>	<b>Salaries</b>	<b>Travel</b>	<b>Operating</b>	<b>Capital</b>	<b>Total</b>
24/25	\$8,250	\$0.00	\$6,750	\$0.00	<b>\$15,000</b>

**Description:**

Initial signing

**Justification:**

**Milestone:** 2025 assessment & MSE **Date:** 31/5/2025

Financial Year	Salaries	Travel	Operating	Capital	Total
24/25	\$54,108	\$4,000	\$44,270	\$0.00	<b>\$102,378</b>

**Description:**

Delivery of 2025 assessment and MSE update

**Justification:**

Salary and operating budget required

**Milestone:** Final MSE update **Date:** 1/12/2025

Financial Year	Salaries	Travel	Operating	Capital	Total
25/26	\$18,957	\$4,000	\$15,511	\$0.00	<b>\$38,468</b>

**Description:**

Final update to SARAG of MSE work

**Justification:**

Salary and operating budget required

**Milestone:** Draft final report **Date:** 15/5/2026

Financial Year	Salaries	Travel	Operating	Capital	Total
25/26	\$11,000	\$0.00	\$9,000	\$0.00	<b>\$20,000</b>

**Description:**

Draft final report

**Justification:**

**Milestone:** Final report **Date:** 30/5/2026

Financial Year	Salaries	Travel	Operating	Capital	Total
25/26	\$11,000	\$0.00	\$9,000	\$0.00	<b>\$20,000</b>

**Description:**

Final report

**Justification:**

## SPECIAL CONDITIONS

If relevant, this field will be used to assist in contract preparation for any special conditions. Examples of special conditions may relate to IP, marine spatial closures (including access) or any other clauses not specifically contained in the contract.

*Please note, Australian Government accessibility standards apply as a special condition on AFMA contracts. It is an Australian government requirement that documents published on AFMA's website meet accessibility standards. An accessible document means that people with different abilities can read the document. Producing an accessible document is not difficult and Microsoft products such as Word, PowerPoint, Outlook and Excel all have features to help all authors to produce an accessible document. Key rules to keep in mind when producing accessible reports for AFMA: all non-text content (images, tables) to have alternative text (alt text); tables specify column header information, images or objects should be inline with the text. AFMA requires all final reports submitted to be accessible and supplied in either Word or a PDF that has been checked for accessibility and tagged correctly to ensure acceptance and payment of the related milestone.*

## INTELLECTUAL PROPERTY

Identify the appropriate Intellectual Property category applicable to this application. Choose ONE from below.

Code	Description
1	Published, widely disseminated and promoted, and/or training and extension provided. Relates mainly to outputs that will be available in the public domain
2	Published, widely disseminated and promoted, and/or training and extension provided. Related products and/or services developed. Relates mainly to outputs that will largely be available in the public domain, but components may be commercialised or intellectual property protected.
3	Published, widely disseminated and promoted, and/or training and extension provided. Related products and/or services developed. Relates mainly to outputs that may have significant components that are commercialised or intellectual property protected.

The following IP category applies to this application: 2

## POTENTIAL CONFLICTS OF INTEREST

Applicants should identify potential conflicts of interest. Any interests will be examined as to whether they may impair the ability of the applicant to perform the research. Examples of potential interests that applicants should declare include but are not limited to:

- a financial or economic interest including the ownership or control of concessions in the fishery/ies which is the subject of the research;
- businesses or assets related to the fishery/ies which is the subject of the research;
- any employment by a business or organisation relevant to the fishery/ies which is the subject of the research;
- any membership of a group or organisation relevant to the fishery/ies which is the subject of the research;
- projects or campaigns that the member or the member's organisation/group has or has planned that are relevant to the fishery/ies which is the subject of the research;
- a direct family member or close associate having such an interest.

