MACQUARIE ISLAND TOOTHFISH FISHERY

2013

Annual Surveillance

Certificate Number: F-SCS-0085

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General Information

Date of Issue	July 2013	
Prepared by	SCS SCS	Sabine Daume, Ph.D. Alexander Morison
Certification Date		29 May 2012
Certification Expiration Date		28 May 2017
Surveillance Team	SCS SCS	Sabine Daume Ph.D. (lead) Alexander (original assessment team)
Surveillance Stage	1st Annual Surveillance	
Surveillance Frequency	Normal surveillance	
Methodologies	MSC Accreditation Manual Issue 5.1, MSC Fisheries Certification Requirements Version 1.3,2013 MSC Guidance to Certification Requirements Version 1.3	

Contents

List of Abbreviations

AFMA	Australian Fisheries Management Authority
B_{MEY}	Biomass estimated to provide the Maximum Economic Yield
B_{MSY}	Biomass estimated to provide the Maximum Sustainable Yield
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CR	Certification Requirements (v1.3)
DAT	Default Assessment Tee
ETP	Endangered, Threatened or Protected
F_{LIM}	Fishing Mortality associated with the Limit Reference Point
F_{TARG}	Fishing Mortality associated with the Target Reference Point
HSP	Commonwealth Fisheries Harvest Strategy Policy
IFMP	Integrated Fisheries Management Plan
ISO	International Standard Organization
LRP	Limit Reference Point
MSC	Marine Stewardship Council
P1, P2, P3	The three guiding Principles of the MSC
PI	Performance Indicator
SCS	SCS Global Services
SSB	Spawning Stock Biomass
TAC	Total Allowable Catch
TRP	Target Reference Point

Executive Summary

This report summarizes the information and findings from the 1st annual surveillance including the required progress for closing out the one condition for continued certification. This report also includes the client action plans for this condition with associated timeline.

This fishery was assessed using the MSC developed default assessment tree. The surveillance audit for 2013 utilized the MSC Certification Requirements and Guidance to Certification Requirements (v1.3). The surveillance audit was conducted by SCS lead auditor Dr. Sabine Daume and Mr. Alexander Morison both members of the original assessment. The surveillance meetings took place at the CSIRO Hobart, Australia on 20 and 21st June 2013.

SCS finds that the Macquarie Island Patagonian toothfish fishery continues to meet the standards of the MSC and complies with the 'Requirements for Continued Certification.'

Table 1. Summary of Performance Indicators with conditions

Indicator	***Status of Condition/Non-Conformance***
2.3.4	Open, on target, timeline extended to 2014

MSC Certification and Conditions for Continued Compliance

An MSC certificate is valid for a period of 5-years. During the initial certification, one condition was identified (see final report on MSC website[1]). This condition must be closed-out before the end of the certification period on 28th May 2017.

The condition to certification was addressed with the client action plan. The action plan includes the actions to be undertaken, responsible parties and timeframe for meeting milestone goals. During this and each surveillance audit, the audit team will check progress against these milestones. The surveillance team will also "spot check" other performance indicators from the original assessment to verify that the fishery is still in compliance with the MSC requirements. In this case all recommendations that were made as part of the certification were checked and have been addressed in this report. Results from the audit are published in the form of a report to the MSC website 30 days after the onsite visit. The client group has an opportunity to review the report and respond before publication.

The audit team evaluates progress toward closing the condition as "ahead of target", "on target," or "behind target." This is based on whether there is enough evidence that sufficient progress is being made relative to the client action plan timeframe for milestones. If a "spot check" of performance indicators reveals that the Performance Indicator (PI) no longer meets

[1] Available at: http://www.msc.org/track-a-fishery/

all scoring elements of the Scoring Guidepost 80 (SG80), an additional "condition" will be raised that must be addressed within the life of the certificate. In this surveillance audit, no deficiencies were evident and no new conditions are raised.

