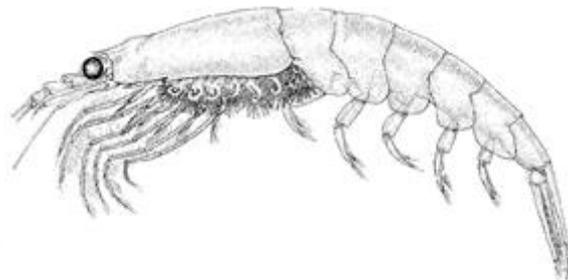


MSC SUSTAINABLE FISHERIES CERTIFICATION

Review of Information - Report for Aker Biomarine Antarctic Krill Fishery



1st Surveillance Audit

July 2016

Certificate Code F-FCI-0044
Prepared For: **Aker Biomarine**
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Assessment Data Sheet

Certified Fishery	Aker Biomarine Antarctic Krill
Fishery Management Agency	CCAMLR, in interaction with the Norwegian Ministry/Directorate of Fisheries and the Government of South Georgia and the South Sandwich Islands (GSGSSI)
Species	Antarctic Krill (<i>Euphausia superba</i>)
Fishing Method	Pelagic Trawl using own patented Eco-Harvesting system
Certificate Code	F-FCI-0044
Certification Date	16 th June 2015
Certification Expiration Date	15 th June 2020
Certification Body	Acoura Marine Ltd 6 Redheughs Rigg Edinburgh EH12 9DQ, Scotland, UK
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Surveillance Stage:	1 st Surveillance Audit
Surveillance Date:	13 th June 2016

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1. Introduction

The purpose of the Review of Information is to:

1. Determine if there have been any changes in the certified fishery's management systems
2. Determine whether any changes or additions/deletions require a full off-site surveillance
3. Determine whether there have been any personnel changes in science, management or industry that would require the team to evaluate impact on the management of the fishery
4. Determine whether any potential changes to the scientific bases of information which will warrant a full off-site surveillance audit

2. Review of Information

This report is underpinned by the sources listed below and a cursory check of background documents.

2.1 CCAMLR documents

- Commission Meeting Report from 2015 (e-cc-xxxiv_4)
- Fishery Report for 2015 (2014/15 fishing season) (KR148 2015_0)
- Industry-Manager-Science Feedback Management Report from the Delegation of Norway, dated 241015 (CCAMLR-XXXIV/BG/47)
- Notifications Report for 2015/16 (xxxiv/BG/03)
- Scientific Report from 2015 (e-sc-xxxiv_2)

2.2 Input from the client and stakeholders

- *Regarding Compliance Report Issues for Aker BioMarine vessels Antarctic Sea and Saga Sea*, report from Aker BioMarine to the Norwegian Directorate of Fisheries from the 2014/2015 fishing season
- email correspondence between the client and the CAB/team
- meeting between Aker BioMarine Sustainability Director Cilia Holmes Indahl and team leader Geir Hønneland in Oslo 16 June 2016
- email correspondence with representatives of the Norwegian Directorate of Fisheries

3. Results, Conclusions and Recommendations

3.1 Results of the review

Target species (P1)

There is no TAC for the krill fishery. It is managed, as it was when previously certified, according to a trigger level of catch in Area 48 which itself is based on a Precautionary Catch Level (PCL) for krill of 5.61 million tonnes that has remained stable since 2010, when the level of B_0 assessed from the previous fully synoptic survey of the CCAMLR area in 2000 was affirmed on the basis of the latest available scientific information and understanding (at 60.3 million tonnes, based on a survey CV of 12.8% and an exploitable fraction of the population estimated using the generalised yield model). The PCL has scientifically defensible recruitment and biomass limit reference points built into it. The trigger level for Area 48 (the main area fished for krill in the Southern Ocean) was set and has been annually reconfirmed as 620 000 t. This maximum has been subdivided further using rigorously determined decision rules that yield the percentage maxima of the stock that can be taken in each of the four Subareas (25% or 155 000 t in 48.1; 45% or 279 000 t in each of 48.2 and 48.3; 15% or 93 000 t in 48.4).

