

**Performance Indicators and Scoring Guideline Document used for the Re-Assessment of the New Zealand Hoki fishery**  
**Revised version November 2005 incl. semantic changes only due to invisible parts in previous version**

SCORING INDICATORS		FINDINGS	REF. DOCS	WEIGHT	SCORE
Principle 1		A fishery must be conducted in a manner that does not lead to over-fishing or depletion of the exploited populations and, for those populations that are depleted, the fishery must be conducted in a manner that demonstrably leads to their recovery.			
1.1	(MSC Criterion 1)	The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s)			
1.1.1		There is sufficient information on the target species and stock structure to allow the effects of the fishery on the stock(s) to be evaluated			
1.1.1.1		Is there adequate knowledge of the identity of the target species?			
60	There is only a moderate degree of confidence in proper identification and reporting of the target species				
80	There is a high degree of confidence in proper identification and reporting of the target species				
100	There is a very high degree of confidence in proper identification and reporting of the target species				
1.1.1.2		Is there adequate knowledge of the stock structure of the species?			
60	Sufficient data are available to determine whether multiple stocks are being fished. Monitoring programmes are designed to collect data for each stock.				
80	Appropriate methods have been applied to samples collected from the primary areas in which the species is found and used to delineate stocks.				
100	A variety of state-of-the-art techniques have been applied to identify sub-structuring of subpopulations.				
1.1.1.3		Is there adequate knowledge of the geographical range of the target species?			
60	The ranges of the stocks have been delineated. Information on ontogenetic and seasonal patterns of movement is available and is sufficient to determine general movement paths and major spawning grounds.				
80	The ranges of the stocks have been delineated reliably. Information on ontogenetic and seasonal patterns of movement/availability is available based on data from fishers and fishery-independent research surveys. Sufficient sampling has been conducted to be confident that all major spawning grounds have been identified.				
100	A variety of techniques, such as tagging and inferences from fishery-dependent and -independent data, have been applied to determine the ranges of the stocks and their ontogenetic and seasonal patterns of movement / availability. Sufficient sampling has been conducted to be confident that all spawning grounds have been identified.				
1.1.1.4		Is the life history of the species understood?			
60	Estimates of natural mortality and growth rates are available for the species. Age validation has been achieved using indirect methods. The reproductive biology of the species is sufficiently well known to support the population model.				
80	Reliable estimates of natural mortality, and growth rates are available for all fished stocks. The method used for age determination has been validated for the ages that make up the bulk of the catch.				

100	Comprehensive information is available on reproductive biology, natural mortality, diet and growth rates for all fished stocks based on fishery-dependent and fishery-independent samples. There is knowledge of changes over time in biological parameters. The method used for age determination has been validated for most ages. Information is available on age-reading error and is accounted for in assessments. Indices of recruitment are available and included in stock assessments.				
<b>1.1.2</b>		<b>There is adequate knowledge of the fishery and its removals of the species</b>			
<b>1.1.2.1</b>		<b>Is there adequate knowledge of the effort and gear used in the fishery?</b>			
60	Total annual effort by fishing method is known. Gear selectivity is taken into account when stock assessments are conducted.				
80	Total annual effort by fishing method is known and reported for major spatial zones of the fishery. Data is available on gear selectivity and changes over time in fishing technology and practices, and is supported by current research.				
100	Comprehensive records are kept on fishing effort. The data collected allow quantification of the amount of fishing effort at small spatial scales. Stock assessments monitor changes in the distribution of fishing effort. Research programmes and in-situ observations have studied fishing practices, gear selectivity and the key determinants of catchability, including environmental influences and changes over time in fishing technology and practices.				
<b>1.1.2.2</b>		<b>Are all sources of fishing mortality measured and accounted for?</b>			
60	Estimates of total catches, including discard rates, are available, and are included in stock assessments.				
80	All sources of catches, including by-catches and discards, of the species are quantified and included in stock assessments. Account is taken in assessments of catches from areas in which stocks are mixed. Independent estimates of discard rates are available.				
100	All sources of human-induced removals, including by-catches and discards, are quantified by stock and included in stock assessments. There is high confidence in catch estimates. The primary source of estimates of catches is an observer programme designed to provide robust estimates with known statistical properties.				
<b>1.1.2.3</b>		<b>Are the age- and size-structures of the catch measured?</b>			
60	Estimates of the age-/size-structure of the catches by the major fisheries are available for a range of years. Some data are available on the sex-structure of the catch.				
80	Reliable estimates of the age-, sex- and size-composition of the catches are available for major fishery sectors and fishing areas over several years. The precision of these estimates is understood and accounted for in stock assessments.				
100	Comprehensive data are available on the landings and discards by all fisheries. The age-, size-, and sex-structure of the catch can be estimated accurately and precisely for all stocks and fishing areas. Annual data on the age-/size-structure of any discards are available based on an observer programme. The sampling scheme used to collect the data on age and size was designed to achieve adequate coverage and precision. Uncertainties associated with the collection of age- and size-composition data have been identified and quantified, and are accounted for in the stock assessment.				

