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MSC Fisheries Certification Programme
Fishery Surveillance Audit Report

MSC Accredited Certification Body:	SGS Product & Process Certification PO Box 200, 3200 AE Spijkenisse, The Netherlands
Project Number:	M5004
Certificate Holder:	Hoki Fishery Management Company (HFMC) Ltd.
Contact:	Mr. Richard Cade – CEO
Address:	Fishing Industry House, Private Bag 24-901, 74 Cambridge Terrace, Wellington, Zealand
Phone:	+64-4-385-4005
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E-mail:	info@hokinz.com
Website:	http://www.hokinz.com
Country:	New Zealand
Fishery Name:	New Zealand Commercial Hoki Fishery
Fishing Area:	New Zealand Exclusive Economic Zone
Management Authority:	Ministry of Fisheries, Wellington
Main Species:	<i>Macruronus novaezelandiae</i>
Fishing Methods:	Mid water and bottom-trawl
Total Allowable Commercial Catch:	180,000 tonnes for 2003/2004 fishing season
Surveillance Number:	Eight
Surveillance Period:	September 2004
Certificate Date of Issue:	14th March 2001
Certificate Lifetime:	5 years
MSC Registration Number:	SGS-NL-MSC-F-0004

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Scope of the Surveillance Audit

This Surveillance Audit was conducted to assess progress by HFMC on the phased requirements of Corrective Action Requests (CARs) 12 & 13.

Summary of Surveillance Audit Findings


The objective of this on-site surveillance audit was to verify the phased completion of the requirements relating to the outstanding Major Corrective Action Requests and to discuss with stakeholders and interested parties, the issues relating to the planned reduction of the TACC for the 2005 fishing year. The minor CARs that had progress due by 31 August were also assessed.

There was a good level of participation in the audit process from stakeholders and interested parties.

The main audit findings were:

- Suitable progress has been made to achieve the requirements of the phased completion dates on CAR 12 (seal by-catch) and CAR 13 (management system) up to 31 August 04.
- Further progress is required on the remaining planned phases of CAR 12 and CAR 13. Completion of these will be verified at the next audit.
- Significant progress has been made on parts of CARs 15, 16 & 17 resulting in these remaining open as Minor with full completion required by 30 November 2004.
- Progress on APRs 2, 3 and 6 was not reviewed at this time, but will be covered at the next surveillance audit.

The condition for maintaining MSC certification remains dependent on the completion of all requirements of the Major CARs (as adjusted) at each defined stage as detailed in this report. Completion will be reviewed by document submission on 31 October 2004 (CAR 12) and by on-site audit on 29 & 30 November and 1 & 2 December 2004 (all CARs).

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Summary of Outstanding CARs

Major CAR No. 012 Ecological Risk Assessment, Indicator 2H

Details of Non-compliance

The assessment programme for developing techniques to mitigate seal by-catch in the hoki fishery requires an earlier completion.

To be completed by November 2003. (This CAR 12 was not completed by this due date and was subsequently upgraded to Major. This resulted in a timetable for phased completion being established as noted below.)

Following the completion of the Phase 1 requirement by 31st March 2004, the achievement of the Phase 2 requirement has been assessed in this present audit. The full completion of this CAR (including Phases 3 and 4) will be assessed in the on-site audit planned for December 2004.

1. HFMC Environmental Steering Group has identified a set of alternative mitigation techniques for evaluation (by 31 March 2004) – **COMPLETED**
2. Completion of data collection phase including sea trials as necessary (by 31 August 2004) (assessed in this audit) - **COMPLETED**
3. Completion of technical and scientific evaluation (peer review) of each alternative mitigation technique (by 31 October 2004)
4. Completion of the integration of the appropriate mitigation technique(s) into the HFMC Code of Practice for mitigating Seal bycatch (by 30 November 2004)



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Major CAR No. 013 Management System, Indicator 3D

Details of Non-compliance

The management system does not yet include a suitable internal audit and corrective action process to verify compliance with HFMC requirements.

Civil contracts have not yet been developed between HFMC and its member companies to ensure compliance with HFMC requirements.

To be completed by November 2003. (This CAR 13 was not completed by this due date and was subsequently upgraded to Major. This resulted in a timetable for phased completion being established as noted below.)

1. Process of Deed amendment and signing by HFMC members completed (by 31 March 2004) - **COMPLETED**
2. Hoki Target Trawling Code of Practice updated including an appropriate set of performance indicators, and a plan developed for updating other Codes of practice (by 31 March 2004) - **COMPLETED**
3. HFMC Internal audit schedule and audit checklist developed (by 30 April 2004) - **COMPLETED**
4. HFMC Internal audits completed according to schedule (must include completion of 30% of the annual audit programme with a representative number of HFMC members) (by 31 August 2004) - **COMPLETED**
5. Review and update of all Codes of Practice integrated into the Deed (by 30 November 2004)



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Minor CAR No. 015 Benthic Impacts

Details of Non-compliance

1. A strategic approach for the mitigation of benthic impacts has not been established.
2. There is a lack of project design and commitment to conduct research to assess the impact of the fishery on benthic habitats.

To be completed by 31 August 2004.

Findings

- Part 1 has been completed.
- Part 2 has yet to be completed, and hence the CAR remains OPEN, and is to be completed by 30 November 2004

Minor CAR No 16: Ecosystem Objectives

Details of Non-compliance

There has been no progress towards development of measurable objectives for key ecosystem components as defined by APR 5.

To be completed by 31 August 2004.