Key issues from the Fishery Reports over the past two years, starting just before the recertification was undertaken, are listed below.

- The overall krill fishery in Subarea 48.1 was closed in May of 2014, 2015 and (very recently) 2016 when the trigger level for that area was approached. It was similarly closed in 2009/10 and 2012/13, as reported in the certification report. Clearly, the reporting system used by CCAMLR is effective. Also, noting the annual regularity with which the 48.1 fishery is being closed, the UoC fishery (the main catch overall from the stock) made an executive decision to move out of that subarea earlier than usual in 2016; it was still closed, however.
- The total krill catch in Subarea 48.2 was small in 2015, likely because the extent of sea-ice then precluded as extensive fishing in that Subarea as in previous years.
- The total annual krill catch in 48.3 peaked (for recent years) in 2014, still well below the trigger level of 279 000 t, but declined to traditional levels in 2015.
- After peaking at 293 kt in 2014 (the largest reported annual krill catch since 1991, when the Soviet and satellite country fishery ended), the total 2015 krill catch only reached 225 kt, still larger than any other annual catch since 1993, but more in line with the gradually increasing fishery the krill fishery in Area 48 has become.
- More than 60% of the total annual krill catch in 2015 was taken by the UoC fishery and another >10% by the other Norwegian fishery for the species, confirming Norway's current position as the major utiliser of krill in Area 48.
- Sampling levels are scientifically and administratively deemed to be adequate and observation levels are 100% in the UoC fishery.
- Division of management units into SSMUs (small scale management units), although recommended for the future by CCAMLR, has not yet been implemented, although catches are recorded and available in such a manner.

Given the above, it is concluded from a stock assessment and management perspective that the UoC and total krill fishery in Area 48 are well managed scientifically and administratively and that no change to the scores for any P1 category need to be entertained at this first annual surveillance.

Ecosystem (P2)

Following the Pew Charitable Trust submission, the team considered the opportunity to amend the wording of PI 2.5.2 in order to correct some inaccuracies in the text, but they do not modify the scoring result.

The Pew Charitable Trust submission raises concerns about the expiry of CCAMLR CM 51-07 in 2016. However, the team notes that the CCAMLR Scientific Committee agreed during its 34th meeting of the Scientific Committee for the Conservation of Antarctic Marine Living Resources (Hobart, Australia,

2015), that any future revision of CM 51-07 should consider how the fishery is arranged within subareas in order to avoid impacts on predators within some SSMU-scale areas (section 3.26). Further, it suggests that the spatial distribution of the trigger level in CM 51-07 should be continued to avoid further harvesting concentration and does not impact adversely on predators. In this way, CM 51-07 would ultimately be revised to reflect stage 2 (section 3.29).

This topic was also taken into account during the Industry–Manager–Science Workshop on Feedback Management (October 2015) organised by the Norwegian Delegation at the CCAMLR Annual Meeting, where different scientists agreed on the need to maintain CM 51-07 or other similar measures as a fallback plan in the case that Feedback Management does not work as expected.

Owing to the high proportion of the total annual krill catch taken by the UoC, and in order to avoid depletion of krill resources in one subarea bearing in mind the potential impending expiry of CCAMLR Conservation Measure 51-07 in November 2016 (unless there is consensus for its renewal by the 25 CCAMLR members at the October 2016 meeting), and also acknowledging industry and scientist concerns about the possible expiry of the Conservation Measure, the team has decided to introduce a new recommendation for the fishery related to this (see section 3.3 below).

Further, the team considers that during the 2nd surveillance audit next year, the issue of the renewal or expiry of CCAMLR CM 51-07 (or any similar measure implemented to satisfy the same goals) should be taken into account in order to guarantee that there is a partial strategy in place to ensure that the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function.