## DATA MANAGEMENT

I have searched for existing data ( refer to guidelines on how to search the Australian Spatial Data Directory and Oceans Portal:

Yes

Provide a brief description of the resulting data from the project and how this data will be stored for future protection and access:

Stock assessment and MSE output and associated papers and presentations

Data management should include a description of the data to be produced by the research and show details on the following aspects:

Data security or privacy issues,  
applying to the data  
Nominated data custodian

None currently applicable to the data used in the  
assessment and MSE work  
AAD





Australian Government

Australian Fisheries Management Authority

# Macquarie Island Toothfish Fishery Assessment Plan

2024/25 – 2025/26



Australian Government

Australian Fisheries Management Authority

Box 7051, Canberra Business Centre, ACT 2610 / Ph (02) 6225 5555 / Fax (02) 6225 5500 / AFMA Direct 1300 723 621 [afma.gov.au](http://afma.gov.au)

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# 1 Introduction

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The Macquarie Island Toothfish Fishery (MITF) Fishery Assessment Plan (FAP) has been developed to address the research needs of the MITF. The FAP was developed by the Australian Fisheries Management Authority (AFMA) in consultation with the MITF fishing industry, the Sub-Antarctic Resource Assessment Group (SARAG) and the Sub-Antarctic Fisheries Management Advisory Committee (SouthMAC). The FAP is a requirement of the *Macquarie Island Toothfish Fishery Management Plan 2006* (the MITF Management Plan):

## 9 Fisheries assessment plan

- (1) *AFMA must develop and implement a fishery assessment plan to ensure that an adequate program of monitoring takes place in the fishery.*
- (2) *The fisheries assessment plan must provide for:*
  - (a) *an adequate program of monitoring to ensure that reliable fisheries stock estimates can be made for Patagonian toothfish; and*
  - (b) *adequate monitoring of the direct impact of the fishery on species other than Patagonian toothfish and the ecosystem in the fishery area; and*
  - (c) *the allocation, before the beginning of each fishing year, of monitoring responsibilities to statutory fishing right holders in proportion to the numbers of statutory fishing rights they are likely to hold at the beginning of that fishing year.*
- (3) *In developing and implementing a fishery assessment plan, AFMA must:*
  - (a) *consult, and have regard to the views of, SouthMAC, SARAG and the holders of statutory fishing rights; and*
  - (b) *have regard to the 5-year strategic research plan mentioned in paragraph 6(i).*

The FAP sets out how monitoring responsibilities (tagging) for the 2024/25 and 2025/26 fishing years will be shared between the holders of Statutory Fishing Rights (SFRs) for the Fishery and how these responsibilities may be traded among operators.

Until 2015/16, the MITF FAP was reviewed annually. However, given the two-year Total Allowable Catch (TAC) setting cycle that commenced in the 2016/17 fishing season, SARAG and SouthMAC agreed the MITF FAP should be a two-year document, unless the need arises for an earlier review. This FAP applies to the 2024/25 and 2025/26 fishing years.

In the past the MITF fishing industry has significantly contributed to research through the provision of vessel time, an observer program, direct financial contributions and the expertise of the crew. This has been supplemented by Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australian Antarctic Division (AAD), the

Fisheries Research and Development Corporation (FRDC) and AFMA through direct financial support and the provision of staff and research time.

## 2 Monitoring Program Requirements

The monitoring program will include the necessary research to underpin stock assessments conducted by CSIRO and considered by SARAG. Until the 2010/11 season, the assessment of Macquarie Island toothfish was based on data from a tag-recapture experiment initiated during the 1995/96 fishing season. The tag-recapture assessment used a population model that included the dynamics of tagged and un-tagged fish, daily tag releases, tag recaptures, total commercial catches, an estimate of natural mortality, and an estimate of the annual net change in available abundance between seasons for the years 1996 to 2010.

An integrated assessment model (stock synthesis 3) has been developed by CSIRO and the outputs are used to set the annual toothfish TAC for the fishery as a whole. The integrated stock assessment model continues to use the tagging information and integrate the emerging spatial and temporal changes that are occurring in the MITF. Tagging remains a critical input to the stock assessment.

Specific research objectives for the MITF are:

1. assessing distribution and abundance of the target species Patagonian Toothfish (*Dissostichus eleginoides*);
2. estimating stock dynamics of target species, including estimating population parameters;
3. assessing the effects of fishing on bycatch species and habitats.

Required research involves:

1. a tagging program and a tag overlap program to ensure an even spread of tags across the fishery;
2. sampling of catch (target and bycatch species) by the observers on each voyage;
3. specialised research as required from time to time, to explore the effects of fishing in the environment as well as specific aspects of stock dynamics.

## 3 Setting of the Annual Monitoring Program

SARAG in conjunction with SFR holders will determine the monitoring program for the 2024/25 and 2025/26 fishing years and allocate responsibilities detailing the requirements for each of the research tasks including:

- implementation requirements;
- critical timing of the task and flexibility that could be considered in timing of the work;
- priority of the work (including whether it is essential); and

- other operational constraints.

