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# **MSC SUSTAINABLE FISHERIES CERTIFICATION**

Surveillance Audit Report for South Georgia icefish pelagic trawl



2<sup>nd</sup> Surveillance stage

November 2018

Certificate CodeF-ACO-0028Prepared For:Polar Ltd.Prepared By:Acoura MarineAuthors:Jim Andrews and Paul Medley





# **Assessment Data Sheet**

Fishery name	South Georgia icefish pelagic trawl	
Species and Stock	Mackerel Icefish ( <i>Champsocephalus gunnari</i> ) South Georgia	
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## 1 Introduction

#### **1.1 Scope of Surveillance**

This report outlines the findings of the 2<sup>nd</sup> Annual Surveillance of the South Georgia icefish pelagic trawl fishery. The scope of the certified fishery and therefore of this surveillance is specified in the Unit of Certification set out below:

 Table 1: Scope of South Georgia icefish pelagic trawl fishery MSC Unit of Certification.

Species:	Mackerel Icefish (Champsocephalus gunnari)	
Geographical area:	South Georgia Maritime Zone	
Method of capture:	Pelagic trawl	
Stock:	Antarctic Mackerel Icefish	
	CAMMLR Area 48 Atlantic within sub-area 48.3	
Management System:	Management advice by CCAMLR, enacted by GSGSSI	
Client Group:	Polar Ltd.	
Other Eligible Fishers:	none	

#### **1.2** Aims of the Surveillance

The purpose of the annual Surveillance Report is fourfold:

- **1.** To establish and report on whether or not there have been any material changes to the circumstances and practices affecting the original complying assessment of the fishery;
- 2. To monitor the progress made to improve those practices that have been scored as below "good practice" (a score of 80 or above) but above "minimum acceptable practice" (a score of 60 or above) as captured in any "conditions" raised and described in the Public Report and in the corresponding Action Plan drawn up by the client;
- **3.** To monitor any actions taken in response to any (non-binding) "recommendations" made in the Public Report;
- **4.** To re-score any Performance Indicators (PIs) where practice or circumstances have materially changed during the intervening year, focusing on those PIs that form the basis of any "conditions" raised.

**Please note:** The primary focus of this surveillance audit is to assess changes made in the previous year. For a complete picture, this report should be read in conjunction with the Public Certification Report for this fishery assessment which can be found here:

https://fisheries.msc.org/en/fisheries/south-georgia-icefish-pelagic-trawl/@@assessments





# 2 Background

#### 2.1 About the fishery

To provide some context for this surveillance audit, the fishery is briefly described below.

#### 2.1.1 History of fishery

Mackerel icefish *Champsocephalus gunnari* is found in both the Atlantic (Bouvet Island, South Georgia, South Sandwich Islands, South Orkney, South Shetland Islands and the northern part of the Antarctic Peninsula) and Indian Oceans (Kerguelen and Heard and McDonald Islands). The species is now exploited only at South Georgia and in the Heard Island and McDonald Islands fishery.

Catch data from this fishery highlight heavy exploitation in the late 1970s and a peak in 1983. Before 1987, no catch limit was set for the South Georgia fishery and catches reported to CCAMLR between 1976 and 1987 are considered highly uncertain due to species reporting issues and potential overreporting of catch. The reported catches since then have fluctuated widely, between 80,000 tonnes in 1986/87 and 0 tonnes between 1992 and 1997 (with a variation in TAC since 1986/87 of between 0 and 1300 tonnes). CCAMLR closed the bottom trawl fishery in the early 1990s and the fishery reopened as a pelagic trawl fishery in 1995.

The client for this assessment, Polar Ltd, are the only licensed operator in the South Georgia Icefish fishery and they operate three vessels in the fishery (see Table 3).

