Surveillance Report
New Zealand Hoki Fishery

Certificate No.: **MML-F-0XX**

Moody Marine Ltd.
November 2009 v2

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1.0 GENERAL INFORMATION

Scope against which the surveillance is undertaken: MSC Principles and Criteria for Sustainable Fishing as applied to the New Zealand Hoki Fishery

Species: Hoki (*Macruronus novaezelandiae*)

Area: New Zealand EEZ HOK1

Method of capture: Trawl Fishery

Date of Surveillance Visit:	**Nov 24 – 27 , 2009**			
Initial Certification	**Date: 1 Nov 2007**		**Certificate Ref: MML-F-030**	
Surveillance stage	**1st**	**2nd**	**3rd**	**4th**
Surveillance team:	**Lead Assessor:** **Assessor(s):** A Punt, G Tingley, J Akroyd, A Hough			
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2.0 RESULTS, CONCLUSIONS AND RECOMMENDATIONS

This report contains the findings of the second surveillance cycle in relation to this fishery. The first annual surveillance audit (Moody Marine 2008) provided a summary of the previous MSC assessment analyses of this fishery (Scoring Guideposts, original assessment evaluation, text of original condition, original client Action Plan and 2008 progress report). The full text on these is not, therefore, repeated here.

The client's response to the Conditions of Certification was set out in an Updated Action Plan to Address Conditions of certification for Hoki (Clement and Tilney, 2009). Action on this was examined as a part of this second surveillance. For each condition, the report sets out progress to date. Where the requirements of a condition are met, the Performance Indicators are re-scored and if the score is 80 or more, then the condition is required to be closed.

Information regarding this year's audit has been collected principally from reports provided by the client and directly from Ministry of Fisheries (MFish) Deepwater Management, Science and Compliance Teams. Consultations have also been undertaken with WWF, Royal Forest and Bird, ECO, NIWA and SeaFIC. Subsequent to the site-visit, detailed written comments were also received from WWF (9 December 2009), which have been considered in the preparation of this audit report.

For each Condition, the report sets out the activity being assessed, then as required by the MSC assessment methodology, DWG (the client) produced an Action Plan setting out the stages involved in addressing the Conditions raised. The client has provided information on the work undertaken to date (the DWG 'Updated Action Plan to address Conditions of Certification') and further information was provided during the audit. This progress report and associated information has now been evaluated by the Moody Marine assessment team ('Observations' and 'Conclusion') against a) the commitments made in the Action Plan, b) the intent of the original Condition and c) the original scoring indicator, guideposts and commentary. The influence of any overall legislative and management changes in the fishery are also taken into consideration.

The MSC has issued a Directive to Certification Bodies on the content of Conditions of Certification. Significant features of the directive are that Conditions should be targeted towards achievement of measurable outcomes, where appropriate, in terms of information, management processes and/or eventual outcomes and should have clear timelines. Where possible, therefore, the phrasing of Conditions is considered here in relation to this directive. The directive also makes clear that Conditions cannot be used to direct a client, in detail, as to how a Condition is to be met, only as to what is the required outcome. Where guidance is provided in the original text of Conditions of Certification, this should be interpreted, therefore, as a recommendation on how to proceed in meeting Conditions, not a requirement.

The fishery was originally certified in March, 2001 by SGS and was then subject to a full sequence of surveillance audits. Prior to expiry of the original certificate, the fishery was reassessed by SGS. The client at the time was the Hoki Fishery Management Company Ltd. The reassessment of the fishery gave rise to an objection which was eventually resolved through the MSC's Objection Procedure. As the objection procedure took some time to resolve, an extraordinary surveillance audit took place in August 2007. The fishery was reassessed and recertified in November 2007, again by SGS.

In early 2006, the Client (the Deepwater Stakeholder Group Ltd, since renamed the Deepwwater Group Ltd) produced an Action Plan for meeting Conditions of Certification (or CARs) that was accepted by the SGS assessment team.

Following recertification, the client, Deepwater Group Ltd, then decided to transfer the contract for surveillance audits to Moody Marine Ltd. In accordance with MSC Tab Directive 12, the SGS certificate was replaced by a Moody Marine certificate at the agreed transfer date (12 September 2008).

Moody Marine carried out the first annual surveillance audit post recertification in October 2008.

This report contains the findings of the second annual surveillance report carried out by Moody Marine in November 2009.

Specific Issues

Item	Comments
0.1	**Update on Stock Status**
Observations	The hoki TACC for the 2008-09 fishing season was set at 90,000t (the same as that for the 2007-08 season, and lower than that for the 2004-05 to 2006-07 seasons of 100,000t). Improved management measures during the 2007-08 fishing season resulted in the catch being less than the TACC. The agreed arrangement between industry and the Minister of Fisheries aimed to apportion catches between the Eastern and Western stocks, with 25,000t of the 90,000t from the western stock (27.8% of the TACC). However, the actual catch from the western stock was 30,000t (33% of the TACC). This was nevertheless the lowest catch from the western stock since the early 1980s. The 2009 assessment was essentially an update to the 2008 assessment, with the only major structural difference between the 2008 and 2009 assessments being the inclusion of data collected since the last assessment. The 2009 assessment was based on the stock assessment package CASAL and again involved a two-stock population dynamics model fitted using Bayesian methods. The new data included in the 2009 assessment were a Cook Strait acoustic survey, two trawl surveys (Chatham Rise and sub-Antarctic), proportion-at-age data from the surveys and fishery, and new proportion spawning data. Unlike the 2008 assessment, the 2009 assessment provided three measures of fishery-wide fishing pressure. These measures allow a clearer evaluation of trends in fishing pressure than the trends in the exploitation rate in the spawning fisheries which had been reported in previous assessments. The Hoki Assessment Working Group provided three measures of fishing mortality, reflecting that no single measure of fishing mortality is ideal. The value of the information on fishing mortality would be enhanced if estimates were also provided of fishing mortality relative to reference values. However, no reference values (such as F_{MSY}) have been identified to date. The assessment again reported total spawning biomass rather than female spawning biomass which would seem to be a better measure of reproductive output. As in past years, the assessment was based on two final accepted model runs (denoted 1.1 and 1.2 in the 2009 assessment). These two sets of model specifications are identical to models 2.3 and 2.4 from the 2008 assessment and represent different ways of dealing with the unexplained lack of older fish in commercial catches and surveys. The status of the eastern stock is essentially unchanged from the 2008 assessment (Table 1) while the 2009 assessment predicts a continuing increase in the size of the western stock, with the lower 95% confidence interval for current stock size relative to virgin stock size now well above the soft limit of $0.2B_0$. The 2009 assessment estimated B_{MSY} under the assumption of deterministic dynamics and a known stock-recruitment steepness to be 23% (eastern stock) to 25% (western stock) of the virgin level. The current interim management target (35-50% B_0) is notably higher than this. The eastern stock was estimated to be in the range of the interim management target while the 2009 biomass of the western stock was estimated to be close to (or perhaps above) the lower end of interim management target. Both stocks are estimated to be above the hard and soft limits (10% and 20% of B_0 respectively) with high probability. The 2009 assessment again confirmed that recruitment for the western stock was poor between 1995 and 2001. The projections on which management advice was based again projected recruitment by sampling from recent recruitments (1995-07). The recruitment estimates for 2002-07 are higher on average than those for 1995-2001. A key uncertainty in the 2008 assessment was the catchability for the 2008 (actually December 2007) trawl survey in the sub-Antarctic. Concern was expressed in the 2008 assessment that catchability for this survey was higher in 2008 than in 2007. However, the 2009 (actually December 2008) survey for the sub-Antarctic confirmed the results from the 2008 survey. The data for this survey were given a higher weighting in the 2009 assessment. Projections for the eastern and western stocks were undertaken under the assumption that future recruitment is best represented by the recruitment between 1995 and 2007 (inclusive). These projections show that stock size will increase in median terms under the current TACC as well as an increased TACC. The Minister of Fisheries decided to increase the TACC from 90,000t to 110,000t for the 2009-10 fishing season.

Item	Comments
1	**Condition of Certification 1: Appropriate target and limit reference points**
Activity assessed	**PI 1.1.4.2 Are appropriate target and limit reference points used?** The provision of management advice needs to be based on agreed references points that are in line with current practice for well-managed fisheries and take account of what known about the biology of the species and the nature of the fishery. It should be possible to estimate the values for the reference points reliably and there should be limited scientific opposition to the reference points. **SG 60**: Generic reference points, appropriate for the species, are reported against, and form the basis for, management advice. **SG 80**: The reference points are in line with current practice for well-managed fisheries and take account of what known about the biology of the species and the nature of the fishery. The values for the reference points can be estimated reliably for the species. There is limited scientific opposition to the reference points. **SG 100**: The reference points have been selected specifically for the species / fishery and take account of stock- specific concerns including uncertainty about stock assessments, serial depletion, ecosystem considerations, and data. The reference points meet or exceed current international practice (e.g. a limit reference point for biomass above B_{MSY} and a limit reference point for fishing mortality below F_{MSY}). The reference points have been developed collaboratively among all major stakeholders and there is no significant disagreement among stakeholders regarding the appropriateness of the reference points. **Actions & milestones** • Determine stock-related and other fishery objectives and develop appropriate target and limit reference points in consultation with stakeholders, including WWF-NZ and RF&BPS, to guide management of the hoki fishery, including as appropriate reference points relating to fishing mortality and biomass, within 9 months of certification • Work to secure formal recognition / adoption of a standard set of hoki limit and target reference points for the reporting of assessment results and forecasts (and for the purposes of assessing fishery performance by the MFish Middle Depths Fisheries Assessment Working Group) within 18 months of certification. **Relevant Performance Indicator:** 1.1.4.2
Client Progress Report	• Consultation with all stakeholders has been held by DWG and MFish Deepwater Managers through the meetings of MFish's Hoki Assessment Working Group meetings during 2008 and 2009. • DWG contracted an assessment to estimate B_{MSY} for both hoki stocks under agreed, assumed harvest regimes for each of the four component fisheries. This information was reviewed and presented to the Hoki Assessment Working Group. MFish has reported the results of the 2009 stock assessment against these agreed reference points. (Ministry of Fisheries: 2009) • MFish has implemented a generic set of reference points within the Harvest Strategy Standards policy, in consultation with quota owners and other interested parties, which provides clarity as to the status and the levels of "target", 'soft" and "hard" limits in relation to biomass for hoki and other fish stocks. (Ministry of Fisheries: 2008). • An agreed set of interim reference points has been developed by DWG and MFish managers for hoki stocks and the 2009 stock assessment reports the status of each of the western and eastern hoki stocks against these. Consultation with stakeholders and interested parties on these was held in the MFish Hoki Assessment Working Group meetings during 2009. The 2009 stock assessment reports historical and current stock status in relation to both fishing mortality and spawning biomass. (Ministry of Fisheries: 2009) • The Draft Hoki Fisheries Plan requires that reference points be finalised during the 2009-10 fishing year and that the eastern and western hoki stock status be assessed