Management (P3)

The fishery is managed under the auspices of CCAMLR, which coordinates scientific research and observer programmes, establishes a scientifically defensible catch trigger level calculated from a rigorously determined Precautionary Upper Catch Limit and distributes quotas between subareas. Recruitment and biomass reference points are considered in the management system. The Norwegian Directorate of Fisheries issues fishery permits and performs quota control of the client vessels.

The client works actively with, and provides financial support to, NGOs and scientific institutes, contributing to knowledge production beyond that provided by CCAMLR and participating states. Aker BioMarine has a dedicated policy to lie ahead of the regulatory system, to drive regulations forward instead of just responding to them. As an example, there is 100% observer coverage of their vessels while the CCAMLR requirement is 50%.

There are no changes in the management system of the fishery, neither at international level in CCAMLR nor at national level in Norway.

3.2 Conclusion

The fishery remains certified and the Surveillance Plan unchanged (Reduced Surveillance).

Based on the conclusions of the review in section 3.1 above, the team has determined to introduce one new recommendation for the fishery (see section 3.2 below).

3.3 Recommendations

Recommendation 1

Aker Biomarine should continue implementing the standard operating procedure they agreed to during the 2nd surveillance of its 1st MSC certification (prior to the establishment of CM 51-07). This was described as follows, 'AKBM have introduced a standard operating procedure (covering both *Saga Sea* and *Antarctic Sea*) requiring skippers to determine the availability of krill in an area; if the swarm being fished seems to be the only available in an area, then the vessel will move on before fishing the available krill – so fishing in a manner that would help to prevent localised depletion within an area.'

Appendix 1 – Written Submissions from Stakeholders

Assessment Stage	Fishery	Date	Name of Individual/Organisation Providing Comments
<input checked="" type="checkbox"/> Surveillance ¹ Opportunity to provide information to the CAB about any changes in the fishery since certification and/or the achievements made towards conditions.	Aker BioMarine Antarctic Krill	May 30, 2016	The Pew Charitable Trusts

Nature of Comment (select all that apply)	Justification Please attach additional pages if necessary.
<input checked="" type="checkbox"/> I wish to alert the assessment team to important changes in the circumstances of this fishery relevant to the MSC certification.	Please see additional pages 13-17 (pages 8-14 in current document).
<input checked="" type="checkbox"/> I wish to provide information relevant to fulfilment of the conditions of certification.	
<input type="checkbox"/> Other (please specify)	

¹ MSC Fisheries Certification Requirements, v2.0 section 7.23

Justification:

In the original 2010 certification of the Aker BioMarine Antarctic Krill Fishery, three conditions were placed on the fishery. Condition 3, related to performance indicator 2.5.2, was ultimately removed due to the implementation of CCAMLR Conservation Measure (CM) 51-07. Recent developments in the fishery, in particular the potential impending expiration of CM 51-07, suggest Condition 3 should be reinstated. Scoring for performance indicator 2.5.2 in the 2015 Recertification Report for the Aker BioMarine Antarctic Krill Fishery² should also be reevaluated particularly given the certifiers also noted this score was related to 51-07 when stating, “The establishment of an interim distribution of the trigger level in the different subareas has been an improvement in the management of the fishery since the previous UoC certification assessment.”³ The certification body should also take note of several inaccuracies in the justification for scores given for PI 2.5.2 in the 2015 Recertification Report.

In the June 2010 Public Certification Report⁴, Condition 3 was placed on the fishery as follows:

“Condition 3. Ecosystem Effects

The PI requirements is that — *There is a partial strategy in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.*

While it is noted that at the current level of catch, the impacts on predators are predicted to be negligible, recent simulation modelling has demonstrated that the current krill catch trigger level may not be precautionary in all situations.