<b>1.1.3</b>		<b>There is a robust assessment of the stocks</b>			
<b>1.1.3.1</b>		<b><i>Is there sufficient information to detect and quantify trends in abundance?</i></b>			
60	Fishery-dependent data (e.g. catch and effort information) are analysed and provide the major source of information on trends. These data are supplemented by some fishery-independent survey information. Qualitative and some quantitative information exists to support the assumption that trends in standardized catch-rates reflect those in population abundance.				
80	Fishery-independent surveys are conducted frequently for most major stock components and supplement fishery-dependent indices. The behaviour of the indices and their uncertainties is sufficiently well understood that there is confidence that trends in abundance will be detected.				
100	Fishery-independent surveys provide statistically-valid estimates of trends in relative abundance for all significant stocks. The data series is already sufficient to detect longer-term trends. The indices of abundance are consistent, and there is clear evidence that they are proportional to stock size. The information available is sufficient to conclude that there is very high power of detecting changes in abundance. Uncertainties are identified and have been fully analysed.				
<b>1.1.3.2</b>		<b><i>Is the assessment method appropriate for the species?</i></b>			
60	Stock assessments rely on generic techniques that use the major sources of data. The performance of the assessment method has yet to be evaluated.				
80	The stock assessments are conducted using generic models which are nevertheless able to account for the specifics of the fishery and species. Environmental influences are included in the assessment by allowing for process error. The stock assessment integrates all major sources of data. The generic models have been evaluated using simulation or by applying a range of models to same data set.				
100	The assessment models are developed specifically for the species / fishery. They capture all major features relevant to the biology of the fishery, the nature of the fishery, integrate all of the available information, and include both observation and process error within a statistically rigorous parameter estimation framework. Assessments explicitly consider both fishery and environmental impacts on stock dynamics. The models are developed specifically to provide the information needed to address management questions. The assessment models have been evaluated by means of simulation to evaluate their performance has been found to be robust to a wide range of uncertainties.				
<b>1.1.3.3</b>		<b><i>Does the stock assessment take into account the implications of uncertainty in data and model structure?</i></b>			
60	The major sources of uncertainty are documented and some attempt is made to determine the sensitivity of the estimates of key model outputs to them.				
80	The major sources of uncertainty are known and documented. There is a thorough evaluation of the sensitivity of key model outputs to the data inputs and assumptions. Retrospective analyses are available.				

100	Uncertainty is quantified. There is a comprehensive evaluation of the sensitivity of key model outputs to the data inputs and the assumptions of the assessment model. Multiple models are considered and retrospective analyses are conducted routinely.				
<b>1.1.3.4</b>		<b><i>Are assessment uncertainties and assumptions reflected in the management advice?</i></b>			
60	The management advice acknowledges the major uncertainties associated with the assessment and provides a qualitative summary of their implications.				
80	The management advice summarizes the implications of the major sources of uncertainty quantitatively.				
100	Important uncertainties and assumptions are considered quantitatively and their consequences for management are reflected in the management advice.				
<b>1.1.3.5</b>		<b><i>Does the assessment evaluate stock status relative to reference points and conduct forecasts under harvest strategies?</i></b>			
60	The assessment includes comparisons between current stock status and reference points, and forecasts of stock status under the current harvest strategy.				
80	The assessment includes comparisons between current stock status and reference points within a probabilistic framework. The sensitivity of the forecasts to key uncertainties is explored.				
100	The assessment includes a statistically robust assessment of the probability of exceeding reference points, at present, in the past, and in the future. Forecasts are based on a comprehensive evaluation of the consequences of a range of harvest strategies, taking account of all sources of uncertainty				
<b>1.1.3.6</b>		<b><i>Is the assessment subject to peer-review?</i></b>			
60	The assessment is reviewed by colleagues of those who conducted the assessment.				
80	The stock assessment is subject to peer-review as part of the stock assessment process. Scientists from outside of the agency that conducted the assessments are involved in the peer-review process.				
100	The stock assessment is subject to rigorous peer-review as part of the stock assessment process and is reviewed regularly by scientists who are not part of the assessment process.				
<b>1.1.4</b>		<b><i>There is a well-defined and effective strategy for managing exploitation of the target stocks</i></b>			
<b>1.1.4.1</b>		<b><i>Are there appropriate management tools (input and/or output controls) to implement decisions and hence constrain harvests?</i></b>			
60	Generic management tools are used to implement management decisions and monitor their consequences. Some information is available to suggest that the tools are sufficient.				
80	The management tools used for the fishery have been evaluated and found to be effective for implementing management decisions.				
100	Management tools, appropriate to the fishery and species, have been specified to implement management decisions. The tools are responsive and timely, and their ability to achieve their goals has been evaluated and continues to be monitored.				
<b>1.1.4.2</b>		<b><i>Are appropriate target and limit reference points used?</i></b>			
60	Generic reference points, appropriate for the species, are reported against and form the basis for management advice.				