#### 2.1.2 Management

Although the Maritime Zone covers three CCAMLR statistical subareas, the entire catch for this fishery comes from within subarea 48.3. The management of the fishery falls within the jurisdiction of CCAMLR and GSSSI. Fisheries management in South Georgia waters is based directly on the annual scientific advice and recommended management measures of CCAMLR. As an Overseas Territory of the UK, GSGSSI has no formal direct contact with CCAMLR, but is represented at CCAMLR by the Polar Regions Unit of the Overseas Territories, Foreign and Commonwealth Office of the UK. Enforcement is conducted by GSGSSI patrol vessels whose operations are consistent with CCAMLR standards and procedures. GSGSSI puts into effect the conservation measures set by CCAMLR, which is advised by its Scientific Committee (SC-CCAMLR), which is in turn advised by its Working Group on Fish Stock Assessment and Working Group on Statistics and Modelling (SAM). Some conservation measures are aimed at preservation of the target stock while others are aimed at the reduction of direct or incidental impacts on other species. Conservation measures for target species of fisheries include the setting of annual Total Allowable Catches (TACs) for each species according to individual sub-areas. In addition, GSGSSI makes domestic legislation that adds a more precautionary approach to conserve fish stocks and related marine living resources, maintain safe and sustainable fisheries, and raise the standards of management, research, and fishery operations.

#### 2.1.3 Fishing methods

The gear used is a pelagic trawl, as regulated. As such nets would be damaged if they came into contact with the seabed, interaction with the seabed is actively avoided. The legal minimum mesh size is 90mm, but Polar Ltd use 95mm in order to allow a MLS of 150g fish which normally relate to a length size of 24cm. Pelagic doors are used.

There are several bird mitigation measures that are used to prevent birds from meshing whilst shooting the trawl. The gear is bound up with sisal string (biodegradable) from the cod end forward to prevent birds being trapped in the net and weights have been sewn into the net to aid rapid sinking. After hauling the gear is carefully cleaned to remove any fish that are meshed or left in the extension or cod end.





## 3 Surveillance Process

#### 3.1 Findings of the original assessment

When this fishery was re-certified in July 2016 it scored more than 80 for all Performance Indicators. No conditions of certification nor any recommendations were generated.

#### 3.2 Surveillance Activity

#### 3.2.1 Determination of surveillance level

Please see Appendix 2

#### 3.2.2 Surveillance team details

The audit was carried out by Jim Andrews and Paul Medley, who were both members of the assessment team that re-assessed the fishery in 2016. Jim Andrews acted at Team Leader.

Acoura Marine confirms that the surveillance team meet the competency requirements set out in Annex PC of the Fisheries Certification Requirements v2.0.

#### 3.2.3 Date & Location of surveillance audit

The audit was conducted on the 26<sup>th</sup> September 2018 in London, United Kingdom. The timing and location of the audit was selected to coincide with the annual fisheries-science meeting organised by the Government of South Georgia & the South Sandwich Islands.

#### 3.2.4 Stakeholder consultation & meetings

#### 3.2.4.1 What was inspected

The audit was conducted through an interview with the client and scientific advisors in London on the 26<sup>th</sup> September 2018. Reports of stock status and fishery management actions were presented at the audit and retained by the assessment team.

Prior to the site visit, the assessment team attended a stakeholder meeting in London at which the fishing industry and other stakeholders were present, and where stakeholders from the fishing industry, science community and NGOs had the opportunity to comment on information presented about South Georgia fisheries.

#### 3.2.4.2 Stakeholder Consultation

A total of 7 stakeholder organisations and individuals having relevant interest in the assessment were identified and consulted during this surveillance audit. The interest of others not appearing on this list was solicited through the postings on the MSC website.

A list of the meetings held during this surveillance audit and the attendance at each meeting is provided in Table 2.





#### Table 2: List of meetings and attendance for this surveillance audit.

Date	Meeting and Attendance
26 <sup>th</sup> September 2018	GSGSSI Fisheries Science & Industry Meeting, Foreign & Commonwealth Office Attended by GSGSSI officials, scientific advisors, industry and NGO representatives.
	Surveillance Audit, Falkland Islands Government Offices, London. Attended by:- Alex Reid, Polar Ltd Chris Darby, Cefas Mark Belchier, GSGSSI Sue Gregory, GSGSSI

#### 3.2.4.3 Documents referred to

See Appendix 4.

#### 3.3 Surveillance Standards

#### 3.3.1 MSC Standards, Requirements and Guidance used

This surveillance audit was carried out according to the MSC Fisheries Certification Requirements v2.0.