Where an agreement cannot be reached on the extent of the monitoring program for the coming fishing year it will not exceed the average level of previous years. In line with the requirements of the MITF Management Plan, the Monitoring Program will be developed and reviewed every two years, unless required earlier, taking into account the:

- objectives of this Plan; and
- Sub-Antarctic Annual and 5 Year Strategic Research Plan.

## 4 Non-operational SFR Holders

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Non-operational SFR holders are defined as those owning less than the minimum amount of quota needed to allow them to fish, that is, less than 25.5% of the total number of SFRs issued in the Fishery, as required under Section 12 of the MITF Management Plan.

Those SFR holders that are unable to fish will continue to accrue a debit against their quota until such time as they:

- lease out their quota – in which case the debit attached to this quota for the current and previous years would be transferred to the lessee; or
- enter into an agreement with an operational quota holder to carry out their monitoring requirements; or
- acquire sufficient quota to become operational and hence are able to meet their monitoring responsibilities; or
- pay money into an agreed research fund for the Fishery.

## 5 Agreed research plan for 2024/25 and 2025/26

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### 2024/25 and 2025/2026 Monitoring Program

#### Tagging toothfish

Since 1995, it has been the aim to tag enough toothfish to enable a stock assessment to be undertaken for the following season. Initially, this was carried out by the trawlers during normal fishing operations, mainly in the Aurora Trough. With the introduction of a longliner in 2007, tagging has been undertaken more widely across the fishery.

The annual stock assessments rely on tagged fish being recaptured. For example, when a 60 tonnes research TAC was set for the Aurora Trough, the aim was to have around 40 tagged toothfish recaptured.

In order to continue to address stock structure issues, it was agreed that a tagging aim of two tagged fish per green weight tonne of toothfish caught be applied for the 2020/21 and 2021/22 fishing years. The two tagged fish per tonne rate will be based on green weight of

toothfish, not glazed weight. The TAC has been set at 468 tonnes for 2024/25 and 468 tonnes for 2025/26. This equates to 936 tags being deployed in each fishing season, assuming that the entire TAC will be caught.

It is important to note two tags per tonne is an aim and operational issues such as lice and likely survivability of tagged fish may prevent this rate being met. Only fish that have a high chance of survival should be tagged. In the MITF a minimum tag size-overlap of 60% must be achieved, with industry and observers working together to aim for 80% tag size-overlap. Tagging should be undertaken on a daily basis to spread the workload evenly and to achieve a geographical pattern of tagged fish releases that closely mirrors the effort and catch of the fishery.

Scientific observers, who have been trained in best tagging practice will tag all fish. However it is industry's responsibility to:

- provide observers with fish that, after being tagged, have a high chance of survival; and
- facilitate close collaboration between crew and observers to ensure that a minimum 60% tag-size overlap is achieved, and where possible a 80% tag-size overlap is achieved.

Australian Longline Fishing Pty Ltd will be the only company operating in the fishery in the 2024/25 season and at the time of writing it is expected that they will also be the only company operating in the 2025/26 season. Should this change, industry will advise AFMA of the change and the FAP will subsequently be reviewed by SARAG and SouthMAC. The tagging requirements based on proportional and actual allocations of SFR holdings for 2024/25 and 2025/26 are shown in the following table, noting this is dependent on whether the TAC is fully caught.

SFR holder	Owned quota holdings	Tagging requirements for each fishing year by quota holding	Number of tags to be deployed by SFR holder
Austral Fisheries Pty Ltd	70%	655.2	0
Australian Longline Fishing Pty Ltd	30%	280.8	936

Tagging work is conducted in line with fishing activity. It is recognised that the tag and release of fish impose a cost to industry in terms of extra time required to catch the annual TAC due to fish being released as part of the tagging program. Industry have estimated that



the tagging commitments specified in this FAP will cost industry \$59,220 for each of the 2024/25 and 2025/26 fishing seasons. This estimate has been derived as follows:

Tagging work

- two tags per 468 tonnes of fish caught = 936 tags deployed in total
- 936 tags x 6kg (average weight of toothfish at MITF) = 5.62 tonnes of fish tagged and released each year
- 5.62 tonnes / 4 tonnes (average catch per boat per day) = 1.41 days to catch
- 1.41 days x \$42,000 (average daily vessel running cost) = \$59,220.