Findings

- This CAR remains OPEN. There has been minimal progress on the development of ecosystem objectives to meet the Appeals Panel recommendation.
- The timeframe for completion of the CAR is therefore extended, and the terms of the CAR are revised as follows:
- "Progress towards development of measurable objectives for key ecosystem components, as defined by APR 5, will include (a) a multi-stakeholder workshop to be conducted in 2005, and (b) an analysis of the outcomes of ENV 2003/03 for the purposes of establishing ecosystem objectives for Chatham Rise hoki fishery".
- The design for part (a) to be completed by 30 November 2004; the outcome of (b) to be completed by 31 March 2005.



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Minor CAR No 17: Strategic Planning and stakeholder input

Details of non-compliance

1. There is a lack of progress on the Hoki Fishery Plan
2. The management system lacks an overall strategy for managing the environmental impacts of the hoki fishery
3. Resources need to be dedicated to improve the involvement of stakeholders in a more systematic approach in order to assist with the development of the fishery plan and environmental strategies

To be completed by 31 August 2004.

Findings

- Part 1 is completed and is now Closed.
- Part 2 of CAR 17 remains **OPEN**. The draft Fishery Plan must be prepared for audit by 31 March 2005.
- Part 3 is completed and is now Closed.



Detail of Progress with Outstanding CARs

Major CAR No. 012 Ecological Risk Assessment, Indicator 2H

Details of Non-compliance

The assessment programme for developing techniques to mitigate seal by-catch in the hoki fishery requires an earlier completion.

To be completed by November 2003. (This CAR 12 was not completed by this due date and was subsequently upgraded to Major. This resulted in a timetable for phased completion being established as noted below.)

Following the completion of the Phase 1 requirement by 31st March 2004, the achievement of the Phase 2 requirement has been assessed in this present audit. The full completion of this CAR (including Phases 3 and 4) will be assessed in the on-site audit planned for December 2004.

1. HFMC Environmental Steering Group has identified a set of alternative mitigation techniques for evaluation (by 31 March 2004) – **COMPLETED**
2. Completion of data collection phase including sea trials as necessary (by 31 August 2004) (assessed in this audit) - **COMPLETED**
3. Completion of technical and scientific evaluation (peer review) of each alternative mitigation technique (by 31 October 2004)
4. Completion of the integration of the appropriate mitigation technique(s) into the HFMC Code of Practice for mitigating Seal bycatch (by 30 November 2004)

Background

New Zealand fur seals were heavily exploited during the 18th-19th centuries, and were protected to a limited extent in 1894. An average minimum of 7750 seals per year has been estimated to have been harvested over about 50 years in the early 1800s (Watson 2004). New Zealand fur seals were given total protection under the New Zealand Marine Mammal Act in 1978. The present population size of fur seals in NZ waters is difficult to measure, but has been estimated to be about 60,000 (Watson 2004). In addition, in Australian waters, there is a closely related population of about 35,000 NZ fur seals (in 1990) that appears to be genetically similar to the New Zealand population.

While populations of the fur seal are generally considered to be increasing in New Zealand waters, and there appears to be no overall concern about the conservation status of the species, there has been concern raised about the increasing bycatches of seals in several fisheries. The

mortality imposed through fisheries bycatch, perhaps in conjunction with stresses imposed by broad-scale changes in the New Zealand ocean ecosystems, may be affecting the recovery of seal populations in some areas (Watson 2004).

Knowledge of seal population dynamics is limited, but anecdotal information suggests that the seal populations of the west coast of the South Island may not be recovering to the extent that seals are recovering elsewhere in New Zealand, and on the west coast they may possibly be in decline. The bycatch of seals in the hoki fishery in this area may contribute to the problem, even though the scale of the issue and the extent to which the hoki fishery actually contributes remain uncertain. Nonetheless, until the importance of the seal bycatch in the hoki fishery is better understood, it is prudent and precautionary for the fishery to implement a planned program for reduction of seal bycatch. This is especially relevant to the west coast of the South Island, where the majority of the seal interaction with the hoki fishery occurs.

This CAR was raised initially to direct the fishery to reduce the numbers of New Zealand fur seals caught as bycatch. The bycatch of seals in the hoki fishery, in the last year for which reliable data are available (2002/03), is estimated to be between 200 and 400, based on data derived from the independent observer program (Table A1 in Baird 2004). This estimate however is uncertain, because only a few trawls were observed in some fishery sub-areas, and the extrapolation from observer data to the number of seals caught across the whole of the hoki fishery is not highly statistically reliable.

However, trends in seal bycatch in the hoki fishery can be reasonably estimated in two fishery sub-areas where the observer data is most statistically reliable. These two fishery sub-areas are SUBA (a sub-Antarctic area to the south of the South Island) and WCSI (west coast of the South Island). For these two fishery sub-areas the trend in estimates of the total seal bycatch in recent years (since the start of the MSC certification process in the hoki fishery) is shown in the table (from Baird 2004):

Fishing year	SUBA	WCSI
1999–00	70 (c.v. = 25%*)	561 (c.v. = 13%)
2000–01	data not reliable	242 (c.v. = 20)
2001–02	data not reliable	325 (c.v.=18%)
2002–03	16 (c.v.= 63)	146 (c.v.=26%)

*c.v. = the coefficient of variation of the mean estimate

There is an apparent trend of a reducing seal bycatch in the hoki fishery, particularly in the WCSI area of most concern. This reduction may be related to changes in both effort (number of trawls) in these areas, and to the effect of the MSC certification (increasing the awareness and implementation of the hoki Code of Practice).



