Principle 1	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	The fishery shall be conducted at catch levels that continually maintain the high productivity of the target population(s) and associated ecological community relative to its potential productivity.			vity of the target population(s) and
1.1.1	There she evaluated		get species and stock(s) to allow the effec	ets of the fishery on the stock(s) to be
1.1.1.1	The identification and reporting of target species is well documented.	There is confusion between the target species and other species by fishermen, such that misidentification is possible, but catch data are not compromised to unacceptable levels.	The target species is unlikely to be confused with any other species.	The target species is readily identifiable by fishermen and regulators, such that catch data are recorded appropriately.
1.1.1.2	The life history of the species is understood.	There are significant gaps in information but the basis of the life history is understood adequately to support a rudimentary evaluation of the fishery.	The life history of the species is clearly documented and understood well enough to support an acceptable degree of confidence in the evaluation of the fishery.	All aspects of the life history of the species, including its behaviour, are clearly documented and understood so as to support a very high degree of confidence in the evaluation of the fishery.
1.1.1.3	The population dynamics of the species (including age at maturity, natural mortality, growth, and fecundity) are understood.	Initial estimates are available for key population-dynamic parameters, including age at maturity, natural mortality rate and growth rate.	Well-founded estimates are available for key population-dynamic parameters, including age at maturity, variations in fecundity with age or size, natural mortality rate and growth rate. There is some understanding of spatial variations in those parameters. There is sufficient knowledge of the population dynamics of the species for appropriate model structures to be selected.	Well-founded estimates are available for key population-dynamic parameters, including age at maturity, variations in fecundity with age or size, natural mortality rate and growth rate. There is some understanding of spatial variations in those parameters. There is sufficient knowledge of the population dynamics of the species for appropriate model structures to be selected.  The factors controlling natural mortality are monitored. The factors controlling variations in the natural mortality rate are understood.
1.1.1.4	The geographical range of	Estimates of the geographic ranges of	Reliable estimates of the geographic	The range of the target species is well

	the target species and stock is known.	the target species and stock(s) are available.	ranges of the target species and stock(s) are available.	established and the distribution of the target stock(s) is comprehensively mapped.
1.1.1.5	The spatial structure of the target stock is known.	There is some knowledge on spatial structure of the target stock.	The range of the target stock(s) is subdivided into management units which have some biological justification. Only very minor parts of the range are outside any management unit.	The biological and oceanographic basis for the spatial structure of the target stock(s) is known. Patterns of movement (including larval drifts) by the target stock(s) are understood. Management units are based on the known biological structure.
1.1.1.6	Information on the relationship of recruitment to parental stock is understood.	Indices of recruitment and spawning stock are available but are not sufficient to track year-class strengths nor to examine spawner/recruit relationships with high confidence.	Estimates of recruitment and spawning stock are available, for each of the principal management areas. Enough years of data are available to track changes in recruitment and detect recruitment trends.	Estimates of recruitment and spawning stock are available for each management unit in the spatial structure of the target stock(s). The impacts of environmental factors and density of the spawning stock on recruitment are understood.
1.1.1.7	Information is collected on the biomass/density of the stock.	Either fishery-dependent or fishery-independent indices of the biomass and density of biomass in each of the principal management areas are available for some years. Qualitative information exists on the appropriateness of the indices as proportional indicators of stock size, sufficient to support a rudimentary evaluation of the fishery.	Fishery-dependent and/or fishery-independent indices of the biomass and density of biomass in each management area are available. The indices are appropriate and generate confidence as indicators of biomass and density.	Multiple fishery-dependent and/or fishery-independent indices of the biomass and density of biomass in each unit of the spatial structure of the stock(s) are available for enough years that trends in biomass are understood. The indices are based on survey designs and data-collection protocols that are statistically rigorous and robust. There is clear evidence that they are proportional to the biomass and density of the stock(s) and of sufficient precision to support a very high degree of confidence in the indicated trends in biomass and density.
1.1.1.8	The age and/or size structure	There is some information available,	There is sufficient information to allow	There are accurate estimates of the age

	of the stock is measured.	sufficient to support a rudimentary evaluation of the fishery, on the age and/or size structure in each of the principal management areas in some years.	estimates to be made of the age and/or size structure in each management area each year, those estimates being adequate to generate confidence in the evaluation of the fishery.	and size structure in each unit of the spatial structure of the stock(s), sufficient to support a very high degree of confidence in the evaluation of the fishery.
1.1.2	There sho	ould be sufficient information on the fish	nery to allow its effects on the target stoc	k(s) to be evaluated.
1.1.2.1	Fishery removals are recorded/ estimated (including landings, discards and incidental mortality).	Sufficient information is available on annual landings of the target stock(s), from each principal management unit, by the principal fisheries to support a rudimentary evaluation of the fishery. Estimates of discards and incidental mortality, of the target stock(s), are available.	Annual landings, discards and incidental mortality (including those caused by minor directed and incidental-catch fisheries) of the target stock(s), in each management unit, are sufficiently well recorded or estimated to generate confidence in the evaluation of the fishery. The estimates of discarding and incidental mortality are verified by observers or some form of statistical sampling.	Landings, discards, incidental mortality and all other removals by all fishing activities are recorded and/or estimated sufficiently to support a very high degree of confidence in the evaluation of the fishery. Spatio-temporal locations of removals by the principal fisheries are recorded at high precision, sufficient that they can be attributed to their sources within the spatial structure of the stock(s). A high proportion of sets by the principal fisheries are observed or otherwise monitored, to record discarding independently of logbooks.
1.1.2.2	The age and/or size structure of catches is measured.	Available data on the age and/or size compositions of catches and other removals, from each principal management unit of the target stock(s), are sufficient to support a rudimentary evaluation of the fishery.	Available data on the age and/or size compositions of catches and other removals, from each management unit of the target stock(s), are of adequate accuracy to generate confidence in the evaluation of the fishery. A high proportion of the catch is reliably sampled for its age and/or size composition.	There is comprehensive and reliable data, collected, on the age and size composition of all catches from the target stock(s), sufficient to support a high degree of confidence in the evaluation of the fishery. Size and age composition estimates for catches by the principal fisheries are available for each unit of the spatial structure of the target stock(s) and with an adequate temporal resolution, sufficient to support a highly-reliable evaluation of the fishery. Adequate data are available on the sizes and ages of members of the target

				stock(s) that are lost to incidental mortality and of other non-catch removals. A high proportion of sets is monitored, for size compositions, by observers.
1.1.2.3	Fishing effort is recorded or estimated, and standardized to effective fishing effort.	Annual nominal effort data are available and can be used to estimate effective fishing effort well enough to support a rudimentary evaluation of trends in fishing mortality.	Accurate estimates of annual effective fishing effort (based on recorded nominal effort data) are made, sufficient to generate confidence in the evaluation of the fishery. The relationship between the nominal fishing effort measure and the fishing mortality rate, including any changes in that relationship over time, has been established.	Comprehensive records are kept of fishing effort in all fisheries which take the target stock(s), effort by the principal fisheries being recorded at a high temporal precision. Nominal effort is standardized to effective fishing effort (including standardization for changes in catchability over time and for the effects of environmental factors) using well-founded relationships and providing an index of fishing mortality which can support a high degree of confidence in the evaluation of the fishery.
1.1.2.4	Spatial distribution of the effort is known.	Available effort data for the principal fisheries are separately recorded for each principal management unit.	The estimates of effective fishing effort are made separately for each management unit.	Fishing effort by the principal fisheries is recorded at a high spatial precision, sufficient to attribute that effort to the units of the spatial structure of the target stock(s) on which it is exerted. Analyses of the fishing-effort information preserve that spatial resolution.
1.1.2.5	Fishing methods and gear types are known throughout the fishery.	Main fishing methods and gear types used in the principal fisheries are known well enough to support a rudimentary evaluation of the fishery.	Main fishing methods and all gear types used in fisheries are known sufficiently to generate confidence in the evaluation of the fishery.	All fishing methods used in fisheries which take the target stock(s) are known and comprehensively documented. Fishing practices are routinely observed and recorded. The fishing behaviours of the fishermen have been described and their controlling factors are well understood. The information and observations support a high degree of