#### 3.3.2 Confirmation that destructive fishing practices have not been introduced

The client and scientific advisors confirmed that no destructive fishing practices have been introduced to the fishery.

#### 3.3.3 Controversial unilateral exemptions

The fishery is not subject to any controversial unilateral exemptions.

#### 3.3.4 Enhancement Activities

This is not an enhanced fishery.

#### 3.3.5 Forced labour

The assessment team confirmed that fishery operators have not been prosecuted for any violations against forced labour laws.

### 4 Updated Fishery Background

#### 4.1 Changes in fleet structure or operation

There have been no changes in the fleet structure. The vessels licensed to fish in the icefish pelagic trawl fishery over the period 2017-19 are listed in Table 3.





Table 3: List of licensed vessels in the South Georgia icefish trawl fishery, for the period 2017-19.

Vessel	PLN
SIL	ZDLR-1
Robin M Lee	ZDZ-2
New Polar	ZDLF-2

There have been no changes in the type of fishing gear used in the fishery since it was re-certified.

There has been very little fishing activity during 2017-18. The vessels operating in the fishery have caught just over 1t of icefish.

The poor catches of icefish in recent years are a result of changes in the behaviour of the fish, which are in turn attributed to the relatively warm surface water temperatures around South Georgia. The icefish appear to be staying close to the seabed where the water is cooler.

The client reported in the 2017 surveillance audit that they would be taking a new net and more experienced skipper to South Georgia in late 2017 to see if it is possible to find a way to catch the fish while they are in the water column using a pelagic net fishing close to the seabed. This proved to have been a valuable exercise and plans are being made to make another trip with this skipper aboard another vessel in late 2018.

#### 4.2 Changes in the management system

There have been no significant changes in the management system in the past year.

In early 2018 the GSGSSI published its management plan for the icefish fishery (GSGSSI 2018a). This plan served to consolidate all of the existing management measures in a single document and has not introduced any changes in management practice.

Licences for the fishery continue to be issued by the GSGSSI for a period of 2 years. Information on the management regime is provided to prospective applicants (GSGSSI 2018b). GSGSSI are considering whether it is appropriate to transition to a quadrennial licence for this fishery.

#### 4.3 Changes in relevant regulations

There have been no significant changes in the regulation of this fishery in the past year.

#### 4.4 Changes to personnel involved in science, management or industry

There have been several personnel changes in the past year.

The Chief Executive Officer for the GSGSSI is now Helen Havercroft, who took over from James Jansen in June 2018. Mark Belchier is the new Director of Fisheries and Environment, and Sue Gregory is the GSGSSI Marine Environment and Fisheries Manager.

The assessment team note that both Sue Gregory and Mark Belchier have been directly involved in the management of the fishery for several years. The personnel changes are not considered likely to affect the performance of the fishery with respect to the MSC Standard.

#### 4.5 Changes to scientific base of information including stock assessments

#### 4.5.1 Stock Assessment

The stock of icefish within Area 48.3 is currently defined as a separate stock, relatively isolated from other populations and hence able to be managed separately. *C. gunnari* has never been found in waters deeper than 700m and most fish live shallower than 300m, which would clearly separate South Georgia as a management unit from other populations.

Strong icefish year classes (recruitment) have been produced around South Georgia at irregular intervals from 1972 until the present. Recruitment can range over 1 - 2 orders of magnitude. A





population model based assessment is not used to assess stock status, but this is based on demersal surveys.

Fishery independent stratified demersal surveys conducted every two years are used as the basis for the assessment of icefish stocks. Estimates of standing stock biomass are derived using catch densities based on the area swept by the trawl (calculated from wing-spread and tow distance). Biomass estimates can be used to derive robust precautionary catch limits taking into account sampling error.

#### 4.5.2 Current Stock Status

The most recent random stratified bottom trawl survey of the South Georgia and Shag Rocks shelves was carried out in January 2017 (Belchier et al 2017), and was presented to the Fish Stock Assessment Working Group in November 2017. This survey formed the basis of new catch limits for the 2017/18 fishing season.