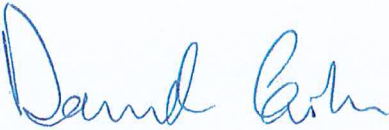
**Observer duties**

The observer duties undertaken on vessels operating in the MITF are similar to those which apply to Australian vessels operating in the Heard Island and McDonald Islands (HIMI) Fishery. The duties also meet the standards adopted by the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR). Broadly the Observers duties include the following observations and data collections:

- count birds around the vessel at the same time each day provided the vessel is not hauling or setting;
- record time, position etc. of sets and hauls in FishLog;
- observe at least 50% of hooks for bird and fish bycatch in all hauls;
- record catch composition of each haul and take biological observations on common bycatch species;
- biological sampling of *Dissostichus* spp. in research and commercial hauls;
- tag *Dissostichus* at a rate of two (2) tags per tonne across all of the regions in the fishery where the vessel operates within the season<sup>1</sup>;
- collect specimens of bycatch species; and
- undertake conversion factor experiments.

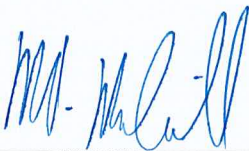
**6 AGREEMENT**

We, the undersigned, as the current holders of Statutory Fishing Rights in the Macquarie Island Toothfish Fishery agree to comply with the requirements of this, Macquarie Island Toothfish Fishery Fishery Assessment Plan for the 2024/25 and 2025/26 fishing seasons:

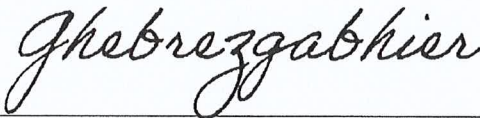
 CEO	9/4/24
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<sup>1</sup> It is important that observers, rather than crew, tag the fish as observers have been trained in tagging.

Director/s/Authorised person, Austral Fisheries Pty Ltd	Date
---	------

	9/4/2024
Director/s/Authorised person, Australian Longline Fisheries Pty Ltd	Date

I endorse that this agreement meets with the requirements of the *Macquarie Island Toothfish Fishery Management Plan 2006*.

	9 April 2024
Manager, Antarctic Fisheries, Australian Fisheries Management Authority	Date





Australian Government

Australian Fisheries Management Authority

# **Heard Island & McDonald Islands**

## **Fishery Assessment Plan**

**2023/24**

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# 1 Introduction

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The Heard Island and McDonald Islands (HIMI) Fishery Assessment Plan (FAP) has been developed to address the research needs of the HIMI Fishery. The FAP has been developed by the Australian Fisheries Management Authority (AFMA) in consultation with the HIMI fishing industry, the Sub-Antarctic Resource Assessment Group (SARAG) and the Sub-Antarctic Fisheries Management Advisory Committee (SouthMAC). The FAP is a requirement of Section 9 of the *Heard Island and McDonald Islands Fishery Management Plan 2002*:

## 9 Fisheries assessment plan

- (1) *AFMA must develop and implement a fisheries assessment plan to ensure that an adequate program of monitoring takes place in the fishery.*
- (2) *The fisheries assessment plan must provide for:*
  - (a) *an adequate program of monitoring to ensure that reliable fisheries stock estimates can be made for each target species; and*
  - (b) *adequate monitoring of the direct impact of the fishery on non-target species and the ecosystem in the area of the fishery; and*
  - (c) *the allocation, by 1 March of each fishing year, of monitoring responsibilities to statutory fishing right holders in proportion to the numbers of statutory fishing rights they are likely to hold at the beginning of that fishing year.*
- (3) *In developing and implementing a fisheries assessment plan, AFMA must:*
  - (a) *consult, and have regard to the views of, the MAC, the RAG and the holders of statutory fishing rights; and*
  - (b) *have regard to the 5-year strategic research plan mentioned in paragraph 7(1)(g).*

The HIMI FAP sets out how toothfish tagging and trawl survey work will be shared between the Statutory Fishing Right (SFR) holders and how these responsibilities may be traded.

Since 2015/16 the HIMI FAP has been developed to match the two-year Total Allowable Catch (TAC) setting cycle, unless the need arises for an earlier review. This FAP applies to the 2023/24 fishing year only, following CCAMLR's decision for a single year TAC for this season.

The Monitoring Program is funded in part through direct contributions from SFR holders, who make significant contributions to research through the provision of vessel time, funding of observers, direct financial contributions and expertise of the crew. HIMI research has been supported by the Australian Antarctic Division (AAD), the



Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), Fisheries Research Development Corporation (FRDC), Institute for Marine and Antarctic Studies (IMAS) and AFMA through direct financial support and the provision of staff and research time.