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.				
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.				
<b>1.1.4.3</b>		<b><i>Is there a clear relationship between management goals, assessment outcomes, reference points and management decisions?</i></b>			
60	The management decisions are based on forecasts which are linked to the target and limit reference points.				
80	The management decisions are based on calculations that are not formalized as decision rules, but nevertheless follow logically from the stock assessments conducted and the reference points established for the fishery.				
100	Clear, documented and tested decision rules are fully implemented. These decision rules are linked directly to the reference points and the quality of the available data.				
<b>1.1.4.4</b>		<b><i>Is management advice appropriately constructed?</i></b>			
60	Management advice is provided for each stock. Assessments report on the implications of management decisions at the stock level.				
80	Management advice is provided by stock, and management regulations account for spatial considerations. The advice is to reduce fishing mortality when the stock size drops below the limit reference points and is precautionary in face of uncertain data and models.				
100	All stocks are managed separately and stock-specific harvest strategies have been developed and tested. The harvest strategies are aimed to achieve rapid recovery if stocks approach or fall below limit reference points. Harvest rates are a function of the extent of uncertainty about data and models. The evaluation of the decision rules shows them to be robust to a wide range of uncertainties.				
<b>1.1.5</b>		<b><i>The stocks are at or above appropriate reference points</i></b>			
<b>1.1.5.1</b>		<b><i>Are the stocks at or above reference points?</i></b>			
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.				
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.				

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.				
<b>1.1.5.2</b>		<b>Is fishing mortality below reference points?</b>			
60	The current level of fishing mortality is expected to keep stocks above their limit reference points.				
80	There is a low probability that the current level of fishing mortality will cause the stocks to drop below their limit reference points.				
100	There is only a very low probability that the current level of fishing mortality will cause the stocks to drop below their target reference points.				
<b>1.2 (MSC Criterion 2)</b>		<b>Where the exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level consistent with the precautionary approach and the ability of the populations to produce long-term potential.</b>			
<b>1.2.1</b>		<b>Are measures in place to rebuild a stock if it is found to be below a target or limit reference point?</b>			
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.				
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.				
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.				
<b>1.3 (MSC Criterion 3)</b>		<b>Fishing is conducted in a manner that does not alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity</b>			
<b>1.3.1</b>		<b>Is the age-/sex-/genetic-structure of the stock(s) monitored?</b>			
60	Population age-/sex-structure of each target stock is based on some sampling and verification. Some genetic information is available for the target species				
80	Population age-/sex-structure of each target stock is based on adequate sampling and verification; ageing errors are estimated. Genetic studies of the target stocks have been made.				
100	Population age-/sex-structure of each target stock is estimated with limited uncertainty. Regular genetic studies are undertaken.				
<b>1.3.2</b>		<b>Does the stock assessment and management advice consider changes in the age-, and sex-, and genetic-structure of the population?</b>			
60	Data on the age- and sex-structure of the catch are routinely examined during stock assessments.				
80	The stock assessment explicitly represents the sex- and age-composition of the stocks. The sex- and age-structure of the population are accounted for when conducting projections and reporting against reference points.				