The 2017 trawl survey was carried out by the fishing vessel *Sil*, which has been used in four previous South Georgia surveys.

A total of 72 trawl hauls were conducted in a random depth-stratified sampling programme. A total of 17.3t of icefish were caught, and the species was found in 71 of the 72 trawl hauls. The survey team reported that the icefish distribution was very different to that seen in 2015. The 2017 survey found the largest catches in 2017 were made in the NW region in the vicinity of the "moraine banks" where the commercial pelagic trawl fishery normally operates (see Figure 1). Juvenile icefish (<20cm) were caught in large numbers at all depths except around Shag Rocks. This was considered to indicate that there has been a pulse of strong recruitment.



# Figure 1: Location and relative size of catches (kg) from the South Georgia and Shag Rocks 2017 groundfish survey. [Source: Belchier et al, 2017].

The overall mean biomass was calculated from the survey at 91,049 tonnes. The lower 1-sided 95% confidence interval bootstrap estimate for 2015 was 37,514t. This stock estimate is higher than the estimate of 48,543t in 2015 and is the third highest in the time series (see Figure 2).







Figure 2: Time series of biomass estimates for mackerel icefish, *Champsocephalus gunnari*, derived from groundfish survey data using the CCAMLR bootstrap method. [Source: Belchier et al, 2017].

In addition to providing data for the stock assessment, the 2017 groundfish reported biological data including a dietary analysis which found that krill are currently relatively less important in the diet than they have been in the past. The dominant prey item found in icefish stomachs in 2017 was the amphipod *Themisto* sp.

The 2017 survey also included a report on some preliminary trials of the use of an underwater camera mounted on the headrope of the trawl to monitor seabed habitat types, and also reports on marine mammal observations. The trawl-mounted camera provided some images of iceberg scouring and also areas with a high density of benthic invertebrates. Preliminary cetacean sighting records are shown in Figure 3 below.







# Figure 3: Preliminary cetacean sightings results from 23 marine mammal observation stations surveyed during the 2017 South Georgia Groundfish survey. [Source: Belchier et al, 2017].

A total of 23 marine mammal survey stations were performed during the groundfish survey. A total of 105 marine mammals were recorded. Fin whales were the most abundant species (28 observed) followed by humpback whales (10).

A preliminary assessment of the icefish stock in CCAMLR Sub-area 48.3 was considered by CCAMLR in 2017 (Earl 2017). The time series of biomass estimates is shown in Figure 4.









The conclusion of the stock assessment was that the biomass is similar to the last (2015) survey, and lower than the highest level recorded in 2013. The stock is estimated to be above the average biomass since 2000. Recent catches have been very low compared to the biomass estimate.

#### 4.5.3 Management Advice

The general management strategy implemented by CCAMLR and GSGSSI is to keep the exploitation rate low until better information is available on the stock size and population dynamics. Catch limits have been set biennially since 2012. Catch limits are based on a precautionary harvest control rule, assuming there is no recruitment in the second year of the assessment period. Catch limits for the second year of an assessment period (e.g. 2017) are therefore always lower than those for the first year. Annual catches, relative to catch limit, are variable depending on the extent of participation in the fishery. They are also influenced by both interannual variation in the icefish population abundance and the availability of fish to the fishery (i.e. changes in the location and depth of fish).

The results of the projections for the 2017/18 and 2018/19 seasons applying the CCAMLR harvest control rule, catch limits (TAC) should be 4,733 tonnes for 2017/18 and 3,269t tonnes for 2018/19 (CCAMLR 2018). These TACs are very low compared to historical catches reported for the 1970s and 1980s. In addition, catches in general have been well below the catch limit. Only 110 tonnes of icefish were caught in 2016/17 compared to the catch limit of 2,074t.

Catches of icefish in recent years are thought to have been low as a result of icefish remaining close to the bottom and therefore difficult to catch with pelagic gear; a behavioural response to the warmer water currently found higher in the water column. The icefish are however taken in the survey's demersal trawl. Commercial demersal trawling is not allowed to protect habitat.