Action required: It is noted that the issue of sub-dividing the krill TAC is being considered within CCAMLR; and also that the likelihood of such a situation arising appears very low. The implementation of an appropriate mechanism within the term of this certification would therefore fulfil this condition (i.e. will prevent significant local depletion).”

Condition 3 was closed during the June 2012 Surveillance Report⁵ and PI 2.5.2 was rescored at 80. The removal of this condition relied on the implementation by CCAMLR of Conservation Measure 51-07. Language related to Condition 3 in the 2011 and 2012 Surveillance Reports is as follows:

- 1) From the September 2011 Surveillance Report⁶:

² MSC SUSTAINABLE FISHERIES CERTIFICATION Aker BioMarine Antarctic Krill Fishery Public Certification Report January 2015. https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/southern-ocean/aker-BioMarine-antarctic-krill/reassessment-downloads-folder/20150116_PCR_v2_KRI001.pdf. Accessed 5/24/2016

³ *Ibid*

⁴ Public Certification Report for ANTARCTIC KRILL PELAGIC TRAWL FISHERY. <https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/southern-ocean/aker-BioMarine-antarctic-krill/assessment-downloads-folder/2010.06.08%20-%20Antarctic%20Krill%20Public%20Certification%20Report.pdf>. Accessed 5/24/2016

⁵ Surveillance Report Aker BioMarine Antarctic Krill Fishery May 2012. https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/southern-ocean/aker-BioMarine-antarctic-krill/assessment-downloads-folder/20120607_SR.pdf. Accessed 5/24/2016

⁶ Surveillance Report Aker BioMarine Antarctic Krill Fishery Intertek Moody Marine June 2011. https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/southern-ocean/aker-BioMarine-antarctic-krill/assessment-downloads-folder/06.09.2011_AKBM_Antarctic_Krill_Surveillance_Report.pdf. Accessed 5/24/2016

“*Observations:* Firstly, as noted above, current catches fall well below the precautionary catch trigger level. The likelihood of any potential impacts on predators therefore remains very low. Notwithstanding this, CCAMLR have implemented CM 51-07, which sets an interim distribution of catches of krill between sub-areas in 48 as follows:

48.1 25%

48.2 45%

48.3 45%

48.4 15%

This measure has the particular aim of avoiding disproportionate effects on land-based predators until allocations by SSMU are in effect.”

“*Conclusion:* Significant steps have been taken within CCAMLR to begin the process of distributing catches to avoid effects on dependent predators....The situation has not apparently arisen whereby significant localised depletion could occur (catches remain significantly below the precautionary trigger level) and so no responses through adaptation of Aker BioMarine fishing patterns have been required.”

From the June 2012 Surveillance Report⁷:

“*Client Progress:* During 2009/10, the largest catch of krill was taken from the Antarctic Peninsula Bransfield Strait West due to an unusual absence of sea ice; this also resulted in the higher catches for 2009/10 which were reduced in 2010/11 when ice cover was more normal. Catches of krill in 2009/10 reached the apportioned limit for Subarea 48.1 (25% of the trigger level: 155 000 tonnes) and on 10 October 2010 the subarea was closed to krill fishing for the remainder of the season. The final verified catch was 153 262 tonnes....The CCAMLR Working Group on Ecosystem Monitoring and Management (section 2.79) concluded that during 2009/10, the fishery concentrated its operations in a manner that was not typical of the distribution of catches during either the previous 10 years or over the whole history of the fishery (as described above). Thus, it was further agreed that application of the subdivision of the trigger level in CM 51-07 had been successful, capping the catches in Subarea 48.1 during 2009/10, while maintaining flexibility in where vessels could fish up to that point. After the fishery in Subarea 48.1 was closed, flexibility was limited to the other subareas. It was noted, however, that there was not sufficient data on predator populations and foraging behaviour to precisely determine the effects of high localised catches on dependent predator populations, but that further work (notably through feedback management) was underway on this issue. It is noted that the CCAMLR Scientific Committee endorsed a programme of work on developing suitable indicators in this area beginning in 2012 and extending until 2014.”