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				confidence in the evaluation of the fishery.	
1.1.2.6	Selectivity is known for the fishery (including incidental catches).	Some information is available on gear selectivity and qualitative changes in that selectivity, sufficient to support a rudimentary evaluation of the fishery.	Size, sex and maturation-stage selectivities of the principal gear type are established, whilst the selectivities of all other gear types which take the target stock(s), including those used in incidental-catch fisheries, are adequately estimated, sufficient to generate confidence in the evaluation of the fishery.  Information is available to evaluate any changes in selectivity over time.  Information is available on targeting and culling practices.	Selectivities have been accurately estimated for all gears which take the target stock(s), for all locations and time of fishing, including changes in those selectivities over time. Targeting, culling and discarding practices are comprehensively described and routinely monitored.	
1.1.3 Appropriate reference levels have been developed for biomass and fishing mortality rate.					
2,2,0	impropriate reference to the native been deteroped for blomass and fishing instantly rates				
1.1.3	Appropriate reference levels have been developed for biomass and fishing mortality rate.	Limit and target reference points for biomass and fishing mortality rate have been proposed in a preliminary way.	Limit and target reference points for biomass and fishing mortality rate have been determined based on stock biology.	Limit and target reference points for biomass and fishing mortality rate have been established and adjusted for stock biology, uncertainty, variability and data limitations.	
1.1.4	There is a	a well-defined and effective harvest strat	egy for managing the target stock(s).		
1.1.4.1	There is a management strategy in place to adjust harvest as required for management of the stock(s).	Mechanisms exist to monitor and reduce harvest to avoid overfishing.	Mechanisms are in place to reduce harvest when required to maintain the target stock(s) at productive levels.  Measures to demonstrate the effectiveness of those mechanisms are in place.	Mechanisms are in place to promptly reduce harvest as and when required to maintain the target stock(s) at productive levels. There is a high degree of confidence in the effectiveness of those mechanisms.	
		In 1	Louis I and a second		
1.1.4.2	There are clear, tested decision rules set out for effective management of the stock(s).	Decision-making is logical and appropriate, although not fully documented. Decision rules have not been tested.	Clear decision rules exist and are fully documented but have not been fully tested. Decision rules are consistent with reference levels and with data and	Clear, documented and tested decision rules are fully implemented, are fully consistent with reference levels and with data and assessment limitations. The	

				assessment limitations.	decision rules are evaluated periodically.
1	.1.4.3	There are appropriate management tools specified to implement decisions in terms of input and/or output controls for management of the stock(s).	Management tools are specified and relevant to the characteristics of the fishery. There is evidence that the tools used are effective in leading to sustainable management of the fishery.	Management tools are specified. They have been adapted to this fishery but are lacking in some details. There is reliable evidence that they are effective in improvement of sustainable management of the fishery.	Management tools designed for and appropriate to the fishery have been specified. Application of those tools is responsive, relevant and timely. Their performance has been evaluated and clearly shown to achieve management objectives.
1	.1.5	There is a	nn appropriately-accurate, spatially-stru	ictured assessment of the stock(s).	
1	.1.5.1	There is a scientifically-rigorous stock assessment methodology that is relevant to the biology of the target species and the nature of the fishery. The assessment uses all available relevant data.	Stock assessments using robust evaluation methods are used to periodically assess the health of the fishery. The assessments are appropriate in time and design to the characteristics of the targeted stock and generate confidence that the stock are not overfished.	Stocks assessments using robust models are used to routinely assess the health of the fishery. The models are partly generic but they consider all major impacts of fishing on the target stock(s), including all-likely sources of fishing mortality. The assessments are appropriate in frequency and design to provide a high degree of confidence that the stocks are not overfished.	Annual assessments of the fishery are performed, using rigorous methods and a fully-dynamic model specifically designed for the fishery. All significant impacts of fishing are incorporated in the model. Natural mortality is treated as time and age specific, with explicit consideration of trends in predation. The model captures all major features of the biology of the species, the fishery and the management system. The assessment makes full use of all available data and information on the fishery. Fishing mortality rates and the biomass of the stock(s) are estimated with a very high degree of confidence and assurance that the stocks are

The assessment considers each principal The assessment models broadly reflect

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healthy.

Fishing mortality rates and the biomass of the stock(s) are reliably estimated.

The assessment models are fully

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1.1.5.2

The assessment is spatially

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	structured.	management unit separately.	the spatial structure of the exploited	spatially-structured representations of
			components of the target stock(s) using appropriate area-specific values.	the target stock(s), including recruitment source/sink linkages, movement patterns of post-settlement animals and distributions of fishing effort
1.1.5.3	The assessment, including any assumptions, has been appropriately tested by simulation or other methods and considers uncertainties which are reflected in management advice.	The assessment methodology takes only limited account of assessment uncertainties, including assumptions but associated results are considered by managers.	The assessment methodology uses statistically-appropriate parameter estimation procedures that take account of uncertainty in the input data. There is an evaluation of the sensitivities of key assessment outputs (e.g. resource biomass) to errors in assumptions. Major uncertainties in the assessment outputs are recognized, the most important ones have been evaluated, and all are both reported in the management advice and taken into account in the harvest strategy.	The assessment methodology has been comprehensively tested by simulation and the results show that major assessment outputs of management interest achieve robust levels of precision and bias. The assessment methodology comprehensively addresses all significant uncertainties. There is a comprehensive evaluation of sensitivities of key outputs to errors in assumptions, parameter values and/or data. The harvest strategy takes full account of sensitivities, uncertainties and of any inaccuracies of the assessment methodology.
		The assessment attempts to evaluate the fishery and the target stock(s) relative to	The assessment evaluates the fishery and the target stock(s) relative to the	The assessment makes a reliable, probabilistic evaluation of the fishery
1.1.5.4	The assessment evaluates the consequences of harvest strategies and evaluates the status of the fishery relevant to reference levels.	the reference levels, including separate evaluations for each principal management unit. The assessment includes an initial, spatially-structured approximation of the future consequences of the current harvest strategy.	reference levels, including separate evaluations for each management unit. The future consequences of the harvest strategy in each management unit have been evaluated, using the assessment model or by other means.	and the target stock(s) relative to the reference levels, including separate evaluations for each management unit. The future consequences of the harvest strategy have been fully evaluated, with attention to the spatial structure of the stock(s) and the uncertainties in the models used.
1.1.6	The stock	(s) is/are at appropriate reference level(	s)	
1.1.0	THE STOCK	(s) is are at appropriate reference level(	5).	
1.1.6.1	The overall population is at	There is a reasonable level of	There is a high degree of confidence	There is a very high degree of

appropriate re	ference levels.	confidence that the total exploitable biomass of the target stock(s) is above the limit reference level (or its operational equivalent), and estimated to be in the vicinity of the target reference level and approximately stable. If the target stock(s) is below the limit reference level(s), (or their operational equivalents)then Criterion 1.2 will be evaluated for appropriate performance of recovery or rebuilding actions.	that the total exploitable biomass of the target stock(s) is above the limit reference level, and biomass is estimated to be in the vicinity of the target reference level and stable, while the age and/or size composition of the stock(s) appears consistent with expectations for equilibrium under sustained fishing at the target mortality rate. If the target stock(s) are below the limit reference levels, (or their operational equivalents), then Criterion 1.2 will be evaluated for performance of recovery or rebuilding actions.	confidence that the total exploitable biomass of the target stock(s) is above the limit reference point and remains generally stable in the vicinity of its target reference level, while the age and/or size composition of the stock(s) is consistent with expectations for equilibrium under sustained fishing at the target mortality rate. If the target stock(s) are below the limit reference level(s), (or their operational equivalents), then Criterion 1.2 will be evaluated for appropriate performance of recovery or rebuilding actions.
The local area resource are n nor overfished	either depleted	There is a reasonable level of confidence that neither local depletion nor local overfishing are occurring, beyond the expected temporary effects of concentrations of fishing effort moving within the fishing grounds.	There is a high degree of confidence that neither local depletion nor local overfishing are occurring, beyond the expected temporary effects of concentrations of fishing effort moving within the fishing grounds. Fishing mortality and the biomass of the target stock(s) within each management area are estimated (with a high degree of confidence) to be consistent with the requirements of long-term sustainable management of the fishery.	There is a very high degree of confidence that neither local depletion nor local overfishing are occurring, beyond the expected temporary effects of concentrations of fishing effort moving within the fishing grounds. The distribution of fishing mortality across the target stock(s) and local biomass densities in each part of the spatial structure of those stocks are known (with a very high degree of confidence) to be fully consistent with the intent and requirements of the management system (including plans for
				rebuilding from depletion, if any).
1.2	to a speci	e exploited populations are depleted, the fied level consistent with the precautiona thin a specified time frame. his is not to be scored unless there is a cu	ary approach and the ability of the popul	rebuilding from depletion, if any).  ery and rebuilding is allowed to occur

depleted significantly below the target level, rebuilding measures are implemented. expected temporary effects of concentrations of fishing effort moving within the fishing grounds) leads to implementation of specific and appropriate rebuilding measures. Their implementation can be demonstrated either through past experience or through a formal plan for such measures. These rebuilding measures have not been tested but there is a basis to expect their effectiveness.

provisions for the prompt implementation of appropriate rebuilding measures when significant local depletion (beyond the expected temporary effects of concentrations of fishing effort moving within the fishing grounds) occurs. Rebuilding measures are tested and effective in allowing the biomass to recover within a reasonable time.

for the prompt implementation of appropriate rebuilding measures when significant local depletion (beyond the expected temporary effects of concentrations of fishing effort moving within the fishing grounds) occurs. Practical experience has demonstrated that the rebuilding measures are effective in allowing the biomass to recover quickly. There is evidence that the management system responds adaptively to past local depletions, adopting additional management measures to prevent the repetition of the same problems.