	against these reference points as part of the 2010 stock assessment. • DWG has contracted a Management Strategy Evaluation of both hoki stocks, based on the 2009 stock assessment results, to assess likely stock status outcomes under a range of catch levels for each of the four component fisheries, to test the above agreed interim reference points (for both biomass and fishing mortality) and to inform fisheries managers in MFish and DWG on future management options, within the agreed reference points. This will be completed by late November 2009 (Langley: 2009) • The agreed reference points will be integrated into the Fisheries Plan for hoki due to be released for consultation by the Minister of Fisheries in late 2009
Observations	The draft hoki fisheries plan includes an operational objective (0001.1) to assess the annual performance of the hoki fishery against a set of biological reference points. Management advice for hoki is currently based on the New Zealand harvest strategy standard. The harvest strategy standard aims to "*provide a consistent and transparent framework for setting fishery and stock targets and limits and associated fisheries management measures, so that there is a high probability of achieving targets, a very low probability of breaching limits, and acceptable probabilities of rebuilding stocks that nevertheless become depleted, in a timely manner*". The harvest strategy standard specifies probabilities for each of these outcomes. The harvest strategy standard is consistent with the 2008 Amendments of the 2006 Fisheries Act. The harvest strategy standard includes the need for a target reference point, a soft limit and hard limit. Stocks that are assessed to be depleted to below the soft limit require a formal, time-constrained rebuilding plan, while stocks that are depleted to below the hard limit should be considered for closure. The harvest strategy standard was established following extensive consultation and review (including international peer-review of a draft of the standard). The focus for reference points has been on biomass-based reference points and no fishing mortality-related reference points have been proposed or evaluated. The 2009 stock assessment reported stock status relative to a hard limit reference point (10% of B_0), a soft limit reference point (20% of B_0), the interim management target (35-50% of B_0), and an estimate of B_{MSY}. The projections on which management advice was based also reported results against these reference points and they were used in the analyses reported by Langley (2009). The analyses by Langley (2009) report the probability of the spawning biomass of the eastern and western stocks dropping below the soft and hard limit reference points for different choices for the upper and lower thresholds for the management target and a harvest control rule which accounts for how TACCs are modified given the status of the resource relative to reference points. The simulations by Langley (2009) implicitly evaluated fishing mortality targets but the results were not evaluated to specifically address target fishing mortality rates relative to, for example, F_{MSY}. A value for the lower threshold of the management target of 35% was shown to generally lead to a low (<10%) chance of dropping below the soft limit and a very low (<1%) chance of dropping below the hard limit. The interim management target is larger than the estimate of B_{MSY}, and the soft and hard limits are appropriate given the estimate of deterministic B_{MSY} (23-25% B_0 for the two stocks). The interim management target is also consistent with avoiding depletion to below the soft and hard limits if the control rules examined in Langley (2009) are followed. The interim management target range is also more conservative than the range (30-40% B_0) considered in previous assessments. The management target is considered to be interim in the sense that additional research (e.g. based on Management Strategy Evaluation, MSE) could influence the most appropriate values for the lower and upper thresholds for the management target. However, the expectation is that the reference points would not be changed frequently and only if new information / analyses suggest that this is appropriate (Martin, 2009). The analyses on which the MSE results are based will be reviewed the Hoki Fishery Assessment Working group in 2010. Comments were made in the WWF submission regarding F-based reference points; these have been captured in the comments above. WWF believes that, while the reference points for the hoki fishery have been reported in the MFish stock assessment report, there are significant

	issues associated with the derivation and use of those reference points and, while invited to the meetings, NGO representatives did not participate in the development of the documents associated with reference points, nor subsequently consulted by the fishery in regards to the reference points. The audit team understand that all stakeholders were invited to participate in the meeting on 31st March 2009 where the reference points were developed. There was robust scientific discussion and the process for defining reference points appears to have been appropriate. The MSC process permits some degree of scientific disagreement on this issue. There will be future opportunities for the eNGOs to participate in discussions about reference points, particularly when the results Langley's simulations are considered by the Hoki Working Group in early 2010.
Conclusion	Appropriate target and limit reference points are used in the hoki stock assessment. These reference points are in line with current practice for well-managed fisheries and take account of the species and the nature of the fishery. PI 1.1.4.1 has been rescored to be 90 because a) the interim management target exceeds the best estimate of B_{MSY}, b) the reference points have been selected specifically for the hoki stock and, c) analyses which show that the upper and lower thresholds for the management target account for several sources of uncertainty have been undertaken. The score would have been higher had the analyses considered the impacts of ecosystem effects and serial depletion and included fishing mortality reference points. Original score at re-certification in 2007: 76 Re-score at the second annual surveillance in November 2009: 90 As the score is now above the 80 guidepost, this condition is now closed. Future audits will review any changes to the reference points.

Item	Comments
2	**Condition of Certification 2: Stock rebuilding strategy**

Activity assessed	**PI 1.2.1.1 Are measures in place to rebuild a stock if it is found to be below a target or limit reference point?**
	PI 1.1.5.1 Are the stocks at or above reference points?
	
	The western stock of hoki was considered to be depleted when the fishery was recertified because this stock was assessed not to be fluctuating about its target reference point. Rather, this stock was assessed to be close to the limit reference point. Moreover, there was no formal rebuilding strategy in place to ensure that rebuilding of the western stock to a management target occurred. However, measures had been taken to reduce fishing mortality on the western stock (a lower TACC and a shift in catch towards the eastern stock) based on the results of forecasts during the 2004 assessment.
	
	PI 1.2.1.1
	SG 60: Measures to reduce exploitation rates are in place, and the stock is being monitored to determine the extent to which management actions are achieving the goal of rebuilding.
	SG 80: Management measures based on an explicit rebuilding strategy designed to have a high probability of recovery to the reference point are in place. The delay in recovery to the reference point caused by the fishery is expected to be no longer than one generation.
	SG 100: Rebuilding measures are in place based on agreed decision rules that have been evaluated and found to have a very high probability of rebuilding. The delay in recovery to the reference point caused by fishery is expected to be less than one generation. A review of previous decision rules is being undertaken to determine how future recurrences of depletion can be reduced.
	PI 1.1.5.1
	SG 60: The stocks are likely above their limit reference points or a rebuilding program is in place so that recovery to above the limit reference points will likely not be delayed by more than one generation
	SG 80: The stocks are being maintained above their limit reference points and are likely currently, and in the future to be around their target reference points
	SG 100: There is a very high probability that all stocks are above their target reference points, and are likely currently, and in the future, to be around their target reference points.
	
	Actions & milestones
	The agreed workplan to address the lack of a rebuilding strategy was:
	By 31 March 2008
	• Complete CAR 07/0 'A rebuilding plan for the western stock is required'. The fishery needs to develop a rebuilding plan for the western stock of hoki, including a rebuilding target, a desired rate of rebuilding and a desired time to recovery. Evidence of satisfactory progress in this regard could be the funding and initiation of a Management Strategy Evaluation exercise for hoki commenced by March 2008.
	By 31 October 2008:
	• Determine a policy position regarding desired rebuild rate for a depleted hoki stock;
	• Develop a rebuild target reference point relevant to the certification period; and
	• Seek agreement from the Ministry of Fisheries for the Hoki Stock Assessment Working Group to assess and report information to inform these management requirements.
	By 30 April 2009:
	• Secure adoption of a rebuilding plan for the western stock which includes:
	  • Estimates of the expected time to recover to the limit and target reference points for biomass
	  • Estimates of current and expected future exploitation rates relative to F_{MSY} and the agreed reference points
	  • Estimates of the probability that recovery to the limit and target reference points for biomass will occur by various years considering options that include a range of annual catch levels, including zero
	  • An assessment regime to monitor progress towards rebuilding while it remains below the target level
	By May each year, commencing 2009:

	• Update the rebuilding plan annually to:
	  • Monitor progress and to assess the effects of management actions taken
	  • Determine if further measures are required to ensure progress towards rebuilding remains adequate, given the desired rate of recovery
	By March 2010:
	• Complete policy analysis of alternative management strategies for both hoki fisheries that are designed to achieve:
	  • Multiple utilisation and sustainability objectives
	  • Certainty as to management actions, and
	  • Clear specification of necessary services
	  • **Relevant Performance Indicators**: 1.1.5.1; 1.2.1

