Piloting ARS AES 2:2014

Road Map and the Implementation of a Pilot Project on the African Eco-labelling Standards, as a Model for Testing "Trade-For-Sustainability"

Manual for Auditing Marine Capture Fisheries
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### Abbreviations and Acronyms

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<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ARSO</td>
<td>African Organization for Standardization</td>
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<tr>
<td>AU</td>
<td>African Union</td>
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<td>AUC</td>
<td>African Union Commission</td>
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<td>BMSY</td>
<td>Biomass at Maximum Sustainable Yield</td>
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<td>CCRF</td>
<td>Code of Conduct for Responsible Fisheries</td>
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<td>COFI</td>
<td>FAO Committee on Fisheries</td>
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<td>CSA</td>
<td>Consequential Spatial Analysis</td>
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<td>EAF</td>
<td>Ecosystem Approach to Fisheries</td>
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<td>EEZs</td>
<td>Exclusive Economic Zones</td>
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<td>ETP</td>
<td>Endangered, Threatened or Protected species</td>
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<td>FAO</td>
<td>United Nations Food and Agriculture Organization</td>
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<td>GHG</td>
<td>Greenhouse Gas</td>
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<td>HCR</td>
<td>Harvest Control Rule</td>
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<td>ICES</td>
<td>The International Council for the Exploration of the Sea</td>
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<td>LTL</td>
<td>Low Trophic Level Stocks</td>
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<td>MEY</td>
<td>Maximum Economic Yield</td>
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<td>MSY</td>
<td>Maximum Sustainable Yield</td>
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<td>PFRS</td>
<td>Policy Framework and Reform Strategy for Fisheries and Aquaculture</td>
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<td>PISGs</td>
<td>Performance Indicator Scoring Guideposts</td>
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<td>PRI</td>
<td>Point of Recruitment Impairment</td>
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<td>SMU</td>
<td>Stock Management Unit</td>
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<td>SSB</td>
<td>Spawning Stock Biomass</td>
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<td>TAC</td>
<td>Total Allowable Catch</td>
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<td>TEDs</td>
<td>Turtle Excluder Devices</td>
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<td>UNCED</td>
<td>United Nations Conference on Environment and Development</td>
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<td>UNCTAD</td>
<td>United Nations Conference on Trade and Development</td>
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<td>UNGA</td>
<td>United Nations General Assembly</td>
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<tr>
<td>VME</td>
<td>Vulnerable Marine Ecosystems</td>
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<td>VMS</td>
<td>Vessel Monitoring System</td>
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<td>WTO</td>
<td>World Trade Organization</td>
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<td>ESD</td>
<td>Ecologically Sustainable Development</td>
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<td>ERA</td>
<td>Ecological Risk Assessment</td>
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<td>BRD</td>
<td>Bycatch Reduction Device</td>
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<td>CSIRO</td>
<td>Commonwealth Scientific and Industrial Research Organisation</td>
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<tr>
<td>LCW</td>
<td>Legal Carapace Width</td>
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<td>LML</td>
<td>Legal Minimum Length</td>
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### Scoring Categories

- **Platinum**: $\geq 90$
- **Gold**: $\geq 75$ to $<90$
- **Silver**: $\geq 65$ to $<75$
- **Bronze (Starter)**: $\geq 55$ to $<65$
Introduction
Certification to sustainability standards is an important tool for market access as well as attesting to the sustainability of the fisheries resources, the environment and the livelihoods of the stakeholders. It is an assurance to the consumers that they are consuming food from resources which can sustain the supply, fare business practices are deployed and that their food is safe. Increasingly, consumers are demanding these assurances for goods and services across all sectors of the economy making the development of sustainability standards a necessary component of standards development by national, regional and international standardization bodies.

The African Ecolabelling Standards were approved by the ARSO Council in 2014 after a rigorous consultative process initiated in 2010 under the African Ecolabelling Mechanism supported by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). One such standard approved by the ARSO Council is ARS/AES 02:2014, Fisheries — Sustainability and eco-labelling — Requirements which deals with sustainability in the fisheries sector.

While ARS/AES 2:2014 was developed to contain principles, criteria and indicators,

List of Principles

Principle 1: Legal compliance

Principle 2: Respect human rights

Principle 3: Respect labour rights

Principle 4: Maintain fisheries resources and rebuild depleted fish stocks

Principle 5: Maintain ecosystems integrity

Principle 6: Contribute to the mitigation and adaptation to the detrimental effects of climate change.

Principle 7: Responsible waste management

Principle 8: Efficient use of resources
Road Map and the Implementation of a Pilot Project on the African Eco-labelling Standards, as a Model for Testing "Trade-for-Sustainability"

1 Scope and purpose

1.1 Scope

This document provides guidance on the conformity assessment procedures complying with the EMA PR 05 and their application to the sustainability certification of capture fisheries in accordance with the African Ecolabelling Standard ARS/AES 2:2014.

1.2 Purpose

This guidance document applies to the procedures which Conformity Assessment Bodies (CABs) accredited in accordance with EMA PR 06 shall follow in conducting certification assessment and carrying out the certification on applicant fisheries.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

AEM PR 03:2013, Procedures for conflict resolution

EMA PR 05:2013, Procedures for conformity assessment

EMA PR 06:2013, Procedures for accreditation of certification bodies

ISO/IEC 17011, Conformity assessment — General requirements for accreditation bodies accrediting conformity assessment bodies

ISO/IEC 17000, Conformity assessment — Vocabulary and general principles

ISO 9000, Quality management systems — Fundamentals and vocabulary

ISO 9001, Quality management systems — Requirements

ISO 10002, Quality management — Customer satisfaction — Guidelines for complaints handling in organizations

ISO/PAS 17001, Conformity assessment — Impartiality — Principles and requirements

ISO/PAS 17002, Conformity assessment — Confidentiality — Principles and requirements

ISO/PAS 17003, Conformity assessment — Complaints and appeals — Principles and requirements

ISO/PAS 17004, Conformity assessment — Disclosure of information — Principles and requirements

ISO/PAS 17005, Conformity assessment — Use of management systems — Principles and requirements
ISO/IEC 17007, *Conformity assessment — Guidance for drafting normative documents suitable for use for conformity assessment*

ISO/IEC 17020, *Conformity assessment — Requirements for the operation of various types of bodies performing inspection*

ISO/IEC 17021, *Conformity assessment — Requirements for bodies providing audit and certification of management systems*

ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*

ISO/IEC 17030, *Conformity assessment — General requirements for third-party marks of conformity*

ISO/IEC 17065, *Conformity assessment — Requirements for bodies certifying products, processes and services*

ISO/IEC 17067, *Conformity assessment — Fundamentals of product certification and guidelines for product certification schemes*

ISO 19011, *Guidelines for auditing management systems*

3 Terms and Definitions

3.1 *fishing capacity*

for a given resource condition, the amount of fish (or fishing effort) that can be produced over a period of time (e.g. a year) by a vessel or a fleet if fully utilized—if effort and catch were not constrained by restrictive management measures (FAO, 2008).

3.2 *Ecologically Sustainable Development (ESD)*

using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased (CoA, 1992). The goal is to achieve development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. The core objectives are:

(i) To enhance individual and community well-being and welfare by following a path of economic development that safeguards the welfare of future generations;

(ii) To provide for equity within and between generations; and

(iii) To protect biological diversity and maintain essential ecological processes and life-support systems.

3.3 *fishery*

a unit determined by an authority or other entity that is engaged in raising and/or harvesting fish. Typically, the unit is defined in terms of some or all of the following: people involved, species or type of fish, area of water or seabed, method of fishing, class of boats and purpose of the activities (Fletcher et al., 2002:119-120).

3.4 *sustainable fishery*

a fishery that is consistent with ecologically sustainable development (i.e. a fishery that uses, conserves and enhances the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased) (Fletcher et al., 2002:119).
3.5 **discards**
that portion of the total catch which is thrown away or slipped. Discards may be comprised of single or multiple species and may be alive or dead. In the context of this guide discards refer to the throwing away or slipping of dead fish and fish that may not survive after live release (FAO, 2011a:5).

3.6 **endangered species**
a species in danger of extinction within the foreseeable future throughout all or a significant portion of its range (NOAA, 2006:12)

3.7 **fish stock; fish resource**
the living resources in the community or population from which catches are taken in a fishery. Use of the term fish stock usually implies that the particular population is more or less isolated from other stocks of the same species and hence self-sustaining. In a particular fishery, the fish stock may be one or several species of fish but here is also intended to include commercial invertebrates and plants (NOAA, 2006:15; FAO, 1997:71).

3.8 **bycatch**
fish other than the primary target species that are caught incidental to the harvest of the primary species. Bycatch may be retained or discarded. (NOAA, 2006)

NOTE A wide range of problems with bycatch have been recognized in specific fisheries and some examples include, *inter alia*, catching (FAO, 2011a:4): (i) species and sizes not specifically targeted in a fishery; (ii) species that are protected, endangered or threatened; (iii) juvenile fish; and (iv) organisms for which there is no intended use.

3.9 **catch**
1. To undertake any activity that results in taking fish out of its environment dead or alive. To bring fish on board a vessel dead or alive; 2. The total number (or weight) of fish caught by fishing operations. Catch should include all fish killed by the act of fishing, not just those landed; 3. The component of fish encountering fishing gear, which is retained by the gear (FAO et al., 1999).

NOTE The catch is usually expressed in terms of wet weight. It refers sometimes to the total amount caught, and sometimes only to the amount landed. The fish which are not landed, but returned to the sea, are called discards

![Figure 1: The various definitions of total catch, bycatch and retained catch (NMFS, 2011)](image)

3.10 **landed catch** or **retained catch**
that catch which is brought ashore, further sub-divided into target catch and incidental catch, bearing in mind the volume, value, the incidence of species caught and the nature of the fishing operations. The same species can move from one category to another depending on size, market demand, season or
other criteria; at the same time other species may be undesirable or of limited value (NMFS, 2011).

3.11 discards
living marine resources returned unprocessed to sea or elsewhere, including those released alive (NMFS, 2011)

3.12 total catch
that quantity of all species taken by the fishing gear and which reaches the deck of the fishing vessel

3.13 non-target species (bycatch; incidental catch)
Species not specifically targeted as a component of the catch but which may be incidentally captured (NOAA, 2006).