Consequences for Non-Compliance

Where a fishery is determined to be "behind target" for a condition, the surveillance team will work with the client representatives to determine a new timeframe for closing of the condition within the original certification period and will include interim milestones for completion. The client must provide evidence that the fishery is working toward compliance and identify the reason that the condition timelines are not met.

Depending on the severity of the non-compliance identified, a "minor" or "major" non-compliance may be raised. If a minor non-compliance is raised and then not addressed by the new timeframe, it will be elevated to a "major." A major non-compliance must be addressed immediately.

SCS reserves the right to enact 7.4. of the MSC Certification Requirements where a fishery certificate may be revoked or suspended if a condition is not back "on target" within 12 months of falling "behind target" following the MSC certification requirements 27.22.9.

Surveillance Audit timing and Frequency

Surveillance audits including this audit were determined to take place annually with an onsite visit each year (normal surveillance cycle). The fishery remains with a surveillance score of 1, as determined in the certification report and has chosen option 1 with a potential for an off-site surveillance level at the third surveillance audit. The level was re-determined following Table C3 and C4 of the certification requirements v 1.3. This was communicated to the client at the closing meeting.

Stakeholder announcements and submissions

According to CR 27.22.4.3 stakeholders were informed about the time, place and scope of the surveillance audit, the surveillance team as well as the surveillance level for this fishery. No stakeholder submissions were received and stakeholders did not attend the onsite meeting.

Assessment Overview

Methodology

The surveillance audit was carried out in accordance with the Marine Stewardship Council (MSC) Certification Requirements v1.3. If a fishery fails the surveillance audit, and cannot address identified deficiencies in a reasonable period of time, then the use of the certificate and the MSC logo will be revoked by the certifier.

The issues for the certifier are whether the fishery has sufficiently acted on the required conditions set forth in the original certification report, and whether a random check on the performance of the fishery verifies continued compliance with the MSC standards.

The annual surveillance audit process is comprised of four general parts:

1. The certification assessment body (CAB) provides questions around areas of inquiry to determine if the fishery is maintaining the level of management observed during the original certification. In addition, the surveillance team requires that the client provide evidence that the fishery management system has taken the necessary actions to meet all conditions placed on the fishery during the initial certification assessment or any previous surveillance audits.

2. The surveillance/assessment team meets with the client fishery to allow the client to present the information gathered to answer the questions asked by the surveillance team. The surveillance team can then ask questions about the information provided to ensure its full understanding of how well the fishery management system is functioning and if the fishery management system is continuing to meet the MSC standards.

3. The surveillance team presents its findings to the client fishery at the end of the site visit. The results outline the assessment team's understanding of the information presented and its conclusion regarding the fishery management system's continued compliance with MSC standards. Where indicated, the surveillance team may provide the client fishery with additional time to supplement the information provided if the surveillance team finds that there are still issues requiring clarification.

4. Where appropriate, the client fishery submits final information to the surveillance/assessment team for consideration in the surveillance findings and report. The surveillance team then reviews the final information and submits a final report to the client fishery and the MSC for posting on the MSC website. If there are continued compliance concerns, these are presented as non-conformances that require further action and audits as specified in the surveillance report.

Surveillance Team

In accordance with MSC methodology and guidance SCS chose team members with combined comparable and equivalent experience to the original assessment team. Both Dr. Sabine Daume and Mr. Sandy Morison were involved in the re-assessment of the fishery.

Team Leader:	**Dr. Sabine Daume**
Original Assessment Team:	**Mr. Alexander Morison**

Dr. Sabine Daume, SCS Global Services

Dr. Daume was on the original assessment team. She is responsible for leading SCS's Sustainable Seafood Certification program, which includes both fishery and chain of custody certification under the auspices of the Marine Stewardship Council (MSC), using the MSC methodology and standards. Dr. Daume has been involved and/ or led numerous pre and full assessments as well as surveillance audits. Dr. Daume is a marine biologist with special expertise in the biology and ecology of exploited marine resources. She has over 13 years professional experience working closely with the fishing and aquaculture industry in Australia. In her role as the Senior Research Scientist at the Department of Fisheries in Western Australia, she led research projects related to fishery and fisheries habitats of temperate and tropical invertebrate species. Dr. Daume is also a certified lead auditor under the International Standard Organization (ISO) 90011:2008 certification requirement.