Client Progress Report	On track to meet milestones: • CAR 07/01 has been closed by SGS • A rebuild standard, describing the management response that will occur if and when a stock falls into the rebuild zone, has been determined and implemented along with a rebuild target reference point. • The target reference points and thresholds are being remodelled within a Management Strategy Evaluation, due for completion in late November, and MFish Science will be asked to report the future stock assessment results against these benchmarks. • Consultation with all stakeholders has been held by DWG and MFish Deepwater Managers through the meetings of MFish's Hoki Assessment Working Group during 2008, 2009 and other management meetings over this period. • Formal rebuilding of the western stock commenced on 1 October 2007 with a catch limit reduction from 40,000 t to 25,000 t, determined after science modelling and full consultation with stakeholders and interested parties. • Further modelling was undertaken in 2008, using the 2008 Stock Assessment results, to assess rebuild rates under different catch levels. Proposed catch assumptions were also assessed against the Rebuild Strategy for the Western stock. (Ministry of Fisheries: 2009). • The rebuild strategy was utilised to drive management action during 2008 when the western stock was assessed to be below the target management level. • Meetings were held in 2008 to seek technical advice on options for limit and target reference points. Meetings were held with stakeholders in April 2009 and interested parties to consult on these before their incorporation into the Hoki Fisheries Plan and into DWG and MFish Operational Plans. • The 2009 stock assessment estimated the western stock has rebuilt to within the interim target range of 35 – 50% B_0. (Ministry of Fisheries: 2009). • The draft Hoki Fisheries Plan describes how the rebuild strategy will drive the management response if either the western or eastern hoki stocks breaches the soft target.
Observations	Two of the operational objectives in the draft hoki fisheries plan relate to rebuilding and harvest strategies: 0001.2: "ensure an appropriate rebuild strategy is in place in the hoki fishery by 2010 to be used if the stock status falls below agreed biological limits", and 0001.4 "Implement an agreed harvest strategy for the hoki fishery by 2010". The aim is to have both of these objectives completed by October 2010. During 2008, NIWA conducted analyses to assess the rate at which the hoki population is expected to rebuild under a no-catch scenario and a scenario in which catches were equal to the catches that occurred during 2008. The projections based on the 2008 assessment suggested continued increase in population size under a 100,000t TACC and the 2008 east-west split of the TACC if future recruitment was assumed to be like that during 1995-2006 (the "recent" scenario) and like that during 1975-2006 (the "long-term" scenario), although the rate of recovery was lower for the former. The hoki rebuilding plan proposed in 2008 includes a desired rate of rebuilding which is tied to that attainable under zero harvest, a target reference point of 30-40% of B_0, and a commitment to monitor progress against the rebuilding objectives. The proposed rate of rebuild is that the spawning biomass is greater than the mean of the difference between the current stock size and that under zero catch. The proposed rate of rebuild is therefore related to the rate at which the western stock would recover if there were no future catches and implicitly to the length of the certification period. The actual rate of rebuilding will be compared with that expected during each assessment. The TACC and catch limits for the eastern and western stocks will be reviewed annually and, if appropriate, both will be adjusted to ensure that the rate of rebuild with fishing is consistent with the proposed rate of rebuild. It is proposed that projections would continue to be conducted for the "recent" and "long-term" recruitment scenarios. In relation to stock status, the eastern stock remains within the interim management target (35-50% of B_0) (Table 1). The status of the western stock, as assessed in 2009, is more optimistic than was the case in 2007 and 2008. In median terms, the western stock is assessed to be 36-39% of the B_0 based on the model runs agreed by the Assessment Plenary. The probability that the stock is below the soft limit (20% of B_0) and deterministic B_{MSY} is now low for both

stocks. There is roughly a 50% probability that the western stock has recovered to the lower end of the interim management target for one of the model runs and 60% for the other model run (Table 1). The assessment report does not report status stock relative to F_{MSY}, but it predicts a continuing increase in stock size for the western stock under current catches.

Table 1. Estimates (posterior medians) of spawning biomass in the most recent year (percentage of B_0) from the 2007, 2008 and 2009 assessments ("current year" is 2007 for the 2007 assessment, is 2008 for the 2008 assessment, and is 2009 for the 2009 assessment). The values in parenthesis are 95% probability intervals.

	Stock / assessment year					
Run	Eastern stock			Western stock		
	2007	2008	2009	2007	2008	2009
2.3, 4.4, 1.1	46 (37,54)	45 (38,52)	47 (40, 56)	20 (12,32)	28 (20,48)	36 (27, 53)
2.4, 4.5, 1.2	37 (30,48)	42 (34,50)	49 (40, 59)	24 (19,31)	30 (25,37)	39 (32, 49)

Work evaluating alternative management strategies (Langley, 2009) is currently underway. This should assist in the final selection of a management strategy for hoki.

WWFs concerns have been noted.

Conclusion

The western stock has now essentially recovered to (at least) the lower end of the interim management target and is assessed to well above the soft limit as well as the deterministic B_{MSY}. The fishery now satisfies the 80 scoring guideline for PI 1.1.5.1 because both stocks are above the limit reference points and within the range of the interim management target. Projections confirm that the stock will remain in the interim management target range even under an increased TACC of 110,000t.

PI 1.1.5.1 is rescored as 80 for the western stock and 90 for the eastern stock because the western stock is well above its limit reference point and within the range of the interim management target while there is a very high probability that the eastern stock is within the bounds of the interim management target.

In relation to PI 1.2.1.1, the rebuild strategy of reducing TACs and shifting catches from the western to the eastern stock was successful at allowing the western stock to recover from its lowest population size (a median estimate of 20% of B_0 or lower in 2003-06) to a population size at (or above) the lower end of the interim management target. However, the fisheries plan which will specify how the rebuilding strategy will drive future management responses is not yet finalized and adopted.

The Condition appears on target for completion within the specified timeframe and will be evaluated further at the next surveillance audit. The condition will be closed as and when PI 1.2.1.1 is fully addressed.

Item	Comments
3	**Condition of Certification : Nature and distribution of habitats**
Activity assessed	**PI 2.1.1.1 Are the nature and distribution of habitats relevant to the fishing operations known?** There is a need to support the development of a moderate-resolution classification of the benthic habitats on the Chatham Rise (i.e. 15-group level as utilised in the draft Benthic Optimised Marine Environment Classification). Ensure all hoki vessel operators continue to meet their legal requirements in completing catch returns on fishing locations in fine scale detail (i.e. with a resolution of 1 nm). **SG 60:** There is some basic information on habitat distributions throughout the fishing grounds, and the extent of fishing effort is broadly documented. **SG 80:** The nature and distribution of the main habitats are known in moderate detail. The distribution of fishing operations is known and monitored in fine scale detail. **SG 100:** • The nature and the distribution of all habitats relevant to the fishing operations are known in detail, based on recent survey information. • The nature and distribution of all fishing operations are known in fine scale detail, and regularly analyzed and reported. **Actions & milestones** By 31 October 2011: • Support further research and the development of a map of benthic habitats on the Chatham Rise, building on existing research and: o Using biological and physical data and spatial modelling, resolve a habitat classification to at least the 15 group level in the Marine Environment Classification (MEC). o Support additional benthic-optimisation of the MEC classification as appropriate to the Chatham Rise. o Prioritise focus on the benthic habitat types that are at highest risk of adverse effects from bottom trawling. o Establish the hoki trawl footprint on the Chatham Rise with a spatial resolution of 1 nm using TCEPR data.
Client Progress Report	• The SGS assessment team provided a high level overview in August 2007, which noted that 50% of this CAR has been achieved and that: "while the intent of this CAR is not yet satisfied, major progress has been achieved and the intent of the CAR could be reformulated to be a smaller and more discrete task(s) that could be readily resolved". • In 2007 the NZ Government introduced the Benthic Protection Areas (BPAs), which close approximately 30% of the New Zealand EEZ to bottom trawling by regulation. These closures were proposed by DWG with the objective to set aside large spatial areas, predominantly untouched by bottom trawl and which are broadly representative of the oceanic classes in the Marine Environment Classification (MEC) (Snelder et al 2005). • These BPAs encompass not less than 10% of each MEC category, in at least two separate areas evenly distributed between north and south (i.e. across the range of oceanographic conditions from sub tropical through to sub-Antarctic) and west to east (i.e. across the range of geological diversity between the two tectonic plates and the mid-oceanic rift). (Helson et al 2009) • At the time it was recognised by DWG that this represented a first step and that the BPAs would be refined as more information on the location, nature and extent of benthic communities within the NZ EEZ (i.e. 12 to 200 NM offshore) becomes available. • A 15-group level 'Benthic Optimised Marine Environment Classification' (BOMEC) has recently been completed by NIWA under contract to MFish (Project BEN200601: Mapping the spatial and temporal extent of fishing in the EEZ). The BOMEC method "is superior to previous classification methods in its ability to summarise biological

	patterns and discriminate biological groups" (Baird: 2009). The BOMEC used environmental and biological datasets to produce a classification specifically for use in assessing the impacts of bottom trawling on benthic biota. The BOMEC report has yet to be released by MFish. • In October 2009, DWG commissioned NIWA to provide BOMEC shape files for the Chatham Rise as part of the requirements to complete this CoC. The NIWA report indicates that nine of the 15 BOMEC classes occur on the Chatham Rise but that the area is dominated by only four classes (Baird 2009). • In October 2009, DWG commissioned GNS Science to plot the Chatham Rise hoki bottom trawl footprint and to determine the percentage of each BOMEC zone that has been swept by bottom trawl (Black & Wood: 2009b). See also 'Summary of Actions to Date' under CoC 005. • DWG has prepared a summary analyses of the above work for Moody Marine's consideration in relation to the 2009 audit of this CoC and PI (Tilney & Clement 2009a) • DWG and MFish are exploring options to test the predictive power of the BOMEC, including the feasibility of using data collected on the Chatham Rise during the Oceans Survey 2020 project.
Observations	Progress on this Condition over the last 12 months been substantive, with a number of studies being completed and reports further defining the benthic habitat areas and specifically addressing the biological component being produced in draft and final forms. An MFish commissioned study, conducted by science provider NIWA, to define a Benthic Optimised Marine Environmental Classification (BOMEC) for the NZ EEZ (BEN200601) has been completed and various outputs have been and are being produced (see Baird, 2009; Leathwick *et al*. 2009)). The outputs of this study have already started to be used, with a subset of these data, those relating to the Chatham Rise, being linked to trawl footprint data for the hoki fishery to show the level of interaction of the fishery with the different habitat types on the Chatham Rise (Black & Wood, 2009). WWF acknowledged that progress had been made but had not had the opportunity to review all the reports.
Conclusion	The surveillance team agree that the requirements of Condition have been satisfied with the completion of the BOMEC studies described above. Only one PI is relevant (2.1.1.1.) and has been rescored as follows based on the above evidence: Original score at re-certification in 2007: 79 Re-score at the second annual surveillance in November 2009: 85 As the score is now above the 80 guidepost, this condition is closed. The score would have been higher if: (i) the match of trawl footprint had considered the whole of the distribution of the hoki and it's fishery rather than to focus principally on the Chatham Rise; and (ii) the scale had been finer than $1km^2$