## 2 Monitoring Program Requirements

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Specific research objectives for the HIMI Fishery include:

1. assessing distribution and abundance of target species, Patagonian toothfish (*Dissostichus eleginoides*) and mackerel icefish (*Champscephalus gunnari*);
2. estimating stock dynamics of target species, including population parameters;
3. assessing distribution and abundance of major bycatch species including grenadiers, grey rock cod, unicorn icefish, skates and rays; and
4. assessing the effects of fishing on bycatch species and habitats.

Based on the research objectives, the Monitoring Program has been designed to include research necessary to underpin stock assessments for:

- a. Patagonian toothfish<sup>1</sup>;
- b. mackerel icefish<sup>2</sup>; and
- c. major bycatch species<sup>3</sup>.

The Monitoring Program involves:

1. Random Stratified Trawl Surveys (RSTS) to estimate abundance and age-structure of the two target species;
2. a Patagonian toothfish tagging program (underway since 1998)<sup>4</sup>; and
3. sampling of catch by the observers on each voyage<sup>5</sup>.

Some specialised research may be necessary from time to time to explore the impacts of fishing on the environment as well as specific aspects of stock dynamics. Specific research programs have been implemented since the 2015/16 season to:

1. reduce the reliance on RSTS to estimate stock abundance estimates by including tag-based abundance estimates in the stock assessments;
2. enhance the understanding of stock structures across the Kerguelen Plateau with a major co-funded program between AAD, IMAS, FRDC and industry;

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<sup>1</sup> Assessments of catch limits since 1995 have required estimates of year class strength combined with estimates of population parameters. Since 2014 assessments have included a subset of tag recapture data as an index of abundance.

<sup>2</sup> Assessments of catch limits since 1997 have been made for two years based on estimates of population parameters, a survey of stock abundance and age structure.

<sup>3</sup> Including skates and rays, grenadiers, unicorn icefish and grey rock cod.

<sup>4</sup> This includes a tag overlap program to ensure an even spread of tags across the fishery.

<sup>5</sup> The observer program underpins the estimates of abundance from the RSTS and facilitates estimates of population parameters, particularly age and growth.

3. address a number of scientific issues raised in the Commission for the Conservation of Antarctic and Marine Living Resources (CCAMLR), such as improving the ageing profile of toothfish by increasing the otolith reading and assessments of age for samples taken in recent years.

The number of fishing days required to fulfil research requirements vary from year to year in order to meet the particular requirements for stock assessments. Changes to research requirements need to be considered and supported by SARAG before being included in the HIMI FAP.

### **3 Vessel Considerations**

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Vessels are required to use standardised methods in the RSTS and tagging programs, as well as other programs designed to answer important questions for stock assessments. Unintended biases can arise when vessels use different gear or fishing and research methods, undertake the research at different times, or if the quality of research information varies between vessels. When designing the two-year Monitoring Program consideration needs to be given to:

1. standardising research survey gear and timing;
2. training, as required, of crew and vessel masters for the implementation of research programs;
3. undertaking trials, as required, to standardise research results between vessels and masters;
4. installing appropriate technologies to support research requirements; and
5. supporting the observers during research operations (as required).

### **4 Setting of the Monitoring Program**

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SARAG, in conjunction with SFR holders, will determine the Monitoring Program for 2023/24 and taking into account standardisation of vessels, will allocate responsibilities.

AAD will provide a draft plan detailing the requirements for each of the research tasks including:

- implementation requirements;
- number of vessels that could be suitably included in the task;
- critical timing of the task and extent of flexibility in timing of the work;
- priority of the work (including whether it is essential); and
- other operational constraints.

Where agreement cannot be reached on the extent of the Monitoring Program for a particular fishing year, it will not exceed the average level of previous years. Consistent with the requirements of the HIMI Fishery Management Plan, the Monitoring Program



will be developed and reviewed every two years, unless required earlier, taking into account:

1. the objectives of the FAP;
2. the Sub-Antarctic Fisheries Annual Research Statement and 5 Year Strategic Research Plan; and
3. CCAMLR requirements.

## **5 Carryover of Credit and Debits**

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SARAG, SouthMAC and AFMA acknowledge the benefits of the Monitoring Program being completed on an annual basis. However, there is recognition that given the design of the Monitoring Program it may not be operationally or scientifically practical (or desirable) to complete survey requirements within a single fishing year.