1.3

Fishing is conducted in a manner that does not significantly alter the age or genetic structure or sex composition to a degree that impairs reproductive capacity.

There is adequate information on the population structure and reproductive capacity of the

resource.

Basic information is available on the average age or size at reproductive maturity and on variations in relative fecundity with size or age, but only through assuming that fecundity is proportional to body weight. Initial estimates of growth and natural mortality rates are available, such that the reproductive capacity of the stock(s) in the absence of fishing can be estimated. The age or size and sex compositions of the stock(s), under exploitation by the fishery, have been estimated.

The age and size at reproductive maturity are known with a high degree of confidence. Maturity ogives have been estimated. The variations in relative fecundity (determined independently of body weight but perhaps by assuming that fecundity is proportional to gonad weight) with size and age are known with a high degree of confidence. Estimates of growth and natural mortality rates are available, such that the reproductive capacity (per recruit) of the stock(s) in the absence of fishing has been estimated, with a high degree of confidence. The age, size and sex compositions of the stock(s), under exploitation by the fishery, and hence their reproductive capacity (per recruit)

The age and size at reproductive maturity are known and maturity ogives have been determined with a very high degree of confidence. The variations in effective fecundity (determined by direct counting of eggs, with due allowance for egg quality and other factors affecting viability of spawned eggs) with size and age are known with a very high degree of confidence. Estimates are available of the minimum density of spawners needed for effective fertilization. Estimates of recruitment. growth and natural mortality rates are available, such that the reproductive capacity of the stock(s) in the absence of fishing can be estimated. with a very high degree of confidence. The age, size

			have been estimated with a high degree of confidence. Differences among management areas in the above variables (if any) have been documented. The importance to successful reproduction of the density of spawners is recognized and its implications have been explained in management advice.	and sex compositions of the stock(s), under exploitation by the fishery, the density of the animals and hence their reproductive capacity have been estimated with a very high degree of confidence. The reduction in reproductive capacity that has resulted from fishing activity is documented. Studies of spatial and temporal genetic diversity of the target stock(s) have been undertaken.  Differences in the above variables among the units of the spatial structure of the stock(s) have been comprehensively documented.  The recruitment source/sink linkages within the spatial structure of the stock(s) are understood.
1.3.2	The age/sex/genetic structure of the resource is monitored to detect significant impairment of reproductive capacity.	There is ample evidence that correlates size as the key indicator of reproductive capacity. The size composition of the target stock(s) in each of the principal management areas is effectively monitored to detect significant impairment of reproductive capacity.	There is strong evidence that correlates size, age and sex as the key indicators of reproductive capacity. Size, age and sex compositions of the target stock(s) in each management area are effectively monitored to detect significant impairment of reproductive capacity.	There is strong evidence that correlates size and age as key indicators of reproductive capacity. The size, age and sex compositions of, and recruitments to, the target stock(s) in each unit of their spatial structure are routinely and effectively monitored to detect any impairment of reproductive capacity. There is some monitoring of relevant genetic indicators.
		The stock assessment doesn't fully	The stock assessment provides	The stock assessment provides a high

confidence that the fishing mortality and

impair reproductive capacity, such that

monitoring for reproductive impairment

other impacts of the fishery cannot

is not required.

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degree of confidence that the fishing

mortality and other impacts of the

fishery cannot impair reproductive

capacity, such that monitoring for

reproductive impairment is unnecessary.

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explain the effects of fishing mortality

reproductive capacity. Monitoring for

reproductive impairment is appropriate.

and other impacts of the fishery on

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The stock assessment

1.3.3

adequately indicates the

level of impairment of

reproductive capacity.

1.3.4	There is a well defined and effective harvest strategy to manage the fishery in a manner that does not impair the reproductive capacity.	Mechanisms are in place to reduce or modify fishing effort when impairment of reproductive capacity is detected or projected to occur. Decision-making is logical and appropriate, although not fully documented. Decision rules have not been tested.	Mechanisms are in place to reduce or modify fishing effort as and when impairment of reproductive capacity is detected or projected to occur. There is a high degree of confidence in the effectiveness of those mechanisms. Clear decision rules exist and are fully documented but have not been fully tested.	Mechanisms are in place to reduce or modify fishing effort as and when impairment of reproductive capacity is detected or projected to occur. Clear, documented and tested decision rules are fully implemented and are fully consistent with data and assessment limitations. The decision rules are evaluated periodically.
1.3.5	Reproductive capacity is not impaired.	Reproductive capacity has been temporarily reduced by fishing but recruitment has not failed and measures have been implemented to restore that capacity.	It is estimated that recruitment to the target stock(s), overall or locally, has not been negatively affected by the fishery beyond the changes expected when fishing a virgin stock.	There is a high degree of confidence that recruitment to the target stock(s), overall or locally, has not been negatively affected by the fishery beyond fishing a virgin stock and is trending toward robust levels.

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Principle 2			nce of the structure, productivity, function	
2.1	cascades	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.		
2.1.1	There is a	ndequate understanding of the ecosystem	and its value.	
2.1.1.1	The nature and distribution of habitats relevant to the fishing operations are known.	Some information exists on the habitats on the fishing grounds but it is neither detailed nor comprehensive. The general distribution of the benthic habitat that supports the targeted stock is known.	The nature and distribution of habitat types on the fishing grounds are known in moderate detail. The distribution of the benthic habitat critical to the targeted species is known and monitored.	The nature and distribution of habitat types on the fishing grounds has been mapped in detail. The distribution of benthic habitat critical to the targeted species fishing operations is monitored with high spatial precision.
		Basic information is available on the	Considerable information is available on	Extensive information is available on
2.1.1.2	The habitat requirements of the target species, in particular the settlement habitat of juveniles, are known.	types of habitat in which various life stages of the target species live.	the habitat requirements of the bivalvular life stages of the target species. Studies of the preferences and habitat requirements of settling larvae have been initiated.	the habitat requirements of all life stages of the target species, The preferences and requirements of settling larvae are thoroughly known.
2.1.1.3	Information is available on the position and importance of the target species within the food web.	Key prey, predators and competitors of the target species are known.	Qualitative and some quantitative information is available on the trophic position and general importance of some life stages of the target species in their ecosystems.	Extensive quantitative information is available on the trophic position and importance of all life stages of the target species in their ecosystems.
	Information is available on	Triangle and a second and a	T	The second secon
2.1.1.4	Information is available on the ecosystem roles of the non-target species impacted by the fishery.	The principal non-target species affected by the fishery have been identified.	The non-target species commonly affected by the fishery have been identified, and research to obtain information, including distribution and	The non-target species affected by the fishery have been identified. The life history and ecosystem requirements of the main species are fully understood.