“*Observations:* CM 52-07 (2011) has confirmed the distribution of catches of krill (up to the trigger level) between sub-areas in 48. The situation of an unusual absence of sea ice in 2009/10 meant that catches reached the apportioned limit for Subarea 48.1 (25% of the trigger level: 155 000 tonnes). This resulted in the closure of this subarea in October 2010 for the remainder of the season. The final verified catch was 153 262 tonnes. This system of catch distributions was therefore tested in the 2009/10 season with demonstrable success.”

“*Conclusion:* The reconfirmed and tested strategy for the distribution of catches of krill between sub-areas in 48 is considered to represent a suitable partial strategy for the management of effects of the fishery on the receiving ecosystem. This takes into account available information and is expected to

⁷ Surveillance Report Aker BioMarine Antarctic Krill Fishery May 2012. https://www.msc.org/track-a-fishery/fisheries-in-the-program/certified/southern-ocean/aker-BioMarine-antarctic-krill/assessment-downloads-folder/20120607_SR.pdf. Accessed 5/24/2016

restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance (i.e. it is highly unlikely that the ecosystem would be disrupted to the point of serious or irreversible harm...The plan and measures are not yet based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem, (CCAMLR WGEMM noted that there was not sufficient data on predator populations and foraging behaviour to precisely determine the effects of high localised catches on dependent predator populations, but that further work (notably through feedback management) was underway). This issue therefore meets the SG80 requirements at present; ongoing work is expected to attain the SG100 level in time... There is now direct evidence that the measures comprising the partial strategy have been implemented successfully and so the 'partial' strategy is expected to work."

CCAMLR Conservation Measure (CM) 51-07 is set to expire on November 30, 2016, at the end of the 2015-2016 Antarctic krill fishing season. Only through total consensus of 25 CCAMLR members, at the October 2016 meeting, will CM 51-07 be renewed. CCAMLR is set apart from other regional bodies that manage fisheries due to its emphasis on precautionary, ecosystem-based management. The Marine Stewardship Council should be at least as environmentally conservative, if not more, than the regulatory bodies in which its certified fisheries operate and we commend the MSC for inclusion of ecosystem considerations in PI 2.5.2. If CCAMLR fails to renew CM 51-07, it will be going backward in terms of ecosystem-based management for the Antarctic krill fishery. Therefore, if CM 51-07 is not renewed the MSC should reconsider the certification of the Aker BioMarine Antarctic Krill Fishery or at a minimum restore Condition 3.

Aker BioMarine is respected by other Antarctic krill fishers as a leader in sustainability. In order to prevent expiration of CM 51-07, which could affect the MSC Certification of their Antarctic Krill Fishery, Aker BioMarine should work with other operators to encourage the extension of 51-07 until CCAMLR implements stage 2 of its planned Feedback Management System while also ensuring that any changes to CM 51-07 take into account the foraging needs of predators (such as adding seasonal area closures to 10 km from the center of colonies of land-based predators during their breeding seasons).

During the 2015-2016 Antarctic Krill fishing season, there was a mass mortality event of gentoo penguins near Cuverville Island, adjacent to where Antarctic Krill vessels were seen fishing in a localized manner. To ensure that Aker vessels are not a contributing stressor in this area, Aker should be sure to continue implementing the standard operation procedure they agreed to in their Client Action Plan to relieve Condition 3. This was described in the 2012 Surveillance Report⁸, "AKBM have introduced a standard operating procedure (covering both Saga Sea and Antarctic Sea) requiring skippers to determine the availability of krill in an area; if the swarm being fished seems to be the only available in an area, then the vessel will move on before fishing the available krill – so fishing in a manner that would help to prevent localised depletion within an area."