100	The stock assessment explicitly represents the sex- and age-composition of the stocks. The stock assessment outputs include time-trajectories of spawning output by stock and measures that capture the change in the sex- / age-structure of the populations. The results of genetic studies are considered when conducting assessments and providing management advice. All genetically identified stocks are at or above target levels.					
<b>1.3.3</b>		<i>Is there evidence for fishery-induced changes in the age-, sex-, and genetic-structure of the species beyond that normal for an exploited population?</i>				
60	Fishery-induced changes in abundance are not linked to changes in the genetic structure of the species.					
80	Any downward trends in reproductive capacity do not appear to be large enough to alter the genetic composition of the species.					
100	There is a high level of confidence that there are no downward fishery-induced changes in reproductive capacity on local stocks or genetically-identified stocks due to changes in age-/sex-/genetic-structure beyond those normal for an exploited population. Analyses have been undertaken to determine the power to detect changes in genetic structure.					
<b>SCORING INDICATORS</b>		<b>FINDINGS</b>		<b>REF. DOCS</b>	<b>WEIGHT</b>	<b>SCORE</b>
<b>Principle 2</b>		<b>Fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery</b>				
<b>2.1 (MSC Criterion 1)</b>		<b>The fishery is conducted in a way that maintains natural functional relationships among species and should not lead to trophic cascades or ecosystem state changes.</b>				
<b>2.1.1</b>		<b>There is adequate knowledge of the ecosystem relevant to the distribution, life history and fishery for the target species.</b>				
<b>2.1.1.1</b>		<b>Are the nature and distribution of habitats relevant to the fishing operations known?</b>				
60	There is some basic information on habitat distributions throughout the fishing grounds, and the extent of fishing effort is broadly documented.					
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.					
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 analysed and reported.					
<b>2.1.1.2</b>		<b>Is the information on non-target fish species affected by the fishery, including incidental mortality, known well enough?</b>				
60	The main non-target species in the fishery have been identified.					
80	Information is available on the distribution, abundance and population status of the main non-target species affected by the hoki fishery.					
100	Detailed information is available on the main non-target species affected by the hoki fishery, including their distribution, recent trends in abundance, ecology and population. Detailed information is available on the main non-commercial species taken as bycatch.					
<b>2.1.1.3</b>		<b>Are the trophic relationships of the target species known?</b>				
60	Key prey, predators and competitors with the target species are known.					

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.				
100	Quantitative information is available on the position and importance of the target species within the food web at key life stages.				
<b>2.1.2</b>		<b>There is adequate knowledge about the effects of fishing on non-target species, habitats and the ecosystem.</b>			
<b>2.1.2.1</b>		<b>Is the information on the nature and extent of the by-catch and incidental mortality of non-target species and their trophic linkages adequate to determine impacts?</b>			
60	Information on changes to species and ecosystems that may have been caused by fishing is adequate to broadly understand changes that may be occurring as a result of the fishery.				
80	Information on the impact of fishing on the population status of the main bycatch species, including QMS species, is adequate to enable a basic assessment to be conducted for these species.				
100	Quantitative empirical research information on the target species and the main non-target species is available to determine the fishery impacts on bycatch species.				
<b>2.1.2.2</b>		<b>Is there adequate knowledge of the impacts of fishing gear on the habitats where the fishery operates?</b>			
60	The main types of impacts of gear use on habitat have been identified, and their extent and location of impacts are broadly identified.				
80	The main impacts of gear use on the main habitat types have been identified, including type, extent, location and frequency, and their trends.				
100	The impacts of gear on habitats have been quantified in empirical research studies, including determination of any habitat changes that may be irreversible.				
<b>2.1.2.3</b>		<b>Is there information on the nature and extent of lost fishing gear and operational wastes?</b>			
60	The type of fishing gear lost and operational waste in the fishery is broadly understood.				
80	The type and extent of lost gear and operational wastes are monitored and assessed.				
100	Detailed information is available on the loss of gear and operational wastes in all areas of the fishery, and this is regularly assessed and publicly reported.				
<b>2.1.2.4</b>		<b>Is there information on the potential for the ecosystem to recover from fishery related impacts?</b>			
60	Key elements of the functioning of the ecosystem relevant to the fishery have been identified.				
80	The main elements of the functioning of the ecosystem, relevant to the fishery have been qualitatively described and are broadly understood.				
100	Detailed quantitative information is available on the main ecosystems functions, sufficient to enable the potential for affected species and communities to recover from fishery related impacts to be estimated.				
<b>2.1.3</b>		<b>Levels of acceptable risk and impact are set, and objectives established, to address and restrain any significant negative impacts of the fishery on the ecosystem</b>			
<b>2.1.3.1</b>		<b>Are levels of acceptable impact determined and reviewed?</b>			
60	Levels of acceptable impacts for the main non-target species and habitats in the fishery have been estimated at least qualitatively.				