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		T	T	T
			basic ecology, on the main non-target	
			species has commenced.	
2.1.1.5	There is information available on the recovery rate of the ecosystem from fishery related impacts.	Approximate recovery rates can be inferred from known generation times and/or life expectancies of species in other regions which are ecologically similar, and taxonomically related, to the principal species affected by the fishery.	Approximate recovery rates are inferred from known generation times and/or life expectancies of species in other regions which are ecologically similar, and taxonomically related, to a selection of the species affected by the fishery. Research to determine life expectancies of the species actually affected and/or to directly measure recovery rates is in progress.	Ecosystem recovery rates have been estimated (where appropriate, for each habitat type affected by the fishery) with a high degree of confidence, using a combination of ecological modelling and direct experimentation.
2.1.1.6	There is information available on the functioning of the ecosystem relevant to the fishery.	Some elements of the functioning of the ecosystem, relevant to the fishery, have been identified.	The main elements of the functioning of the ecosystem, relevant to the fishery, have been documented and are partially understood.	Detailed information is available on the ecosystem, including species diversity, trophic and other functional relationships, the dominant factors structuring the system, ecosystem dynamics and the extent and nature of spatial and temporal variations.
2.1.2	There is a	dequate knowledge of the effects of gear	r-use on the receiving ecosystem and exte	ent and type of gear losses.
2.1.2.1	There is adequate knowledge of the physical impacts on the habitat due to use of gear.	The intensity and location of gear use is known in general terms. The main impacts on habitat types present in this fishery are known.	The intensity and location of gear use are known with high precision. The impacts on habitat types have been identified, and studies specific to the assessed fishery have commenced.	The types of gears and the fishing techniques employed are comprehensively documented. All fishing activity_impact on habitat types is routinely monitored with very high spatial precision.
	I <b></b>		T	T
2.1.2.2	There is adequate knowledge of gear losses and their impacts on the ecosystem.	Some recording of gear losses takes place.	There is some knowledge of the type, quantity and location of gear lost during fishing operations and its destiny in the receiving ecosystem.	There is fully sufficient knowledge of the type, quantity and location of gear lost during fishing operations and its destiny in the receiving ecosystem, to

				characterize any resulting impacts.
2.1.3	Risks to t	he ecosystem are adequately determined		
2.1.3.1	Information is available on the nature and extent of the non target species caught, or otherwise killed, by the fishery. This includes all non target species – invertebrates, fish, mammals, reptiles, birds etc.	The principal non-target species caught by the assessed fishery have been identified. Types of non-capture mortality have been identified.	Quantitative information from on-board observers is available on the principle non-target species caught by the assessed fishery. Initial estimates of non-capture mortality have been made but monitoring of it is limited. Basic biological information, including distribution and abundance, is available for a selection of the main species affected.	Quantitative estimates, providing a high degree of confidence, of the nature and extent of non-target catches and incidental mortalities by the fishery are available. They are based on a comprehensive observer program Monitoring of non-capture mortality is on-going. Sufficient information is available, for a selection of those species, to judge whether they are declining or depressed and whether the assessed fishery is causing a significant portion of their total mortality.
2.1.3.2	Information is available on the extent and survivability of the discarded by-catch.	Some information is available on the extent of discard of by-catch, including a list of the principal species discarded. However, no information is available on discard survival.	Information is available to allow reliable estimation of discarding of the principal by-catch species. Initial estimates of discard mortality are available for some species.	Information from onboard observers provides for an accurate estimate of the extent of all discards of by-catch species. Estimates of discard mortality are available for the principal non-target species affected.
2.1.4		s have been developed and implemented mpacts of the fishery on the ecosystem.	within the fisheries management system	to address and restrain any significant
	Strategies have been	While ecosystem effects are not taken	Available information on ecosystems	The management advice includes a
2.1.4	developed and implemented within the fisheries management system to address and restrain any significant negative impacts of the fishery on the	into account in the reference levels for the target species there is no evidence of trophic cascades or ecosystem state changes.	and the impacts of the fishery are included in the scientific advice to fishery managers. Some allowance for ecosystem effects is taken into account in setting the reference levels for the target species. There is clear evidence	thorough presentation of available information on ecosystems, the impacts of the fishery and their implications.  Management of the fishery takes full account of these implications. The reference levels take quantitative and

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	ecosystem.		that no trophic cascade or ecosystem state change is occurring.	explicit account of ecosystem effects.  Levels of acceptable impacts for key aspects of the ecosystem, based on well-founded knowledge have been established and are subject to frequent review.
2.1.5		ents of impacts associated with the fisher		
2.11.0	ecosysten	a structure and/or function, on habitats	or on the populations of associated spec	ies.
2.1.5.1	An assessment of the ecosystem effects of the fishery has been conducted, including consideration of significance and risk.  Monitoring of any significant effect is ongoing.	The principal impacts of the fishery (including but not limited to those on the ecosystem addressed under other performance indicators) have been identified. On-going monitoring is not-well developed.	An evaluation of the effects and potential risks of the fishery on the ecosystem has been initiated. A monitoring programme is being developed.	A comprehensive, quantitative risk assessment of the effects of the fishery on the ecosystem has been undertaken and is updated regularly. The assessment is founded on appropriate comparative and/or experimental studies, including where possible comparisons between fished and unfished areas. There is an on-going monitoring program capable of identifying any fishery-induced changes to community structure or the population dynamics of key species.
2.1.5.2	The impacts on ecosystem structure and function from removal of target stock(s) are known.	Removals from target stock(s) are not expected to have unacceptable impacts on ecosystem structure and function.	Qualitative information on the ecosystem consequences of current levels of removals from the target stock(s) is available.	The ecological consequences of current levels of removals from the target stock(s) have been quantified to a sufficient extent that reasonable predictions can be made about the effects on ecosystem structure and function.
2.1.5.3	The impacts on ecosystem structure and function from removal of non-target stocks	Studies of the impacts on ecosystem structure and function of removals from key non-target stocks have been	Some information on the ecosystem consequences of current levels of removals from non-target stocks is	The ecological consequences of current levels of removals from non-target stocks have been quantified to a

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2.1.5.4	Fishery impacts on habitat structure are known.	Expected impacts of the fishery on habitat structure within the principal fishing areas have been identified, although the issue has not been directly studied.	Impacts of the fishery on habitat structure within the principal fishing areas are being studied.	sufficient extent that reasonable predictions can be made about the effects on ecosystem structure and function.  The level of impacts on habitat structure have been documented and are within acceptable, tested and justified limits.
2.1.6	There are	e no unacceptable impacts on the ecosyst	em.	
2.1.6	There are no unacceptable impacts on the ecosystem.	There is a rudimentary understanding of the impacts of the assessed fishery on the ecosystem. There is some confidence that there are no unacceptable impacts on the ecosystem.	There is a reasonable understanding of the impacts of the assessed fishery on the ecosystem. There is enough information to generate confidence that there are no unacceptable impacts on the ecosystem.	Through comprehensive reviews and analysis there is clear understanding of the impacts of the assessed fishery on the ecosystem. There is a high degree of confidence that there are no unacceptable impacts on the ecosystem.
2.2			ot threaten biological diversity (at the gen adangered, threatened or protected speci	
2.2.1	Fishing is species.	conducted in a manner that does not ha	ve unacceptable impacts on recognised	protected, endangered or threatened
2.2.1.1	There is information on the presence and populations of protected, threatened and endangered species.	There is a program in place to identify protected, threatened and/or endangered species potentially affected by the assessed fishery.	Key protected, threatened and/or endangered species directly affected by the assessed fishery, if any, have been identified. Their spatio-temporal distributions within the area of the fishery are known.	There is knowledge of all protected, threatened and/or endangered species directly or indirectly affected by the fishery, if any, including their spatiotemporal distributions within the area of the fishery, trends in their abundances, and the types and distributions of their critical habitats.

2.2.1.2	The interactions of the fishery with protected, threatened and endangered species are known.	The direct interactions between the assessed fishery and any protected, threatened and/or endangered species (if any have been identified) are known.	There is a reasonable level of confidence that there are no significant interactions between the assessed fishery and any protected, threatened, and/or endangered species.  No information is available on indirect impacts.	There is a high degree of confidence that there are no significant interactions between the assessed fishery and any protected, threatened and/or endangered species.
2.2.1.3	Strategies have been developed and implemented to address and restrain any unacceptable risks, posed by the fishery to protected, threatened or endangered species.	Some interactions may occur. Only limited strategies exist to address risks to protected, threatened, and/or endangered species. These strategies take a precautionary approach. Management actions are mainly reactive rather than proactive.	Significant interactions are unlikely but nevertheless limited strategies exist to address risks. These strategies take a precautionary approach. The management system has adequate arrangements to adjust fishery operations if unacceptable risks are detected.	There is a high degree of confidence that there are no significant interactions between the assessed fishery and any protected, threatened, and/or endangered Nevertheless limited strategies exist to address risks. These strategies are precautionary in approach. The management system has adequate arrangements to adjust fishery operations if unacceptable risks are detected.
2.2.2	The fishe	ry is conducted in a manner that does no	ot threaten biological diversity (at the ge	netic, species or population levels).
2.2.2.1	The effects of the fishery on associated biological diversity and productivity are documented.	The impacts of the assessed fishery on biological diversity and productivity have been considered but not directly studied.	The impacts of the assessed fishery on biological diversity and productivity have been studied directly but those studies are not comprehensive.	The principal effects of the assessed fishery on biological diversity and productivity have been comprehensively documented.
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2.2.2.2	The fishery does not threaten biological diversity or productivity.	No unacceptable impacts of the assessed fishery on biological diversity and productivity have been identified.	The impacts of the assessed fishery on biological diversity and productivity are estimated to be within acceptable limits.	There is a high degree of confidence that the effects of the assessed fishery on biological diversity and productivity are within tested acceptable limits.