In addition, the certification body should also make note of several inaccuracies in the justification for scores given for PI 2.5.2 in the 2015 Recertification Report, and take care in the future to ensure accuracy in their reporting of the Antarctic Krill fishery management scheme:

- 1) "Guidepost A (SG 80- There is a partial strategy in place, if necessary). Justification - The trigger levels associated with the Area 48 subareas, established through to CCAMLR Conservation Measure 51-07, are considered to be a partial strategy that prevents the fishery from causing serious harm to the ecosystem. It is obligatory for the fishery to move to another area if the trigger level is reached. The purpose of the trigger levels being set at such precautionary levels is, inter alia, for sufficient krill resource to be preserved for predators within the ecosystem to be able to exist, as well as to underpin any recovery from depressed levels."

⁸ *BioMarineIbid*

The trigger level was set by CCAMLR Conservation Measure 51-01⁹. The catch allocation percentages within subareas were set by CM 51-07. There are not multiple trigger levels within Area 48.

- 2) “Guidepost B (SG 80- The partial strategy takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.) Justification - The establishment of an interim distribution of the trigger level in the different subareas has been an improvement in the management of the fishery since the previous UoC certification assessment. However, Small Scale Management Units (SSMU) are not totally implemented yet (see Section 3.3 above). Data collected through the CCAMLR Ecosystem Monitoring Programme is not yet being used to develop Conservation Measures, so there is no management feedback policy in place to regulate the ecosystem impacts of fishing activities.”

The system CCAMLR is developing is known as “Feedback Management”.

- 3) “Guidepost C (SG 80- The partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems)). Justification - Measures such as the establishment of subareas and their rigorously enforced precautionary trigger levels in CCAMLR Area 48, established under Conservation Measure 51-07 (2011), ensure that the fishery does not cause irreversible harm to the fishery. The measure recognizes that catches up to the trigger levels in areas smaller than the whole of Area 48 are the maximum that should be made at the current state of knowledge. The reporting of catch and effort data on a haul-by-haul basis, required in all CCAMLR fisheries, facilitates monitoring of cumulative catch in each subarea. Data gathered through this monitoring are used to monitor fishery activity, quantifying catches of target and bycatch species, incidental catches and any removal of vulnerable marine ecosystem (VME) indicator species, estimate fishery and biological parameters and contribute to assessment of fish stocks.”

The aim of this PI is that the fishery does not cause irreversible harm to the “ecosystem”, not to the “fishery”.

- 4) “Guidepost D (SG 80- There is some evidence that the measures comprising the partial strategy are being implemented successfully.). Justification - Subarea 48.1 has been closed twice to the fishery well into each season, in October 2010 and in June 2013, as its precautionary trigger level was reached. The team considers that this provides evidence of the successful implementation of management controls over the ecosystem.”

While this does suggest the management system is working as planned, it should be recalled that a) this Conservation Measure was only meant to be temporary/interim and 2) the fishery has grown in catch by 200% in the last decade. The closing of the fishery in subarea 48.1 before the end of the fishing season, four times since the establishment of CM 51-07, is a particular cause for concern about ecosystem effects of fishing in the Bransfield Strait region, suggesting CM 51-07 in itself is not offering the intended level of ecosystem protection in this area.