80	<p>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.</p> <p>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.</p> <p>Research is underway to study impacts related to, and refine the assessment of, any medium-level risks and the main gaps in knowledge.</p>				
100	<p>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 are subject to regular review.</p>				
<b>2.1.3.2</b>		<b><i>Are the management objectives and fishing practices set in terms of impact identification and avoidance/reduction?</i></b>			
60	The management system includes procedures to identify avoidance/reduction measures ifor use in the main areas of the fishery.				
80	Management objectives and practices are designed to detect and reduce impacts, although they may not have been fully tested and proven. These result in management measures that are designed to adequately protect key aspects of the ecosystem within main fishing areas.				
100	Management objectives, strategies and measures to detect and reduce impacts have been developed, tested and are fully deployed across the fishery to deal with all relevant issues.				
<b>2.1.4</b>		<b>The impacts of the fishery do not exceed unacceptable levels.</b>			
<b>2.1.4.1</b>		<b><i>Are the impacts of the fishery on ecosystem structure, function, biological diversity, productivity within acceptable levels?</i></b>			
60	The main impacts of the fishery are generally considered to be within acceptable levels.				
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).				
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.				
<b>2.1.4.2</b>		<b><i>Are the impacts of the fishery on habitat structure and function within acceptable levels?</i></b>			
60	The main impacts of the fishery on habitats are generally considered to be within acceptable levels.				

80	The effects on the benthic and mid-water habitats, and their functions, are generally maintained within acceptable levels for the most important parameters (as established in 2.1.3.1).				
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.				
<b>2.1.4.3</b>		<b><i>Are the impacts of lost fishing gear and operational wastes within acceptable levels?</i></b>			
60	The risks of impacts from lost gear and operational (biological and non-biological) wastes have been assessed and there is no evidence of major ecological impacts.				
80	The risks of impacts from lost gear and operational wastes are monitored and are generally maintained within acceptable levels.				
100	The impacts of all forms of lost gear and operational wastes are monitored using selected response indicators and are always maintained within acceptable levels across the full range of the fishery operations and vessels.				
<b>2.1.5</b>		<b><i>There are well-designed strategies for managing by-product species</i></b>			
<b>2.1.5.1</b>		<b><i>Are there adequate assessments of by-product species?</i></b>			
60	The status of most major by-product species is monitored using trends in relative abundance indicators.				
80	Formal stock assessments are conducted for most major stocks. Trends in abundance indicators are analysed for the remaining species / stocks in the QMS				
100	Reliable stock assessments based on fitting population dynamics models and quantifying uncertainty are available for all species / stocks included in the QMS.				
<b>2.1.5.2</b>		<b><i>Are there strategies to control catches of by-product species within sustainable levels?</i></b>			
60	Management advice is provided for the major by-product species in the QMS.				
80	Management advice is provided for all by-product species in the QMS.				
100	Fully-specified and tested decision rules are applied to determine harvest levels for each species. There are effective management controls which have been shown to be effective in the target fishery				
<b>2.2 (MSC Criterion 2)</b>		<b><i>The fishery is conducted in a manner that does not threaten biological diversity (at the genetic, species or population levels) and avoids or minimises mortality of, or injuries to endangered, threatened or protected species.</i></b>			
<b>2.2.1</b>		<b><i>There is adequate knowledge of the protected, endangered, threatened or at risk species in relation to the fishery for the target species.</i></b>			
<b>2.2.1.1</b>		<b><i>Is the nature and distribution of endangered, threatened, protected or at risk species relevant to the fishing operations known?</i></b>			
60	There is a program in place to identify protected, threatened, endangered or at risk species that may be affected by the fishery.				
80	Protected, threatened, endangered or at risk species likely to directly interact with the fishery operations have been identified, and their likely space and time interactions have been identified.				
100	There is a detailed knowledge of all protected, endangered, threatened or at risk species that directly or indirectly interact with the fishery, including an assessment of their critical habitats and spatial and temporal interactions with the fishery.				

<b>2.2.1.2</b>		<b><i>Is there adequate information about the interactions of the fishery with protected, endangered, threatened or at risk species?</i></b>			
60	The main interactions directly related to the fishery are known.				
80	Quantitative estimates have been made of the nature and extent of direct interactions for the main protected, threatened, endangered or at risk species that directly interact with the fishery.				
100	Interactions of the fishery with all protected, endangered, threatened or at risk species are regularly assessed, quantified, documented and reported.				
<b>2.2.2</b>		<b>Levels of acceptable risk and impact are set and objectives established to address and restrain any significant negative impacts of the fishery on protected, endangered, threatened or at risk species.</b>			
<b>2.2.2.1</b>		<b><i>Have the interactions of the fishery with protected, endangered, threatened or at risk species that constitute an unacceptable impact been determined.</i></b>			
60	Unacceptable impact levels are set by national or international legislative requirements.				
80	Levels of unacceptable interaction and impacts have been determined through a robust peer reviewed scientific impact assessment process involving the relevant range of ecological expertise and stakeholders.				
100	The unacceptable levels of impact of the fishery on any protected, endangered, threatened or at risk species have been determined by quantitative assessment of direct and indirect interactions of the fishery.				
<b>2.2.2.2</b>		<b><i>Are management objectives and fishing practices set in terms of impact identification and avoidance/reduction in relation to protected, endangered, threatened or at risk species?</i></b>			
60	Some management systems are in place to reduce impacts although their effectiveness may not have been proven. The management system includes procedures to identify impacts and relevant avoidance/reduction measures in the main areas of the fishery.				
80	There are objectives and practices designed to adequately protect the main protected, endangered, threatened or at risk species within the main fishing areas; these are determined in conjunction with an appropriate range of ecological expertise and stakeholders.				
100	Management objectives and fishing practices to detect and reduce impacts have been developed, tested and are fully deployed across the fishery. These objectives and practices are determined in conjunction with an appropriate range of ecological expertise and stakeholders to adequately protect populations across the full range of the fishery. The effectiveness of mitigation strategies in restraining the impacts of the fishery is regularly reviewed.				
<b>2.2.3</b>		<b>Fishing is conducted in a manner that does not have unacceptable impacts on protected, endangered, threatened or at risk species</b>			
<b>2.2.3.1</b>		<b><i>Do the impacts of the fishery on protected, endangered, threatened or at risk species exceed unacceptable levels?</i></b>			
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.				