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2.3	is allowed the ability	Where exploited populations (of non-target species) 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.  (NOTE, these indicators are only to be scored if the team finds a circumstance of current depletion).			
2.3.1	There is sufficient information on fishery interaction with the depleted species to determine appropriate management measure which will allow recovery of depleted non-target populations.				
2.3.1	There is sufficient information on fishery interaction with the depleted species to determine appropriate management measures which will allow recovery of depleted nontarget populations.	hery interactions with the depleted species, sufficient to identify precautionary measures to for depleted stocks to rebuild.  interactions with the depleted species to identify reasonable management measures for depleted stocks to rebuild.  fishery interactions, sufficient to identify and test specific management measures for depleted stocks rebuilding.			
2.3.2	Appropri	ate recovery/rebuilding measures have l	peen implemented in response to identific	cation of unacceptable impacts.	
2.3.2	Appropriate recovery/rebuilding measures have been implemented in response to identification of unacceptable impacts.	Appropriate rebuilding measures for depleted non-target stocks exist and are implemented. They have been judged to be reasonably effective but have not been evaluated.	Appropriate rebuilding measures exist and are fully effective. A mechanism exists for the rapid introduction of new measures for management of the assessed fishery, if its catches of nontarget species are identified as impeding rebuilding of depleted stocks.	Appropriate precautionary, rebuilding measures, based on a sound understanding of functional relationships, are fully implemented. They have been tested and shown to be effective.  If the assessed fishery was the cause of the depletion (in whole or in part) additional measures are being implemented to prevent a recurrence.	

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Principle 3	3		ry is subject to an effective management ates institutional and operational framev		
3.1 Structu	ire and Strategies	A manag	ement system containing an institutional	and operational framework exists with	clear lines of responsibility.
3.1.1 (3A. 3	3)	The man	agement system is appropriate to the cul	tural context, scale and intensity of the	fishery.
3.1.1	The management appropriate to the context, scale and of the fishery.	cultural	The management system has some inconsistencies with key elements of the cultural context, scale and intensity of the fishery but a process to resolve them is in progress.	The management system is consistent with key elements of the cultural context, scale and intensity of the fishery.	The management system is entirely consistent with the cultural context, scale and intensity of the fishery.
3.1.2 (3A. 2	2)		agement system has clear long-term goal s and Criteria.	ls, specific objectives, incorporating ope	rational criteria, consistent with MSC
3.1.2.1	There are long-ter and objectives.	m goals	There is a general consensus among management decision-makers about the goals and objectives of their management of the assessed fishery but no comprehensive documentation exists.	A general statement of broad goals and objectives for the management of the assessed fishery exists and is used as guidance by management decision-makers.	There is a complete and explicit statement of long-term goals and objectives for management of the assessed fishery, which statement has been formally adopted by the legallymandated management authority.
3.1.2.2	There are operatio objectives and crit		Operational criteria are limited to the reference levels for the target stock(s).	Short- term objectives for management of the assessed fishery have been developed and are used as guidance by management decision-makers.  Operational criteria beyond reference points have been adopted by the management authority.	Long term objectives for management of the assessed fishery have been developed and are used regularly in management decisions. Operational criteria beyond reference points and for other issues of concern have been adopted.
3.1.3 (3A. 1	1)	The man	agement system has a clear legal basis.		
3.1. 3.1	The fishery manag system has a clear foundation.		The legal foundations of some minor facets of the management system are disputed. The disputed points do not	All facets of the management system have clear foundations in local and national law. Any points of dispute are	All facets of the management system have clear foundations in local, national and international law.

		impede effective implementation of the management system.	procedural in nature and do not impede the effectiveness of the management system.		
3.1. 3.2	The fishery is not conducted under a controversial unilateral exemption to an international agreement.	The fishery is conducted under one or more unilateral exemptions to international agreement(s) but those exemptions are not controversial in nature and participants are engaged in a process to overcome this exemption.	The fishery is not conducted under any controversial unilateral exemptions to international agreements.	The fishery is not conducted under any controversial unilateral exemptions to international agreements. It is managed and conducted in a manner that fully respects the spirit of international conventions and agreements.	
3.1. 3.3	The fishery is consistent with international conventions and agreements.	The fishery appears to only have minor deviations from the terms of relevant international conventions and agreements and efforts are ongoing to address these deviations in a timely manner.	The fishery is broadly consistent with the terms of all relevant international conventions and agreements.	The fishery is fully consistent with the terms of all relevant international conventions and agreements.	
3.1.3.4	The fishery and management system are consistent with local legislation and official regulations, in the appropriate jurisdictions.	The fishery and its management system are generally consistent with the requirements of relevant Argentine legislation and official regulations (occasional at-sea violations of regulations excepted). No known violations of legislation or regulations jeopardize the management of the fishery.	The fishery and its management system is fully consistent with all requirements of relevant Argentine legislation and official regulations (occasional at-sea violations of regulations excepted).	The fishery and its management system are fully consistent with both the letter and the intent of relevant Argentine legislation and official regulations.	
3.1.4 (3A. 4)	3.1.4 (3A. 4) The management system observes the legal and customary rights and long-term interests of people dependent on fishing.				
3.1.4	The management system observes the legal and customary rights and long-term interests of people dependent on fishing.	The fishery and its management do not violate the legal or customary rights of any directly-affected stakeholder group and considers the interest of people dependent on the fishery.	The fishery and its management fully recognizes and does not violate the legal or customary rights of any stakeholder group. The fishery management system takes into account the long-term interests, including socio-economic	The management system explicitly abides by and recognizes legal and customary rights of any stakeholder group. The fishery management system gives full consideration to the long-term interests, including socio-economic	

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			interests, of people dependent on fishing for food and livelihood.	interests, of people dependent on fishing for food and livelihood. The system includes efforts to understand the social and economic consequences of management decisions.	
3.1.5 (3A. 2;	3A 5) The mans	agament system contains a transparent c	onsultative process and incorporates a d	isnute resolution machanism	
3.1.3 (3A. 2,	JA. 3) The mana	igement system contains a transparent c	onsultative process and incorporates a d	ispute resolution mechanism.	
3.1.5.1	The management system involves all interested and affected parties through a regular, integral, open and transparent consultative process.	The management system allows for affected parties to voice their concerns in a manner timely to management decisions.	The management system incorporates regular, effective and meaningful consultation with directly-affected parties. There is no distinct evidence of a pattern of discrimination against any significant stakeholder interests.	The management system incorporates a formal and effective consultative process, open to all interested parties, with consultations ahead of all major management decisions. There is no distinct evidence or perception of discrimination against significant stakeholder interests.	
3.1.5.2	The management system provides, in an open and transparent manner, for timely and fair resolution of disputes arising within the system.	Disputes not resolved informally are addressed through the processes of the management authority and/or the national judicial and governance structures. The application of those processes may vary.	The management system incorporates provisions for open and transparent resolution of significant disputes.  Disputes are resolved in a timely and fair manner.	The management system incorporates a formal and effective dispute-resolution mechanism, independent of both the management authority and the national governance structure. That mechanism is open, transparent and accessible to all stakeholder groups.	
`	3.1.6 (This relates to what is used in other Assessment Trees)  The management system recognizes the responsibilities and authorities of relevant official institutions and coordinates their implementation. Conflicts with or between the authorities of institutions are addressed.				
3.1.6	The management system recognizes the responsibilities and authorities of relevant official institutions and coordinates their	Areas of responsibility and authority of each relevant institution is known.  However there is no coordination and interaction. While some disagreements exist there are no serious conflicts which undermine the management	The areas of responsibility and authority of each relevant institution with respect to the fishery are known. Their major interactions have been defined. Informal arrangements among relevant institutions are effective in preventing	The areas of responsibility and authority of each relevant institution with respect of the fishery are explicitly acknowledged. There is a high degree of coordination and cooperation of all institutions.	