The catch limit is highly precautionary (Hillary et al., 2009, Hillary et al., 2010, Edwards et al., 2010a, Edwards et al., 2010b, Darby et. al. 2013). No recruitment is assumed in the second year, so the TAC will fall in the second year. The lower 95% confidence level is used as the basis of the biomass and an escapement of 75% is then calculated.

The full range of conservation measures are described in Conservation Measure 42-01 (2014) and, as well as catch limits, also include measures discouraging catching immature icefish below 24cm. Fishing is also prohibited within 12 nautical miles of the coast of South Georgia and within 3nm of the South Sandwich Islands.

CM42-01 limits on seabird by-catch in Subarea 48.3 icefish fishery were carried forward from the last season. Should any vessel catch a total of 20 seabirds, it is required to cease fishing for the remainder of the 2017/18 seasons. Limitations of fish by-catch outlined in CM 33-01 have also been carried forward to the coming season.

#### 4.5.4 Observer coverage

There is 100% observer coverage in the South Georgia Icefish fishery. At the time of the surveillance audit in September 2018, only one fishing trip had been carried out, and another was scheduled for October 2018. The observer report for the one fishing trip that had been carried out was submitted to the audit team (MRAG 2017) and is summarised below.

The FV *Robin M Lee* made a fishing trip to GSGSSI between the 6<sup>th</sup> and 31<sup>st</sup> October 2017. During that time the vessel fished for 17 days, and made 52 trawls. A total of 90.8t of icefish were caught. There was a small catch of non-target species, the observer recorded 63 South Georgia Icefish (*Pseudochaenichthys georgianus*); 146 Blackfin icefish (*Chaenocephalus aceratus*); 17 Lanternfishes (Myctophidae); 2 Antarctic armless flounder (*Mancopsetta maculata*); and 4 marbled rock cod (*Notothenia rossii*).

The observer report shows that all fishing regulations were complied with by the vessel. Weather and sea conditions were suitable to allow streamers to be used on all tows (see Figure 5), and no adverse interactions with birds were observed.









Figure 5: Photographs from observer report showing the deployment of streamer lines from the FV Robin M Lee around and over the trawl warps during fishing operation (MRAG 2017).





#### 4.6 Changes and updates on Ecosystem issues

There have been no changes in the fishing method, and therefore no changes in the nature of interactions with the South Georgia ecosystem. There has been ongoing research into ecosystem interactions, which was reported during the audit and also to stakeholders at a meeting prior to the audit.

#### 4.7 Harmonisation

There are three MSC-certified icefish fisheries listed on the MSC website. Summary information describing each fishery is listed in Table 4 below. The Australia mackerel icefish fishery has recently been combined with the Australian Heard Island and McDonald Islands Toothfish & Icefish fishery certificate.

Table 4:
 Summary information describing the MSC-certified fisheries for icefish. [Source: MSC website].

Fishery	Species	Gear types	Locations	MSC status
South Georgia icefish pelagic trawl	Mackerel icefish (Champsocephalus gunnari)	Trawls - Midwater trawls	Atlantic & Antarctic (FAO Area 48)	Certified
<u>Australia mackerel</u> icefish	Mackerel icefish (Champsocephalus gunnari)	Trawls - Bottom trawls	Antarctic and Southern & Indian Ocean (FAO Area 58)	Combined
AustralianHeardIslandandMcDonaldIslandsToothfish & Icefishfisheries	Mackerel icefish ( <i>Champsocephalus</i> <i>gunnari</i> ), Toothfish (Patagonian) ( <i>Dissostichus</i> <i>eleginoides</i> )	Hooks And Lines - Set longlines Trawls - Bottom trawls.	Antarctic and Southern & Indian Ocean (FAO Area 58)	Certified

The assessment team note that there is no spatial overlap between the South Georgia fishery and the Australian Heard Island fisheries, and that the fishing method used to catch icefish in that fishery is a demersal (rather than pelagic) trawl. There is thus no rationale for harmonising the Principle 1 and Principle 2 scores since the fisheries target different stocks in different sea areas.

The Australian and South Georgia fisheries both operate within the area managed by CCAMLR. The scores awarded for Principle 3 in these two icefish fisheries are very similar and the conclusions of the assessments are identical.