Alexander "Sandy" Morison – Consultant , Morison Aquatic Sciences

Mr. Morison is a consultant specializing in fisheries and aquatic sciences. He has over 30 years experience in fishery science and assessment at state, national and international levels and has held senior research positions for state and national organizations in Australia. He is currently chair of the Ecologically Related Species Working Group of the Commission for the Conservation of Southern Bluefin Tuna and is also contracted by the Australian Fisheries Management Authority to chair the South East Scalefish and Shark Fishery Resource Assessment Group and the Slope Fisheries Resource Assessment Group and is the Scientific Representative on the South East Fishery Management Advisory Committee. Sandy has experience with the assessment of invertebrate, chondrichthyan and teleost fisheries. These include commercial and recreational fisheries in freshwater, estuarine and marine habitats and fisheries operating in tropical, temperate and polar environments.

Mr. Morison has participated as part of a team undertaking MSC pre-assessments for several fisheries and has been the Principle 1 expert for the MSC certification or surveillance audits of assessments of the Heard Island and McDonald Islands (HIMI) Icefish fishery, the HIMI toothfish fishery, the Macquarie Island toothfish fishery, the Kyoto Danish Seine Fishery, the Western Australian Rock Lobster Fishery and the Lakes and Coorong Fishery. Issues of straddling stocks have been important for the toothfish fisheries and the Kyoto Danish Seine Fishery.

Mr Morison has been engaged by the Great Barrier Reef Marine Park Authority to assist with a consultative assessment of the ecological risks from Queensland's East Coast Trawl Fishery that looked at the full range of ecological components as well as a separate assessment of this fishery's vulnerability to climate change. He has particular expertise with fish age and growth and has been involved in the development and implementation of harvest strategies for several fisheries. He has over 20 publications in peer-reviewed scientific journals (8 as senior author), 8 book chapters, and over 100 project reports, technical reports, client reports and papers in workshop and conference proceedings.

Schedule for Meetings

The surveillance audit for 2013 comprised:

1. An Audit Plan was provided to the client, management and scientists before the meeting. The opening meeting with the client included an exchange of information relevant to the surveillance audit.

2. A meeting took place on the 20th and 21st June 2013 with the client representative Mr. Exel and Mr. Scott as well as scientists and managers of the fishery (Table 2). The discussions focused on the ongoing activities associated with the Conditions placed on the fishery.

3. Necessary documents were sent to SCS by the client prior and during the meetings.

Table 2: Meeting Attendees

Meeting Attendees	Role	Organization
Dr Sabine Daume	Lead Auditor	SCS
Alexander Morison	Auditor	
Martin Exel	Client Representative	Austral Pty Ltd
Les Scott	Client Representative	Australian Longline Pty Ltd
Dr Dirk Welsford	Stock Status and	AAD
Dr Malcolm Haddon	Harvest Strategy	CSIRO
Peter Neave	Management	AFMA (by phone)

MSC Blue Eco-Label and Chain-of-Custody

Traceability for chain-of-custody begins at the point of landing. The product may carry the MSC blue ecolabel if the processor or toothfish buyer has a valid MSC chain-of-custody certificate from an accredited Conformity Assessment Body (CAB) such as SCS. The certificate holders for this fishery have current logo licensing agreements with Marine Stewardship Council International (MSCI) for this fishery which allows them to use the MSC blue eco-label on products originating from that fishery's Unit of Certification (UoC).

New Documentation since the Assessment

AFMA (2013). Status Report. Macquarie Island Toothfish Fishery. 27 pp.