3.14 on-board observer; observer
a certified person on board fishing vessels who collects scientific and technical information on the fishing operations and the catch. Observer programs can be used for monitoring fishing operations (e.g. areas fished, fishing effort deployed, gear characteristics, catches and species caught, discards, collecting tag returns, etc.). Observers may or may not have legal coercion powers and, their data may or may not be used for non-scientific purposes (e.g. enforcement) depending on the situation (NOAA, 2006).

3.15 precautionary management; precautionary action
Involves the application of prudent foresight, taking account of the uncertainties in fisheries systems and the need to take action with incomplete knowledge. It requires, inter alia: (i) consideration of the needs of future generations and avoidance of changes that are not potentially reversible; (ii) prior identification of undesirable outcomes and of measures that will avoid them or correct them promptly; (iii) that any necessary corrective measures are initiated without delay, and that they should achieve their purpose promptly, on a timescale not exceeding two or three decades; (iv) that where the likely impact of resource use is uncertain, priority should be given to conserving the productive capacity of the resource; (v) that harvesting and processing capacity should be commensurate with estimated sustainable levels of resource, and that increases in capacity should be further contained when resource productivity is highly uncertain; (vi) all fishing activities must have prior management authorization and be subject to periodic review; (viii) an established legal and institutional framework for fishery management, within which management plans that implement the above points are instituted for each fishery, and (ix) appropriate placement of the burden of proof by adhering to the requirements above (FAO, 1996:6)

3.16 reference point
(1) A reference point indicates a particular state of a fishery indicator corresponding to a situation considered as desirable (target reference point) or undesirable and requiring immediate action (limit reference point and threshold reference point); (2) An estimated value derived from an agreed scientific procedure and/or model, which corresponds to a specific state of the resource and of the fishery, and that can be used as a guide for fisheries management. Reference points may be general (applicable to many stocks) or stock-specific; (3) Values of parameters (e.g. B_{MSY}, F_{MSY}, F_{0.1}) that are useful benchmarks for guiding management decisions. Biological reference points are typically limits that should not be exceeded with significant probability (e.g. MSST) or targets for management (e.g. OY) (NOAA, 2006).

3.17 target reference point
The value of an indicator that management aims to achieve (i.e., a socially desired ecosystem state, zone or point) based on management goals. A target expresses a goal in quantitative, measurable terms that
can be practically evaluated; e.g., if the goal is sustainable fisheries, the target is fishing mortality = natural mortality.

3.18 limit reference point
a value management aims to avoid. E.g., if the goal is sustainable fisheries, the limit might be a maximum fishing mortality or minimum fish biomass values.

3.19 baseline reference point
a value associated with “initial” conditions, which needs context-specific definition. E.g. pre-industrial level biomass.

3.20 resilience
the capacity of an ecosystem to absorb perturbations while retaining its essential structure, function and feedbacks (i.e., stay in the same state, not cross a threshold) (Suding et al., 2009; Folke et al., 2004). Capacity of a natural system (fisheries community or ecosystem) to recover from heavy disturbance such as intensive fishing (NOAA, 2006)

3.21 ESD Components for Fisheries

![Diagram of ESD Components for Fisheries](image)

Fletcher et al. (2002) have developed an ESD reporting framework which has eight major components, grouped within three main categories relevant to fisheries: (1) contributions to environmental well-being; (2) contributions to human well-being; and (3) ability to achieve:

(1) Contribution to Ecological Well-being

(i) Retained Species (those species that the fishery wants to capture and use): To manage the take of retained species within ecologically viable stock levels by avoiding overfishing and maintaining and optimizing long-term yields.

(ii) Non-Retained Species (those species caught or directly impacted by the fishery but not used): To manage the fishery in a manner that does not threaten biodiversity and habitat via the removal of non-retained species (including
protected species and ecological communities) and manage the take of non-retained species at ecologically-viable stock levels.

(iii) **General Ecosystem Impacts** *(this covers the potential indirect and more general environmental impacts the fishery may have):* To manage the impacts of fisheries such that only acceptable impacts occur to functional ecological relationships, habitat and processes.

(2) **Contribution to Human Well-being**

(i) **Indigenous Community Well-being** *(How does the fishery affect indigenous communities in the area where the fishery operates?):* To satisfy traditional (customary) fishing needs, cultural/economic development and sustainability of indigenous communities.

(ii) **Community Well-being** *(Are there local or regional communities that are dependent on the fishery, and whether they are supportive or negative about its operation?):* To contribute to community and regional well-being, lifestyle and cultural needs.

(iii) **National Well-being** *(How does the fishery contribute to national issues such as employment rates, supply of fish, economic returns, reductions in trade deficit etc?):* To contribute to national well-being, lifestyle and cultural needs.

(3) **Ability to Achieve**

(i) **Governance** *(Does the fishery have sufficient management processes and arrangements in place to enable the other elements to achieve an adequate level of performance?):* (a) To ensure that ESD principles are underpinned by legal, institutional, economic and policy frameworks capable of responding and taking appropriate peremptory and remedial actions. (b) To allocate the resource to maximise/optimise community benefits.

(ii) **Impacts of the Environment** *(Are there issues that may reduce or improve performance of the fishery that are outside of the direct control of the management agency/industry?):* To recognise the impacts of the environment on fisheries from both natural and non-fishery human induced sources and incorporate these within management responses.

3.22 retained species
There are two main groups of species on this tree (Fletcher et al., 2002:34):

![Generic component tree structure for ecological risk assessment](Zeller et al., 2006:13)
(1) **Primary species** – these species are often termed the target species. In general, these would need to be reported separately and in full in this assessment.

(2) **By-product species** – these are the species that are caught in relatively small quantities by the fishery but are still marketed. There are two main subcategories of by-product species:

(a) Mainly caught (greater than 90 per cent) by some other fishery. Given that the majority of information will probably be presented in the report of the other fishery, only a summary of how this fishery meets the overall objectives often needs to be presented;

(b) By-product species for which this fishery catches relatively minor amounts and no other fishery catches significant amounts.

Figure 4: Example of Retained Species in the Finfish Trawl Fishery (Zeller et al., 2006)
NOTE 1 While the term Primary Species is used in many texts to refer to the fish species targeted by a fishery, the Marine Stewardship Council (MSC) uses the term Primary Species to refer to other species of commercial value to the fishery under assessment but are not targeted for certification (MSC, 2014:417, 2015:102). The MSC further clarifies that the primary species must not be amphibians, birds, reptiles or mammals.

NOTE 2 MSC classifies the primary species into two categories: main primary and minor primary. A species shall be considered ‘main’ if (MSC, 2014:137-138):

(i) The catch of a species by the fishery under assessment comprises 5% or more by weight of the total catch of all species by the fishery under assessment comprises, or;

(ii) The species is classified as ‘Less resilient’ and the catch of the species by the fishery under assessment comprises 2% or more by weight of the total catch of all species by the fishery under assessment.

(iii) In cases where a species does not meet the designated weight thresholds of 5% or 2% the species can still be classified main if the total catch of the fishery under assessment is exceptionally large, such that even small catch proportions of a non-target species significantly impact the affected stocks/populations.

(iv) All other primary species not considered ‘main’ shall be considered ‘minor’ species.

3.23 secondary species
also called bycatch, include fish and shellfish species that are not managed according to reference points and birds/mammals/reptiles/amphibians (all species that are out of scope of the standard) that are not ETP species. These types of species could in some cases be landed intentionally to be used either as bait or as food for the crew or for other subsistence uses, but may also in some cases represent incidental catches that are undesired but somewhat unavoidable in the fishery. Given the often unmanaged status of these species, there are unlikely to be reference points for biomass or fishing mortality in place, as well as a general lack of data availability (MSC, 2014:417, 2015:146). Species are classified as secondary on the basis that:

(i) They are not the target of certification in the fishery.

(ii) They are not classified as primary species or ETP species.

(iii) They are subject to less management than primary species (though there may be some management tools and measures are in place, these are not explicitly linked to stock management objectives reflected in either limit or target reference points).

(iv) They may be within or outside of scope (i.e., could include birds, reptiles, amphibians, mammals, where these are not classified as ETP).

NOTE Secondary species are more likely to be of lesser commercial importance and therefore less directly targeted — although there may be exceptions to this (i.e. commercially important and targeted species which are not subject to clear management connected to reference points). As such they may well include species which are rarely landed. However, the impact of overall fishing mortality, taking account of any mortality not reflected in landing statistics, must be considered.

4 Process Requirements

4.1 Confidential information in fishery assessments

4.1.1 Conformity assessment bodies set limits to the information which can be considered as confidential to include at most (a) financial transactions about certification; (b) The financial affairs of individual companies or information that may lead to this information being made public; and (c) Information that is the subject of relevant national privacy or data protection legislation in the client’s country.

4.1.2 Information considered confidential shall be of a nature that should not affect the certification assessment outcome and hence not to be referenced in the assessment.
4.2 Access to information

Stakeholders shall have the opportunity to access publicly available information including unpublished key information to be able to understand the basis used in scoring various performance indicators. Such information shall be available at the public review stage and throughout the subsequent stages of the assessment process until such time as a certification decision is made. Unpublished information does not include peer-reviewed or grey literature.

4.3 Pre-assessment

4.3.1 The pre-assessment is an optional step in the certification of a fishery.

4.3.2 Pre-assessments shall form part of the fisheries improvement projects where CABs are planning for a full assessment necessitating the informing of the client of the likelihood of achieving certification and enabling client planning for the full assessment.

4.3.3 The basis for pre-assessment shall be in conformity with ISO/IEC 17065.

4.3.4 The following activities may form part of the pre-assessment:

1. A meeting with the client.
2. Decisions on potential field site visits, if required.
3. An assessment of the extent to which the fishery is consistent with certification requirements of ARS/AES 2:2014.
5. A review of the availability of data.
6. Defining the options for the scope of the full assessment.
7. Describing potential obstacles or problems that may be a barrier to certification.
8. Any actions known to be needed prior to a full assessment, or issues that may be a barrier to certification.
9. Communications that may need to take place with management agencies, environment groups, post-harvest sectors, relevant commercial and non-commercial fishing groups to explain the assessment process and the implications (including costs and benefits) of certification.

4.4 Application review

The provisions of ISO/IEC 17065 and EMA PR 05 shall apply.