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).				
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).				
<b>2.3</b>		<b>Where exploited populations are depleted, the fishery will be executed such that recovery and rebuilding is allowed to occur to a specified level within specified time-frames, consistent with the precautionary approach and considering the ability of the population to produce long-term potential yields.</b>			
<b>2.3.1</b>		<b>There are management measures in place that allow for the rebuilding of affected populations.</b>			
<b>2.3.1.1</b>		<b>Are management measures for the target species in place that allow for the rebuilding of the affected non-target populations?</b>			
60	There is some information on functional relationships, sufficient to allow alterations to be made to fishing to support the rebuilding of depleted non-target species.				
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 non-target species, and management measures are in place.				
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.				
<b>SCORING INDICATORS</b>		<b>COMMENTS</b>	<b>REF. DOCS</b>	<b>WEIGHT</b>	<b>SCORE</b>
<b>Principle 3</b>		<b>The fishery is subjected to an effective management system that respects local, national and international laws and standards and incorporates institutional and operational frameworks that require use of the resource to be responsible and sustainable.</b>			
<b>3.1</b>		<b>Management framework and structure</b>			
<b>3.1.1</b>		<b>The management system has a clearly defined scope and includes short and long-term objectives consistent with a well managed sustainable fishery.</b>			
<b>3.1.1.1</b>		<b>Do the organisations with management responsibilities have clearly defined interactions and responsibilities? [Relates to MSC Criteria 3.1, 3.2, 3.3]</b>			
60	Organisations interacting in the management process have been identified. Functions and responsibilities for interactions with other management entities need refinement. Interactions between organisations exhibit occasional specific problems.				
80	Organizations/agencies with management responsibilities have been identified. For the most part, functions and responsibilities requiring interactions with other management organisations are explicitly defined. In general, interactions between organisations are effective and operate without serious difficulties.				

100	Organizations with management responsibilities and their functions, particularly respecting interactions with other management elements, are clearly defined. Interactions between elements are effective and run smoothly.				
<b>3.1.1.2</b>		<b><i>Is there a Management Plan that includes objectives related to target species and the impacts of fishing on the ecosystem [Relates to all P3 MSC Criteria]?</i></b>			
60	The fishery operates under a set of informal and formal arrangements that broadly constitute a coherent management system.				
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.				
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.				
<b>3.1.1.3</b>		<b><i>Are there objectives related to managing the social economic impacts of the fishery? [relates to MSC criteria 3.2, 3.4, 3.6, 3.7]</i></b>			
60	The fishery management system seeks to understand social and economic consequences of decision making but there are no formal arrangements. There are no significant direct subsidies to the fishery that might promote overfishing or ecosystem degradation.				
80	A range of socio economic impacts are considered and taken into account in the management system. The management system addresses legal and customary rights. There are no significant direct subsidies to the fishery that might promote overfishing or ecosystem degradation.				
100	The management system considers a range of socio-economic impacts and legal and customary rights. Relevant stakeholders are involved in the development of advice related to socio-economic impacts.				
<b>3.1.2</b>		<b><i>The management system includes management measures and strategies to achieve its objectives</i></b>			
<b>3.1.2.1</b>		<b><i>Are there measures and strategies to maintain target species at high levels of productivity ? [relates to MSC Criteria 3.2, 3.7, 3.9, 3.10]</i></b>			
60	The management system includes management measures that are aimed at maintaining target species at high level of productivity.				
80	The management system includes formal stock assessment procedures that involve forecasts which can be used to select among alternative management measures and strategies aimed at maintaining species at high levels of productivity.				
100	The management system includes decision rules that are adopted formally, recognize uncertainty, and are sufficiently precautionary to maintain target species at high levels of productivity.				
<b>3.1.2.2</b>		<b><i>Are there management measures and strategies to manage the impacts of fishing on the ecosystem [Relates to MSC criteria 3.2, 3.7, 3.9, 3.10]?</i></b>			