The assessment team has concluded that there is no need for further harmonisation activity at this surveillance audit.

#### 4.8 Any developments or changes within the fishery which impact traceability or the ability to segregate between fish from the Unit of Certification (UoC) and fish from outside the UoC (non-certified fish)

There have been no developments or changes to the fishery that would impact traceability. Only the client for this MSC assessment is licensed to fish for icefish in the South Georgia icefish fishery. The client's vessels are not licensed to fish for icefish anywhere else.





#### 4.9 TAC and catch data

The TAC and catch data for the most recent fishing year are summarised below.

#### Table 5: TAC and Catch Data for the South Georgia Icefish Pelagic Trawl Fishery

TAC	Year	2017-18	Amount	2,074t
UoA share of TAC	Year	2017-18	Amount	2,074t
UoC share of TAC	Year	2017-18	Amount	100%
Total green weight catch by UoC	Year (most recent)	2017-18	Amount	1.3t*
	Year (second most recent)	2016-17	Amount	110.4t

\* Reported catch in September 2018.

#### 4.10 Summary of Assessment Conditions

There are no assessment conditions for this fishery.





## 5 Results

No conditions of certification or recommendations were generated with the fishery was re-certified in 2016.

At this surveillance audit the assessment team found no changes in the status of the fishery that would require the re-scoring of any Performance Indicators or the generation of any conditions or recommendations.

## 6 Conclusion

#### 6.1 Summary of findings

The management of the icefish fishery is being conducted in accordance with the harvest control rules set out by CCAMLR and the management plan implemented by the GSGSSI.

Fishery removals have been very low. This is a result of the icefish congregating close to the seabed which makes them very hard to catch using a pelagic trawl. The behaviour of the icefish is attributed to warm surface water temperatures which affect the distribution of krill and icefish in the water column.

There have been no changes to stock status, ecosystem impacts or management of the fishery that require the re-scoring of any Performance Indicators at this surveillance audit.

We therefore conclude that this fishery continues to meet the requirements of the MSC standard and that **MSC Certification should continue, subject to annual surveillance audits**.





# 7 References

Belchier, M., Foster, V., Gregory, S., Hill, S., Laptikhovsky,, V., Lafite, P. & Featherstone, L., 2017. Report of the UK Groundfish Survey at South Georgia (CCAMR sub-Area 48.3) in January 2017. 39pp.

CCAMLR. 2018. Annex 7: Report of the Working Group on Fish Stock Assessment (Hobart, Australia, 2 to 13 October 2017). Pages 243–344. CCAMLR, Hobart. <u>https://www.ccamlr.org/en/system/files/e-sc-xxxvi-a07.pdf</u>.

Darby. C, T. Earl, H. Peat. (2013) An evaluation of the performance of the CCAMLR mackerel icefish (*Champsocephalus gunnari*) harvest control rule as applied within CCAMLR Subarea 48.3. CCAMLR working document WG-SAM-13/31 Rev. 1, CCAMLR, Hobart, Australia.

Earl, T. 2017. Preliminary assessment of mackerel icefish Champsocephalus gunnari in Subarea 48.3 based on the 2017 groundfish survey. 30pp. CCAMLR, Hobart. https://www.ccamlr.org/en/wg-fsa-17/47.

Earl, T. and Darby, C (2015). Assessment of Mackerel Icefish *Champsocephalus gunnari* in CCAMLR Statistical Subarea 48.3 based on the 2015 demersal fish survey. WG-FSA- 2015/25.

Edwards, C. T. T., Hillary, R., Mitchell, R. E. & Agnew, D. J. (2010b) Comparison of age and length based harvest control rules for the South Georgia icefish (*Champsocephalus gunnari*) fishery. CCAMLR Document, WG-SAM-10/12.

Edwards, C. T. T., Mitchell, R. E., Pearce, J. & Agnew, D. J. (2010a) Estimation of the 2011 catch limit for mackerel icefish (*Champsocephalus gunnari*) in sub-area 48.3 using a length based population dynamics model. CCAMLR working document WG-FSA-10/37, CCAMLR, Hobart, Australia.