4.5 Assessment timelines

The process from application to the certification shall take not more than 12 months. If the period from the full assessment announcement to the receipt of the final report is more than 18 months, the CAB shall withdraw the fishery from the assessment process.
4.6  Confirmation of scope

4.6.1  The fishery is eligible for certification through the following determinations:

4.6.1.1  The fishery shall not target: (a) amphibians; (b) reptiles; (c) birds; and (d) mammals.

4.6.1.2  The fishery shall not use poisons or explosives.

4.6.1.3  The fishery shall not be conducted under a controversial unilateral exemption to an international agreement.

NOTE 1  CABs shall use these definitions to interpret this criterion:

(i)  Controversial means creating a controversy in the wider international community rather than simply between two states.

(ii)  Unilateral means arising from the action of a single state.

(iii)  Exemption means a refusal to join or abide by the rules of an international management body, or the taking of a reservation or exception to a measure adopted by such body, when in either such case the effect is to undermine the sustainable management of the fishery.

(iv)  International agreements are those with a direct mandate for sustainable management of the resources affected by the fishery.

NOTE 2  When verifying fishery conformity with this criterion, CABs shall take into consideration:

(i)  The relationship between international and coastal state jurisdictions recognised by relevant international agreements.

(ii)  Whether exemptions result in the implementation of a higher or lower level of conservation than are currently agreed by an international management body.

(iii)  In all cases, the important point is whether the sustainable management of the fishery is undermined.

4.6.1.4  The prospective fishery shall not include an entity that has been successfully prosecuted for a forced labour violation in the last 2 years.

4.6.2  A fishery shall not be eligible for certification if there is no mechanism for resolving disputes, or if the disputes overwhelm the fishery.

4.6.3  Enhanced fisheries

4.6.3.1  An enhanced fishery shall only be eligible for assessment if it conforms to all of the scope criteria.

(1)  Linkages to and maintenance of a wild stock

(i)  At some point in the production process, the system relies upon the capture of fish from the wild environment. Such fish may be taken at any stage of the life cycle including eggs, larvae, juveniles or adults. The ‘wild environment’ in this context includes marine, freshwater and any other aquatic ecosystems.

(ii)  The species are native to the geographic region of the fishery and the natural production areas from which the fishery’s catch originates.

(iii)  There are natural reproductive components of the stock from which the fishery’s catch originates that maintain themselves without having to be restocked every year.

(iv)  Where fish stocking is used in hatch-and-catch (HAC) systems, such stocking does not form a major part of a current rebuilding plan for depleted stocks. This requirement shall apply to the “current” status of the fishery. Wild stocks shall be managed by other
conventional means. If rebuilding has been done by stocking in the past, it shall not result in an out-of-scope determination as long as other measures are now in place.

(2) Feeding and Husbandry

(i) The production system operates without substantial augmentation of food supply. In HAC systems, any feeding is used only to grow the animals to a small size prior to release (not more than 10% of the average adult maximum weight), such that most of the total growth (not less than 90%) is achieved during the wild phase. In catch-and-grow (CAG) systems, feeding during the captive phase is only by natural means (e.g., filter feeding in mussels), or at a level and duration that provide only for the maintenance of condition (e.g., crustacean in holding tanks) rather than to achieve growth.

(ii) In CAG systems, production during the captive phase does not routinely require disease prevention involving chemicals or compounds with medicinal prophylactic properties.

(3) Habitat and ecosystem impacts

Any modifications to the habitat of the stock are reversible and do not cause serious or irreversible harm to the natural ecosystem’s structure and function.

4.6.4 A fishery on introduced species shall be eligible for certification if it fulfils the following criteria:

(1) Irreversibility of the introduction in the new location

(i) The introduced species has a large population size (comparable to or larger than the population sizes of other native species occupying similar ecological niches in the new location).

(ii) The species has spread to a range beyond that of its initial introduction in the new location.

(iii) There is evidence to demonstrate that the species cannot be eradicated from the location by known mechanisms without serious ecological, economic and/or social consequences.

(2) History of the introduction

(i) The species was introduced to the new location prior to 1993; this being the year that the Convention on Biological Diversity (CBD), which includes provisions on introduced species was ratified.

(ii) If the introduction occurred after the CBD was ratified such fisheries shall only potentially be in scope if the introduction was non-deliberate and occurred at least 20 years prior to the date the application is made for certification.

(3) No further introductions

There is no continuing introduction of the introduced species being considered for certification.

4.6.5 Unit of assessment and unit of certification

(1) The CAB shall confirm the proposed unit of assessment (UoA) (i.e., what is to be assessed) to include:

(i) The target stock(s),
(ii) The fishing method or gear type/s, vessel type/s and/or practices, and

(iii) The fishing fleets or groups of vessels, or individual fishing operators pursuing that stock, including any other eligible fishers that are outside the unit of certification.

(2) The CAB shall confirm the proposed unit of certification (UoC) (i.e., what is to be covered by the certificate) to include:

(i) The target stock(s),

(ii) The fishing method or gear type/s, vessel type/s and/or practices, and

(iii) The fishing fleets or groups of vessels or individual fishing operators pursuing that stock including those client group members initially intended to be covered by the certificate.

4.6.6 The CAB shall undertake an initial review of key traceability factors and shall document whether any of the following risks are applicable:

(a) The possibility of non-certified gears being used within the UoC.

(b) The possibility of vessels from the UoC fishing outside the unit of certification or in different geographical areas (on the same trips or different trips).

(c) The possibility of vessels from outside the UoC or client group fishing the same stock.

(d) Any other risks of substitution between fish from the UoC and fish from outside this unit.

4.6.7 The CAB shall notify the fishery of its obligations to meet traceability requirements before it sells product as certified or under-assessment including that:

(a) Systems are in place to ensure that fish and fish products from the UoC are traceable back to the UoC.

(b) Systems are in place to ensure that fish and fish products from the UoC shall be segregated from any products not included in the UoC.

4.6.8 The CAB shall identify if there are other eligible fishers or other entities that may share the certificate as new client group members. If there are other eligible fishers or other potential client group members within the UoA, the CAB shall require the client to:

(a) Prepare and publish a statement of their understanding and willingness for reasonable certificate sharing arrangements.

(b) Inform other eligible fishers and/or other entities of the public statement and of the opportunity to share the certificate during relevant interactions with the eligible fishers and other entities as is practicable.

4.6.9 Inseparable or practicably inseparable (IPI) catches

The CAB shall identify if there are catches of non-target stock(s) that are inseparable or practicably inseparable (IPI) from target stock(s). The CAB shall only recognise stock(s) as being an IPI stock, where the inseparability arises because either:

(a) The non-target catch is practicably indistinguishable during normal fishing operations (i.e., the catch is from a stock of the same species or a closely related species); or
(b) When distinguishable, it is not commercially feasible to separate due to the practical operation of the fishery that would require significant modification to existing harvesting and processing methods.

and:

(c) The total combined proportion of catches from the IPI stock(s) do not exceed 15% by weight of the total combined catches of target and IPI stock(s) for the UoA;

(d) The stocks are not ETP species; and

(e) The stocks are not certified separately.

4.6.10 Overlapping fisheries

The CAB shall determine if the assessment of the applicant fishery will result in an assessment of overlapping fisheries.

4.7 Team selection

The selection of the fisheries assessment team shall be in accordance with the requirements of ISO/IEC 17065 and EMA PR 05. Additional specific requirements are provided in Annex A.

4.8 Determination of eligibility dates

4.8.1 The CAB shall nominate a date from which product from a certified fishery is eligible to be sold as certified or bear the EMA label (the eligibility date). This shall be either:

(i) The date of the certification of the fishery; or

(ii) The publication date of the first Public Comment Draft Report.

4.8.2 If the eligibility date is set before the certification date, the CAB shall inform the fishery that any fish harvested after the eligibility date and sold or stored as under-assessment fish shall be handled in conformity with relevant under-assessment product requirements.

4.9 Site visit

The team shall carry out the on-site assessment as planned. The team shall conduct stakeholder interviews to make sure that the team is aware of any concerns or information that stakeholders may have.

4.10 Scoring the fishery

After the team has compiled and analysed all relevant information (including technical, written and anecdotal sources), they shall score the UoA against the Performance Indicator Scoring Guideposts (PISGs) in the final tree. The team shall:

(i) Discuss evidence together.

(ii) Weigh up the balance of evidence.

(iii) Use their judgement to agree a final score following the processes below.

4.11 Traceability systems and chain of custody entry point(s)

4.11.1 The CAB shall determine if the systems of tracking and tracing in the UoA are sufficient to ensure all fish and fish products identified and sold as certified by the UoA originate from the appropriate Unit of Certification (UoC).
4.11.2 Appropriate records shall be maintained that demonstrate the traceability of certified fish or fish products back to the UoC.

4.11.3 The CAB shall determine and document the scope of the fishery certificate, including the parties and categories of parties eligible to use the certificate and the point(s) at which chain of custody is needed.

(a) Chain of custody certification shall always be required following a change of ownership of the product to any party not covered by the fishery certificate.

(b) Chain of custody certification may be required at an earlier stage than change of ownership if the team determines that the systems within the fishery are not sufficient to make sure all fish and fish products identified as such by the fishery originate from the UoC.

4.12 Preliminary Draft Report for client review

4.12.1 Upon initial assessment, the CAB shall issue a preliminary draft report to the client. The CAB shall give the client an opportunity to question the team and have an issue re-examined if the client has a concern that insufficient information is available to support the team’s decisions or that a decision has been made in error.

4.12.2 The CAB shall require clients to provide objective evidence in support of any additional claims or any claimed errors of fact.

4.12.3 The team does not have to accept client requests for changes in the report, but shall provide justifications for whatever responses are made to client comments.

4.12.4 A period of up to 30 days shall be made available after receipt of the draft report for the client to consider the report and respond to it.

4.12.5 Following client comments and changes (if any) the team may or may not revise the Preliminary Draft Report to become the Peer Review Draft Report.

4.12.6 Any comments made by the client and the team shall be documented and retained by the CAB and shall be available upon request to any party.

4.13 Peer review and Peer Review Draft Report

4.13.1 The CAB shall arrange a review of the Peer Review Draft Report by a group of appointed experts selected from the ARSO database.

4.13.2 The CAB shall send the appointed experts a copy of the announcement of the fishery entering assessment, the Notification Report and an assessment timeline which shall specify a projected timeframe for the peer review process.

4.13.3 The CAB shall confirm the names of peer reviewers and details of their qualifications and competencies in consideration of required competencies for the peer review and disclosure of conflict of interest.