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In order to monitor the *systematic* reduction in the bycatch of seals in the fishery, as opposed to a reduction in bycatch related only to a reduction in fishing effort (number of trawls), the catch rate of seals per trawl has also been estimated for the two fishing areas where data is statistically reliable (Baird 2004).

The bycatch rate in the whole fishery has been variable amongst years, and is estimated to range from a low of 0.012 (91/92) to a high of 0.041 (95/96) in the last 15 years (Watson 2004). However, these data are also uncertain, because of the limited coverage of observer data. As for the total seal bycatch, discussed above, more reliable data are available for seal bycatch rate in the WCSI, where, in 1999-2000, there were 7686 trawls, with an estimated seal bycatch rate of 0.073 seals per trawl. For the WCSI in 2002/03, the estimated seal bycatch rate was lower, at 0.020 seals per trawl (Baird 2004). These data on seal bycatch therefore indicate that there appears to be a decreasing trend in the WCSI, and a rate that is approaching the historical lowest seal bycatch rates recorded for the hoki fishery.

The trend in seal bycatch rate, determined from the independent observer data, is likely to be the key indicator for monitoring the patterns of seal bycatch in the fishery and for making future assessments of the performance of the fishery in this matter of seal bycatch.

CAR 12, Phase 2


Phase 2 of CAR 12 requires:

“Completion of data collection phase including sea trials as necessary (by 31 August 2004)”.

The Environmental Steering Group (ESG: a group of fishery, government and non-government experts formed to provide advice to HFMC about environmental issues) has reviewed and considered the implementation of a range of various possible mitigation strategies for seal bycatch in the fishery. At the July 2004 meeting of the ESG, the (draft) minutes record the following discussion and agreement:

“The group agreed that the seal workshop in March 2004 had not identified any ‘silver bullet’ and that consequently there was nothing to go to sea trial at this point in time. Instead, the HFMC should look to review the seal code practice and write into it the management actions that are contributing to reduced bycatch (i.e. those outlined above). The situation should then be periodically reviewed to check whether bycatch was continuing to track down and also to see if there were any new and effective approaches to reducing impacts further.”

In the context of phase 2 of CAR 12, there appear to be no sea trials for new mitigation techniques that should be conducted to evaluate any further specific measures that could be used to contribute to reducing seal bycatch in the fishery. In addition, there are no other forms of data collection that are required to evaluate mitigation techniques, since there are apparently no feasible new mitigation techniques to be trialled.

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Finding

Phase 2 of the CAR is **CLOSED**, since there are no new mitigation techniques that are feasible for sea trials or evaluation.

CAR 12, Phase 3

Phase 3 of CAR 12 requires:

“Completion of technical and scientific evaluation (peer review) of each alternative mitigation technique (by 31 October 2004)”

The recent evaluation of seal bycatch in fisheries (Baird 2004) provides an important analysis of vessel-level bycatch rate both across the hoki fishery and in specific areas (including WCSI). That analysis shows that, of the 32 vessels (out of 67 vessels in the hoki fishery) that reported observer data for the 2003/04 year, the great majority of seals were observed to be caught by only 11 vessels. One vessel achieved an estimated seal bycatch rate of 0.15 in WCSI, which is about 7 times higher than the estimated average bycatch rate for WCSI in that year. It is clear therefore that the fishing characteristics of a small number of vessels in the hoki fishery may predispose to high seal bycatch rates in the fishery as a whole. If these characteristics can be determined, then it may be feasible to quickly and effectively reduce seal bycatch rates by developing improved fishing practices in conjunction with the few vessels that catch most seals.

The HFMC has prepared a Fur Seal Action Plan designed to assess the Ministry of Fisheries observer database to search for parameters (such as gear type, vessel size, time of day etc) that are best related to the vessel-level patterns in seal bycatch. The HFMC then intend to take appropriate action in relation to the specific vessels identified in the observer data as having a high seal bycatch. The Program includes a proposal to analyse the historic observer data to identify the fishing factors most likely responsible for the contrast in bycatch rate observed across vessels in the hoki fleet. This analysis should focus on the last 4 years of available data, roughly corresponding to the period in which the MSC assessment and subsequent certification could have influenced the bycatch rate. The Fur Seal Action Plan indicates that the HFMC will subsequently update the Draft Seal and Sea Lion Code of Practice to reflect the importance of any specific practices that are identified through this vessel-level investigation of the seal bycatch patterns.

Achievement of the Fur Seal Action Plan will be verified in the audit planned for December 2004. The implementation of the Seal and Sea Lion Code of Practice (updated as necessary) will be verified through internal audit procedures established within the HFMC Deed (and see CAR 13 below). The outcomes of implementing the Seal and Sea Lion Code of Practice will be verified by ongoing annual reporting from the observer program data.



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Objective Evidence Sighted

- Baird S. J. (2004) Estimation of the incidental capture of New Zealand fur seals (*Arctocephalus forsteri*) in commercial fisheries in New Zealand waters, 2002–03. NIWA report to the Ministry of Fisheries (ENV 2001/03 Objective 1) (Draft Report to the Aquatic Environment Working Group).
- Watson D. M. (2004) New Zealand Fur Seals: Population Management Plan and Status Report. (Report to Hoki Fishery Management Company Ltd.) University of Otago Wildlife Management Report FS-1/2004.
- Fur Seal Action Plan – HFMC Marine Mammal DOC.1 Sep 4.