Item	Comments
4	**Condition of Certification : Trophic relationships of target species**
Activity assessed	**PI 2.1.1.3 Are the trophic relationships of the target species known?** There needs to be adequate information on the position and general trophic importance of the target species at key life stages. **SG 60:** Key prey, predators and competitors with the target species are known. **SG 80:** The basic structure of the food web has been determined, and information is available on the position and general trophic importance of the target species at key life stages. **SG 100:** Quantitative information is available on the position and importance of the target species within the food web at key life stages. **Actions & milestones** DWG to: • Participate in the AEWG review of MFish project ZBD2004-02 and support the outcomes of this project and project ENV2007-06. • Publish updated Livingstone report (Livingston 2002, updated by MacDiarmid et al., 2006) on DWG's website. • DWG to provide active support for other projects addressing trophic structure issues and particularly projects dealing with young hoki on the Chatham Rise.
Client Progress Report	• DWG website construction completed and website initiated on 11 August 2008 and the updated Livingstone (2002) report has been posted onto the DWG website (i.e. MacDiarmid et al., 2005). • DWG has supported relevant AEWG Projects.
Observations	A series of outputs from the three-year study ZBD2004-02 aimed at addressing gaps in knowledge about the trophic interactions of the most abundant fish species on the Chatham Rise (Connell, (2009); Dunn *et al*., 2009; Dunn (in press); Horn, *et al*. (submitted)) are now in the public domain or will be shortly This project, initiated in December 2005 and completed in June 2009, examined the diet of 25 fish species taken from the Chatham Rise in research trawls during 2004/05 2005/06 and 2006/07 between 200 m and 1,000 m depth. In relation to the collective knowledge of where hoki fit into the ecosystem as both predator and competitor, this study fills a previously identified gap in knowledge between the larval fish (Murdoch, 1990) and larger (older) fish (MacDiarmid *et al*. 2005) and thus directly addresses key aspects of the Condition. The data collected and analysed represents a substantial body of work that provides a much improved basis for understanding the Chatham Rise ecosystem in terms of the trophic inter-relationships of the key predators and prey species, including hoki. The outputs from this study will enhance trophic modelling studies and improve confidence in the understanding of the position of hoki within the ecosystem and the impact on other species of the historic, current and future pattern of removal of hoki (and other species) from the ecosystem by fishing. This study will also enable significant inference about trophic inter-relationships of fish in other areas of the New Zealand EEZ. There are other scientific studies being completed (e.g. ENV 2007/06) that will further the overall knowledge of trophic inter-relations for the Chatham Rise in the near future (see Dunn *et al*. 2009). WWF noted progress but again were concerned that they had not reviewed relevant reports. DWG provided their 'Updated Action Plan to Address Conditions of Certification for Hoki' to Royal Forest and Bird and to WWF-NZ at the same time as it was provided to the audit team. This contained references to all cited reports and NGOs were advised they had access to any of these on request. WWF-NZ subsequently requested access to several of these reports, which were provided to them by DWG.
Conclusion	Whilst there will always be more research that would be interesting or useful to undertake, the

	activity of research and outputs from the various projects that have been undertaken over recent years fully meets the requirements placed on DWG to address identified gaps in knowledge for the Chatham Rise ecosystem. The identity of the main predator and prey species relating to hoki are known for significant areas of the distribution of the fishery and outside of fishery areas. Detailed knowledge of the overall trophic structure of the Chatham Rise has been collected and preliminary analyses conducted. Previous data taken from the commercial fishery has thus been augmented by data from research surveys covering the spatial areas of the fishery and other areas not at the core of the fishery, and specifically examining fish smaller than those taken in the commercial fishery. Other studies looking at the Chatham Rise ecosystem (ENV2007/06) have been completed and are due to report shortly. Trophic models exist to explore these new data further. The surveillance team has thus rescored the relevant PI (2.1.1.3) *Are the trophic relationships of the target species known?* and updated the score as follows: Original score at re-certification in 2007: 78 Re-score at the second annual surveillance in November 2009: 85 The score would have been higher if the studies had considered the whole of the distribution of the hoki and its fishery rather than (as was done) focus principally on the Chatham Rise. As the score is now above the 80 guidepost, this condition is now closed.

Item	Comments
5	**Condition of Certification : Impacts of fishing gear on habitats**
Activity assessed	**PI 2.1.2.2 Is there adequate knowledge of the impacts of fishing gear on the habitats where the fishery operates?** Although the main types of impacts with extent and location have been broadly identified across fishing grounds, the specific impacts (including their frequency and their trends) need to be identified **SG 60:** The main types of impacts of gear use on habitat have been identified, and their extent and location of impacts are broadly identified. **SG 80:** The main impacts of gear use on the main habitat types have been identified, including type, extent, location and frequency, and their trends. **SG 100:** The impacts of gear on habitats have been quantified in empirical research studies, including determination of any habitat changes that may be irreversible. **Actions & milestones** Note: These actions and milestones have been revised in line with the approach • to define the areal extent of the Chatham Rise for the purposes of addressing the effects of the Chatham Rise hoki fishery. • Establish the historic and current hoki trawl footprint on the Chatham Rise by single and twin-rig bottom trawl gear. • Assess the extent of the hoki bottom trawl footprint By 31 March 2010: • Consult with stakeholders on the proposed BPA plan for the Chatham Rise to limit the effects of hoki trawling on the Chatham Rise BOMEC areas. By 31 May 2010: • Complete a draft BPA plan, with stakeholder agreement, to manage the benthic impacts of the Chatham Rise hoki fishery. By 31 October 2010: • Submit this plan to MFish.
Client Progress Report	• A range of analyses of TCEPR and CELR data have been undertaken to determine the trawl footprint for all bottom trawl fisheries in the New Zealand EEZ (Baird et al 2006, 2009a, 2009b, 2009c; Baird & Wood 2007, 2008; Black & Wood 2006, Wood 2006) • Analyses of TCEPR data have been undertaken to describe the spatial extent and frequency of disturbances by bottom trawls in Chatham Rise fisheries over a 14-year period from 1990-2003. (Baird et al 2006) • Ana analysis of the trawl footprint in each of the WWF-NZ benthic biodiversity zones, in each of the MEC zones and in the BPA and 'Seamount' Closures within the EEZ has been determined for the period 1990-2008. (Black & Wood 2009a) • Analyses of TCEPR data have been undertaken to determine the trawl footprint by single and twin-rig bottom trawls in the EEZ hoki fishery during the period 1990–2008. (Black & Wood 2009b) • The areal extent of the Chatham Rise has been defined for the purposes of addressing CoC 005 and the single, twin-rig and total hoki trawl footprints on the Chatham Rise have been determined for the period 1989-2008 and for the most recent fishing year for which data were available (i.e. 2007-08). (Black & Wood 2009b) • The proportion of each BOMEC area swept by trawl gear on the Chatham Rise has been determined for the period 1990-2008. (Black & Wood:2009b) • DWG has prepared a summary analyses of above in relation to the new BOMEC categories and the hoki trawl footprint on the Chatham Rise for Moody Marine's consideration in relation to the 2009 audit of this CoC and PI (Tilney & Clement 2009b)
Observations	This Condition was written to address an inadequacy of information in two areas: (i) in the knowledge of the range of gear types, where the different gear types had historically been used, and concerns over the on-going methodology for recording gear type in the collected trawl data; and (ii) knowledge of the interaction of the gear with the benthic environment and the spatial and temporal distribution of that interaction on the benthic environment.

	The approach to addressing the management of benthic impacts has differed from that envisaged at Certification and relies on the provision of adequate areas fully protected from benthic impacts of fishing using benthic protected areas (BPAs), coupled with a significantly improved understanding of the spatial and temporal distribution of the trawl footprint. This has been considered as an acceptable approach by the surveillance team. Progress has continued to be made in addressing this complex and difficult issue since the last surveillance audit in 2008. It is now clear that all of the issues dealing with the identity of gear type, location of operation of gear type and future recording of gear type have been adequately addressed (Anon., 2008a; Anon., 2008b; Hurst 2008). The use of the new TCEPR forms has been fully implemented. The historic areas fished using gear that is likely to impact the benthic environment, the '*trawl footprint*', has now been well characterised (Anon., 2009; Baird and Wood, 2009; Black and Wood, 2009). There is a forthcoming review of benthic protection areas planned and the basis for addressing the needs of managing the interactions between fishing and the benthic environment using BPAs are in place. Specifically the work to define the BOMEC (Baird and Wood, 2009; Leathwick *et al*., 2009;), the detailed knowledge of the trawl footprint of the fishery (Hurst, 2008; Anon., 2009; Black and Wood, 2009) and the review of the approach that led to the current selection of BPAs (Helson *et al*., in press) will significantly inform this process. WWF expressed concerns as to the way that this CoC was being addressed. The audit team has noted these views and agrees that the approach has differed from that envisaged at Certification. However the current approach is viewed as acceptable.
Conclusion	The outputs from the various research efforts coupled with the management change in terms of data collection described under observations above satisfy this Condition and the Condition may now be rescored. Only one PI is affected (2.1.2.2) and has been rescored as follows: Original score at re-certification in 2007: 68 Re-score at the second annual surveillance in November 2009: 85 The score would been higher if there were clearer evidence that sufficient hoki habitat had been protected; at present this is being assumed based on the effectiveness of the BPAs coupled with the estimated coverage of the area of occurrence of hoki and the area and intensity of the trawl footprint. Outside of the requirements of this Condition, a need to further consider, and then ensure the provision of, adequate protection to core hoki habitat has been identified; irrespective of any existing environmental impacts as a result of fishing. It is noted that a DWG paper in response to this condition (Tilney and Clement, 2009b) indicates an intention to address this issue. It is also expected that further aspects of managing the interaction of trawl gear with the benthic environment will be addressed both within Condition 6 (below) the Ecological Risk Assessment and also in future reviews of the approach to defining benthic protection areas. This condition is now closed.