AFMA (2013). Australian Sub-Antarctic Fisheries Bycatch and Discarding Workplan. 19pp.

AFMA (2013). Sub-Antarctic Fisheries Harvest Strategy. Accessed from AFMA website, 9 July 2013.
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Constable A.J., Welsford D., Ewing G.P., Hibberd T., and Kilpatrick R. (draft). Demersal fishing interactions with marine benthos in the Australian EEZ of the Southern Ocean: An assessment of the vulnerability of benthic habitats to impact by demersal gears. Draft Final Report FRDC Project 2006/042.

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Ziegler, P (2012). Influence of the quality and quantity of data from a multi-year tagging program on bias and precision of biomass estimates from an integrated stock assessment – update. WG-FSA-12/18.

Summary of the Fishery

Principle 1: Stock status and Harvest control rules and tools

Catches of Patagonian toothfish have continued to remain within the determined total allowable catches (TACs) (Table 1).

The 2012 stock assessment produced a spawning biomass estimate for the entire fishery of 70% of unfished levels including 77% of unfished levels in the north and 48% in the south (Wayte and Fay 2012). This result is very similar to that from the 2011 assessment. The point estimate for the 2012 stock size in the northern area is estimated to be about five times larger than that in the south hence the overall stock levels are closer to those estimated for the northern region. Stochastic stock projections estimated that the maximum constant catch that would comply with the reference points was 455 t (Figure 1), based on the assumptions that all catches would be taken by longline, a maximum of 150 t would be taken in any year from the Aurora Trough, and that the remainder of the catch would be split 70:30 between the southern and northern Macquarie Ridge longline fleets.

Sensitivity tests on the assessment results produced estimates of current relative spawning biomass of between 55% and 71% of unfished levels. The lower level was produced when a

higher level of natural mortality was used (M=0.203 yr^{-1} when estimated within the model compared to a value of M=0.155 yr^{-1} in the base case taken from the estimate from the Heard Island fishery). The lower value produced a better fit to the data but the estimate will be subject to further investigation in the future.

Patagonian toothfish in the Macquarie Island Toothfish Fishery continue to be classified as not overfished and not subject to overfishing in the ABARES fishery status reports (Patterson and Skirtun 2012).

The AFMA website has now published the harvest strategy for the Macquarie Island Toothfish Fishery as part of a Sub-Antarctic Fisheries Harvest Strategy (AFMA 2013b). In this, the reference points for Patagonian Toothfish in the Macquarie Island Fishery are articulated:

"Patagonian Toothfish - that the probability that spawning biomass will fall below 20% of the pre exploitation level over the 35 year projection period must not exceed 0.1 and the median escapement for the Fishery of the spawning biomass shall not be less than 50% over a 35 year projection."

Table 1. Total Allowable Catch (TAC) for Aurora Trough (AT, with research allowances in brackets) and Macquarie Ridge (MR, with trigger TACs in brackets); catches (tonnes) for Patagonian toothfish from the MITF (by fishing year) and from CCAMLR statistical area 88.1, for recent years (from AFMA 2013a, Wayte and Fay 2012). * indicates TACs set for the longline trial. No trawling has occurred since the close of the '08/09 season.

Period	TAC		Trawl catch		L'line catch		Total catch	Catch CCAMLR Area 88.1
	AT	MR	AT	MR	AT	NMR		
1 Jul 05 – 30 Jun 06	255	125 (319)	241	9			250	1
1 Jul 06 – 30 Jun 07	241	100 (264)	238	<1			239	12
I Jul 07 – 30 Jun 08	390	86*	223		5	84	312	9
1 July 08 –30 Jun 09	312	150*	307			150	457	17
1 Jul 09 – 14 Apr10	(60)*	150*	-	-	66	146	212	<1
15 Apr 10 – 14 Apr 11	140	150*	-	-	125	139	264	2
15 Apr 11 –14 Apr 12	150	360			148	196	344	5