Finding

In the light of these important findings about the vessel-level patterns in seal bycatch rate, Phase 3 of CAR 12 is now **REVISED** as follows:

“Completion of a more detailed analysis of vessel-level seal bycatch rate, the technical review and evaluation of the draft Seal Action Plan by the ESG, and any subsequent updating by HFMC (by 31 October 2004)”

Completion of this revised Phase 3 will be verified through document submission and off-site audit.

CAR 12, Phase 4

Phase 4 of CAR 12 remains as previously required:

“Completion of the integration of the appropriate mitigation technique(s) into the HFMC Code of Practice for mitigating Seal bycatch (by 30 November 2004)”

The completion of CAR 12 in total, including Phase 4, will be assessed in the December 2004 on-site audit.

Failure to achieve any of the above actions within the timeframe specified will lead to the process of MSC certificate suspension.

The final report on SED trials will also be required for verification in the December 2004 audit in order to determine the issues and weaknesses that surround this mitigation technique (and to fulfill Appeal Panel Requirement 4).



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Major CAR No. 013 Management System, Indicator 3D

Details of Non-compliance

The management system does not yet include a suitable internal audit and corrective action process to verify compliance with HFMC requirements.

Civil contracts have not yet been developed between HFMC and its member companies to ensure compliance with HFMC requirements.

To be completed by November 2003. (This CAR 13 was not completed by this due date and was subsequently upgraded to Major. This resulted in a timetable for phased completion being established as noted below.)


1. Process of Deed amendment and signing by HFMC members completed (by 31 March 2004) - **COMPLETED**
2. Hoki Target Trawling Code of Practice updated including an appropriate set of performance indicators, and a plan developed for updating other Codes of practice (by 31 March 2004) - **COMPLETED**
3. HFMC Internal audit schedule and audit checklist developed (by 30 April 2004) - **COMPLETED**
4. HFMC Internal audits completed according to schedule (must include completion of 30% of the annual audit programme with a representative number of HFMC members) (by 31 August 2004) - **COMPLETED**
5. Review and update of all Codes of Practice integrated into the Deed (by 30 November 2004)

CAR 13, Phase 1

Phase 1 of CAR 13 requires:

“Process of Deed amendment and signing by HFMC members completed (by 31 March 2004)”

On 20 June 2004 all quota owners were given the final version of the Deed (v.LEE793440.11) and the Hoki Target Trawling Code of Practice (v. 7 16.06.04) for signing by 30/06/04. The Deed was subsequently signed and agreed to by Talley's Fisheries Ltd, Sanford Ltd, Sealord Group Ltd, Aurora Developments Ltd, and Amatal, and a binding commitment made by TOKM Aotearoa Treaty of Waitangi Fisheries Commission). This equated to acceptance by 75% of the quota holding, which is the minimum required for the Deed to become mandatory and binding for all members of HFMC. The quota % was verified by the current levels of quota holding % as detailed in the Seabird Mitigation Code of Practice being drafted by HFMC for presentation to the Ministry of Fisheries on 24/09/04.

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Finding

Phase 1 of this CAR 13 is **CLOSED**, since the required 75% of quota holders has now signed and agreed to the Deed.

CAR 13, Phase 2

Phase 2 of CAR 13 requires:

“Hoki Target Trawling Code of Practice updated including an appropriate set of performance indicators, and a plan developed for updating other Codes of practice (by 31 March 2004)”

The Performance Indicator Framework has now been established. This is an addendum to the current Hoki Target Trawling Code of Practice and now details the following:

- The type of data being collected in relation to the Monitoring Requirements defined in Part 5 of the Hoki Target Trawling Code of Practice.
- A number of Performance Indicators, including definitions of breaches of the CoP requirements and the performance levels at which action is to be taken.
- A timetable for the update of the Hoki Target Trawling Code of Practice to include the formal inclusion of the Performance Indicators by 01/10/04 and other Codes of Practice by 30/11/04.
- The Audit Schedule and Methodology for verifying compliance to the Hoki Target Trawling Code of Practice.

Finding

Phase 2 of this CAR 13 is **CLOSED**, since Performance Indicators and a plan for updating the Code of Practice are now established.


CAR 13, Phase 3

Phase 3 of CAR 13 requires:

“HFMC Internal audit schedule and audit checklist developed (by 30 April 2004)”

Finding

Phase 3 of this CAR 13 is **CLOSED**, since the Performance Indicator Framework includes a suitable Internal Audit schedule and methodology.

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CAR 13, Phase 4

Phase 4 of CAR 13 requires:

“HFMC Internal audits completed according to schedule (must include completion of 30% of the annual audit programme with a representative number of HFMC members) (by 31 August 2004)”

Monitoring data is collected from sources such as Daily Reporting form, Length Frequency Data form and vessel location reports. The information is processed by FINNZ and reviewed by HFMC and SeaFIC. The internal audit of initial monitoring data identified an inconsistency between the reporting requirements for daily reporting for the small fish requirements of the CoP and for Length Frequency Data, as a result of an omission in the Hoki Target Trawling Code of Practice v.7. This internal auditing will result in improvements in the next version of the Code of Practice.

The monitoring data is reported approximately on a monthly basis to HFMC, and currently includes:

- Tows where hoki smaller than 60cm length comprise more than 10% of the catch on that tow, and the consequent action taken by vessels (to comply with the move-on provisions of the CoP where the catch of small hoki exceeds 10%),
- Summary reports for all vessels and companies, which include fishing method, vessel length, provision of appendix 1 reports, entry/exit to CW, and catch sampling data.

Additional information is still being received from members by HFMC, and reporting formats improved, to ensure the most suitable format and mechanism for highlighting non-compliance issues.