SARAG, SouthMAC and AFMA appreciate there are benefits in the same vessel using the same standardised fishing gear to complete surveys. In order to facilitate standardisation, carryover of monitoring credits and debits from year to year may be needed. These balances are to be expressed in terms of days or parts of days and/or fish to be tagged (refer to table on page 11).

Should industry wish to carryover any research outlined in the FAP, written support must be obtained from AFMA following consideration by SARAG and SouthMAC. If the carryover of FAP research is approved and this occurs in the first year of the two-year FAP, the FAP must then be amended to reflect the additional research requirements in the second year of the FAP.

Monitoring credits and debits will be taken into account by SARAG when determining the Monitoring Program for the following year.

## **6 Non-operational SFR Holders**

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SFR holders who are unable to fish will continue to accrue a debit against their quota until such time as they:

- lease out their quota – in which case the debit attached to this quota for the current and previous years is transferred to the lessee; or
- enter into an agreement with an operational quota holder to carry out their monitoring requirements; or
- pay money into an agreed research fund for the Fishery<sup>6</sup>.

Monitoring debits may not accrue for more than three years.

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<sup>6</sup> To assist in calculating outstanding amounts an annual estimate will be made of the cost of performing a day of monitoring activities and undertaking fish tagging. These estimates will be made prior to the commencement of the season. Industry has come to a commercial agreement among themselves and an agreed research fund will not be utilised for the 2023/24 fishing seasons.

## 7 Trading of monitoring credits and debits

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SFR holders may trade their monitoring credits and debits during the year. Any trading will not impact on the Monitoring Program for the fishery for the year as operators must undertake the surveys and tagging activities agreed to under the FAP.

Operators who trade their research credits and debits are required to notify AFMA in writing.

## 8 Agreed research plan for 2023/24

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### 8.1 Random stratified trawl survey – 2024

#### Icefish and toothfish survey

Gunnari Ridge	(Icefish + toothfish)	18 stations
Heard Island Plateau Southeast	(Icefish + toothfish)	30 stations
Heard Island Plateau West	(Icefish + toothfish)	10 stations

#### Toothfish survey

Evitas	(Toothfish only)	25 stations
Heard Island Plateau North	(Toothfish only)	15 stations
Plateau Deep Northeast	(Toothfish only)	15 stations
Plateau Deep East	(Toothfish only)	30 stations
Plateau Deep Southeast	(Toothfish only)	10 stations
Plateau Deep West	(Toothfish only)	10 stations

**TOTAL** **163 stations**

Industry has estimated that 163 stations will take 24 days to complete.

The estimated time for completion is based on actual times to complete previous surveys. Historically, the survey has been undertaken between late March and as late as June. To aid with operational efficiency for industry, from 2024, it was agreed that the survey could begin as early as 1 March. Normally, between 19-27 research days are undertaken by an industry trawler to monitor the abundance of the recruited and pre-recruit year classes of mackerel icefish and the three to six year old year classes of Patagonian toothfish. Toothfish are found widely over the shallow plateau, slope and surrounding deeper water to greater than 2000 m depth, whereas icefish has a more localised distribution on parts of the shallow plateau, particularly in the eastern and south eastern parts.



The principal research activity is a RSTS, which is a multispecies survey that concentrates on mackerel icefish and young Patagonian toothfish. As a result of the age-specific depth distribution of toothfish, older year classes are not adequately sampled by the trawl gear because it cannot adequately fish the deeper slope areas. In areas where toothfish and icefish overlap, the two species can be surveyed in the same operation provided that trawls are only made during daylight hours.

The abundance and demographic data from each species gained from the RSTS is utilised in population models to project the abundance of the observed year classes through a period appropriate to the life span of the species. A TAC that meets CCAMLR requirements for maintaining the spawning stock biomass and allowing sufficient escapement for predators is then calculated.

The abundance of icefish can naturally vary substantially between year classes, and as there are only two or three recruited year classes in the fishery it is necessary to conduct a survey each year to adequately monitor the abundance and hence the yield. The results of the 2019 RSTS highlighted the importance of sampling the stations outlined above, and SARAG recommended that industry reserve a minimum of 35 tonnes of icefish quota to ensure the survey is representative and the data collected during the RSTS can be fully utilised in future assessments.