60	The management system includes management measures that are aimed at managing the impact of fishing on the ecosystem.				
80	The management system takes ecological impacts of the fishery into account when selecting management measures and strategies.				
100	The management system takes ecological impacts of the fishery into account when selecting management measures and strategies that are precautionary and account for uncertainty.				
<b>3.1.3</b>		<b>The management system recognises applicable legislative and institutional responsibilities and constraints.</b>			
<b>3.1.3.1</b>		<b><i>Is the fishery managed and conducted in a manner that respects international conventions and agreements and is not under any controversial unilateral exemption to an international agreement [Relates to MSC Criterion 3.1,3.16]?</i></b>			
60	The management system appears to be in compliance with international conventions and agreements.				
80	The management system complies with all applicable international fisheries and environmental agreements. The management system does not operate under any controversial exemption to an international fisheries or environment-related agreement.				
100	The fishery is managed and conducted in a manner so that it complies with applicable international fisheries and environmental agreements and laws, respects fully the spirit of international conventions and agreements, and does not operate under any controversial unilateral exemption to an international agreement.				
<b>3.1.3.2</b>		<b><i>Is the fishery managed and conducted in a manner that complies with domestic law [Relates to MSC Criterion 3.2, 3.16]?</i></b>			
60	The management system generally appears to operate in accordance with all aspects of applicable domestic law.				
80	The management system makes consistent efforts to be in compliance with all aspects of applicable domestic law. The management system has not been found repeatedly by any domestic court of jurisdiction to be in violation of any significant aspect of any applicable domestic law, e.g. fisheries, protected species, etc.				
100	The management system is in compliance with all substantive and procedural aspects of applicable domestic law. The management system, including its component institutional entities, has not been found at any time to be in wilful violation of any order of any domestic court.				
<b>3.1.3.3</b>		<b><i>Is the fishery managed or conducted in a manner that observes legal and customary rights [Relates to MSC Criterion 3.2, 3.4]?</i></b>			
60	The management system generally recognizes access, subsistence, and customary rights in the fishery.				
80	The management system recognizes access, subsistence and customary rights in the fishery. The management system includes processes for regular consultations with Maori regarding exercise of their rights The fishery management system provides a fair means to avoid and reconcile conflicts between legal and customary rights.				

100	The management system always recognizes access, subsistence and customary rights in the fishery. The management system includes processes for regular consultations with Maori regarding exercise of their rights. The fishery management system provides a fair and predictable means to avoid and reconcile conflicts between legal and customary rights.				
<b>3.1.4</b>		<b>The management system includes a comprehensive research programme.</b>			
<b>3.1.4.1</b>		<b>Does the management system include a research plan to support the management of the target species and protection of the ecosystem ? [Relates to MSC Criterion 3.2, 3.8]?</b>			
60	There is a research plan to support management needs. Funding is available for projects that are critical.				
80	There is a research plan that involves short- and long-term projects that are prioritized based on the needs for the management of the target species and protection of the ecosystem. Stakeholders assist in design of research projects and the assignment of priorities. Funding is available for high priority research projects. Some long-term research projects are supported.				
100	There is a research plan that involves short- and long-term projects that are prioritized based on the needs for the management of the target species and protection of the ecosystem. Stakeholders assist in design of 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.				
<b>3.2</b>		<b>Implementation of the Management System</b>			
<b>3.2.1</b>		<b>The management system includes an effective process for acquisition and analysis of relevant information.</b>			
<b>3.2.1.1</b>		<b>Does the management system obtain and synthesize the relevant information? [Relates to criterion 3.2, 3.9, 3.10, 3.17]</b>			
60	The management system has mechanisms to receive information and advice from stakeholders and outside technical sources. Information and advice is evaluated, but there are no well defined procedures.				
80	The management system has a stable, open and tolerant process to solicit relevant information. The management system shows evidence of listening and responding to diverse points of view. The advice is based on a thorough analysis of the information provided.				
100	The management system has a stable, open and tolerant process to solicit relevant information. The management system shows evidence of listening and responding to diverse points of view. The information is evaluated in a thorough, unbiased and objective manner.				
<b>3.2.1.2</b>		<b>Does the management system involve all categories of stakeholders appropriately ? [Relates to MSC Criterion 3.2]</b>			
60	The management system provides for involvement of representative groups.				