Finding


Phase 4 of this CAR 13 is **CLOSED**, since the Internal Audit process is now underway with the collection and review of data and reporting of performance.

CAR 13, Phase 5

Phase 5 of CAR 13 remains as previously required:

“Review and update of all Codes of Practice integrated into the Deed (by 30 November 2004)”

The completion of Phase 5 of CAR 13 will be assessed in the December 2004 on-site audit.

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Failure to achieve any of the above actions within the timeframe specified will lead to the process of MSC certificate suspension.

Objective Evidence Sighted

- The HFMC Deed (signed 29.04.04) Ref v.LEE793440.11
- Hoki Target Trawling Code of Practice v.7 16.06.04
- SeaFIC Data Management System Summary for Hoki CoP 01/04 - 06/04
- Summary Report for all Vessels and Companies
- Hoki Length Frequency Data form, July 04
- Daily Reporting form (bridge derived data)
- Letter to Quota Owners 20.06.04 (for signing of Deed)
- Draft Seabird Mitigation Code of Practice (for presentation to MFish 24/09/04)
- Performance Indicator Framework addendum to the Hoki Target Trawling Code of Practice Sept 04



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Minor CAR No. 015 Benthic Impacts

Details of Non-compliance


- A strategic approach for the mitigation of benthic impacts has not been established.
- There is a lack of project design and commitment to conduct research to assess the impact of the fishery on benthic habitats.

To be completed by 31 August 2004.

This CAR is focused on requiring HFMC to develop and begin the implementation of a relevant set of activities to address the issues surrounding the impacts of the fishery on the benthic ecosystems. The first step required is to develop, in conjunction with relevant stakeholders, a strategic approach to identifying and then mitigating any benthic impacts that are considered to be important. This initial work should be firmly based on the outcomes of the ERA, which has already been completed. SGS recognises that mitigating benthic impacts in waters where the hoki fishery operates is a complex and resource demanding activity, and will take some time to develop and implement. Also, mitigating such impacts will be a process of continuous improvement, as new information and data about the ecosystems is developed from surveys and research programs, and as the fishery evolves.

There are specific changes that could be implemented in the fishery immediately, such as removing heavy ground gear from bottom trawl nets, to mitigate some benthic impacts. However, without a more detailed and strategic analysis of the impact issues, any such major changes in the fishery may contribute little to mitigating actual benthic impacts but impose major costs on the fishery for little environmental or economic return. Therefore, the development of an effective and lasting set of solutions to assessing and mitigating benthic impacts in the hoki fishery will be best based on a robust analysis of the nature and extent of the existing (and historic) impacts, followed by an agreed set of changes to fishing practices that are embodied within hoki code of practices, or are embedded within other fishery management instruments that can be independently audited for assessment of outcome performance.

SGS recognises that much of the research and analysis required to address the issues of identifying and mitigating benthic impacts is expensive and long term. The CAR does not imply or expect that the benthic impact issues will be fully identified and resolved within the timeframe of the MSC certification. The intention is to ensure that the fishery is embarked on a robust pathway that will lead eventually to lasting solutions to mitigation of the benthic impacts, and that these are fully institutionalised and accepted in the fishery management system. The role of this CAR therefore is to ensure that, within the timeframe of this certification, the initial steps along such a pathway by the HFMC are appropriate, and that the actions and timeframes are commensurate with the scientific and institutional capacity and context in New Zealand.

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For the success of such long term complex ventures, and to achieve effective and efficient fishery management, it is crucial to maintain a reasonable engagement with the relevant government, non-government and scientific stakeholders in reaching solutions that are relevant to the New Zealand situation. One important aspect of this is the engagement and support provided by HFMC for the existing government and technical processes in New Zealand that design and implement major research projects of relevance to the benthic impact (and related) issues of the hoki fishery. The hoki fishery is not the only source of marine impacts, or even the main source for many issues, and all mitigation activities need to be designed and established in a coordinated way so that outcomes are agreed with stakeholders and are sustained beyond the life of this current MSC certification.

Put simply, while there are gains that could be made in the short term by making unilateral changes in the hoki fishery to *appear* to reduce benthic impacts, such activities may not be genuinely effective in terms of reducing actual benthic impacts, and they may not be capable of being institutionalised into the fishery management system and hence not be effective for impact mitigation beyond the short term because of a lack of broad acceptance within the New Zealand or the hoki-specific context.

In addition to short term industry funded research projects where the HFMC is able to provide resources and commitment to resolving specific issues, there are several important government systems for broader marine research funding in New Zealand. The participation and commitment of the HFMC to these processes is an important indicator of support for resolving benthic impact issues, many of which will require joint mitigation activities by government, the hoki fishery and the private sector outside the hoki fishery.

The HFMC has prepared a Fishery Environmental Strategic Plan to deal, amongst others, with the issue of mitigating benthic impacts. The plan focuses on this matter through establishing an objective to reduce impacts, and makes a commitment to specific actions that are considered to contribute to reducing benthic impacts (such as using existing trawl paths as far as possible).

The involvement and support of HFMC in a range of marine environmental research projects is noted, but the specific role and levels of support provided by the HFMC for participation in research projects relevant to assessment and mitigation of benthic impacts is as yet unclear.

Objective Evidence Sighted

- HFMC Environmental Steering Group minutes (July 2004)
- HFMC Environmental Steering Group minutes (August 2004)
- HFMC Draft Fisheries Environmental Strategic Plan; July 2004 – Dec 2006. (Final Draft 24 August 2004).