Toothfish live in excess of 40 years and by having more year classes the overall toothfish population remains more stable between years. It is therefore not as important to conduct a survey each year for toothfish, although the preference is to obtain at least three annual observations on each age classes, which means conducting a survey at least every second year. Notwithstanding, the annual RSTS is a valuable input when assessing the stock status particularly in light of periods of low recruitment historically and work being undertaken to assess and minimise potential bias in the stock assessment caused by the variability in spatial distribution of commercial fishing effort and tagging data.

In order to standardise timing, the RSTS must commence no earlier than 1 March each year and be completed as quickly as possible and ideally by 30 May each year, to allow the RSTS to be a comparable snapshot in time between years.

Additional RSTS work may be completed at other times of the year, should the need arise.

## **8.2 Tagging toothfish**

An annual tagging aim of 1000 toothfish was introduced in 1998. Initially, this was carried out by trawlers during normal fishing operations. With the introduction of longlining in 2003, tagging requirements were divided between trawlers and longliners relative to the SFRs held. There has been an impetus to tag fish widely across the fishery however in some years special efforts were made to tag additional small fish on the shallow plateau.



In 2014/15, to inject additional tags into the fishery, the tagging rate increased from two fish per three green-weight tonnes to two fish per one green-weight tonne. Increased tag releases were important for transitioning the Patagonian toothfish stock assessment from reliance on RSTS to a tag-based assessment.

The rate of two tagged fish per one green-weight tonne of toothfish will apply for the 2023/24 fishing season. This equates to aiming for a total of 4,800 toothfish being tagged in the 2023/24 season based on a TAC of 2,400 tonnes. The two tagged fish per tonne rate is based on green weight of toothfish, and not glazed weight. It is important to note two tags per tonne is an aim and operational issues such as lice and likely survivability of tagged fish, may prevent vessels from achieving this tagging rate. Only fish that have a high chance of survival should be tagged.

In the HIMI Fishery a minimum tag size-overlap of 60% must be achieved, with industry and observers working together to aim for 80% tag size-overlap. Tagging should be undertaken on a daily basis to spread the workload evenly and to achieve a geographical pattern of tagged fish releases that closely mirrors the effort and catch of the fishery.

Scientific observers, who have been trained in best tagging practice, will tag all fish. However it is SFR holders responsibility to ensure vessel crew:

- provide observers with fish that, after being tagged, have a high chance of survival; and
- facilitate close collaboration between crew and observers to ensure that a minimum 60% tag-size overlap statistic is achieved, and where possible an 80% tag-size overlap statistic is achieved.

It is not only the total number of tags released that is important to the stock assessment, but also spatial spread of both tag releases and scanning (recapture) effort. Therefore, industry is strongly encouraged to spread effort to the extent that is practically possible within the area of the fishery where tags have previously released. The practice of continually fishing in a small area also causes difficulty for non-spatially explicit tag-based models.

The tagging work is conducted in line with fishing activity. It is recognised that the tag and release of fish impose a cost to industry in terms of extra time required to catch the annual quota, due to fish being released as part of the tagging program. Industry have estimated that the tagging and RSTS commitments specified in this document, cost industry \$1,913,650 for the 2023/24 fishing season. This estimate has been derived as follows:

#### Tagging work

##### 2023/24

- two tags per 2400 tonnes of fish caught = 4,800 tags deployed in total

- 4,800 tags x 6kg (average weight of toothfish at HIMI) = 28.8 tonnes of fish tagged and released each year
- 28.8 tonnes / 4.5 tonnes (average catch per boat per day) = 6.4 days to catch
- 6.4 additional days x \$37,000 (average daily vessel running cost) = \$236,800.

#### RSTS work

Industry has estimated that 163 stations will take 24 days to complete.

- 24 days x \$48,000 (average daily trawl vessel running cost) = \$1,152,000

Additionally, there is an operational and opportunity cost of catching small trawl toothfish as opposed to catching larger fish with longline:

- Average last 2 years survey = 51.5 tonnes TOP green weight = 31.6 tonnes HGT
- Trawl vs longline price differential on 31.6 tonnes HGT = \$415,850.
- Trawl vs longline difference in conversion factor on 51.5 tonne GWT = 2.6 tonne.
- Additional 2.6 tonne of HGT lost due to trawl CF = \$109,000

### 8.3 2023/24 and Monitoring Program

Toothfish tagging requirements: approximately 4,800 tags in total in 2023/24 fishing year

Toothfish surveys: 105 stations each fishing year

Toothfish and icefish surveys: 58 stations each fishing year.