Item	Comments
6	**Condition of Certification 6: Levels of acceptable risk and impact**
Activity assessed	**PI 2.1.3.1.Are levels of acceptable impact determined and reviewed?** **SG 60:** Levels of acceptable impacts for the main non-target species and habitats in the fishery have been estimated at least qualitatively. **SG 80:** Risks and acceptable levels of impact have been determined through a robust peer reviewed scientific risk assessment process that takes a precautionary approach to gaps in knowledge and involves the relevant range of ecological expertise and stakeholders. Levels of acceptable impact caused by the removal of the target species, at key life stages, on the main species of prey and predators of the target species are being determined. Research is underway to study impacts related to, and refine the assessment of, any medium level risks and the main gaps in knowledge. **SG 100:** Levels of acceptable impact caused by the removal of the target species, at key life stages, on the main species of prey and predators of the target species have been determined. The risks and acceptable levels of impact have been determined through a robust peer reviewed scientific risk assessment process that takes a precautionary approach to gaps in knowledge and involves the relevant range of ecological expertise and stakeholders. Research is underway to study impacts related to, and refine the assessment of, any medium level risks and the main gaps in knowledge. The assignment of acceptable levels of impact is subject to regular review. Original Evaluation: The fishery conducted a qualitative ERA (in 2002) that identified the main areas of risk **PI 2.1.4.1. Are the impacts of the fishery on ecosystem structure, function, biological diversity, and productivity within acceptable levels?** **SG 60:** The main impacts of the fishery are generally considered to be within acceptable levels. **SG 80:** The effects of removal of the target and non target species, and impacts and productivity, are generally maintained within acceptable levels for the most important parameters (as established in 2.1.3.1). **SG 100:** The effects of the fishery on the ecosystem have been quantified in all areas where the fishery operates, and impacts are found to be always maintained within acceptable levels for all the most important parameters. **PI 2.1.4.2. Are the impacts of a fishery on habitat structure and function within acceptable levels?** **SG 60:** The main impacts of the fishery on habitats are generally considered to be within acceptable levels. **SG 80:** The effects on the benthic and midwater habitats, and their functions, are generally maintained within acceptable levels for the most important parameters (as established in 2.1.3.1). **SG 100:** The effects of the fishery on the habitats have been quantified in all areas where the fishery operates, and impacts are found to be always maintained within acceptable levels for the most important parameters. **Actions & milestones** By 30 June 2008: • Review 2002 ERA methodology and consult with stakeholders. By 31 October 2008: • Scope, develop and consult with stakeholders on revised ERA methodology. By 31 April 2009: • Implement a new ERA process. By 31 October 2009: • Scope, design and implement a process to develop objectives for each of the main risk issues identified in the revised ERA • Consult on proposed process. • Develop draft objectives for the main ecological risks. By 31 October 2010: • Design, pilot and test management objectives and practices that will detect and reduce major impacts identified in the ERA

	• Complete and implement a management plan to achieve each of the above objectives. • Develop and implement a research and monitoring plan to measure the effects of the management measures and to further develop management responses for those objectives that have been identified as requiring further work and/or information. By 31 October 2011: • Implement the above agreed procedures that have been found to be effective in monitoring and reducing agreed adverse effects on the aquatic environment.
Client Progress Report	• The 2002 ERA and methodologies have been reviewed by MFish and DWG. • A new ERA process has been initiated and will include consultation with stakeholders and interested parties on the ERA methodology and on the scope of the ERA. • Goals and management objectives to avoid, mitigate and remedy the adverse effects of hoki fishing on the aquatic environment have been indentified and agreed by MFish, DWG, other stakeholders and interested parties in the development of the draft Fisheries Plan for hoki. • The nature and extent of incidental interactions between hoki fishing vessels and seabirds and marine mammals has been assessed by MFish, DWG and interested parties (through MFish science and management forums) and mitigation measures have been implemented (through a combination of regulatory and non-regulatory measures). • Data obtained through routine monitoring of incidental interactions with marine mammals and seabirds in the hoki fishery (by independent at-sea observers) indicates reductions in the levels of interactions with albatrosses, sooty shearwaters, white-chinned petrels and fur seals, the main groups identified at risk of incidental interactions or incidental captures by hoki trawlers. • An ERA on seabird captures in New Zealand fisheries (including those for hoki) has been undertaken during the past four months as a component of the development of a revised National Plan of Action for Seabirds (NPOA). This process is lead by MFish with broad representation from industry, DoC, environmental NGOs and scientists. The purpose of this ERA was to inform the revised NPOA for seabirds, currently nearing completion. The results from this ERA will be used to inform the ERA for hoki. • The hoki trawl footprint has been assessed in relation to: o The total benthic habitat range of hoki in the EEZ, establishing that only 20% has been trawled at any time and of the balance, 6% has been closed to bottom trawling by regulation. o The Chatham Rise, establishing that only 25% of the area has been trawled at any time and of the balance, 7% has been closed to bottom trawling by regulation. • Initial discussions on a revised ERA have been held with stakeholders and interested parties and a training workshop held by DWG at CSIRO laboratory in Hobart, attended by an invited representative of WWF (Daley et al 2007; Hobday et al 2007). Familiarisation sessions on these AFMA ERA methodologies have now been held with NIWA and MFish scientists, MFish and DWG managers, and environmental NGO representatives. • An ERA, based on the methodologies developed by CSIRO for AFMA, will be undertaken during the period November 2009 and mid 2010. This process will be facilitated by independent consultants from New Zealand and Australia. • The management outcomes from the ERA will be delivered through the Fisheries Plan for hoki. • A synthesis of the available information (research projects and reports post-2006), on the assessment of benthic effects of bottom trawling for hoki, has been prepared for use in the ERA process.
Observations	Work to define best practice in Ecological Risk Assessment (ERA) methodology has been undertaken including workshop-based training of staff from DWG and WWF held at the CSIRO Marine and Atmospheric Research laboratory in Hobart. This training has subsequently been passed on in familiarisation sessions to other stakeholders in New Zealand (e.g. NIWA, MFish scientists & managers, DWG managers and NGO representatives). A specific recommendation to include both seabirds and elasmobranches within the ERA has

	been partially addressed though a Level 1 ERA on seabird captures that is currently being finalised. Trawl footprint studies showing the spatial and temporal extent of the fishery in relation to benthic interactions of the have been largely completed and will be able to be fully incorporated into the ERA. A meeting with stakeholders to initiate ERA development is planned for mid Dec 09. Other meetings are planned for March and later in 2010. This Condition is running a little behind schedule, but recent and current activity, given the placement of future milestones, suggest that this Condition will be met on target. DWG plan to undertake an ERA based on the methodologies developed by CSIRO for the Australian Fisheries Management Authority (AFMA) between November 2009 and mid 2010. The importance of an ERA-based approach to informing sustainable management of the hoki fishery has been substantially increased due to the approach taken by DWG in addressing certain interactions of the fishery with the benthic environment, benthic organisms, seabirds, etc. WWF state that CoC 6 has clearly not been achieved to date. The audit team agree with this and with the view that stakeholders need to be fully engaged in this process. DWG have advised that this is their intention and this will be reviewed at the next surveillance audit in 2010.
Conclusion	DWG has changed its approach to fulfilling certain conditions, specifically in trying to move away from 'micro-management' of such aspects as bottom impacts to large scale management though areas closed to trawling (Tilney and Clement 2009b). This approach has a number of practical management benefits. It does also, however, place substantially more emphasis on the ERA approach to identify and manage ecological risk. Given the increased importance of the ERA process, it is important that DWG ensure that the ERA process covers *all* aspects of potential fishery interactions. For example, the draft seabird ERA focuses on captures (Rowe, 2009), the overall ERA should also consider all other aspects of seabird-fishery interaction, including, for example, unrecorded seabird mortalities (i.e. not just captures), competition for food, provision of food as offal and from nets, etc. As was indicated in the first surveillance report in 2008, the ERA must also specifically address elasmobranches. While the timescale for completing this Condition is growing tighter, the planned schedule coupled with the experience of delivering a draft seabird ERA provides encouragement that DWG will be able to complete this larger piece of work on target. Progress will be a key focus of the third surveillance audit in 2010. Scores for the three PIs affected are unchanged.

Item	Comments
7	**Condition of Certification 7: Impacts on Seabirds**
Activity assessed	**Performance Indicator 2.2.3.1** Need to reduce the risk of interactions between seabirds and trawl vessels in the hoki fishery through implementation of an offal management system that includes a verifiable auditing process to enable monitoring of compliance. **SG 60:** Studies in the fishery have examined fishery impacts on protected, endangered, threatened or at risk species, and mitigation strategies are in place or being developed where appropriate. There is no evidence that interactions with the fishery create unacceptable impacts on populations of the species concerned. **SG 80:** Regular assessment of the impacts of the fishery on protected, endangered, threatened or at risk species that may be affected by the fishery demonstrates that fishery impacts are generally maintained within acceptable levels (as established in 2.2.2.1). **SG 100:** The conservation status and impacts of the fishery on all protected, endangered, threatened or at risk species that may be affected by the fishery are regularly assessed, quantified, documented and publicly reported through independent external expert review. Regular quantitative assessment of the impacts of the fishery on protected, endangered, threatened or at risk species that may be affected by the fishery demonstrates that fishery impacts are generally maintained within acceptable levels (as established in 2.2.2.1). **Action & milestones** By 31 October 2009: • Design and implement an offal management system across entire fleet which will include an effective system to audit compliance. By 31 October 2010: • Develop and implement an effective internal auditing system across both hoki fisheries
Client Progress Report	• Implementation of offal management measures on a vessel-specific basis was completed on 1 June 2007 through vessel-specific VMPs for factory trawlers. • Extension to all trawlers >28m was completed during October 2008. • Implementation of an effective external (MFish) auditing system has been in place from 1 June 2007. This system was revised on 1 October 2008. • SGS advised in August 2007 that: "Overall, this CAR could probably be considered to be fulfilled". • Further work on refining the VMP requirements, effective offal management measures and auditing processes, have been completed in conjunction with MFish and the outcomes were implemented on 1 October 2009. • Further offal management research is underway, in collaboration with SeaFIC, DoC and MFish, on the effectiveness of batching and mincing and the results from this research will be used to further develop and improve existing seabird mitigation measures.
Observations	The trend in numbers of recorded seabird captures shows a clear pattern of decline in impact with 120 birds recorded as killed in the hoki fishery during 2007-08 (Abraham *et al*., 2009). This appears to be driven by reduced warp strikes as a result of the application of devices to mitigate the incidental interactions between foraging seabirds and trawl warps (e.g. tori lines) coupled with changes in the management of offal discards (to reduced the level of attraction to seabirds in the high risk areas; ahead of the warps or in proximity to the trawl while it is at or near the surface). There has been a significant reduction in the captures of those species whose populations are most likely to be impacted by fishery-related mortalities, especially the various albatross species (Abraham *et al*., 2009). This reduction has been largely driven by the use of a variety of deterrent devices that keep birds away from the stern of the vessels and ahead of the warps. The use of these devices, (e.g. bafflers, tori lines) is mandatory (see MFish website) and their use is subject to verification by MFish observers and other enforcement assets. The seabird species about which there appears to be the greatest concern in relation to the middle depth trawl fisheries (including hoki) are the white chinned petrel, Salvin's albatross and sooty shearwater (Rowe, 2009).