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- Progress reports (work in progress) on several relevant MFish ENV projects for research funding.

Finding

This CAR remains **OPEN**. There has been minimally adequate progress on development of a strategic approach to the issue of benthic impacts, achieved through the development of the Strategic Plan. There is however adequate documentary evidence of a significant commitment to identify and support appropriate research projects that will contribute to resolving issues of benthic impacts. This aspect of the CAR therefore has not been adequately achieved. The timeframe for completion of the CAR is therefore extended, and the terms of the CAR are revised as follows:

There is a lack of project design and commitment to conduct research to assess the impact of the fishery on benthic habitats.

To be completed by 30 November 2004.



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Minor CAR No 16: Ecosystem Objectives

Details of Non-compliance

There has been no progress towards development of measurable objectives for key ecosystem components as defined by APR 5.

To be completed by 31 August 2004.


The Appeals Panel recommended that a set of ecosystem objectives be established for the fishery, initially as interim objectives while the more detailed analyses of risks were being undertaken from which more detailed and specific objectives would ultimately emerge.

“Interim but measurable management objectives for key ecosystem components should be set using existing knowledge, consistent with the principles of the Precautionary Approach, and with the full understanding that these objectives would be revised as the Ecological Risk Assessment is completed” (Appeals Panel Recommendation 5).

The objectives that would need to be developed would cover a range of important ecosystem components, including benthic and pelagic species and habitats, and possibly ecosystem processes such as benthic-pelagic coupling. The ESG has considered these matters and has identified a strategy with both short term and medium term aspects to meet the Appeals Panel recommendation. The Fishery Environmental Strategic Plan (section 7) provides an outline for the ESG-preferred approach to this matter. The intention is to first determine what the key aspects of the ecosystems are (the ‘ecosystem components’), and then, using the ERA approach, determine an appropriate set of ecosystem objectives. The preferred approach is to conduct, in 2005, a broadly-based workshop of technical experts in conjunction with the stakeholders to determine the pragmatic first steps to setting ecosystem objectives. However, the commitment to undertake such a workshop is limited, expressed in the Strategic Plan (page 7) as “investigate the possibility” of holding the workshop.

In the interim, the HFMC have supported a Ministry of Fisheries research project (ENV 2003/03) on the Chatham Rise that is undertaking some basic research to establish the fine-scale (trawl by trawl) distribution of fishing effort in the hoki fishery (and other Chatham Rise fisheries) in relation to known environmental features. As this project comes to completion, it should provide the basis for establishing some ecosystem objectives for the Chatham Rise fisheries, and identify many of the practical issues associated with attempting to prepare a set of such objectives for the other hoki fishery areas.

Much of this work is essential for a planned and systematic approach to the matter of establishing ecosystem objectives. However, the Appeal Panel considered that there were sufficient grounds

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and existing information for the establishment of a series of ecosystem objectives in the short term for the fishery. These would be modified in the light of further evidence and the outcomes of the next ERA. The actions to be taken in respect of CAR 15 (benthic impacts) will also contribute to the short term responses to this matter. However, at this stage, there is only limited progress on establishment of ecosystem objectives for the fishery despite the Appeals Panel recommendation, and progress does not meet the basic intention of the APR 5 of requiring a set of ecosystem objectives to be established.

Objective Evidence Sighted

- HFMC Environmental Steering Group minutes (July 2004)
- HFMC Draft Fisheries Environmental Strategic Plan; July 2004 – Dec 2006. (Final Draft 24 August 2004).

Finding

This CAR remains **OPEN**. There has been minimal progress on the development of ecosystem objectives to meet the Appeals Panel Recommendation (APR). However, there are imminent outcomes of research projects that will assist the HFMC to progress this matter in the short term. The timeframe for completion of the CAR is therefore extended, and the terms of the CAR are revised as follows:

“Progress towards development of measurable objectives for key ecosystem components, as defined by APR 5, will include (a) a multi-stakeholder workshop to be conducted in mid-2005, and (b) an analysis of the outcomes of ENV 2003/03 for the purposes of establishing ecosystem objectives for Chatham Rise hoki fishery”.

The design for part (a) to be completed by 30 November 2004; the outcome of (b) to be completed by 31 March 2005.



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Minor CAR No 17: Strategic Planning and stakeholder input

Details of non-compliance

- There is a lack of progress on the Hoki Fishery Plan
- The management system lacks an overall strategy for managing the environmental impacts of the hoki fishery
- Resources need to be dedicated to improve the involvement of stakeholders in a more systematic approach in order to assist with the development of the fishery plan and environmental strategies

To be completed by 31 August 2004.

Objective Evidence Sighted

- Flowchart of proposed building blocks/components of the Fisheries Plan with some timeframes.
- Minutes of Environmental Steering Group meetings


Part 1. Findings

Some progress has been made on developing the various components of the Fisheries Plan. In fact some of the building blocks are well underway (such as the Compliance Strategy, Environmental Strategic Plan, and Company Management). Other components are currently being developed with timeframes attached (the strategy, vision, goals and objectives) .

This section of CAR 17 is **CLOSED**, as there has been some demonstrated progress towards development of a hoki Fishery Plan

Part 2. Findings

An overall strategy linking the environmental risk assessment, a risk management plan, objectives (including priorities) and tasks and activities has not been clearly established. More progress and further input from stakeholders needs to occur to complete an overall strategy that will be consistent with a Fishery Plan. Important aspects will include clear policy and a plan for how to establish prioritized research support for the fishery, and how decisions about catch and effort in the fishery relate to environmental issues.