4.13.4 The CAB shall confirm the anticipated date that the Peer Review Draft Report will become available.

4.13.5 The number of peer reviewers shall normally be two taking into account the possibility of being less or more than two pertinent on scale of the fishery’s operations.
4.13.6 Upon receipt of the peer reviewers’ written comments, the team shall:

4.13.6.1 Explicitly address all the issues raised changing any part of the scoring, conditions and report as the team sees necessary.

4.13.6.2 Incorporate peer reviewer comments, team responses to those comments and any appropriate changes into the peer review draft report to create the Public Comment Draft Report.

4.13.6.3 Amend any conditions as required, and ensure the fishery client amends the client action plan, as required.

4.14 Public Comment Draft Report

4.14.1 The Public Comment Draft Report (PCDR) shall include:

(a) The scores and weightings;
(b) The draft determination on whether or not the applicant will be recommended for certification;
(c) The eligibility date;
(d) The surveillance programme;
(e) Any conditions, and
(f) The client action plan for any conditions.

4.14.2 Any references used to support statements in the evaluation tables of the reports shall be included in the ‘References’ section of the table and an in-text reference (e.g., number or author, date) made to the relevant source.

4.14.3 The CAB shall make the Public Comment Draft Report available for comment by stakeholders and peer reviewers for a period of at least 30 days. Stakeholders and peer reviewers shall be informed that they are to provide objective evidence in support of any additional claims or any claimed errors of fact.

4.15 Determination and final report

4.15.1 The team shall consider the changes made to the PCDR under 4.12 and shall confirm or amend the draft determination.

4.15.2 The CAB shall actively notify stakeholders involved in the fishery’s certification assessment process of the existence of the final report.

4.16 Objections procedure

4.16.1 An objection may be lodged with the ARSO/AEM advisory board during a period of 15 working days from the posting of the Final Report and Determination on the ARSO website.

4.16.2 The advisory board shall use the procedures provided in AEM PR 03 to resolve any objections raised in respect of certification decisions.

4.17 Public Certification Report

4.17.1 At the end of the full assessment process the CAB shall finalise a Public Certification Report in accordance with this section that shall incorporate the Final Report and, if relevant, any written decisions arising from the Objections Procedure. The Public Certification Report shall be released to the public identifying an intention to certify or fail the fishery.
4.17.2 If other eligible fishers are identified in the unit of assessment (UoA), the CAB shall make sure that, immediately following the release of the Public Certification Report, a statement describing the certificate sharing mechanism is submitted for public posting on the ARSO website.

4.17.4 The CAB shall determine which entities should or should not be allowed to use the fishery certificate they have issued. Only fish caught by those fishers that are identified by reference to or on a valid fishery certificate by the CAB shall be eligible for chain of custody certification and subsequent use of the EMA ecolabel.

4.17.6 The CAB shall define entities in this case to include any processing companies or producer organisations or other bodies that the client wishes to make the certificate available to, at the exclusion of other non-client group members.

4.17.7 The CAB shall provide a statement for ARSO to post on its website defining:

(a) Which parties (vessels, fleets and/or any other client group members, including named companies) are currently eligible to access the certificate;

(b) Which other eligible fishers, if such exist, may be able to access the certificate through the mechanism of certificate sharing; and

(c) Which points of landing or other transfer may be used for the sale of fish from the certified fishery into further chains of custody.

4.18 Certification decision and certificate issue

4.18.1 If the CAB makes a decision to award certification, the award of the certificate shall take place only after the Public Certification Report has been posted on the ARSO website.

4.18.2 CABs shall submit to ARSO a copy of each fishery certificate issued, for posting on its website, within 10 days from the date it is issued.

4.18.3 CABs shall make sure that when changes to the information contained on a fishery certificate are made that they provide the updated copy of the fishery certificate to ARSO for posting on its website within 10 days of changes occurring.

4.19 Fisheries that fail or withdraw from assessment

4.19.1 In circumstances where the fishery client and CAB make the decision not to proceed with the assessment, the fishery can be withdrawn from assessment at any time and will be removed from the ARSO website.

4.19.2 Where the CAB makes a decision not to award certification and fail the fishery, the Public Certification Report released to the public:

4.19.2.1 Shall not specify any mandatory conditions or defined actions that would need to be undertaken before the fishery could be reconsidered for certification in the future.

4.19.2.2 Shall outline draft and non-binding conditions for any PIs that score more than 55 % but less than 75 %.

4.19.2.3 Shall clearly specify that the conditions outlined are non-binding and serve to provide an indication of the actions that may have been required should the fishery have been certified.

4.19.4 The reports shall also:

4.19.4.1 Specify that the fishery has re-entered full assessment.

4.19.4.2 Summarise the details of the initial assessment, including:

(a) The results of the original assessment.

(b) The date of the original determination not to certify.

4.19.4.3 Identify those performance indicators for which scoring and/or the rationale for scoring has changed from the original assessment.

4.20 Extension of scope of fishery certificate (Expedited Assessment)

4.20.1 An existing fishery certificate may be extended to include another fishery within its scope providing:

4.20.1.1 The target species of the new proposed UoA was previously assessed under the existing fishery certificate.

4.20.1.3 The fisheries are in close geographical proximity.

4.20.2 The request for an expedited assessment, for the purpose of extending a fishery certificate can only be made by a holder of a valid EMA fishery certificate.

4.20.3 The CAB shall identify the assessment components in the new proposed UoA and carry out a gap analysis to confirm which assessment components are the same as for the certified fishery.

4.20.4 The duration of the extended certificate (if the assessment results in certification) shall only be as long as the initial certificate.

4.20.5 If the certificate has other eligible fishers and/or a certificate sharing mechanism the CAB shall, within 30 days of receiving a request to share the certificate, facilitate the client’s and other eligible fishers’ engagement in good faith efforts to enter into a certificate sharing agreement.

4.20.6 If the membership of the client group or the unit of certification changes at any point during a certification period (e.g., due to a new certificate sharing agreement), the CAB shall, within 10 days, provide an update to the ARSO website.

4.21 Surveillance

4.21.1 During each full assessment, surveillance and re-certification assessment, the team, with input from the client shall determine the level at which subsequent surveillance of the fishery shall be undertaken.

4.21.2 Surveillance audits shall take place according to the default surveillance level described in Table 1, unless the team decides on a reduced surveillance programme (see section 4.21.4).
<table>
<thead>
<tr>
<th>Surveillance level</th>
<th>Surveillance requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 6 Default Surveillance</td>
<td>4 on-site surveillance audits</td>
</tr>
<tr>
<td>Level 5</td>
<td>3 on-site surveillance audits</td>
</tr>
<tr>
<td></td>
<td>1 off-site surveillance audit</td>
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<tr>
<td>Level 4</td>
<td>2 on-site surveillance audits</td>
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<td></td>
<td>2 off-site surveillance audits</td>
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<tr>
<td>Level 3</td>
<td>1 on-site surveillance audits</td>
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<tr>
<td></td>
<td>3 off-site surveillance audits</td>
</tr>
<tr>
<td>Level 2</td>
<td>1 on-site surveillance audits</td>
</tr>
<tr>
<td></td>
<td>2 off-site surveillance audits</td>
</tr>
<tr>
<td></td>
<td>1 review of information</td>
</tr>
<tr>
<td>Level 1 Minimum Surveillance</td>
<td>1 on-site surveillance audit</td>
</tr>
<tr>
<td></td>
<td>1 off-site surveillance audit</td>
</tr>
<tr>
<td></td>
<td>2 review of information</td>
</tr>
</tbody>
</table>

4.21.3 The following types of surveillance audits are available based on the characteristics of the fishery:

4.21.3.1 On-site audit – The audit involves face to face engagement with the client, conducting stakeholder interviews and review of changes in management and science in the fishery.

4.21.3.2 Off-site audit – The audit involves engagement with the client, conducting stakeholder interviews and review of changes in management and science in the fishery and is undertaken by the auditors from a remote location.

4.21.3.3 Review of information – The audit involves seeking the views of the client and identifying if there are any issues requiring further investigation. The audit is undertaken from a remote location. The CAB publishes a statement of review of information.

4.21.4 The CAB shall determine whether the fishery is eligible for a reduction of surveillance levels and the number of team members dependent upon the number of conditions outstanding and the ability of the CAB to verify information and progress against the conditions remotely.

4.21.4.1 In the initial certification period the number of auditors for surveillance activities shall be at least 2. The on-site audit may be undertaken by a minimum of 1 auditor who is supported by the rest of the assessment team from a remote location.

4.21.4.2 In the second and subsequent certification periods a reduced team of 1 auditor may be used if the fishery has conditions associated with only one Principle, or no conditions.

4.21.4.3 The surveillance level for the fishery shall be determined on the basis of the confidence of the CAB in its ability to verify information, and progress towards meeting conditions, remotely. Surveillance level 1 may only be chosen if, following an assessment or surveillance audit, the fishery has no outstanding conditions.

4.21.5 Where a reduced surveillance level is adopted the team shall provide a rationale of how the fishery meets the criteria in 4.21.4.
4.21.6 Surveillance audit timing

Surveillance audits shall be undertaken by the anniversary date of the certificate unless the following applies:

4.21.6.1 CABs may elect to undertake surveillance audits up to 6 months earlier or later than the anniversary date, where this deviation is appropriate given the circumstances of the fishery.

4.21.6.2 The reasons for deviating from the anniversary date shall be detailed as part of the surveillance programme.

4.21.7 There shall be 4 surveillance audits before the fifth anniversary of the existing certificate.

Surveillance programme

4.21.8 The team shall agree a surveillance programme for the duration of the certificate with the client, based on 4.21.1 to 4.21.7.

4.21.9 The surveillance programme shall be published in the Public Comment Draft Report.

4.21.9.1 The team shall review the proposed surveillance programme for the Final Report and Public Certification Report to take account of any changes to the assessment.

4.21.10 The surveillance programme may be amended following a surveillance audit, and if so shall be published in the surveillance report.

4.21.11 Preparing the surveillance audit

The CAB shall plan each surveillance audit, including:

4.21.11.1 During initial surveillance cycle, the CAB shall appoint a team of 2 or more auditors to conduct the surveillance audit.

(a) The team shall comprise a team leader and a minimum of one additional team member who together meet at least three of the Fishery Team qualifications and competency requirements specified in Table PC3.