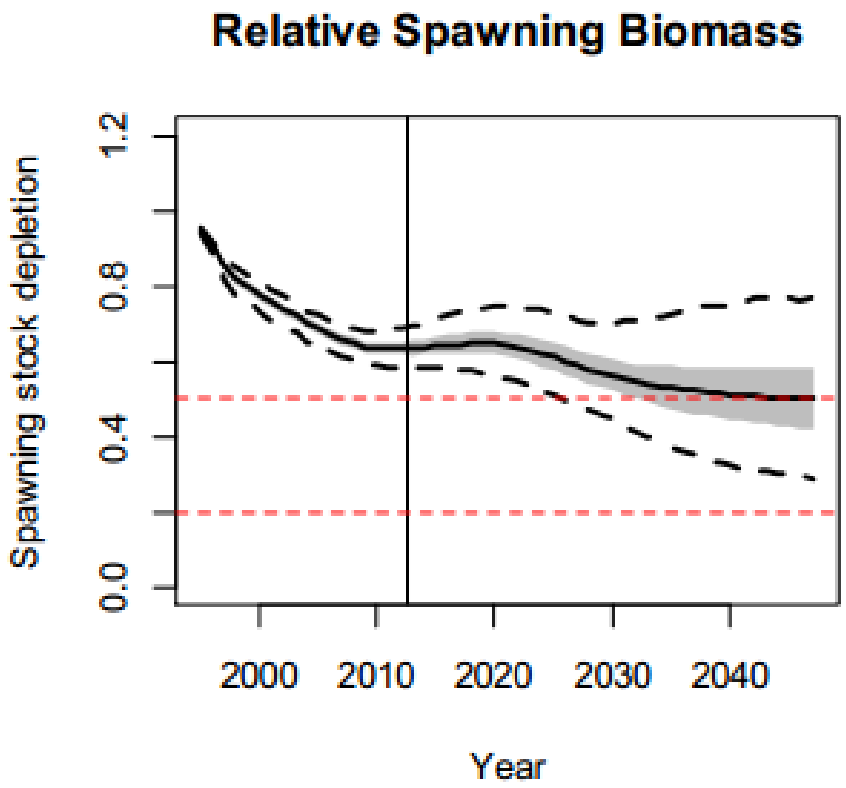

Figure 1. Base-case posterior distribution and projection of spawning biomass relative to the unfished level, under a constant catch of 455 t, split150 t for Aurora Trough, 183 t for southern Macquarie Ridge and 122 t for northern Macquarie Ridge. (from Wayte and Fay 2012).

In addition MI toothfish has been rated as 'Best Choice' under the Monterey Bay Aquarium Seafood Watch Program (see Report and new rating Monterey Bay Aquarium Seafood Watch Program).

Principle 2: Target Species Ecosystem Impacts from Fishing

There have been no changes in the ecosystem impacts of the fishery since the certification of the fishery last year. Total catch during the last season increase by about 80 tonnes but remained well below the TAC (Table 1). However it is not likely to have any adverse effect on the impacts of the fishery on, or the status of, retained species, bycatch, ETP species, or the trophic function of the ecosystem.

A Bycatch and Discard Workplan has now been produced (AFMA 2013c). Bycatch limits for the fishery have been amended so that instead of a 200 t limit in total across all bycatch species, there is now a 50 t limit in place for each species (AFMA 2013a).

As part of a review of the Australian Bycatch Policy there was also a review of trends in bycatch across all Australian fisheries (Welsford et al. 2012). This review included the Macquarie Island Toothfish Fishery. It concluded that "the fishery has always been subject to strict bycatch management measures and fish bycatch levels have generally remained low and steady.

There have been no deaths of seabirds or marine mammals as a result of interactions with fishing gear, since operations began in 1994."