	The most recent population estimates for the white chinned petrel are a world wide population of the order of 7 million individuals, with 2 million pairs on South Georgia, c.23,600 breeding pairs on Crozet, c.200,000 pairs on Kerguelen, at least 100,000 on Disappointment (Auckland) and the Antipodes and at least 55 pairs on the Falkland Islands (www.iucnredlist.org). The most recent population estimate for Salvin's albatross dates from 1998 as 61,000 mature individuals, most of which breed on the Bounty Islands. There is no reliable information about the population trend (www.iucnredlist.org). There are reported declines in the global population of sooty shearwaters and in the population breeding in New Zealand, with both North Pacific fisheries and large scale climate influences being suggested as factors in this decline (www.teara.govt.nz; www.iucnredlist.org/). The global and New Zealand breeding populations of shearwaters are very large, with estimates of more than 20 million individuals worldwide, including 5 million pairs in New Zealand (www.iucnredlist.org/). Given the size of the shearwater population and the observed level of shearwater mortality as a result of the hoki (and other New Zealand EEZ) fisheries, there is little current concern for the impact of the fisheries on sooty shearwaters at the population level. However, given the on-going decline continued monitoring and mitigation is justified. There is also a large commercial harvest of this species, with current estimates of 360,000 birds harvested per year in New Zealand (Newman et al., 2009). As a guide to the magnitude of fishery-related mortality, captures (which are expected to underestimate mortality) for New Zealand fisheries are reported in Abraham *et al*. (2009) for 2007/08, the most recent year for which data are available. For the three species of prime concern, the following figures show capture in all trawl fisheries, with capture in the hoki trawl fishery in brackets: white chinned petrel 74 (8), Salvin's albatross 11 (0) and sooty shearwater 82 (3). At these numbers, there can be little concern about the impact of the hoki fishery on these species at the population level. There is still some underestimation of mortality where dead birds are not recovered or are poorly represented as recoveries (e.g. birds feeding off the net), which is a particular issue for the shearwaters, which implies higher risk for this species. This risk has been considered in the draft risk assessment for seabirds (Rowe, 2009). Some of the environmental stakeholders continue to be concerned about fishery-related seabird mortality. Where these concerns remain, continuing opportunities exist to raise and discuss this issue, specifically including recent work on developing an Ecological Risk Assessment (ERA) for seabirds (Rowe, 2009) and the planned ERA for the fishery as a whole (see Condition 6 above). There is scope for further work to continue to reduce the incidental mortality of seabirds and it is recommended that DWG continue to pursue reduced seabird mortality by, for example preferentially requiring the most effective mitigation devices for trawlers, enhancing offal management at both the vessel and fleet levels. Specific areas of concern related to seabird mortality (i.e. unrecorded sea bird mortality) have in part been addressed by the seabird ERA (Rowe 2009). Remaining issues will need to be addressed under the ERA in response to Condition 6 coupled with evaluation and possible further mitigation should specific issues be identified within the ERA process. WWF and Royal Forest and Bird made useful comments on this CoC. Where appropriate and relevant the audit team has taken these into account. However it is important to note that it is not appropriate for the Certification Body to stipulate how the client fishery addresses a particular issue.
Conclusion	The evidence of a reduction in observed mortality of those species most at risk, as well as the overall reduction in seabird mortality (Abraham *et al*., 2009), as a direct result of changes in fishing practices over recent years inevitably leads the surveillance team to conclude that the requirements of this Condition have been fulfilled and the relevant PI (2.2.3.1) rescored. Original score at re-certification in 2007: 77 Re-score at the second annual surveillance in November 2009: 85 There is scope to improve on the score with continued improvement in (i) the understanding of seabird impacts (ii) improved understanding of risk (Condition 6 and Rowe, 2009); and (iii) by

	further development and application of the most effective approaches to mitigation. As the score is now above the 80 guidepost, this condition is now closed.

Item	Comments
8	**Condition of Certification 8: Fur seals**
Activity assessed	**PI 2.2.3.1 and PI 2.3.1.1** There is a need to ensure that incidental captures of fur seals in the hoki fisheries do not threaten the long-term viability of the WCSI fur seal sub-population and further reduce incidental captures of fur seals as far as possible, taking into account advances in technology, knowledge of vessel and crew safety and the economic implications **PI 2.2.3.1** Do the impacts of the fishery on protected, endangered, threatened or at risk species exceed unacceptable levels? **SG 60:** Studies in the fishery have examined fishery impacts on protected, endangered, threatened or at risk species, and mitigation strategies are in place or being developed where appropriate. There is no evidence that interactions with the fishery create unacceptable impacts on populations of the species concerned. **SG 80:** Regular assessment of the impacts of the fishery on protected, endangered, threatened or at risk species that may be affected by the fishery demonstrates that fishery impacts are generally maintained within acceptable levels (as established in 2.2.2.1). **SG 100:** The conservation status and impacts of the fishery on all protected, endangered, threatened or at risk species that may be affected by the fishery are regularly assessed, quantified, documented and publicly reported through independent external expert review. Regular quantitative assessment of the impacts of the fishery on protected, endangered, threatened or at risk species that may be affected by the fishery demonstrates that fishery impacts are generally maintained within acceptable levels (as established in 2.2.2.1). **PI 2.3.1.1 Are management measures for the target species in place that would allow for the rebuilding of the affected nontarget populations?** **SG 60:** There is some information on functional relationships, sufficient to allow alterations to be made to fishing to support the rebuilding of depleted nontarget species. **SG 80:** There is adequate information, combined with a precautionary approach wherever necessary, to allow alterations to be made to fishing to support the rebuilding of the depleted nontarget species, and management measures are in place. **SG 100:** There is a clear understanding of functional relationships between all depleted populations and the fishery. Intervention measures based on this understanding have been tested and shown to be effective All relevant management measures are in place. **Actions & milestones** • Support the existing processes for estimation of fur seal by-catch to provide statistically robust estimates of fur seal by-catch in the hoki fishery for the 2003/04 and 2004/05 fishing years, within 6 months of recertification. • Work with a science provider and the appropriate scientific Working Group to review the new data (Best 2005, WWF 2006) on the current status of the NZ fur seal, within 9 months of recertification, and as necessary, support additional surveys to improve the current information on fur seal abundance. • Review existing analyses and, if necessary, seek additional statistical analyses of factors associated with the capture of NZ fur seals in the hoki fishery, within 9 months of re-certification. Revise the Code of Practice guidelines, if necessary, to take account of this review, within 12 months of certification. • Support a Working Group process to establish appropriate initial fishing related mortality limits for the NZ fur seal population, within 12 months of recertification. • Develop a process to establish appropriate monitoring of annual fur seal bycatch targets in the WCSI fishery within 15 months of recertification. • Work with fishing companies to strengthen their commitment to the existing 'Code of Practice' regime and ensure DWG has appropriate access to vessel-specific incidental capture information to audit compliance with the Code of Practice. The timescale will be determined following Government decisions on the regulation of the Non-Fish Incidental Catch Return. • Review technological options for mitigation of fur seal bycatch in the WCSI hoki fishery within 12 months of recertification. Establish a process for testing and

	development of promising mitigation technologies
Client Progress Report	• DWG has actively supported the existing and revised processes for estimation of fur seal interactions to provide statistically robust estimates of fur seal captures in the hoki fishery, and this work has been completed and implemented (Abraham et al 2009). • Note: DWG considers the use of the term 'bycatch' is inappropriate in the context of ETP species, including fur seals. The hoki fishery does not have a bycatch of any marine mammals. Fur seals may be attracted to trawlers fishing for hoki through their opportunistic feeding behaviours and may, unwittingly, place themselves at risk of drowning through entering or becoming entangled with the trawl net while feeding. This behaviour largely occurs near the surface during shooting or hauling – fur seals do not normally feed on hoki in the locations and depths of fishing operations and are therefore not taken as by-catch during normal fishing operations. • A technical review of the Marine Mammal Operational Procedures (MMOP, formerly the CoP) was undertaken in 2007 by DWG in consultation with MFish, DoC, and environmental NGO representatives. • The revised MMOP was implemented during the 2007-08 fishing year. (Wells 2007a, 2007b, 2007c, 2008;Wells et al 2008, 2009a, 2009b) • Routine monitoring and assessments of interactions between fur seal and vessels fishing in the NZ EEZ are regularly undertaken by MFish and DWG and the summaries are reported through the MFish Aquatic Environment Working Group (e.g. Abraham et al 2009). • A review of world's beat practice for the mitigation of incidental captures of pinnipeds; a review of the technological options for mitigation of incidental captures of fur seals in the hoki fishery; and trials of methods to mitigate these interactions have been undertaken (Baird 2004; Cawthorn 2008; Chilvers 2008; Clement & Associates 2008a, 2008b, 2009). • A review of the concerns raised by SGS in 2006 based on reports from Best and WWF-NZ (see Best 2009, Walker 2006) has been completed by DWG and MFish, but the information in these reports has been superseded by work undertaken and information collected since that time. • A survey of WCSI fur seal populations was conducted by DWG, MFish and DoC during December 2008 and January 2009 (Baker et al 2009, Mellina & Cawthorn 2009). • DWG has prepared a summary analysis of the above studies, including an assessment of the PBR for fur seals by hoki fishing activities on the WCSI, for Moody Marine's consideration in relation to the 2009 audit of this CoC and PI (Tilney & Clement 2009c, Wade et al 1998).
Observations	The hoki trawl fishery is a source of non-intentional mortality of New Zealand fur seals by drowning. This results from drowning when the mammals get into the nets and are unable to escape and is a consequence of opportunistic foraging in and around the trawl nets while they are at or near to the surface. Fur seals are not taken with hoki during trawling at depth, This continues to be a significant issue for a number of stakeholders. There have been substantive and continuing efforts to improve the reporting of captures of fur seals in the fishery and continued activity in developing improved operating procedures to minimise captures (e.g. Anon, 2008c). Research into possible mitigation has also progressed with trials in September 2008 and April 2009 to test an exclusion device to prevent seals entering the cod end of nets and becoming trapped. The tested device was based on that successfully used for sea lions in the squid fishery (Anon, 2009b). Whilst not extensive, these trials suggest that this type of device will be ineffective in reducing fur seal deaths. It appears that there are fundamental differences in the behaviour of fur seals and sea lions that mean that while some mitigation devices provide some protection for sea lions, they are may prove ineffective in protecting fur seals. Although the numbers of estimated incidental captures of fur seals has declined, the capture rate of fur seals has not declined within the hoki fishery (Tilney & Clement, 2009c). This may not be that unexpected given the 73% reduction in effort between 1998/99 and 2007/08 (i.e. more seals per vessel), and the complexity of the sporadic nature of the interaction and the