4.21.11.2 During second or subsequent surveillance cycles, the CAB shall appoint one or more auditors to conduct the surveillance audit following the requirements of 4.21.4.2.

(a) If two or more auditors are appointed as the assessment team, the requirements set out 4.21.11.1.a shall apply

(b) If a single auditor is appointed in accordance with 4.21.11.2 the auditor shall meet the appropriate requirements in Annex A.

4.21.11.3 CABs shall ensure that the auditing team has local knowledge of the fishery.

4.21.11.4 CABs shall use the “Surveillance Announcement Template” to notify stakeholders and ARSO of the:

(a) Time and dates of the surveillance activities;

(b) Location the surveillance activities will be carried out;

(c) What will be assessed/reviewed during the audit; and
(d) The relevant skills and expertise of auditors carrying out the surveillance audit.

4.21.11.5 CABs shall submit this information for posting on the ARSO website at least 30 days before the audit activities are carried out.

4.21.12 Surveillance audit activities

During each on-site and off-site surveillance audit, the CAB shall:

4.21.12.1 Actively seek the views of the client about:

(a) Changes to the fishery and its management;
(b) Performance in relation to any relevant conditions of certification;
(c) Any developments or changes within the fishery which impact traceability and the ability to segregate certified from non-certified products; and
(d) Any other significant changes in the fishery.

4.21.12.2 Hold stakeholder interviews and actively seek the views of stakeholders to ensure that the team is aware of any concerns of stakeholders. Where stakeholders do not wish to be interviewed they shall be informed that they may submit written information to the team.

4.21.12.3 Review the following:

(a) Any potential or actual changes in management systems.
(b) Any changes or additions/deletions to regulations.
(c) Any personnel changes in science, management or industry and their impact on the management of the fishery.
(d) Any potential changes to the scientific base of information, including stock assessments.
(e) Any changes affecting traceability

4.21.12.4 Where the information base for PI scores has changed the CAB shall report and record what has changed in the information base.

4.21.13 At each on-site or off-site surveillance audit the team shall evaluate progress against conditions.

4.21.13.1 The team shall audit conformity with, and progress and performance against, certification conditions.

(a) The CAB shall document conformity with, and progress and performance against, certification conditions using the narrative or metric form of the original condition.

(b) The CAB shall document whether progress is ‘on target’, ‘ahead of target’ or ‘behind target’, as well as its rationale for such a judgement. If progress against the measurable outcomes, expected results or (interim) milestones specified when setting the condition is judged to be behind target, the CAB shall specify the remedial action, and any revised milestones, that are required to bring process back on track within 12 months to achieve the original condition by the original deadline.
To verify that conditions have been met and outcomes have been achieved, the CAB shall examine relevant objective evidence.

4.21.13.2 In the event that the CAB determines that progress against a condition is not back ‘on target’ within 12 months of falling ‘behind target’, the CAB shall:

(a) Consider progress as inadequate.

(b) Apply the requirements of suspension or withdrawal.

4.21.13.3 In the event that the requirements of any condition are changed, the CAB shall provide written justification for this in the Surveillance Report.

4.21.14 In the event that the CAB determines that the information required to carry out an off-site surveillance audit or a review of information has not been provided or is unavailable the CAB shall conduct an on-site audit.

4.21.15 The CAB shall send the surveillance report to the client along with any requests or conditions that may arise from surveillance activities and a client action plan in case of new conditions.

4.21.16 The Surveillance Report shall be forwarded to ARSO within 60 days of completing the audit, for publication on the ARSO website.

4.21.17 The CAB shall include all written submissions made by stakeholders during the annual surveillance audit process in full in a separate section or appendix to the annual surveillance report together with explicit responses of the team that identify what changes to scoring, rationales or conditions have been made and, where no changes were made, justifies that action.

4.21.18 At the time of submission of each surveillance report, the CAB shall add catch figures for the UoC share of the catch for the most recent fishing year into ARSO database for each UoC.

4.21.22 Expedited audit

The CAB shall undertake an “expedited audit”, including as it determines necessary review of documents and an on-site audit if:

4.21.22.1 The CAB becomes aware of major changes in relation to the circumstances of the fishery, or of significant new information that may cause a major change.

(a) A ‘major change’ is one that is likely to be material to the certification status. A change in scope, a PI score falling below 55 or outcome PI score falling below 75, or a change that could bring about a Principle Level aggregate score to drop below 75, shall be considered material to the certification status.

(b) To avoid unnecessary expedited audits, CABs shall ensure that an expedited audit is only triggered when the information available supports the conclusion that an actual material change has taken place in the status or management of the fishery.

(c) Significant new information becomes available in relation to the circumstances of the fishery including during the period between the original assessment and the issue of a certificate which is likely to be material to the certification status.

4.21.22.2 An expedited audit can be a review of information, off-site audit or on-site audit, based on what the CAB determines necessary.
4.22 Re-assessment

4.22.1 The CAB should commence the re-assessment of a certified fishery by the fourth anniversary of the existing certificate. Exact timing and planning of the re-assessment shall remain the responsibility of the CAB, in consultation with the client.

4.22.2 Full re-assessment activities

When conducting a re-assessment of a certified fishery, the CAB shall:

4.22.2.1 Apply all of the steps of the ARSO Certification Requirements in force at the time of the re-assessment.

4.22.2.2 Take into account all surveillance reports, outcomes, and evaluate progress against certification conditions.

4.22.2.3 Maintain records of its consideration of the issues above, as well as any rationale for decisions made relating to these issues.

4.22.3 Reduced re-assessment activities

A fishery is eligible for reduced reassessment if:

(a) The fishery was covered under the previous certification or scope extension;

(b) The fishery had no conditions remaining after the 3rd surveillance audit, and

(c) The CAB confirms that all standard related stakeholder comments have been addressed by the 3rd surveillance audit.

4.22.4 If the fishery is eligible for reduced re-assessment, the CAB shall provide a detailed explanation of how the reduced re-assessment criteria are satisfied at the time of announcing the re-assessment.

4.22.5 A reduced re-assessment shall follow the full reassessment requirements except that:

(a) The CAB may undertake the assessment with one assessment team member onsite and other team member(s) working from a remote location.

(b) Only one peer reviewer is required to review the re-assessment peer review report.

4.23 Management System Requirements for CABs

The CAB shall conduct and document a review of each fishery assessment completed to identify any corrective or preventive actions that would contribute to continual improvement.

5 General requirements

5.1 Responsibility

An economic operator shall be responsible for only its own operations in applying this standard. Its own operations are defined as the sum of activities conducted by the economic operator throughout the supply chain, including those contracted activities conducted by its subcontractors.
Auditor Question
(1) Does the fishery operation have a defined sphere of responsibility with respect to its own operations?

(a) There is a clear and high level organization of documentation of the scope of responsibilities of the fishery's operations and detailed activities (≥ 90 %).

(b) The fishery operation keeps records of its operational responsibilities and has an operation licence (≥ 75 %).

(c) The fishery operation indicates responsibility via a license (≥ 65 %)

(d) The fishery operation indicates understanding of its operational responsibilities through group self-regulation and/or customary obligations (≥ 55 %)

5.2 Transparency

The data, information sources and assumptions used shall be clearly supported.

Auditor Question
(2) Are the sources of data, information and assumptions on allowable catch levels credible and transparent?

(a) The fishery operation uses researched and official government data and information to forecast its catch levels (≥ 90 %).

(b) The fishery operation relies on quotas assigned through licensing (≥ 75 %).

(c) The fishery operation uses local knowledge and group self-regulation to determine catch levels (≥ 65 %).

(d) The fishery operation uses its limitation of effort as a measure of determining the catch levels (≥ 55 %).

5.3 Legality

The economic operator shall be in compliance with all applicable laws and regulations having direct relevance to the principles, criteria and indicators presented in this standard. An economic operator may document instances where it is prohibited from complying with this standard as a consequence of a conflicting applicable law or regulation.

Auditor Question
(3) Does the fisheries operation operate within the legal framework of the host country?

(a) Fully compliant directly or through cooperative licensing (≥ 90 %)

(b) Operates through sub-licensing through other entities on sub-contracted basis (≥ 75 %).

(c) Operates through ad hoc or temporary licensing (≥ 65 %).

(d) Operates on proximate basis as part of host community entitled to livelihood extraction (≥ 55 %).
5.4 Science-based approach

Any data collected or used in the application of this standard, as well as justifications, presentations, commentary, or interpretation of results associated with the use of this standard, shall be based on science.

Audit Question
(4) To what extent are fishery's operations informed by the best scientific evidence available?

(a) The fishery operation demonstrates high level of adoption of state of art scientific knowledge in its operations (≥90 %).

(b) Fishery operation utilizes consultancy services to adopt latest scientific practices (≥75 %).

(c) The fishery operation depends on cooperative experts to build capacity for scientific updates repackaged in locally relevant understanding (≥65 %).

(d) The fishery gets updates on scientific information from extension services with noticeable lags (≥55 %).

5.5 Human rights

This standard strives to ensure that the actions of the economic operators and their subcontractors respect the human rights of all citizenry, especially those of local stakeholders. The economic operators shall respect universally recognized human rights.

Audit Question
(5) Does the fishery have a compliance scheme for human rights?

(a) The fishery demonstrates compliance with the relevant provisions of the Universal Declaration of Human Rights; International Bill of Human Rights; international, regional and national conventions governing human rights and has a clearly stipulated human rights policy (≥90 %).

(b) The fishery complies with human rights within the national legislative framework and is in progress of compliance with international instruments (≥75 %).

(c) The fishery is in general compliance with human rights as per the management with no counter claims from staff (≥65 %).

(d) There is recognition of the need to uphold human rights but the formal declaration, identification of the respective instruments and specific laws is not clear in the fishery (≥55 %).

5.6 Working conditions

The economic operator shall respect labour rights and provide safe and healthy working conditions, including providing tools, equipment and training that address the risk of workplace hazards.

Audit Question
(6) Are the fishery workers fully appraised about the working conditions in their respective posts?

(a) The workers in the fishery are provided with documented information that is clear and understandable, regarding their rights under national labour and employment law and any applicable collective agreements, including their rights related to hours of work, wages, overtime arrangements and overtime compensation; breaks; rest days; and leave for illness, maternity, vacation or holiday and benefits upon beginning the working relationship and when any material changes occur (≥90 %).
(b) There is a formal briefing of the workers on their rights and entitlements outlined in the staff regulations manual (≥75 %).