One condition was placed on the fishery during the assessment under Principle 2 and related to performance indicators 2.4.3. The habitat impact studies have been finalized and the full report in draft form has been sent out to peer review (Welsford et al. Draft May 2013). However results of that work are not publically available and this condition can therefore not be closed out as planned. There is however strong progress for meeting this condition and the requirements put in place at the last surveillance audit has been met in principle. Therefore the assessment team determined that this would bring the fishery back on track (CR 27.22.8.1 b i), and "The condition has been revised and remains open, with updated obligations for the second annual surveillance."

Subantarctic islands are considered possible sites for low diversity and high degrees of endemism due to their isolation, unique oceanographic influences and small size (Branch *et al.* 1993, Gutt *et al.* 2006). However, Butler *et al.* (2000) found few species with restricted distributions around Macquarie Island, and instead suggested the island is a biogeographic contact zone with mixing of many species from north to south. O'Hara (1998) also found few endemic echinoderms at Macquarie Island. However, the Welsford et al. (2013) study found that, unless the current peer review identifies flaws in the project's analytical methods – which is very unlikely at this stage - , there is an extremely low level of impact from the fishery on the marine habitats.

Principle 3: Governance and Policy

There has been a significant change to the management arrangements for the fishery in that a single TAC is now set for the fishery (AFMA 2013a). Previously separate TACs were set for the Aurora Trough and the Macquarie Ridge areas of the fishery but this was changed to reflect the scientific advice that there was a single stock of toothfish in the waters around Macquarie Island. This change was made in January 2012 and will apply from the 2012/13 fishing season and beyond.

The Management Plan was also amended in December 2012 to allow the dates of the fishing season to be set through a Determination and to make minor changes to some definitions and removed specific reference to the Bycatch Action Plan (AFMA 2013a). AFMA subsequently made a Determination which changed to start of the fishing season from 15 April to 1 May, starting from 1 May 2013. This was done to align the start of the fishing season with the start of the longline season and provide additional flexibility for the use of any uncaught quota by other fishing methods after the end of the longline season (on 31 August).

Progress toward closing conditions

Only one condition was issued by the audit team during the initial assessment against the MSC standard:

2.4.3 Information is adequate to determine the risk posed to habitat types by the fishery and the effectiveness of the strategy to manage impacts on habitat types.		
SG 60	**SG 80**	**SG 100**
There is a basic understanding of the types and distribution of main habitats in the area of the fishery. Information is adequate to broadly understand the main impacts of gear use on the main habitats, including spatial extent of interaction.	The nature, distribution and vulnerability of all main habitat types in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery. Sufficient data are available to allow the nature of the impacts of the fishery on habitat types to be identified and there is reliable information on the spatial extent, timing and location of use of the fishing gear. Sufficient data continue to be collected to detect any increase in risk to habitat (e.g. due to changes in the outcome indicator scores or the operation of the fishery or the effectiveness of the measures).	The distribution of habitat types is known over their range, with particular attention to the occurrence of vulnerable habitat types. Changes in habitat distributions over time are measured. The physical impacts of the gear on the habitat types have been quantified fully.
Score: 70 (trawl and longline)		

Condition 2.4.3
By the first annual surveillance audit, the client shall provide documented evidence that the nature of the impacts of the fishery on different habitat types, at a scale relative to the fishery, is known and that monitoring is continuing to detect any increase in risk to habitat. The client shall include the results of the ongoing study on habitat impacts in the region.
Client Action Plan

Conditional Requirement	How Meet	By Whom	When Completed
By the second annual surveillance audit, the client should provide some evidence that the nature of the impacts of the fishery on different types of habitats is known and that monitoring is ongoing to detect any increase in risk. This should include the completion of the ongoing study on habitat impacts in the region.	Results of benthic impacts study presented publicly. Incorporation of results in risk assessment program and in consideration of evaluation of existing Marine Protected Areas to ensure comprehensive, adequate and representative areas are set aside, and impacts on other regions are mitigated where feasible.	AAD SARAG, SouthMAC, AFMA, AAD	March 2013 March 2014

Progress on Condition

The habitat impact studies have been finalized and a copy of the completed draft final report to FRDC (Welsford et al. 2013) was provided to the audit team. This report is currently being independently reviewed prior to submission to FRDC. Final results of that work, however, are still not publically available and this condition can therefore not be closed out as planned. The final report is expected by June 2014. The plan is also to incorporate the results into the risk assessment by 2014.