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	implementation. Cor with or between the authorities of institute addressed.		system.	conflicts.	Formal agreements among relevant institutions ensure that no conflicts can arise.
	r Assessmeni	The manaresearch.	ngement system provides for adequate fi	nancial support for necessary activities a	and functions of management and
3.1.7.1	Adequate funding is provided for manage		Sufficient funding is available for only the most basic of management.	The management system is funded adequately in order to fulfill all of its major responsibilities.	The management system is funded adequately for fulfilling all management responsibilities effectively and efficiently.
3.1. 7.2	Adequate funding is provided for research		Research funding is minimal, sufficient only for basic data collection.	Research funding is sufficient to support a on-going short-term work but inadequate for in-depth, long-term research.	Research funding is ample to support the immediate research needs of the fishery and a long-term research plan.
3.1. 7.3	The funding provide secure in the long-te		Funding is only provided annually, without providing confidence that budgets will be maintained in the future.	Funding is provided annually but is predictable over long-enough time scales to allow continuity of the present level of management.	Funding arrangements provide a very high degree of confidence that at least the present level of budgets will be maintained in the long term.
3.1. 7.4	Providers of funding management and res have appropriate sec their interests in the	search curity for	Private-sector funding support for management and/or research does not provide any security for the funder's interests in the fishery.	It is understood that private-sector funding support for management and/or research increases the security of the funder's interests in the fishery.	Private-sector funding support for management and/or research is encouraged by a clear commitment that such investment will secure the funder's interests in the fishery, in so far as those are consistent with the MSC Principles and Criteria.
3.2 (3A. 10)		The mana	agement system specifies measures and s	strategies that demonstrably control the	degree of exploitation of the resource.
3.2.1. (3A. 10	The management system sets catch levels that will maintain the target population, and account for the non-target species (or size, age, sex) captured and landed in association with, or as a consequence of, fishing for the target species.				

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3.2.1.1	Catch levels are set for each local area in the fishery, either as allowable catches, levels of fishing effort expected to take those catches, or both.	A fishery-wide TAC and/or allowable effort limit is specified.	A TAC and/or allowable effort limit is specified for each principal management area.	A TAC and/or allowable effort limit is specified for each management area which addresses the spatial structure of the stock.
				<u></u>
3.2.1.2	Catch levels are set to maintain the productivity, biomass and age structure of the target population at optimum levels.	The catch and/or effort limits are set such that it is estimated that productivity, biomass and age structure of the target stock(s) will be maintained at adequate levels.	The catch and/or effort limits are set such that there is a high degree of confidence that productivity, biomass and age structure of the target stock(s) will be maintained at adequate levels.	The catch and/or effort limits are set such that there is a very high degree of confidence that productivity, biomass and age structure of the target stock(s) will be maintained at optimum levels.
3.2.1.3	Catch levels are set to prevent significant capture of non-target species.	The catch and/or effort limits are set such that it is estimated that catches of non-target species, sizes, ages or sexes will not be excessive.	The catch and/or effort limits are set such that there is a high degree of confidence that catches of non-target species, sizes, ages or sexes will not be excessive.	The catch and/or effort limits are set such that there is a very high degree of confidence that catches of non-target species, sizes, ages or sexes will not be excessive.
3.2.2. (3A. 14)	10 b) (3B. 13; 3B. impacts of target spo	on habitat (especially in critical or sensiti	he use of appropriate gear, practices and ive zones such as spawning and nursery ax of the target species). Destructive fishing	areas) and to avoid the capture of non-
	The fishing gears, methods	The potential for adverse impacts on	The selection of fishing gears is	The selection of fishing gears is
3.2.2.1	and practices suitable for harvest of the target species have been examined with regard to their adverse impacts on habitat (especially in critical or sensitive zones), their rates of capture of non-target animals and incidental impacts on target animals. The gears with least impacts	habitat (especially in critical or sensitive zones), capture of non-target animals and/or incidental impacts on target animals by the fishing gears, methods and practices used in the fishery has been considered and any significant adverse effects have appropriately considered in defining operational criteria for the fishery. The selection of fishing gears is	appropriate to the fishery being assessed, the environment in which it is conducted and the requirement to use gears with the least impact on habitat and non-target catches. Critical and sensitive zones within the fishery have been identified and efforts are underway to avoid or minimize interaction with these zones.	appropriate to the fishery being assessed, the environment in which it is conducted and the requirements to use gears with the least impact on habitat and non-target catches. Critical and sensitive zones within the fishery have been identified and are either avoided or interactions have been significantly reduced. To further reduce bycatch or interaction with sensitive area, further gear modification research is ongoing.

	and non-target catches are used and/or prevented by other management measures.	appropriate to the fishery being assessed, the environment in which it is conducted and the need to minimize adverse impacts.			
3.2.2.2	The fishery does not use poisons, explosives or similarly destructive fishing practices.	The fishery does not involve the use of poisons or explosives.	The fishery does not involve the use of poisons, explosives or destructive fishing practices.	The fishery does not involve the use of poisons, explosives or destructive fishing practices. There is effective legislation to safeguard against such activities.	
3.2.3. (3A. 1	3.2.3. (3A. 10 c)  The management system provides for the recovery and rebuilding of depleted fish populations to specified levels within specified time frames.				
	time ir an	ics.			
3.2.3.1	The management system includes specified requirements for rebuilding the target stock(s), to specified levels within specified time frames, if they become depleted.	No formal requirement for specified rebuilding measures exists in the management system but there is both an understanding that such measures would be required in the event of excessive depletion of the target stock(s) and procedures that would recognize such depletion if it occurred. In addition the management system has a capacity to respond appropriately and with reasonably expected effectiveness.	Even though the target stock(s) have never yet been depleted the management system is capable of rapidly and effectively developing appropriate rebuilding requirements if and when required.	Even though the target stocks have yet to be depleted. the management system includes specified requirements for rebuilding the target stock(s), to specified levels within specified time frames, if they become depleted.	
	I				
3.2.3.2	The management system includes specified requirements for rebuilding any non-target fish populations, if they are frequently caught by the fishery and if they become depleted.	No formal requirement for specified rebuilding measures exists in the management system but there is an understanding that such measures would be required in the event of excessive depletion of any non-target fish stocks frequently taken by the assessed fishery. In addition the management system has	Even though no non-target fish stocks frequently taken by the assessed fishery have yet been depleted the management system is capable of rapidly and effectively developing appropriate rebuilding requirements if and when required.	Even though depletion on non-target stocks has occurred, the management system includes specified requirements for rebuilding any non-target fish stocks frequently taken by the assessed fishery, to specified levels within specified time frames, if they become depleted.	

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		a capacity to respond appropriately and with reasonably expected effectiveness		
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3.2.4. (3A. 1	0 d) The man	agement system has mechanisms in place	e to limit or close fisheries when designat	ted catch limits are reached.
3.2.4.	The management system has mechanisms in place to limit or close fisheries when designated catch limits are reached.	Management actions to be taken when catches reach the set limits are only considered when that situation arises. Catches are generally constrained within set limits but non-significant over-runs occur from time to time.	The management system triggers fishery closures or other restrictions when catches approach set limits. There is a demonstrated, consistent ability to prevent catch over-runs.	The management system has pre-set mechanisms which directly lead to fishery closures or other restrictions when set catch limits are reached, such that total catches do not exceed allowable levels.
3.2.5. (3A. 1	0 e) The man	agement system has considered no-take a	zones as a means to control exploitation.	
3.2.5.	The management system has considered no-take zones as a means to control exploitation.	The potential use of no-take zones in the assessed fishery has been considered by management decision-makers. A more definitive analysis of the value of no-take zones is being planned.	The potential use of no-take zones in the assessed fishery has been reviewed by management decision-makers and management has acted on the results.	There has been a formal analysis of the value of establishing no-take zones in the assessed fishery and management has acted upon the findings and recommendations.
3.2.6.	The man fishery.	agement system specifies such other mea	sures and strategies which demonstrably	y achieve the goals and objectives of the
3.2.6.	The management system specifies such other measures and strategies which demonstrably achieve the goals and objectives of the fishery.	The management system includes a range of measures and strategies to control the level of fishing activity but it is unclear whether, taken as a whole, they are sufficient to achieve the goals and objectives of the fishery.	The management measures and strategies applied in the fishery, when taken as a whole, are thought to limit fishing activity to the level which best achieves the goals and objectives of the fishery.	There is a high degree of confidence that the management measures and strategies applied in the fishery, when taken as a whole, limit fishing activity to the level which best achieves the goals and objectives of the fishery.
3.2.7. (3B. 12		perations minimize mortality of non-targ nal waste such as lost fishing gear, oil spil		t be released alive, and minimize
3.2.7.1	The operations of the fishery are conducted so as to	The operations of the fishery include some reasonable measures to reduce the	The operations of the fishery include a range of reasonable measures, including	The operations of the fishery are demonstrably conducted so as to