(c) Employees have appointment letters which spell out their duties and responsibilities (≥65 %).

(d) The personnel manager offers explanations and instructions and determines the duties and responsibilities of the workers as the need arises (≥55 %).

6 Principles, criteria and indicators

6.1 Governance and policy

Principle 1: Legal compliance

6.1.1 Legal compliance

Criterion: The operator shall comply with all applicable laws and regulations

Indicator:

6.1.1.1 The operator shall demonstrate the presence of valid applicable licences and other legal requirements. The operator shall have a mechanism for ensuring that all applicable laws and regulations are implemented and appropriately scaled system for tracking any changes in the law.

Audit Question

Does the legal framework include all tiers of jurisdiction required to deliver management outcomes? Is the national management authority party to effective international cooperation as required? Does the framework for cooperation include all relevant aspects of science, data collection, management rules and control and enforcement? Is there appropriate engagement at the level of RFMO? Are the rules that govern the fishery applicable to all vessels and to all areas where the species are targeted? Do national legislation and implemented rules of operation comply with international agreements? Are all relevant international instruments ratified and implemented and can this be demonstrated? Are there traditional or informal practices and rules that are consistent with ensuring cooperation?

(7) Within the area of operation, can the fishery identify if there is established an effective legal and administrative framework at the local and national level, as appropriate, for fishery resource conservation and management?

(a) There is an effective national legal system and binding procedures governing cooperation with other parties which delivers management outcomes consistent with the principles of this standard. (≥90 %).

(b) There is an effective national legal system and organized and effective cooperation with other parties, where necessary, to deliver management outcomes consistent with the principles of this standard. (≥75 %).

(c) There is an effective national legal system and a framework for cooperation with other parties, where necessary, to deliver management outcomes consistent with the principles of this standard. (≥65 %).

(d) The fishery operation has made effort to identify the status of the legal and administrative framework but is prepared to apply the best international practices outlined in international voluntary or obligatory instruments to supplement national deficit. (≥55 %).

NOTE The first scoring issue seeks to ensure that all the necessary legal frameworks required for effective management are in place. Fisheries that perform well under this PI have an effective national legal system. Where stocks are shared there is
international cooperation or national cooperation between regional and national entities that is shown to be organized and effective and unequivocally binding. Such cooperation would generally involve collection and sharing of data, assessment of status of stocks and development of scientific advice.

Audit Question

(8) Can the fishery demonstrate compliance with legal requirements for its operations?

(a) The fishery management knows and complies with the applicable laws (international, regional, national and local), anti-IUU rules and all applicable licenses, permits, tax returns and other legal requirements are valid (≥90 %).

(b) The fishery operates within the nationally recognized legal framework and instruments but is aware that there are additional legal requirements it is not complying with due to the low state capacity to enforce them (≥75 %).

(c) The fishery depends on the government authorities to be corrected whenever they fail to comply and there is documentation to this effect (≥65 %).

(d) The fishery presumes to operate legally on account of being licensed to do so. (≥55 %).

Audit Question

Are informal or traditional mechanisms for dispute resolutions in place? Are dispute resolution mechanisms appropriate to address all disputes that may be likely to occur? Are all parties signed up to the dispute resolution mechanisms, such that the outcome of any process would be binding (i.e. considered effective)? Are there examples of disputes being resolved through this process? Is the process transparent? For example, is it possible to review past findings in previous disputes?

Are dispute resolution mechanisms in place at all relevant jurisdictions?

(a) The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective. (≥90 %).

(b) The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the UoA. (≥75 %).

(c) The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system. (≥65 %).

(d) Documents on fishery management arrangements, such as legal and policy research papers. (≥55 %).

NOTE The intent of this scoring issue is to ensure that there are appropriate and effective dispute resolution mechanisms, within the legal framework and that these exist at all relevant levels - fleet, regional, national and international. High performing fisheries have dispute resolution mechanisms at all jurisdictions that are relevant to the scale of the fishery (e.g. fleet level, national and international) and the dispute resolution mechanism is transparent and proven appropriate and effective.

Audit Question

Are the established rights of any such groups or individuals formally recognized in treaties or other relevant legislation? Have past court cases established relevant rights and if so, are these recognized in management? Does the management system have an appropriate mechanism to acknowledge these rights? Are there norms and practice across the fishery that is supportive of established rights?

Are the rights of any groups of host communities or indigenous people dependent on fishing for food or livelihood recognized and respected in the fishery management system?

(a) The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom on people dependent on fishing for food and livelihood in a manner consistent with the objectives of MSC Principles 1 and 2. (≥90 %).
(b) The management system has a mechanism to **observe** the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2. (≥75 %).

(c) The management system has a mechanism to **generally respect** the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives of MSC Principles 1 and 2. (≥65 %).

(d) Field observations and stakeholder meetings will often be a key source in informing the scoring of this scoring issue to determine the extent of established rights. In particular, certifiers may wish to speak with representatives of any groups dependent on fishing for food or livelihood. Certifiers may also review relevant legislation and decisions of legislatures (through statutes or national treaties relating to aboriginal or indigenous people) or courts to determine if rights have been conferred on any particular group or individual and that there is a mechanism to implement such rights. (≥55 %).

**NOTE** The intent of the third scoring issue is to ensure that the established rights of any indigenous or aboriginal groups or individuals dependent on fishing for either food or livelihood are fully recognized within the management system. Fisheries that perform well under this scoring issue have a system or means within management to ensure that the legal rights that have been established by custom or law for those dependent on fishing are observed. Higher levels of performance require that these rights are not just demonstrated in practice but that they are explicitly codified in the binding rules of the fishery.

**Audit Question**
(9) What are the mechanisms employed by the fishery to ensure that all applicable laws and regulations are implemented?
(a) Established department or dedicated staff or group manager to oversee the implementation of applicable laws and regulations (≥90 %).

(b) The fishery uses ad hoc committees to interpret the legal requirements and provides recommendations for implantation (≥75 %).

(c) The fishery prepares a checklist which is counterchecked with the fisheries authority for nonconformity or otherwise (≥65 %).

(d) The fishery depends on the interpretation of the operations manager or team leader to interpret and recommend the course of action (≥55 %).

**Audit Question**
(10) How does the fishery track changes in laws and regulations and update its compliance levels?
(a) The fishery participates in consultative forums where they get first-hand information with respect to impending changes in laws and regulations and contributes to their development (≥90 %).

(b) The fishery gets updates from group managers once the laws are passed (≥75 %).

(c) The fishery gets updates from government notifications (≥65 %).

(d) The fishery updates its compliance under direction of the responsible authorities once it is found to be noncompliant (≥55 %).

**Audit Question**
Are all fishing boats officially registered?
(a) The fishing vessel is registered, its gears licensed, has a vessel monitoring system and submits all relevant data to the competent authorities. (≥90 %).
(b) The vessels are registered as Small Fishing Vessel Register (SFVR) belonging to the artisanal fisheries operating within territorial waters with limited modern tracking systems. (≥75 %).

(c) Cooperative multiuser registration. (≥65 %).

(d) Artisanal constructed vessels (boats and canoes) registered with the local authority or office of competent authority. (≥55 %).

**Audit Question**  
Does the fishing fleet of the fishery include vessels with a flag of convenience?

(a) The fleet does not include boats registered to another nation identified as a flag of convenience and is verified by reference to http://www.itf seafarers.org/foc-registries.cfm. (≥90 %).

(b) The fleet has boats registered to another flag of convenience (FoC) nation which has the capacity to ensure that fishery still complies with the provisions of national, regional and international laws and this African standard. (≥75 %).

(c) The fishery's fleet includes leased vessels with clear guidelines on fisheries operations but ultimate control of the vessel is not vested in the fishery. (≥65 %).

(d) The fleet includes vessels registered under flag of convenience with no proven capacity to hold the operators to account. (≥55 %).

**NOTE** This standard does not endorse the use of Flags of Convenience (FoCs) by fishing vessels due to overwhelming evidence of their involvement in pirate fishing and IUU (EJF, 2009).

**Audit Question**  
Does the fishery have a policy for excluding INN (illegal, non-declared, non-regulated) fishing boats and non-involvement in illegal, unreported and unregulated (IUU) fishing?

(a) There is evidence that the fishery has policy and implementation strategy against IUU fishing and complies with national, regional and international treaties and conventions in this regard. (≥90 %).

(b) The fleet does not include INN (illegal, non-declared, non-regulated) fishing boats and does not operate in areas where regulations and management programs are seriously eluded. (≥75 %).

(c) The fishery has a documented policy against IUU and depends on maritime authorities for guidance to avoid IUU violations. (≥65 %).

(d) The fishery opines that certain unregulated fishing may be taking place in a manner which is not in violation of applicable international law, and may not require the application of measures envisaged under the International Plan of Action (IPOA) (FAO, 2002). (≥55 %).

**Audit Question**  
Inspection of the on-board equipment and absence of forbidden devices and fishing methods, chemical substances and explosives

(a) There is verification that the fishery does not use forbidden devices and fishing methods, chemical substances and explosives through inspections carried out in accordance with national and international regulations. A detailed description of the fishing regulation concerning each Country is available on FAO’s website http://www.fao.org/fishery/countryprofiles/search/en (≥90 %).

(b) There is no legal framework for prohibition and enforcement of banned devices and fishing methods, chemical substances and explosives but the fishery utilizes and complies with
provisions of similar laws and regulations operating in comparable circumstances in other countries. (≥75 %).

(c) The fishery complies with group supervision and self-inspection rules. (≥65 %).

(d) The fishery depends on the guidance of the competent authorities to certify that their on-board devices and fishing methods are acceptable in law. (≥55 %).

Consultations, roles and responsibilities

Roles and responsibilities

Audit Question
Are key areas of responsibility within the fishery identified? Are the different parties involved in the management of the fishery clearly identified and documented? Do stakeholders in the fishery know how the management system works and the relative roles of each of the key organizations and individuals? If stakeholders have a question, a concern or a relevant contribution for consideration, is it understood where these should be addressed and to whom? If roles and responsibilities within the fishery change, either as a result of personal changes or reorganization within management bodies, are these changes communicated to ensure clarity of understanding?

(a) Organizations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction. (≥90 %).

(b) Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction. (≥75 %).

(c) Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood. (≥65 %).