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This part 2 of CAR 17 remains **OPEN**. The draft Fishery Plan must be prepared for audit by 31 March 2005.

Part 3. Findings

Resources have indeed been dedicated to improve the involvement of stakeholders in a more systematic approach in order to assist with the development of the fishery plan and environmental strategies. An independent chairperson is provided by HFMC to facilitate the Environmental Steering Group, which is now meeting every month.

This section of CAR 17 is now **CLOSED**. Further development of the Fishery Plan, and the involvement of the ESG, will be the subject of routine surveillance audits.



Summary of Outstanding Appeal Panel Recommendations (APRs)

Objections Panel Recommendation 2

“Seal excluding devices be tested in New Zealand waters as a complement to the trials off Western Tasmania.”

Findings

- **Final report of the SLED trials is required in order to close this Objections Panel recommendation 2. Further aspects of seal bycatch mitigation are considered under CAR 12.**

Objections Panel Recommendation 3

“The trawl grounds should be mapped, especially those areas where trawls impact on the seabed.”

- **Evidence of progress towards this will be the subject of the next surveillance audit.**

Objections Panel Recommendation 5

“Interim but measurable management objectives for key ecosystem components should be set using existing knowledge, consistent with the principles of the Precautionary Approach, and with the full understanding that these objectives would be revised as the Ecological Risk Assessment is completed”.

- **Evidence relating to this recommendation will be the subject of the next surveillance audit.**




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Objections Panel Recommendation 6

“The fishery observer programme and the procedures manual be reviewed for effectiveness and efficiency.”

- **Evidence of progress towards this will be the subject of the next surveillance audit.**

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Other issues assessed

Status of the New Zealand Hoki Fishery Stock

There is concern about the current state of the Hoki fish stock (HOK 1). It is considered that current catches from the western population of the HOK 1 fishstock are unlikely to be sustainable. Information from the stock assessment models indicate that the western biomass is at the lowest point ever. The current Hoki stock biomass is largely dependent on recent recruitment to the stock and recruitment from the western population has been poor for the last 7 years. Current catches from the eastern stock are considered to be sustainable.

Background


Hoki migrate to spawning grounds in Cook Strait, West Coast South Island (WCSI), Puysegur, and East Coast south Island (ECSI) areas in the winter months. Throughout the rest of the year the adults are dispersed around the edge of the Stewart and Snares shelf, over large areas of the Sub-Antarctic and Chatham Rise, and to a lesser extent around the North Island. Juvenile fish (2–4 yrs) are found on the Chatham Rise throughout the year.

The main spawning grounds are centred off the WCSI and in Cook Strait. The major nursery ground for juvenile hoki aged 2–4 years is along the Chatham Rise. The older fish disperse to deeper water and are widely distributed on both the Sub-Antarctic and Chatham Rise. Research suggests that a significant proportion of hoki move from the Chatham Rise to the Sub-Antarctic as they approach maturity, with most movement between ages 3 and 7 years. There is little information at present to determine the season of movement, the exact route followed, or the length of time required, for fish to move from the Chatham Rise to the Sub-Antarctic.

Recent History

A total allowable commercial catch (TACC) for the Hoki fishery (HOK 1) is set by the Minister of Fisheries for each fishing year commencing 1 October. The TACC is determined by the Minister after considering the available fishery assessment information, advice from his Ministry (MFish) and all of the issues and information forwarded by the stakeholders.

Since the introduction of the Quota Management System (QMS), hoki has been managed as a single stock HOK1. However within HOK1 two stocks are recognised, eastern and western. These are assessed separately. Unfortunately the existence of two genetic stocks within HOK 1 which co- occur in one of the four fishing grounds (Chatham Rise), makes this fish stock particularly difficult to assess. A complex set of assumptions has to be made concerning the movement of fish between the four fishing grounds

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The hoki stock assessment has progressed considerably in recent years and despite considerable technical difficulty and remaining sensitivity to a number of factors, is considered to provide a robust basis for advising on sustainability options.

In recent years there has been a progressive reduction in the TACC.

The TACC for Hoki in 2001/02 fishing year, was reduced by 50,000t to 200,000t. At this time the stock assessment suggested that the eastern stock was more depleted than the western stock. The industry agreed, by way of voluntary agreement to take 65% of the catch from the west and 35% from the east.


In the 2002 fishery assessment, the eastern stock still appeared to be more depleted than the western stock, though neither stock was strongly depleted. The TACC for 2002/03 fishing year was again set at 200,000t with the same E-W split.

The 2003 assessment indicated that there was a major decline in the WCSI catches. However the combined catch, from the eastern spawning fisheries in Cook Strait and on the ECSI had increased

As a result of this assessment and the concern of poor recruitment during the last few years on the WCSI, the Minister decided, with agreement from the industry to reduce the TACC for the 2004/05 fishing year to 180,000t. There was also an agreement from the industry to change the catch split to take 61% from the west stock and 39% from the east.

The 2004 stock assessment indicated that current catch levels in the western fishing grounds were unsustainable. The main reason for this appeared to be that recruitment for the west stock has been below average for a number of years (with the possible exception of the most recent year, for which recruitment is not well determined).

Interested parties (including HFMC, Seafood Fishing Industry Council, Forest and Bird, Ministry of Fisheries (MFish, NIWA and independent stock assessors) were involved in the workshops that discussed the stock assessment design, interpretation and results.