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	minimize (to the degree practical) the capture of non- target animals, particularly those which cannot be released alive	capture of non-target animals, particularly those which cannot be released alive. Their effectiveness has not been fully evaluated.	both formal management requirements and informal industry practices, to minimize the capture of non-target animals, particularly those which cannot be released alive. Their performance is appropriately evaluated.	minimize (to the degree practical) the capture of non-target animals, particularly those which cannot be released alive, and the mortality of those which are discarded. Fishermen and others in the industry take reasonable measures, beyond the formal management requirements, to minimize such capture and mortality.
3.2.7.2	The operations of the fishery are conducted so as to minimize (to the degree practical) the mortality of discarded non-target catch. Fishermen and others in the industry take reasonable measures, beyond the formal management requirements, to minimize such mortality.	The operations of the fishery include some reasonable measures to reduce the mortality of discarded non-target catch.	The operations of the fishery include a range of reasonable measures, including both formal management requirements and informal industry practices, to minimize the mortality of discarded non-target catch.	The operations of the fishery are demonstrably conducted so as to minimize (to the degree practical) the mortality of discarded non-target catch. Fishermen and others in the industry take reasonable measures, beyond the formal management requirements, to minimize such capture.
3.2.7.3	Fishermen and others in the industry take all reasonable steps to minimize the loss of fishing gear.	Fishermen and others in the industry have adopted procedures to retain fishing gear.	Fishermen and others in the industry take steps to minimize the loss of fishing gear.	Fishermen and others in the industry demonstrably take all reasonable steps to minimize the loss of fishing gear, and to recover lost fishing gear.
3.2.7.4	Fishermen and others in the industry take all reasonable measures, whether or not required by law or regulation, to minimize discharge into the ocean of anything except water, organic shipboard wastes and materials caught during fishing operations.	Fishermen and others in the industry do not wantonly discharge substances into the ocean but there are no specific programs or controls. While there are no significant discharges except for water, organic shipboard wastes and materials caught during fishing operations.	Fishermen and others in the industry take reasonable measures to minimize discharges into the ocean, in accordance with either regulations or an industry code of practice.	Fishermen and others in the industry demonstrably take all reasonable measures to minimize discharge into the ocean of anything except water, organic shipboard wastes and materials caught during fishing operations, in accordance with either regulations or an industry code of practice. Such discharges are minimal. Performance monitoring occurs. Fishermen and others in the

				industry strongly support minimization of waste discharges.		
3.2.7.5	Fishing and on-board processing operations are conducted so as to minimize spoilage or other wastage of the marketable portion of the target catch.	Spoilage or other wastage of the marketable portion of the target catch is not excessive.	Fishing and on-board processing operations are conducted so as to minimize spoilage or other wastage of the marketable portion of the target catch.	Fishing and on-board processing operations are conducted such that spoilage or other wastage of the marketable portion of the target catch does not occur except as a result of unforeseen emergencies or accidents atsea.		
3.2.8 (3A. 6)		agement system provides economic and s that contribute to unsustainable fishing.		inable fishing and does not operate with		
3.2.8.1	The fishery has no subsidies that contribute to unsustainable fishing.	The fishery management system is not financially dependent on subsidies that contribute or lead to overfishing.  However, some subsidies do occur and could be construed as contributing to over-capacity in the fishery, These subsidies are minor and do not impinge on management's ability to manage biological resources on a sustainable basis.	The fishery management system is not financially dependent on subsidies that contribute or lead to overfishing, Subsidies that could be contributing to overfishing are now being addressed and a program is in place to eliminate them.	The fishery has no subsidies that contribute to unsustainable fishing or overcapacity.		
The management system includes economic/social incentives that contribute to sustainable fishing.		Other than the economic benefit of achieving a sustainable fishery, the management system provides little additional incentives for sustainable fishing.	The management system includes some economic and/or social incentives for sustainable fishing. A programme is being developed to promote sustainable fishing practices beyond harvest and gear controls.	The management system includes specific economic and/or social incentives that demonstrably contribute to sustainable fishing. A programme to actively promote sustainable fishing practices has been implemented.		
3.3	The mana	3.3 The management system is implemented in an effective manner to meet MSC Principles and Criteria.				

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3.3.1 (3B.		ry operation (which includes all manage e, responsible and timely.	ment authorities) is conducted in compli	iance with the management system and
3.3.1	The fishery operation (which includes all management authorities) is conducted in compliance with the management system and is effective, responsible and timely.	The effectiveness, responsibility and timeliness of the management system and operation of the fishery are marginally sufficient for the management of the assessed fishery.	The administration of the management system and operation of the fishery is adequately effective, responsible and timely.	The administration of the management system and operation of the fishery is highly effective, responsible and timely.
3.3.2 (3A.	7) The man	agement system uses adaptive and preca	utionary approaches, particularly when	dealing with scientific uncertainty.
3.3.2	The management system uses adaptive and precautionary approaches, particularly when dealing with scientific uncertainty.	While there is policy in place to ensure use of the precautionary approach, management decisions appear to be precautionary when dealing with scientific uncertainty. Scientific uncertainty is met by treating best available estimates as though they were accurate.	Management decisions implement appropriate precaution when dealing with scientific uncertainty. Efforts to define and implement an explicit precautionary strategy are underway.	Management decisions are made using an explicit precautionary strategy in light of scientific uncertainty. This strategy is formally adopted as policy or regulation. The use of this strategy is documented.
3.3.3 (3A.			plan – appropriate to the scale and inter or the dissemination of research results	
3.3.3.1	There is a comprehensive, long-term research programme that provides for both short- and long-term information needs for management of the fishery and protection of the ecosystem.	Major areas requiring further research have been identified and some research projects addressing key issues are undertaken by one or more institutions. These areas of research are relevant to information needs of the management system. However there is no organized, comprehensive research programme.	Major areas requiring further research have been prioritized. These areas of research are relevant to information needs of the management system and are beginning to address ecosystem productivity. The research priorities are appropriate to the scale and intensity of the fishery. There is limited coordination between institutions engaged in research related to the fishery.	There is a comprehensive research programme that provides for both shortand long-term information needs for management of the fishery and protection of the ecosystem through multiple ongoing research projects. There is coordination among the institutions participating in the research program.  The fishing industry and other stakeholders participate in the direction

				of the research programme, along with scientists and fishery managers.
	The management system provides for dissemination	Dissemination of research results is left to the scientists involved in the research.		The management system includes a very effective programme for the timely
3.3.3.2	of research results to all interested parties in a timely and understandable fashion.	Technology transfer is informal and involves the operators in the industry.	research results to interested parties.	dissemination of research results to all interested parties.
3.3.4 (3A. 2)	The mana informati		formation, including local knowledge, ar	nd bases decisions on the best available
3.3.4.1	The management system solicits and takes into account relevant information, including information on conservation of the resource, protection of the ecosystem, efficiency of harvesting of the target species, and other issues while also using relevant information in fair and equitable ways.	The management system considers information and advice but does not solicit it. Relevant information is used when making decisions.	The management system actively solicits and seriously considers all relevant information when making management decisions. There is some evidence that the management system gives fair and appropriate consideration to all information received. There is evidence that the system responds to the information.	The management system demonstrably solicits, encourages and takes into account all relevant information from all interested and affected stakeholders. The system is responsible and contributes to planning. There is clear evidence that the management system does not discriminate in the solicitation and use of information received.
3.3.4.2	The management system presents information, including scientific advice, to interested parties in a clear, useful, transparent way.	Relevant information is made available to interested parties on request.	The management system routinely provides for public presentation of relevant information to interested parties.	The management system includes an effective public programme for presentation of relevant information to interested parties in a clear, useful, and transparent way. This program also active public education/outreach to improve the quality and quantity of incoming information.
3.3.4.3	Management decisions are based on the best information available.	It appears that management decisions are based on the best available information.	There is evidence that management decisions are based on the best information in a timely way.	There is a clear record that Management decisions are based on the best information available. There are internal