The delays in submission of the final report were the result of changes to staff responsibilities during the past 12 months at AAD. The findings contained in the draft report that was presented to the audit team indicate that, unless the review identifies a hitherto unrecognized major flaw in the project's analytical methods, there is an extremely low level of impact from the fishery on the marine habitats. There is however strong progress for meeting this condition and the condition put in place at the full assessment in 2012 has been met in principle. Therefore the assessment team determined that this condition is on target and and remains open, with updated timeline for the second annual surveillance.

Monitoring is ongoing as evident from the observer reports that were provided to the assessment team (CCAMLR 2013b).

Status of Condition

Open, timeline extended to 2014.

Progress toward meeting recommendations

There were four recommendations made in the original certification report, one for Principle 1, one for Principle 2, and two for Principle 3.

Recommendation for 1.2.2:
Catches in other fisheries that are likely to be from the same stock should be monitored and, if they become a significant proportion of the total catch, they are not only included in the assessment but also taken account of when making projections for TAC setting purposes.

The audit team were informed that there has been engagement with New Zealand fishery managers including a data exchange and that any take by New Zealand vessels. The New Zealand catch is constrained by a TAC of 50 t and, although there has been no update of the New Zealand assessment of toothfish, annual catches of Patagonian toothfish from the area adjacent to Macquarie Island were reported to have been zero. The team therefore considers that this recommendation has been implemented.

Recommendation for 2.3.2:
Before trawling resumes in the fishery, a bycatch management strategy must be developed that has limits for interactions with seabirds, seals and other ETP species and appropriate management responses.

The fishery is expected to remain as a longline fishery for the foreseeable future and therefore this recommendation is considered to be redundant.

Recommendations for 3.1.1
It is recommended that the client actively encourage the responsible Australian agencies to progress bilateral talks with New Zealand so as ensure that the straddling stock of Toothfish continues to be managed appropriately.

The client should ensure that a harvest strategy for the MITF is clearly identifiable and that it makes explicit reference to how the fishery meets the requirements of the HSP.

As noted above, AFMA has engaged in bilateral talks with New Zealand and the audit team were advised that, should catches within the New Zealand EEZ rise to significant levels, there is the mechanism in place to allow for appropriate management.

The second recommendation was made because, at the time of the initial assessment, the assessment team noted that it had seen no explicit reference to how management of the MITF sought to achieve B_{MEY} although the HSP required that domestically managed Commonwealth fisheries be managed to a maximum economic yield (B_{MEY}) target and, that where B_{MEY} is unknown, a proxy of $1.2B_{MSY}$ be used. As noted above under the background information for Principle 1 the AFMA website now includes an "Antarctic Fisheries Harvest Strategy" which notes that "The toothfish harvest strategy is the same for the Heard Island and McDonald Islands Fishery and the Macquarie Island Toothfish Fishery". This strategy does not make

explicit reference to how the fishery meets the requirements of the HSP. Nevertheless, the target reference point for spawning biomass is clearly consistent with the proxy for B_{MEY}.

Results and Conclusions

It is SCS's view that the Macquarie Island Toothfish Fishery continues to meet the standards of the MSC and complies with the 'Requirements for Continued Certification.' In this audit cycle, the condition that was set during the assessment of the fishery remains open and the timeline was extended to allow for the FRDC report on habitat impacts to be made public as well as to include the results into existing risk assessments. Progress toward closing the condition will be evaluated at the 2014 surveillance audit.

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