(d) (≥55 %).

NOTE This scoring issue looks at the function and the roles and responsibilities of stakeholders within the management system. Fisheries that score well under this scoring issue have at least identified the key areas of responsibilities within the fishery management system. The individuals or organizations with responsibilities for those areas have also been identified. Key areas of responsibility include data collection, science, licensing, decision-making, monitoring and surveillance (at all relevant locations) administration and training.

Audit Question
Does the management system consult with stakeholders at all key points and in support of major decisions and policy changes? Is the management system effective at engaging with all relevant stakeholders during consultations? Does the management system consider the information provided by consultation? Are stakeholders provided with feedback indicating how the consultation processes have been considered and the extent to which information obtained has been used?

Consultation processes

Does the management system include consultation processes to collect relevant information?

(a) The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information and explains how it is used or not used. (≥90 %).

(b) The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained. (≥75 %).
The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system. (≥65 %).

NOTE The second scoring issue focuses on the process by which managers seek stakeholder input and communicate how this is used. All fisheries should be able to have clear consultation processes, however fisheries should show that these processes are regular, that key organizations are consulted and that the information obtained is accepted and considered by management.

Audit Question

Are consultative processes designed to make it easy for stakeholders to respond? Are sector representatives consulted within the management process and do these representatives in turn consult with their members? Have stakeholders been well aware of past consultation processes and understood how to participate?

Are there good levels of participation in consultative exercises and does the management system consider how best to maximize stakeholder participation in these processes?

(a) The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement. (≥90 %).

(b) The consultation process provides opportunity for all interested and affected parties to be involved. (≥75 %).

(c) Sectoral representation in consultation committees as shown by committee membership and minutes. (≥65 %).

(d) Fishery legislation or other policy documents which detail a minimum level of consultation and the process by which this will be achieved. (≥55 %).

NOTE The third scoring issue focuses on the process by which stakeholders are engaged in consultations, and the efforts made by management to support this. In fisheries that score well against this scoring issue, consultations are made widely available to all parties. Opportunities are presented in an appropriate format for stakeholders and are widely publicized in appropriate locations, ensuring that it is easily possible for all those who may have an interest to participate. Such opportunities may include representation of different stakeholder groups in advisory bodies or other similar entities.

Long-term Objectives

Audit Question

Are the objectives consistent with this sustainability standard and do they mention the precautionary approach? Are the high level objectives relevant to the jurisdiction of the fishery? Are all fisheries decisions taken in relation to these objectives? Is there any higher level policy document which requires management to set out its long term objectives? Are decisions in the fishery guided by a notion of long term objectives that are consistent with this sustainability standard?

Are the high-level, long term objectives explicitly stated and binding in relevant documents or legislation?

(a) Clear long term objectives that guide decision-making, consistent with this sustainability standard and the precautionary approach, are explicit within and required by management policy (≥90 %).

(b) Clear long term objectives that guide decision-making, consistent with this sustainability standard and the precautionary approach, are explicit within management policy. (≥75 %).

(c) Long term objectives to guide decision-making, consistent with this sustainability standard and the precautionary approach, are implicit within management policy. (≥65 %).
(d) Certifiers may refer to fishery management plans, to ascertain to what extent these refer to overarching high level objectives (more fishery-specific and day-to-day operational objectives contained in fishery management plans will not be used to inform this scoring issue). (≥55 %).

NOTE The scoring issue addresses and assesses long term objectives in the fishery and extent to which they ensure decision-making is consistent with this sustainability standard. Good practice requires objectives are explicitly stated. This means clearly written down in a binding document, which is relevant to both the fishery under assessment and the management jurisdiction of the fishery. In traditionally and informally managed fisheries the decision and practices in the fishery must be influenced by factors that are consistent with achieving the intent of this sustainability standard.

Fishery-specific objectives

Audit Question
Is there a management plan for the fishery, which clearly states the long and short term objectives of management? Are the objectives measurable against targets or timelines? Are there other relevant documents, legislation or plans which clearly state the objectives that shape management decision-making? Do stakeholders understand the objectives that managers are seeking to meet with their decisions? Do the stated objectives reflect the aims of sustainable stock management and healthy ecosystems? Do management decisions follow these objectives - both in the short and longer term?

(a) Well defined and measurable short and long term objectives, which are demonstrably consistent with achieving the outcomes expressed by this sustainability standard, are explicit within the fishery and associated enhancement management system(s). (≥90 %).

(b) Short and long term objectives, which are consistent with achieving the outcomes expressed by this sustainability standard, are explicit within the fishery and associated enhancement management system(s). (≥75 %).

(c) Objectives, which are broadly consistent with achieving the outcomes expressed by this sustainability standard, are implicit within the fishery and associated enhancement management system(s). (≥65 %).

(d) Fishery-specific scientific management advice, which may detail the operational objectives shaping the advice. (≥55 %).

NOTE This scoring issue addresses and assesses the presence of objectives in the fishery and the extent to which these are leading to outcomes that are consistent with this sustainability standard. Good practice requires that the objectives for the fishery management system, as well as being consistent with this sustainability standard must also include both short term and long term operational targets and must also be explicitly stated. This implies that it is stated in a fishery specific management document or plan. At the highest scoring level, the stated objectives should be measurable, so that management can undertake an empirical review of performance against objectives.

Decision-making processes
The fishery-specific and associated enhancement management system includes effective decision-making processes that result in measures and strategies to achieve the objectives and has an appropriate approach to actual disputes in the fishery.

Audit Question
Is a decision-making process for key fisheries decisions established and understood? Are there informal processes that can be triggered and which have led to decisions in the past? Where multiple jurisdictions are involved in management decisions, are the decision-making processes at each of these levels equally established and/or overlapping? Looking at a previous important decision relating to the fishery, can the process by which that decision was taken be clearly described? Is the decision-making process set out either in governing legislation or in relevant policy documents of the fishery management plan? Do relevant government departments describe their role in the decision-making process, for example on government websites?

(a) There are established decision-making processes that result in measures and strategies to achieve the fishery-specific and enhancement objectives. (≥90 %).
(b) There are some decision-making processes in place that result in measures and strategies to achieve the fishery-specific and enhancement objectives. (≥75 %).

(c) Management policy documentation, including the fisheries management plan - may set out decision-making process. (≥65 %).

(d) Fisheries legislation - indicating powers and responsibility. (≥55 %).

NOTE The first scoring issue seeks to ensure that the process by which key management decisions are taken is established. It is likely that all fisheries will be able to point to some decision-making process, but for good practice these processes should be well established. This would imply that the decision-making process is recognized within the management system and should be clearly described. There should be evidence to show that the process can be triggered and has been used in the past.

Responsiveness of the decision-making process

Audit Question
Are there examples of management taking timely action in response to scientific advice, the results of evaluation or recommendations from studies? Does management consider the implications of management decisions, perhaps through impact studies, or modeling, or via consultation exercises? Does the legislation, or management policy state what information should be used to inform decisions and how the implications of possible management action should be taken account of? Is the timescale of management decision-making, appropriate to the possible impact? Is the process transparent to enable all stakeholders to understand how management has responded to relevant issues?

(a) Decision-making processes respond to all issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. (≥90 %).

(b) Decision-making processes respond to serious and other important issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. (≥75 %).

(c) Decision-making processes respond to serious issues identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take some account of the wider implications of decisions. (≥65 %).

(d) Fisheries legislation - may detail the range of decisions and requirements for consideration of wider implications. (≥55 %).

NOTE This scoring issues seeks to ensure the decision-making processes are responsive to relevant information and enable decisions to be taken in a timely, transparent and adaptive manner. Fisheries are expected to respond to serious issues and be transparent, timely and adaptive. In good practice fisheries, a broader range of issues (not just the most serious) are subject to the relevant decision-making process and greater consideration is given to the wider implications of decisions.

Use of precautionary approach

Audit Question
Has the country ratified international conventions with a formal commitment to the precautionary approach? Do any of the national legislation of fisheries sector policies (including management plans) make explicit reference to the precautionary approach? Are there examples of conservation focused management decisions being taken in the fishery which have been precautionary, in the absence of adequate scientific information?

(a) Decision-making processes use the precautionary approach and are based on best available information. (≥90 %).

(b) International conventions that the county has ratified, which may commit them to the precautionary approach. (≥75 %).
(c) Fisheries legislation - if this is more recent it may include an explicit commitment to the precautionary approach. (≥65 %).

(d) Fisheries policy papers of fisheries management plans - may make formal commitment to the precautionary approach. (≥55 %).

NOTE The third scoring issue requires that decision-making processes follow the precautionary approach. The FAO Technical Guidelines define the precautionary approach as ‘the application of prudent foresight, taking account of the uncertainties in fisheries systems and the need to take action with incomplete knowledge’. There is a requirement that the management policy should be informed by best available information and an appropriate degree of precaution. Fisheries that perform well on this scoring issue have a formal commitment to the precautionary approach and have examples of practice that demonstrates how precaution is being applied.

Accountability and transparency of management system and decision making process

Audit Question
Is there formal communication with fishery stakeholders explaining reasons for management action? This could be via stakeholder meetings, direct mailing, websites etc.? Is the information that informs management decisions, such as scientific advice, management evaluations, simple landings and effort data, made widely available to stakeholders? Are there examples of past management decisions which have been effectively communicated to stakeholders, including the reasons for those decisions?

(a) Formal reporting to all interested stakeholders provides comprehensive information on fishery performance and management actions and describes how the management system responded to findings and relevant recommendations emerging from research, monitoring, evaluation and review activity. (≥90 %).

(b) Information on fishery performance and management action is available on request, and explanations are provided for any actions or lack of action associated with findings and relevant recommendations emerging from research, monitoring evaluation and review activity. (≥75 %).

(c) Some information on performance and management action is generally available on request to stakeholders (≥65 %).

(d) Other means of stakeholder communication - annual fishery meetings, websites, direct mailing, notice boards? (≥55 %).

NOTE This scoring issue seeks to ensure that the management system is accountable to the stakeholders that it serves, that the decision-making process is transparent and that the reasons for management decisions are clearly communicated. It also focuses on the availability of information about the fishery to allow stakeholders to effectively contribute to decision-making. The scoring issue requires that explanations are provided which detail both the reasons for management action or lack of action. Information on fishery performance that is not legally confidential (fisheries data, allocation, management action, etc.) should be available at least on request by stakeholders.