⁹ <https://www.ccamlr.org/en/measure-51-01-2010>

Appendix 2 – Revised Scoring Table for PI 2.5.2

Evaluation Table for PI 2.5.2

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
Scoring Issue		SG 60	SG 80	SG 100
A	Guidepost	There are measures in place, if necessary.	There is a partial strategy in place, if necessary.	There is a strategy that consists of a plan, in place.
	Met?	Y	Y	
	Justification	The trigger level associated with Area 48 subareas, established through CCAMLR Conservation Measure 51-01, along with the catch allocation percentages within subareas set by CM 51-07, are considered to be a partial strategy that prevents the fishery from causing serious harm to the ecosystem. It is obligatory for the fishery to move to another area if the trigger level is reached. The purpose of the trigger levels being set at such precautionary levels is, <i>inter alia</i> , for sufficient krill resource to be preserved for predators within the ecosystem to be able to exist, as well as to underpin any recovery from depressed levels.		
B	Guidepost	The measures take into account potential impacts of the fishery on key elements of the ecosystem.	The partial strategy takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance.	The strategy, which consists of a plan, contains measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem. This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm.
	Met?	Y	Y	
	Justification	The establishment of an interim distribution of the trigger level in the different subareas has been an improvement in the management of the fishery since the previous UoC certification assessment. However, Small Scale Management Units (SSMU) are not totally implemented yet (see Section 3.3 of [the PCR]). Data collected through the CCAMLR Ecosystem Monitoring Programme are not yet being used to develop Conservation Measures, so the Feedback Management system is not yet operating to regulate the ecosystem impacts of fishing activities.		

PI 2.5.2		There are measures in place to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function		
c	Guidepost	The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The partial strategy is considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems).	The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved.
	Met?	Y	Y	
	Justification	Measures such as the establishment of subareas and their rigorously enforced precautionary trigger levels in CCAMLR Area 48, established under Conservation Measure 51-07 (2011), ensure that the fishery does not cause irreversible harm to the ecosystem. The measure recognizes that catches up to the trigger levels in areas smaller than the whole of Area 48 are the maximum that should be made at the current state of knowledge. The reporting of catch and effort data on a haul-by-haul basis, required in all CCAMLR fisheries, facilitates monitoring of cumulative catch in each subarea. Data gathered through this reporting are used to monitor fishery activity, quantifying catches of target and bycatch species, incidental catches and any removal of vulnerable marine ecosystem (VME) indicator species, estimate fishery and biological parameters and contribute to assessment of fish stocks.		
d	Guidepost		There is some evidence that the measures comprising the partial strategy are being implemented successfully.	There is evidence that the measures are being implemented successfully.
	Met?		Y	
	Justification	Subarea 48.1 has been closed several times to the fishery well into each season, in October 2010, and also in June 2013, and May of 2014, 2015 and 2016, as its precautionary trigger level was reached. Although it is a little worrying that the subarea 48.1 annual limit is being reached so regularly, the team considers that such closures do provide evidence of the successful implementation of management controls over the ecosystem. Although CM 51-07 is subject to review in November 2016, at this point in time the team concludes that the measure is working in protecting the ecosystem in the manner it was designed to do.		
References		<ul style="list-style-type: none"> » CCAMLR Conservation Measure 51-07 (2011). Interim distribution of the trigger level in the fishery for <i>Euphausia superba</i> in Statistical Subareas 48.1, 48.2, 48.3 and 48.4. » http://www.ccamlr.org/sites/drupal.ccamlr.org/files//51-07.pdf » http://www.ccamlr.org/en/wg-emm-13/37-rev-1 » https://www.ccamlr.org/en/wg-emm-11/5 » http://www.ccamlr.org/en/fisheries/fishery-monitoring 		
OVERALL PERFORMANCE INDICATOR SCORE:				80
CONDITION NUMBER (if relevant):				N/A

Appendix 3 – Client Catch during the 2014/2015 Season

Krill harvested in 2015 season (MT)			
Month	<i>Saga Sea</i>	<i>Antarctic Sea</i>	Total
Dec '14	1 066	165	1 231
Jan	4 515	9 273	13 787
Feb	5 011	7 997	13 009
Mar	8 199	17 714	25 913
Apr	7 126	15 013	22 139
May	6 055	11 743	17 798
Jun	3 146	8 181	11 327
Jul	4 476	7 356	11 832
Aug	5 830	5 517	11 346
Sep	4 731	2 901	7 632
Oct	-	-	-
Nov	-	-	-
Total	50154	85 859	136 013