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3.4	The mana	ngement system contains a process for m	onitoring and evaluating performance a	audits procedures in place to ensure this record continues.  nd acting on findings.			
3.4.1. (3A. 1	enforcem	The management system contains appropriate procedures for effective compliance, monitoring, control, surveillance and enforcement which ensure that established limits to exploitation are not exceeded and specifies corrective actions to be taken in the event that they are exceeded.					
3.4.1.1	The management system includes appropriate procedures for monitoring fishing effort allocation in the fishery.	The management system includes a basic procedures for monitoring fishing effort allocation in the fishery but this monitoring program lacks evaluation. Data are collected with a temporal resolution of years and a spatial resolution of management units only.	The management system includes a full range of appropriate, proven procedures for monitoring fishing effort allocation in the fishery at logical temporal and spatial resolutions.	The management system includes a suite of appropriate procedures for comprehensive monitoring fishing effort allocation in the fishery. Data are collected with high temporal and spatial resolutions. This program is fully evaluated to ensure its effectiveness.			
3.4.1.2	The management system includes appropriate procedures for monitoring of catches, including species, sizes, ages and other data.	The management system provides for basic monitoring of catches, including species, sizes, ages and other data, encompassing catches of both target and non-target species. However, this monitoring program lacks evaluation, its effectiveness is uncertain. Data are collected with a temporal resolution of years and a spatial resolution of management units only.	The management system includes appropriate procedures for monitoring of catches, including species, sizes, ages and other data, encompassing catches of both target and non-target species. The fates of various portions of the catch (e.g. retained, discarded) are monitored. Data on the target species are collected with medium temporal and spatial resolutions.	The management system includes a suite of evaluated procedures for comprehensive monitoring of catches, including species, sizes, ages and other data, encompassing catches of both target and non-target species. The fates of various portions of the catch (e.g. retained, discarded) are monitored. Data are collected with high temporal and spatial resolutions, particularly those on the target species This program has a demonstrated ability to monitor all relevant aspects of the fishery.			
3.4.1.3	The fishing industry assists and cooperates with the management authorities in the collection of catch, discard and other	The fishing industry cooperates in the collection of catch, discard and other information to the extent required by law and regulation. Deliberate misreporting is not so common as to	The fishing industry provides significant assistance to the management authorities in the collection of catch, discard and other information, beyond minimum requirements. Deliberate	The fishing industry extensively assists and cooperates with the management authorities in the collection of catch, discard and other information.  Deliberate misreporting is non-existent			

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information.	compromise management of the fishery.	misreporting is minimal.	
The management system provides for necessary control of fishing activity.	The management system includes provisions for the control of fishing activity but they are not fully effective.	The management system includes provisions which adequately control fishing activity, such that the objectives of management are generally achieved.	The management system includes provisions which effectively control fishing activity as necessary for the achievement of the objectives of management.
The management system includes appropriate surveillance, enforcement and justice systems.	The management system includes surveillance, enforcement and justice systems of limited effectiveness, such that there is some minor risk of inadequate compliance However there are no major risk to management's ability to achieve conservation objectives.	The management system includes appropriate surveillance, enforcement and justice systems, and compliance is generally achieved.	The management system includes appropriate and effective surveillance, enforcement and justice systems, sufficient to ensure a high degree of compliance with management measures.
The fishing industry complies with the fishery management system and all legal and administrative requirements and intentions.	The fishing industry generally complies with the fishery management system and/or legal and administrative requirements.	The fishing industry generally complies with the fishery management system and all legal and administrative requirements, though the compliance is with the letter of the requirements and not with their intentions.	There are no significant indications of non compliance with the fishery management system and all legal and administrative requirements and intentions.
The management system includes specified corrective actions to be taken if established limits to exploitation are exceeded.	Corrective actions are taken when established limits to exploitation are exceeded and are only considered when that situation arises. However, these actions are taken on a case by case basis.	Corrective actions are taken when the established limits to exploitation are exceeded and are considered on a case by case basis. There is evidence that demonstrates that the case by case actions are appropriated executed in a timely manner.	The management system has predetermined actions and timelines to be taken if established limits to exploitation are exceeded. There is record of proven results that demonstrate that these corrective actions are working and leading to fewer and fewer incidents of exceeding established limits.
	The management system provides for necessary control of fishing activity.  The management system includes appropriate surveillance, enforcement and justice systems.  The fishing industry complies with the fishery management system and all legal and administrative requirements and intentions.  The management system includes specified corrective actions to be taken if established limits to	The management system provides for necessary control of fishing activity.  The management system includes provisions for the control of fishing activity but they are not fully effective.  The management system includes surveillance, enforcement and justice systems of limited effectiveness, such that there is some minor risk of inadequate compliance However there are no major risk to management's ability to achieve conservation objectives.  The fishing industry complies with the fishery management system and all legal and administrative requirements and intentions.  The management system includes surveillance, enforcement and justice systems of limited effectiveness, such that there is some minor risk of inadequate compliance However there are no major risk to management's ability to achieve conservation objectives.  The fishing industry generally complies with the fishery management system and/or legal and administrative requirements.  Corrective actions are taken when established limits to exploitation are exceeded and are only considered when that situation arises. However, these actions are taken on a case by case basis	The management system provides for necessary control of fishing activity.  The management system includes provisions for the control of fishing activity, such that the objectives of management are generally achieved.  The management system includes surveillance, enforcement and justice systems.  The management system includes surveillance, enforcement and justice systems.  The fishing industry compliance However there are no major risk to management's ability to achieve conservation objectives.  The fishing industry complies with the fishery management system and all legal and administrative requirements and intentions.  The fishing industry generally complies with the fishery management system and all legal and administrative requirements and intentions.  The management system includes surveillance, enforcement and justice systems, and compliance is generally achieved.  The fishing industry generally complies with the fishery management system and all legal and administrative requirements, though the compliance is with the letter of the requirements and not with their intentions.  Corrective actions are taken when established limits to exploitation are exceeded and are only considered when that situation arises. However, these actions are taken on a case by case basis. There is evidence that demonstrates that the case by case actions are appropriated executed in a

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and are periodically conducted.

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3.4.2. (3A. 9)

3.4.2.1	There are annual assessments of the fishery and its target stock(s).	Assessments of the fishery and its target stock(s) are performed at appropriate intervals. The results are evaluated relative to the reference levels.	A full assessment of the fishery and its target stock(s) has been conducted and update assessments are performed at intervals. The results are evaluated relative to the reference levels.	Full assessments of the fishery and its target stock(s) are conducted at intervals, the timing of which has been determined to be consistent with the inherent variability of production parameters and the uncertainty of assessments. The results are evaluated relative to the reference levels.
3.4.2.2	The impacts of the fishery on the ecosystem and on endangered, threatened or protected species are assessed routinely.	An assessment of the impacts of the fishery on the ecosystem and on endangered, threatened or protected species is being developed.	The impacts of the fishery on the ecosystem and on endangered, threatened or protected species have been assessed.	The impacts of the fishery on the ecosystem and on endangered, threatened or protected species are assessed routinely every few years.
3.4.2.3	The management system includes provisions for regular internal reviews.	The management system incorporates an internal review process that meets minimum performance requirements.	The management system undertakes internal reviews of its functioning at intervals. Performance is evaluated relative to the objectives set by the management system.	The management system incorporates explicit provisions for on-going internal reviews of its performance. Performance is evaluated relative to the objectives set by the management system.
3.4.2.4	The management system is subject to periodic external reviews	The management system is not subjected to independent external reviews but considers external critiques that may occur.	The management system is subjected to independent external review at intervals, results of which are explicitly considered by managers.	The management system incorporates explicit provisions for independent, expert external review, including considering and implementing appropriate advice.
3.4.2.5	The management system responds to the results of assessments and reviews.	There are indications that the management system responds to some results of assessments and reviews.	The management system shows evidence of improved performance built on the results of internal and external reviews.	The management system has demonstrated a consistent pattern of incorporating, in a timely manner, significant recommendations for improvement developed through internal or external performance reviews.