	level of observer coverage. To specifically address the Condition, DWG collaborated with DoC and MFish to commission a fur seal census of the WCSI during the pupping season in December 2008 and January 2009. The aerial census involved counts of pups and adults at 34 sites between Farewell Spit in the north and Puysegur Point/Solander Island in the south. Land-based counts (mean Peterson estimates) at three reference sites during the survey period were used as an inter-calibration exercise and to determine an adequate correction factor for application to the aerial counts. The total sighted counts were 5,618 (CI 5,463 – 5,773) for pups and 18,503 (CI 17,886 – 19,120) for all seals (Baker, *et al.*, 2009). Whilst there is some evidence for reduced reproductive success in some New Zealand rookeries (Best, 2009), there is also evidence that the population in New Zealand as a whole continues to recover from the commercial harvesting of the 18th, 19th and early 20th centuries and international concern for this species is low (http://www.iucnredlist.org/). It is also noted that a number of stakeholders indicated that a historic time series of data on fur seals is being prepared for publication that may shed further light on variation and trend in the population fur seals (see Best, 2009). The figure for fur seal captures within the fishery is often equated to mortalities. This is of note because this is a conservative approach as some captures result in live release and thus using 'captures' to define mortalities overstates the impact of the fishery on the fur seal population by some degree. Indicative average figures for the percentage of captures fur seals released alive are for the West Coast South Island 6.7%, Chatham Rise 28% and Cook Strait 18.7% with an overall average for the hoki fishery of 12.7% (Abraham, *pers .comm*., 2009). An initial estimate of the potential biological removal (PBR) level of 1,863 fur seals annually has been determined (Tilney & Clement, 2009c). The application of PBRs in the understanding of marine mammal populations and their management has occurred outside New Zealand (Wade, 1998) and also in relation to the New Zealand sea lion (Chilvers, 2008). It is intended that the results of the survey and PBR calculations will be presented for review at a forthcoming session of the Aquatic Environment Working Group and that the PBR calculations be formally published (Clement, *pers com*. 2009). WWFs comments have been noted but again the MSC process specifically prevents the certification body from stipulating how the client fishery addresses a particular issue.
Conclusion	With the completion of the survey of fur seal populations (Baker, *et al*. 2009) there is additional information upon which to assess the level of impact that this fishery is having on the fur seal population. Mortality of fur seals attributed to fishing activities appears, on current evidence, to be below a level that would give rise to concern for the rebuilding of the fur seal population. This position will continue to be monitored and kept under review at the annual surveillance especially with respect to changes in the level of fishing driven by changes in the TACC and developments associated with the PBR. The various requirements of this condition are determined to have been completed and this condition can therefore be closed and the two relevant PIs rescored. Whilst this condition can now be closed, and given the recent increase in TACC for the western stock of hoki, the surveillance team make the following recommendation: > It is important that, with rising TACCs, the fishery does not raise the overall level of fur seal mortality to unacceptable levels in terms of adversely impacting on fur seals at a population level. It is, therefore, recommended that the efforts directed at understanding the nature of the interaction between fur seals and the fishery and at reducing the mortality of fur seals are continued. The surveillance team consider that significant progress has been made in addressing the Condition and are satisfied that those parts of this Condition relating to both PIs (2.2.3.1

	impacts on PET species) and (2.3.1.1 management measures) have been completed. These PIs have thus been rescored as follows. PI 2.2.3.1. Do the impacts of the fishery on protected, endangered, threatened or at risk species exceed unacceptable levels? Original score at re-certification in 2007: 77 Re-score at the second annual surveillance in November 2009: 85 PI 2.3.1.1 Are management measures for the target species in place that would allow for the rebuilding of the affected non-target populations? Original score at re-certification in 2007: 78 Re-score at the second annual surveillance in November 2009: 85 The scores reflect the uncertainty associated with the status and trend of elements of the New Zealand population of fur seals, the preliminary nature of the PBR figures, and the lack of reduction in catch rate of fur seals in the hoki fishery.

Item	Comments
9	**Condition of Certification 9. Management Plan**
Activity Assessed	**P1: 3.1.1.2 Is there a management plan that includes objectives related to target species and the impacts of fishing on the ecosystem** Need to develop and implement a Ministry of Fisheries approved Fisheries Plan in collaboration with all relevant stakeholder groups **SG 60:** The fishery operates under a set of informal and formal arrangements that broadly constitute a coherent management system. **SG 80:** There is a strategic overview of the management system that identifies the goals and objectives, processes (including strategies, and provision of management advice), management tools and arrangements, responsibilities, points of stakeholder engagement, research, monitoring and compliance plans, and applicable laws and regulations. **SG 100:** There is a documented system of goals and objectives, processes (including strategies, and provision of management advice), management tools and arrangements, responsibilities, points of stakeholder engagement, research, monitoring and compliance plans, and applicable laws and regulations. This document is developed within the framework of the Fisheries and other applicable Acts. **Actions & milestones** By 1 May 2008 • write a draft strategic overview of the management of hoki • Finalise this plan within a timeframe agreed by stakeholders
Client Progress Report	**Summary of actions to date** • A draft strategic management overview of all of the deepwater fisheries in New Zealand's EEZ, including those for hoki, has been completed, in consultation with stakeholders and interested parties. • A draft Fisheries Plan for hoki has been developed by DWG and MFish in consultation with stakeholders and interested parties. • Consultation with hoki quota owners, environmental NGOs and other interested parties has been held. • This draft Fisheries Plan will be provided to the Minister of Fisheries before the end of 2009. This will be followed by a full consultation period (note: consultation with hoki quota owners, environmental NGOs and other interested parties has been held). MFish expects to implement the plan during the 2009-10 fishing year. • The Fisheries Plan sets out the goals and objectives for the management of the hoki fisheries and will drive the management of the hoki fishery over the next five-year period. • It will be implemented along with Annual Operation Plans and Annual Review Report.
Observations	A draft Hoki and Middle Depth Fisheries Plan was provided during the First Annual Surveillance in October 2008. The Plan was scheduled to be implemented in October 2009. Progress on this condition is running well behind the agreed milestone. A second draft (April 2009) has been completed, but it is still a "DRAFT" Plan. The delay is due to actions that need to be taken by the Ministry of Fisheries (MFish). MFish has recently undergone a major restructuring which has delayed progress on completing this condition. Progress that was cited included a Draft hoki and selected middle depth species Fisheries Plan, April 2009.This plan consists of four parts: 1) The National Fisheries Plan, 2) Individual fisheries chapters (including hoki), 3) An Annual Operational Plan, and 4) An annual review report. The first

	two parts of this plan are now due to be presented to the Minister of Fisheries before the end of 2009 and pending his approval will be released for wider consultation. WWF comment that while they wish to see the fisheries plan developed and implemented as soon as possible, it is important that it is updated to reflect the outcomes of the ERA process
Conclusion	The Plan has been behind target but is now on a new schedule for completion and is to be provided to the Minister of Fisheries before the end of 2009. This will be followed by a full consultation period. MFish expects to implement the plan during the 2010/2011 fishing year. The plan would therefore be implemented well within the current MSC certification period. Progress on this will be reviewed at the next annual surveillance audit. This condition remains open.

Item	Comments
10	**Condition of Certification 10. Compliance and Enforcement**
Activity assessed	**P1 3.2.4.1 Does the management system determine the extent of compliance and include an enforcement component?** NOTE: the condition related to this PI applied only to the non regulatory management measures. **SG 60:** There is a system for assessing the degree of compliance and an enforcement system to enhance compliance. **SG 80:** There is an effective system for assessing compliance and enforcing management measures. **SG 100:** There is an effective system for assessing compliance and enforcing management measures. Penalties are adequate to discourage noncompliant behaviour. **Actions & milestones** By October 2011 • A system will be in place to ensure there is operator/quota owner compliance with the non regulatory management systems in place for this fishery.
Client Progress Report	• Build on the existing MFish Scientific Observer Programme and regulatory management measures by designing and implementing a monitoring, verification and auditing regime around the non-regulatory management measures. • Link this regime to other MFish processes, such as foreign charter vessel registration, as a means to ensure compliance with non-regulatory measures. • Formalise this monitoring regime through the Fisheries Plan process.
Observations	The non-regulatory management measures that have been implemented in New Zealand's deepwater and middle depth fisheries aim to improve the performance of the fleet in terms of environmental interactions with non-target species. Through the collaborative working relationship between the Deepwater Group Ltd (DWG) and the Ministry of Fisheries (MFish), three non-regulatory management measures have been implemented. These measures are in the form of the following operational procedures (OPs): There are 3 non regulatory measures in place: 1. Vessel Management Plan (VMP) 2. Marine Mammal Operating Procedures (MMOP) 3. Hoki Operating Procedures (HOP) The non-regulatory management measures currently in place in deepwater and middle depth fisheries have no formal sanctions, such as financial penalties or the possibility of a prosecution, attached to them. However, MFish intends to achieve vessel operator compliance with these non-regulatory measures through a range of incentives. These incentives focus on the risk of increased operating costs to vessel operators and greater administrative burden should it become apparent that they are not compliant. The regime in place to ensure that vessels in the hoki fishery comply with non regulatory measures include: 1. Monitoring, auditing and verification 2. A trigger point system and an observer debriefing process to determine compliance to the non regulatory management measures including VMP, MMOP and HOP audits 3. A review of the monitoring, auditing and verification regime Since the previous surveillance there is now is an independent audit system in place which is designed to monitor and verify compliance with non-regulatory management measures. During this surveillance the audit team also observed information provided by the Field Operations group of the Ministry of Fisheries in relation to changes in compliance behaviours they have observed from 2004 through until the present day in the hoki sector regarding any

	incidence of discarding or highgrading of small fish. In late 2008 and 2009 tactical placement of MFish observers on risk vessels as well as the more recent approach of 'informed and assisted' to industry appears to have again reduced the incidence of these practices. WWF acknowledges that the framework for the management approach has changed since this condition was imposed. WWF supports the audited system to monitor compliance using MFish observers.
Conclusion	An effective system for assessing compliance and enforcing management measures is now apparent with penalties to discourage non–compliant behaviour (although there are no formal sanctions attached, such as financial penalties or the possibility of a prosecution). The surveillance team has thus rescored the relevant PI 3.2.4.1. *Does the management system determine the extent of compliance and include an enforcement component?* and updated the score as follows: Original score at re-certification in 2007: 78 Re-score at the second annual surveillance in November 2009: 90 As the score is now above the 80 guidepost, this condition is now closed.