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Management options under consideration

The 2004 HOK 1 stock assessment signals that current catch levels in the western fishing grounds are unsustainable and that significantly increased catches in the eastern fishing grounds may not be feasible. MFish has proposed three options to address the concern over the WCSI fishery. MFish believes that these options present a graduated range of measures that can be employed to ensure sustainability of the hoki stock by adjusting the TACC as well as the allocation of catch effort between the eastern and western fishing grounds

The options also take into account section 13 of the Fisheries Act that the TAC should be set at a level that moves the stock towards the level that can produce maximum sustainable yield (MSY)

The options include:

1. Reduce the TACC to 140,000 tonnes {split W40% E 60% (56,000t: 84,000t)}
2. Reduce the TACC to 120,000 tonnes {split W40%: E 60% (48,000t: 72,000t)}
3. Reduce the TACC to 100,000 tonnes {split W40%: E 60% (40,000t, 60,000t)}


All stakeholders have been asked to submit their views on the three options to the Minister before he makes his final decision (due mid September).

The HFMC has been involved in the stock assessment process and has publicly supported the need to reduce the TACC.

There will be another stock assessment process in 2005.

References

- Ministry of Fisheries, 2004. Summary of the Assessments of the Sustainability of Current TACC's and Recent Catch Levels and Status of the Stocks for the 2004-05 Fishing Year. www.fish.govt.nz/sustainability/research/stock/staus3.html#HOK
- Ministry of Fisheries June 2004. Initial Position Paper for the Review of Sustainability Measures and other Management Controls for the 2004- 05 Fishing Year. www.fish.govt.nz/sustainability/ddecisions/final-ipp.pdf

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Matters raised by stakeholders and interested parties

Seal Bycatch

Several stakeholders raised concerns about the apparent lack of action by HFMC to address the issue of seal bycatch. The most often expressed view was that there appeared to be a lack of commitment to accept the suggestions of various stakeholders about mitigation strategies, and a lack of willingness to proceed to make changes in fishing practices, such as controls on where hoki fishing can occur in relation to seal colonies.

Stock


Two stakeholder groups were concerned about the condition of the stock, suggesting that the reducing TACC was evidence of an unsustainable fishery. This was supported, in the view of one stakeholder organization, by the failure of the fishery to fully take the permitted TACC in recent years. This amounts, in the view of this stakeholder, to evidence of a rapidly falling stock size ahead of the stock assessment process which follows (by necessity) about a year later to confirm recruitment failure and declining stock unprotected by a suitably precautionary TACC. The serial decline in TACC and failure each year to catch the agreed TACC amounts to an unsustainable fishery, in the view of this stakeholder.

Pace of Reform

Several stakeholders held concerns for the pace of reform in the fishery. They maintain that this shows a lack of commitment from the fishery to actually implement the reforms expected, and required under the MSC certification process. Stakeholders generally felt that progress was 'glacial' and most could not accept that the changes were so difficult or time-consuming to design and implement, preferring to infer a lack of commitment by HFMC rather than acceptance of the complexity of negotiating changes to established practice in a complex fishery management environment.

Awareness and Communication

Stakeholders generally felt that the HFMC should be more pro-active in providing information about current activities to the broader stakeholder community. Several stakeholders felt that there was a responsibility for HFMC to better maintain levels of awareness, through both meetings and the electronic media (such as the hoki website). A matter also of concern was that the HFMC responses to the MSC CARs (the Corrective Action Plan, which detailed how each CAR was to be actioned by HFMC) had not been updated and this left stakeholders without a clear view of how the HFMC was dealing with the CARs.


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Increased use of Pair-Trawls

Several stakeholders raised concerns about the apparently increasing frequency of use of twin-rigged gear, but particularly the concern about use of larger and heavier ground gear in such gear configurations that would have increased damage to benthic communities. Concerns also included the adequacy of reporting of the use of this gear, and the capacity of the MFish reporting system to detect the true frequency of use of this gear type.

Seabird interactions

Stakeholders were concerned about the lack of technical rigor that had been evident in previous experimental approaches to mitigation strategies. Concerns were also expressed that the present series of warp-strike trials were proceeding too slowly, and were of a pilot nature only.

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Planning and focus for the next surveillance audit

The next on-site audit 29, 30 November & 1,2 December 2004 will include:

- Final verification of outstanding CARs
- Review of progress on outstanding Objections Panel Recommendations
- Review of CAR plans, HFMC Business Plan
- Review of Fisheries Plan
- Vessel visit
- Verification of Observer Data and Internal Audit results and Corrective Action taken
- Environmental Steering Group attendance
- Stakeholder consultation

Organisations/stakeholders consulted

- Hoki Fishery Management Company (HFMC) – Wellington (Richard Cade)
- Enfocus Consulting Ltd. – Wellington (Jane Gunn)
- SeaFIC – Wellington (Kevin Stokes, Dave Banks)
- Forest & Bird Protection Society – Wellington (Barry Weeber, Kevin Hackwell, Michael Szabo)
- World Wildlife Fund (WWF) New Zealand – Wellington (Jo Breese, Chris Howe, Nathan Walker)
- Ministry of Fisheries (MFish) – Wellington (Kevin Sullivan, Neville Smith)
- Department of Conservation (DOC) – Wellington (Johanna Pierre)
- NIWA – Wellington (Rosie Hurst, Alistair Dunn Mary Livingston, , Chris Francis, Suze Baird)

Assessment team

Mr. Michael van Uden – Lead Assessor
Mrs. Jo Akroyd – Fishery management specialist
Dr. Trevor Ward – Marine ecosystem specialist
Mr. Aldin Hilbrands – MSC Programme Manager

Date

12th October 2004