#### 8.3.1 Proportional allocations

SFR Holder	Quota holdings		Tagging requirements*	Survey Requirements	
	Toothfish	Icefish	Toothfish	Toothfish	Toothfish & Icefish
Austral Fisheries Pty Ltd	71.00%	71.00%	3,408 (23/24)	74.55 stations	41.18 stations
Australian Longline Pty Ltd	14.50%	14.50%	696 (23/24)	15.23 stations	8.41 stations
Nippon Suisan Kaisha Ltd	11.37%	11.37%	545.76 (23/24)	11.94 stations	6.59 stations
Ocean Values (NSW) Pty Ltd	3.13%	3.13%	150.24 (23/24)	3.29 stations	1.81 stations

\* Based on the entire annual TAC being caught.


### 8.3.2 Actual allocations agreed to by SFR Holders

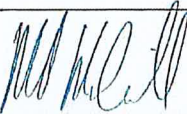
SFR Holder	Agreed research to be carried out			Debit/credits to be carried forward		
	Tagging requirements	Survey Requirements		Tagging	Survey	
	Toothfish	Toothfish	Icefish	Toothfish	Toothfish	Icefish
Austral Fisheries Pty Ltd	3,408 (23/24)	105 stations	58 stations	0*	0*	0*
Australian Longline Pty Ltd	1,392 (23/24)	0	0	0*	0*	0*
Nippon Suisan Kaisha Ltd	0	0	0	0*	0*	0*
Ocean Values (NSW) Pty Ltd	0	0	0	0*	0*	0*

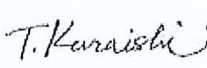
\* Austral Fisheries Pty Ltd, Australian Longline Pty Ltd, Nippon Suisan Kaisha Ltd and Ocean Values (NSW) Pty Ltd have agreed that, during the 2023/24 fishing season and for consistency, Austral Fisheries Pty Ltd will undertake the RSTS. These companies have come to a commercial agreement among themselves which will result in no debits or credits being carried forward to the 2024/25 fishing seasons. It should be noted that until 2014 the RSTS was completed by Austral Fisheries vessel *Southern Champion* and from 2015-2020 the Austral Fisheries vessel *Atlas Cove* and in 2021 the Austral vessel *Cape Arkona* took over the RSTS.

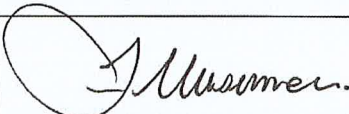
## 9 AGREEMENT

We, the undersigned, as the current holders of Statutory Fishing Rights in the Heard Island and McDonald Islands Fishery agree to comply with the requirements of this, Heard Island and McDonald Islands Fishery Assessment Plan for the 2023-24 fishing season:


	21/3/24
Director/s/Authorised person, Austral Fisheries Pty Ltd	Date

	27/3/24
Director/s/Authorised person, Australian Longline Pty Ltd	Date

	8/4/2024
Director/s/Authorised person, Nippon Suisan Kaisha Ltd	Date

	27/3/24
Director/s/Authorised person, Ocean Values (NSW) Pty Ltd	Date

I endorse that this agreement meets with the requirements of the *Heard Island and McDonald Islands Fishery Management Plan 2002*.

	23/5/2024
Manager, Antarctic Fisheries, Australian Fisheries Management Authority	Date

## Attachment E

### Agenda Item 4 of SouthMAC 43 meeting

Revised proposed longline fishing season extension trial arrangements for the MITF taking into account feedback received from the Protected Areas and Species Section at the AAD for added clarification of the intentions of the trial and the seabird limits applicable (revisions are underlined). This was provided to SouthMAC Members on 27 June for consideration at their meeting on 1 July.

**Table 1** Proposed longline fishing season extension trial arrangements for the MITF. ‘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.

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.
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.
Monitoring and analysis	As far as practical having regard for other data collection priorities, the AFMA observer program is to include daily seabird <u>abundance</u> 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	<b><i>Arrangements for the 5 identified species.</i></b> <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>  <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> </ul>

Trial component	Detail
	<ul style="list-style-type: none"> <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 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.</li> </ul> <p><b><i>Arrangements for all other seabird species ('other' seabirds).</i></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><u>Option 1:</u></b> cease in its entirety; or</p> <p><b><u>Option 2:</u></b> cease for that season. 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, <u>identify what additional mitigation measures will be required to</u> address the cause.</p>