11	**Condition of Certification 11. Internal and External Review**
Activity Assessed	**PI 3.3.3.1 Does the management system provide for internal and external assessment and review** There needs to be a Quality Management System in place that is regularly subject to internal review and periodically subject to an independent external review. **SG 60:**There is a process for occasional internal evaluation of the management system **SG 80**: There is a process for regular internal and occasional external evaluation of management system. The management system adjusts its practices based on the results of such evaluations. **SG 100:** There is a process for regular internal and independent external evaluation of the management system. Evaluations of the management system are assessed by stakeholders and made public. The management system adjusts its practices based on the results of such evaluations **Actions & milestones** By 31 October 2008 • develop and document a process for regular, independent external evaluation of the management systems applied by DWG: Completed. By 31 April 2009 • appoint an independent external quality management auditor and develop and implement a schedule of external audits over the period of certification: Completed.
Client Progress Report	• A process of documentation and internal and external evaluation of DWG management systems has been implemented • A Fishery Management Manual has been established to promote that effective management procedures are adhered to in relation to operational procedures. • A Quality Manual has been established to promote that quality management standards are maintained throughout the organisation. • Staff training has been conducted to promote that procedures are followed in relation to the above manuals. • Internal audits are conducted at 2-monthly intervals. • External audits are conducted annually. • An external audit of DWG's management systems was held on 23 October 2009 by Solutions in Seafood Ltd. The outcome was favourable. (Bryant 2009)
Observations	During the previous surveillance audit (October 2008) it was observed that there was a process for regular internal review of management measures. This was verified during the current audit. There is good document control and record keeping at DWG and an identified process for corrective action and preventative action. The DWGs members' compliance with non-regulatory controls is audited by the Ministry of Fisheries. Since the previous surveillance a Quality Manual has been produced to promote maintenance of the quality management standards throughout the organisation. In October 2009, DWG requested Solutions in Seafood Ltd (SIS) to carry out an external review of their newly developed and implemented Quality Systems Manual. The review summarised that: *"the company's operational procedures have been in place for a number of years now. The Quality Management System now provides a structure on which to base these procedures. The systems are working well despite being in their infancy. This is mainly due to the small team of dedicated staff at DGW who have fully embraced the new systems. They have also seen where the systems will be advantageous in other work areas. A number of actions and recommendations have been made through the report which will enable the systems to be more robust and work more effectively in the future. It is recommended that a further external review of the systems be scheduled for 12 months time with a focus on the Operational Procedures Manual."*

	WWF agree that overall, the system now in place appears to meet the requirements of this CoC and the indicator at the Scoring Guidepost 80 level. However, in the interests of transparency WWF believes that DWG should provide further information on the findings of the external review and an indication of what actions it intends to take to respond to any areas identified as requiring improvement.
Conclusions	There is now an apparent process for regular internal and independent external evaluation of the management system. The management system adjusts its practices based on the results of such evaluations. The surveillance team has thus rescored the relevant PI (3.3.3.1) *Does the management system provide for internal and external assessment and review?* and updated the score as follows: Original score at re-certification in 2007: 78 Re-score at the second annual surveillance in November 2009: 85 The score would have been higher if the evaluations of the management system were assessed by stakeholders and made public. As the score is now above the 80 guidepost, this condition is now closed.

12	**Condition of Certification 12: Research Plan**
Activity Assessed	**P1 3.1.4.1 Does the management system include a research plan to support the management of the target species and protection of the ecosystem** **SG 60:** There is a research plan to support the management needs. Funding is available for projects that are critical **SG 80:** There is a research plan that involves short and long term projects that are prioritised based on the needs of the management of the target species and protection of the ecosystem. Stakeholders assist in the design of the research projects and the assignment of priorities. Funding is available for many high priority research projects. Some long term research projects are supported **SG 100:** There is a research plan that involves short and long term projects that are prioritised based on the needs of the management of the target species and protection of the ecosystem. Stakeholders assist in the design of the research projects and the assignment of priorities. Funding is available for all medium and high priority research projects. Long term research projects are encouraged and supported **Actions & milestones** By 31 April 2009 • Develop a research plan for hoki linked to the Fisheries Management Plan in COC 09
Client Progress Report	• MFish Medium Term Research Plan for hoki is in place • A revised long-term (10-year) research programme is currently being developed for all the New Zealand EEZ fisheries by MFish, in collaboration with DWG and relevant technical expertise, to ensure a consistent, comprehensive and quality set of science-based information is available to inform future management decisions. • The component of this 10-year research programme relevant to the hoki fisheries will be implemented through the Fisheries Plan for hoki.
Observations	MFish Medium Term Research Plan for hoki is available on MFish website. MFish has a priority setting process in place to determine priority research projects and stakeholders are involved in this process. Funding is available for many high priority research projects for hoki through the Fisheries Research Services (Aquatic Environment and Hoki middle depths) process. Other research projects have been directly funded by DWG. The draft 10 Year Research Programme for Deepwater Fisheries was provided to the surveillance team. This research programme is focused on providing a comprehensive, consistent and independent science-based information base to inform management decisions. Research services will be purchased through public tender processes, jointly administered by MFish and DWG. Payment for this research will be through the existing cost recovery mechanisims (i.e. quota owners will continue to pay attributable costs).. The aim of the 10 year research programme is “to establish a comprehensive, robust and consistent time series of information that can be used to sustainably manage New Zealand’s deepwater fisheries in a more cost efficient and effective manner”. The programme is a collaborative initiative between the Ministry of Fisheries (MFish) and the deepwater industry represented by the Deepwater Group Ltd (DWG). The MFish deepwater team is the project manager with considerable support and input from the MFish science team. Work streams have been identified across the following four areas: 1. Stock assessment research 2. Aquatic environment research 3. Funding model and contracts management 4. Observer services requirement WWF views that this CoC has not being met have been taken into account in the assessment. However the audit team agrees that it is critical that the Research Plan incorporate the outcomes of the proposed ERA.
Conclusions	The surveillance team considers that this condition has therefore been met. PI 3.1.4.2 has been rescored as 85. This would have scored higher if those components of the 10 year research programme relevant to the hoki fisheries were implemented through the Fisheries Plan for hoki and with involvement from stakeholders.

	Original score at re-certification in 2007: 79 Re-score at the second annual surveillance in November 2009: 85 As the score is now above the 80 guidepost, this condition is now closed.

	Overall Conclusions
	The overall management of the fishery continues to improve. Progress on the majority of the Conditions has been substantial, resulting in many of them now being closed. However, as will be seen, progress on a number of the conditions is running behind the agreed milestones. Where this occurs there are usually sound operational reasons rather than any perceived lack of commitment by DWG. For, example, some actions require MFish to act and as MFish have their own priority for work these may not always align. MFish has also recently undergone a major restructuring which has delayed a number of their normal activities. It is also of note that progress on other conditions has been considerably faster than that expected or required. The surveillance team were impressed by the amount of preparation and the provision of numerous reports that were provided to them prior to the audit. The surveillance team also thank the eNGOs that took part in meetings and contributed detailed written submission. The major concern that most stakeholder and NGO groups have is what they consider to be a lack of communication with the Deepwater Group and the limited involvement they are having concerning the management of the fishery and its ecosystem. Most acknowledge some of this is due to their limited resources and time constraints, however they believe there is a lot of room for improvement. The surveillance team recognises the value, knowledge and experience the stakeholders and NGOs have and recommend the client should involve these groups wherever appropriate. The risk-assessment process would be a key area for such involvement. Other issues raised by NGOs have been taken into account, where appropriate, in the observation sections of the various Conditions of Certification. The additional concerns raised by WWF may be addressed to some extent by the proposed increased observer coverage and also in the ERA process. Also when the fishery is undergoes a further re-certification process again, these will be considered in relation to the MSC FAM standard assessment tree. As the certifying body can not require any specific approach to addressing an issue, other suggestions made by WWF, would more appropriately be taken up in discussions directly between the NGOs and the Deepwater Group and the Ministry of Fisheries Progress against conditions can be summarised as follows: 1. Conditions where requirements are deemed to be fully to have been fully met and the Condition closed: Conditions 1,3,4,5,7,8,10,11,and 12 2. Conditions which are on or ahead of targets which will be reviewed in future surveillance reports Condition 2 3. Conditions which are or have been behind target dates but which are apparently being addressed within overall assessment timescales Conditions 6 and 9 The closure of these Conditions has resulted in the scores for 9 PIs being raised to 80 or more. No changes in management have taken place that would detrimentally affect the performance of this fishery against the MSC standard; no PIs have therefore been re-scored other than those detailed above in respect to Conditions of Certification. The fishery therefore continues to meet the requirements of the MSC Standard. MSC Certification should continue with surveillance audits annually.

Information Sources:

Meetings

1. 24 Nov 2009: Opening Meeting: with client. Chief Executive Officer George Clement. Also present A. Martin Ministry of Fisheries
2. 25Nov 2009: Meeting with Ministry of Fisheries Science team (Fishing Impacts). M. Livingston and N Walker
3. 25 Nov 2009: Meeting with Ministry of Fisheries Compliance. A Colman and A Martin
4. 26 Nov 2009: Meeting with ENGOs. WWF – Bob Zurr and R Bird. Royal Forest and Bird- K Knowles, ECO- B Weeber
5. 26 Nov 2009: Meeting with SeaFiC – D Middleton
6. 26 Nov 2009: Meeting with NIWA – J McKoy, R Hurst, S Baird, M Dunn
7. 26 Nov 2009: Meeting with Ministry of Fisheries Science (Stock assessment) P Mace and K Sullivan
8. 27 Nov 2009 Closing Meeting Deepwater Group G Clement, Ministry of Fisheries A Martin and V Reeves

Reports and Information Sources

Results, Conclusions and Recommendations

Clement, I.T. and Tilney, R. (2009). Updated Action Plan to Address Conditions of Certification for Hoki. 33pp.

Principle 1

Hoki, Fishery Assessment Plenary Report for 2008
Hoki, Fishery Assessment Plenary Report for 2008
Hoki management measures for the 2009-2010 fishing year: final advice paper.
Minister's Decision letter 2009/10 Hoki (HOK1)
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Hoki Fishery Rebuild: Management, Strategy and Implementation: Document submitted to SGS by George Clement.
Draft hoki and selected middle depth species fisheries plan.
Minutes of the Hoki Fishery Assessment Working Group meetings (4 March 2009, 13 March 009, and 31 March 2009)
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Principle 3

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