80	The management system provides for involvement of all significant stakeholders and considers their interests. The management system makes transparent decisions taking into account stakeholders views and feedback mechanisms are in place. There is an program of familiarizing stakeholder groups with the management system's principles and criteria for decision making.				
100	The management system provides for direct representation of all significant stakeholder interests. It produces decisions that take all significant stakeholder issues into account and there is a feedback mechanism. There is an proactive program of familiarizing stakeholder groups with the management system's principles and criteria for decision making.				
<b>3.2.1.3</b>		<b><i>Does the management system present decision makers with clear, relevant information, which is considered in decision-making? [Relates to MSC Criterion 3.2, 3.7]</i></b>			
60	Decision makers are provided with relevant information.				
80	The decision makers consider and use clear and relevant information.				
100	The management system regularly presents decision makers with carefully analysed alternatives for action including all legally permissible options presented by stakeholders.				
<b>3.2.2</b>	<b>The management system implements appropriate measures and strategies.</b>				
<b>3.2.2.1</b>		<b><i>Does the management system implement management measures to maintain the target species? [relates to criteria</i></b>			
60	Management measures reflect the intent of any strategies.				
80	Management measures are based on the best available information and are consistent with any strategies.				
100	Management measures reflect the outcomes of the precautionary application of any strategies.				
<b>3.2.2.2</b>		<b><i>Does the management system implement management measures to minimize impacts on the ecosystem? [Relates to MSC Criteria,3.2, 3.12, 3.13, 3.14 &amp; 3.15]</i></b>			
60	Management measures reflect the intent of any strategies.				
80	Management measures are based on the best available information and are consistent with any strategies.				
100	Management measures reflect the outcomes of the precautionary application of any strategies.				
<b>3.2.2.3</b>		<b><i>Does the management system incorporate mechanisms to limit fishing areas and protect the ecosystem, including by applying closures where appropriate? [Relates to MSC Criterion 3.10]</i></b>			
60	The management system has the capacity to create closed areas.				
80	The management system has responded to an identified need by establishing no-take zones or other area control mechanisms, as appropriate.				
100	The management system has identified criteria and standards for establishment of closed areas or other area control mechanisms, and these have been implemented.				
<b>3.2.2.4</b>		<b><i>Does the management system provide for timely and fair resolution of disagreements? [Relates to MSC Criteria 3.2, 3.5]</i></b>			
60	The management system has a mechanism for the resolution of disputes.				
80	The management system has a mechanism for the timely resolution of disputes that is open to all stakeholders.				
100	The management system has a mechanism for the timely resolution of disputes that is open to all stakeholders. Stakeholders accept the outcomes from the dispute resolution mechanism.				

<b>3.2.3</b>		<b><i>The management effectively monitors all aspects of the fishery</i></b>			
<b>3.2.3.1</b>		<b><i>Does the management monitor all aspects of the fishery effectively? [Relates to MSC Criteria 3.2, 3.10, 3.11, 3.17]</i></b>			
60	The management system has a monitoring program that provides the basic data needed to support the management, compliance and enforcement system.				
80	The management system has a monitoring program that provides the data needed to determine management measures for target species, some of the protected species data, some information pertinent to evaluating other fishery impacts on the ecosystem, as well as data needed for compliance and enforcement.				
100	The management system has a monitoring program that provides all the data needed for target species and ecosystem management, as well as that needed for compliance and enforcement.				
<b>3.2.4</b>		<b><i>The management system determines the extent of compliance and includes an enforcement component.</i></b>			
<b>3.2.4.1</b>		<b><i>Does the management system determine the extent of compliance and include an enforcement component ?[Relates to MSC 3.2, 3.11 and 3.16]</i></b>			
60	There is a system for assessing the degree of compliance and an enforcement system to enhance compliance.				
80	There is an effective system for assessing compliance and enforcing management measures.				
100	There is an effective system for assessing compliance and enforcing management measures. Penalties are adequate to discourage non-compliant behaviour.				
<b>3.3</b>		<b><i>Evaluation of management system</i></b>			
<b>3.3.1</b>		<b><i>The performance of the management system is regularly and candidly evaluated and adapted as needed to improve.</i></b>			
<b>3.3.1.1</b>		<b><i>Does the management system provide for internal and external assessment and review? [Relates to MSC criterion 3.2, 3.3]</i></b>			
60	There is a process for occasional internal evaluation of the management system.				
80	There is a process for a regular internal and occasional independent and external evaluation of management system. The management system adjusts its practices based on the results of such evaluations.				
100	There is a process for a regular internal and independent external evaluation of management system. Evaluations of the management system are reviewed and assessed by stakeholders and made public. The management system adjusts its practices based on the results of such evaluations.				