GSGSSI. 2018a. South Georgia & the South Sandwich Islands Mackerel Icefish Fishery (48.3) Management Plan 2018-2019. 12pp. Government of South Georgia & the South Sandwich Islands, Stanley, Falkland Islands. http://www.gov.gs/docsarchive/Fisheries/180105%20Icefish%2048\_3%20Fishery%20Management% 20Plan%20-%20Final.pdf.

GSGSSI. 2018b. Icefish Licensing 2018-2019 Information for Applicants. Page 14. Government of South Georgia & the South Sandwich Islands, Stanley, Falkland Islands. http://www.gov.gs/docsarchive/Fisheries/180105%20Icefish%20Licensing%202018-2019%20Information%20for%20Applicants%20-%20Final.pdf.

Hillary, R., Edwards, C., Mitchell, R. & Agnew, D. J. (2010) Length-based assessment for mackerel icefish (*Champsocephalus gunnari*) in sub-area 48.3. CCAMLR Science 17, 129- 137.

Hillary, R., Mitchell, R. E. & Agnew, D. J. (2009) Length-based assessment for mackerel icefish (*Champsocephalus gunnari*) in sub-area 48.3. CCAMLR Document, WG-SAM-09/15.

MRAG. 2017. CCAMLR Scientific Observer Cruise Report: FV Robin M Lee, 6th-31st October 2017. 18pp.





# 8 Appendix 1 – Re-scoring evaluation tables (if necessary)

None.





# 9 Appendix 2 - Stakeholder submissions (if any)

No written submissions were made by stakeholders at this surveillance audit.





# 10 Appendix 3 - Surveillance audit information (if necessary)

Not applicable.





# 11 Appendix 4 - Additional detail on conditions/ actions/ results (if necessary)

Not applicable.





## 12 Appendix 5 - Surveillance Program

The MSC Fisheries Certification Requirements v2.0 specify that after each certification, surveillance and re-certification the Certified Accreditation Body (CAB) shall determine the level at which subsequent surveillance of the fishery shall be undertaken.

The MSC require that surveillance audits should be conducted at the default level, unless the team decides on a reduced programme (for instance because there has been good progress towards meeting the conditions; there is confidence that the CAB can verify information remotely; and/or that there are few (or no) conditions).

This fishery presently has no conditions of certification, has returned a high score against all 3 MSC **Principles, and has demonstrated an excellent track record of compliance with the MSC Scheme** requirements as well as conditions of certification generated during earlier periods of certification. The fishery is well documented, and the GSGSSI has consistently provided comprehensive and verifiable information about the fishery that enables remote surveillance to be carried out.

The surveillance levels available under the MSC Fisheries Certification Requirements are reproduced below in Table 6 of this report. The assessment team has concluded that a **Minimum (Level 1) Surveillance level** is appropriate for this fishery.

Surveillance level	Surveillance requirements
Level 6	4 on-site surveillance audits
Default Surveillance	
Level 5	3 on-site surveillance audits
	1 off-site surveillance audit
Level 4	2 on-site surveillance audits
	2 off-site surveillance audits
Level 3	1 on-site surveillance audits
	3 off-site surveillance audits
Level 2	1 on-site surveillance audits
	2 off-site surveillance audits
	1 review of information
Level 1	1 on-site surveillance audit
Minimum	1 off-site surveillance audit
Surveillance	2 review of information

**Table 6**: Surveillance levels (table reproduced from MSC FCR, Table 5)

The CAB is required to document its rationale for determining the surveillance level and schedule for the fishery. The surveillance schedule was amended from that set out in the PCR for this fishery. The amended schedule is presented below.





#### **Table 7**:Timing of surveillance audit

Year	Anniversary date of certificate	Proposed date of surveillance audit	Rationale
1	July 2019	September 2019	Stakeholder meetings are held in London in September at which the client is present so audit is timed to coincide with these dates.

#### Table 8: Fishery Surveillance Program

Surveillance Level	Year 1	Year 2	Year 3	Year 4
Level 1	Off-site	Review of information	Review of invormation	On-site (possible re- assessment).