Approach to disputes

Audit Question
Is there general respect and compliance with the management system, as evidenced by a lack of continuing legal challenge of the management system? Are the results of any legal dispute decisions quickly enacted or applied? Does the management system specifically address the need for mechanisms which seek to proactively avoid disputes arising? Is there evidence of the management system responding to the results of any legal disputes?

(a) The fisheries management regime (national or international system or plan) includes a mechanism for resolving disputes. The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges. (≥90 %).
(b) There is a mechanism for resolving disputes which is considered adequate to deal with potential or existing disputes. (e.g., stakeholders have access to the mechanism for resolving disputes and there sufficient scope to cover the relevant issues). (≥75 %).

(c) Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery. (≥65 %).

(d) Evidence of dispute avoidance and resolution mechanisms built into the management system as detailed in a fishery management plan. (≥55 %).

NOTE This scoring issue assesses the approach taken by management to disputes. Good practice requires that the management system actively seeks to avoid disputes and that the management system is designed to enable this. Management should be seen to be making the effort to comply with any decisions resulting from any legal challenge. This includes the need for management to be ‘proactive’ in avoiding legal disputes.

Compliance and enforcement

Monitoring, Control and Surveillance (MCS) implementation

Monitoring, control and surveillance mechanisms ensure the management measures in the fishery and associated enhancement activities are enforced and complied with.

Audit Question

Does the MCS system contain all relevant tools/mechanisms to minimize the risk of IUU, including informal mechanisms? Is the MCS system well established and has it been demonstrated to work? Has the MCS system been designed with an understanding of the likely risks of IUU and shaped accordingly? Does the MCS system adequately cover all vessels in the fishery and all areas where the fishery operates?

(a) A comprehensive monitoring, control and surveillance system has been implemented in the fishery and associated enhancement activities and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules. (≥90 %).

(b) A monitoring, control and surveillance system has been implemented in the fishery and associated enhancement activities and has demonstrated an ability to enforce relevant management measures, strategies and/or rules. (≥75 %).

(c) Monitoring, control and surveillance mechanisms exist, and are implemented in the fishery and associated enhancement activities and there is a reasonable expectation that they are effective. (≥65 %).

(d) Any agency reports, such as fishery meetings, annual reports and stakeholder committee minutes which may detail compliance information and details of fishery offences and prosecutions. (≥55 %).

NOTE This scoring issue examines the components of the MCS system and the extent to which these have been effectively linked together into a 'system' designed to address risks of IUU, and which has been shown to be effective. Fisheries that perform well against this scoring issue will have a range of MCS mechanisms in place that work together to ensure compliance in the fishery. This may include inspections, monitoring, patrols, surveillance, vessel blacklists, etc. Where the word 'system' is included, this implies that MCS mechanisms not only exist, but these have been coordinated and linked to ensure all areas of risk are covered, ideally comprehensively. The performance level described in SG75 and SG90 also require a 'demonstrated' efficacy, rather than simply an expectation of efficacy.

Audit Question

Do fishermen have a clear understanding of the sanctions for different IUU infringements and is this understanding consistent across the fleet? Are the penalties for repeat infringement also clearly and consistently understood (and applied)? Do regulations clearly state the sanctions for different infringements? Is there evidence of past infringements resulting in sanctions? Where infringements were
similar, were the sanctions consistent? Are there any evaluations or reviews which provide a reliable indication of the effectiveness of the deterrence provided by the MCS system?

(a) Sanctions to deal with non-compliance exist, are consistently applied and **demonstrably** provide effective deterrence. (≥90 %).

(b) Sanctions to deal with non-compliance exist, **are consistently applied** and thought to provide effective deterrence. (≥75 %).

(c) Sanctions to deal with non-compliance exist and there is some evidence that they are applied. (≥65 %).

(d) Reviews and evaluations (both internal and external) of the monitoring, control and enforcement system in the relevant jurisdictions of the fishery. (≥55 %).

**NOTE** The intent of this scoring issue is to ensure that the management system contains clear sanctions to deter fishers from participating in IUU fishing and that these sanctions are consistently applied and effective. Fisheries that perform well against this scoring issue have penalties or repercussions that are applicable when there are violations of fisheries regulations. To achieve higher scores requires greater evidence of consistent application of sanctions and a proven effective deterrence.

**Audit Question**
Can it be demonstrated that fishers comply with all relevant regulations? Do fisheries enforcement personnel have confidence in the MCS system and the resulting level of **compliance**? Do fishers provide additional information to managers to support the effective management of the fishery? This could include voluntarily carrying observers, recording bycatch data, reporting suspected illegal activity, providing operational or economic data?

(a) There is a **high degree of confidence** that fishers and hatchery operators comply with the management system under assessment, including, providing information of importance to the effective management of the fishery and associated enhancement activities. (≥90 %).

(b) **Some evidence exists** to demonstrate fishers and hatchery operators comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery and associated enhancement activities. (≥75 %).

(c) Fishers and hatchery operators are **generally thought** to comply with the management system for the fishery and associated enhancement activities under assessment, including, when required, providing information of importance to the effective management of the fishery. (≥65 %).

(d) Records of past infringements. (≥55 %).

**NOTE** The intent of this scoring issue is to verify that there is a good record of compliance by fishers in the fishery and that fishers are providing any information requested to contribute to the effective management of the fishery. In fisheries that perform well against this scoring issue, there is also evidence and a high degree of confidence that fishers comply with regulations. In addition to achieve higher scores fishers provide additional information, such as daily catch landings or bycatch data to managers for effective management.

**Audit Question**
Are there indications - either from enforcement officers, or other stakeholders, or fishers themselves - of particular enforcement issues (**infringements/ systematic non-compliance**) that continue to occur and which the management regime has not addressed? Are there certain infringements that regularly occur and that the sanctions have not deterred? Are there any regulations that are widely ignored where the scale of the infringement means that the enforcement authorities are unable to or unwilling to enforce?

(a) There is no evidence of systematic non-compliance. (≥90 %).
(b) Reports from stakeholders of possible illegal practices that should be verified by the agencies MCS system. (≥75 %).

(c) Records of infringements indicating persisting enforcement controls including the same offence occurring overtime. (≥65 %).

(d) Evaluations of the MCS system. (≥55 %).

NOTE The intent of this scoring issue is to confirm that there is no systematic non-compliance. If there is any systematic non-compliance SG75 is not met and a condition is triggered. Good performance against this scoring issue is simply a lack of systematic non-compliance.

Monitoring and management performance evaluation
There is a system for monitoring and evaluating the performance of the fishery-specific and enhancement management system(s) against its objectives. There is effective and timely review of the fishery-specific and associated enhancement program(s) management system.

Audit Question
Have any evaluations been carried out in recent years on any parts of the management system, such as the management plan, or MCS, or stock assessment procedures? Are there processes in place which provide the management system with a clear indication of whether the measures and regulation in place are meeting the intended objectives? Do stakeholders in the fishery have an opportunity to review the performance of the fishery management? Do outside agencies (e.g. FAO) undertake reviews of the fisheries sector?

Evaluation coverage
(a) The fishery and associated enhancement program(s) has in place mechanisms to evaluate all parts of the management system. (≥90 %).

(b) The fishery and associated enhancement program(s) has in place mechanisms to evaluate key parts of the management system. (≥75 %).

(c) The fishery and associated enhancement program(s) has in place mechanisms to evaluate some parts of the management system. (≥65 %).

(d) Evaluations of performance in meeting environmental objectives and international commitments and targets. (≥55 %).

NOTE The intent of this scoring issue is to ensure that various evaluations are undertaken of the component parts of the management system. To meet this requirement at SG8o requires that at the very least "key" parts of the management system should be evaluated. Good practice may involve having a range of approaches for evaluation. These may include peer review of stock assessments by scientific committees, internal or external audits of components of the fishery or review of implementation of management regulations by government agency, NGO or donor.

Audit Question
Does the management plan or other binding document setting out the process of management of the fishery state the frequency and scope of evaluations? Are there past evaluations of the management plan (either internal or external)? Was the current management plan (or fishery-specific management system) reviewed prior to implementation? Are there feedback mechanisms within the management system which means that the performance of the management (and the fishery) is subject to on-going review and refinement?

Internal and/or external review
(a) The fishery-specific and associated enhancement program(s) management system is subject to regular internal and external review. (≥90 %).
(b) The fishery-specific and associated enhancement program(s) management system is subject to regular internal and occasional external review. (≥75 %).

(c) The fishery-specific and associated enhancement program(s) management system is subject to occasional internal review. (≥65 %).

(d) Past evaluations of the fishery-specific management system. (≥55 %).

NOTE This scoring issue focuses in on the fishery-specific management, rather than the other component parts of the fisheries management framework. In fisheries that perform well against this scoring issue there is greater regularity of review and presence of external review, rather than just internal review.

6.1.2 Management systems

Criterion: The operator shall have a management system which shall exist within the applicable laws and regulations for sustainable fisheries.

Indicator:

6.1.2.1 The operator shall maintain records of compliance such as licenses from competent authorities, Operations data Monitoring Control and Surveillance (MCS) reports and other appropriate compliance reports (EIA).

Audit Question (11) Does the fishery’s conservation and management measures comply with applicable laws and regulations based on the best scientific evidence available?

(a) The management process uses an independent and up-to-date scientific stock assessment or analysis, or other appropriate method that seeks knowledge related to stock status, and this assessment is conducted regularly and is complete and robust, which may include both fishery-independent and appropriate fishery-dependent data. (≥90 %).

(b) The fishery utilizes data generated from research institutes which conduct acceptable statistically scientific programs to assess productivity, stock status, and fishery impacts to inform stock assessment and quota setting. (≥75 %).

(c) Locally generated scientific research is lacking but the fishery utilizes secondary scientific data extrapolated from similar environments elsewhere. (≥65 %).

(d) The scientific models used by the fishery are thought to provide fair results but have plausible scientific uncertainties. (≥55 %).

Audit Question (12) Are conservation and management measures designed to ensure the long-term sustainability of fishery resources at levels which promote the objective of optimum utilization and maintain their availability for present and future generations?

(a) There is clear evidence that the conservation and management measures of the fishery have objectives of long-term sustainability consistent with the principles of meeting the needs of the present populations and ensuring availability of the fisheries resources for future generations. (≥90 %).

(b) Clear long term objectives that guide decision-making, sustainable development, are explicit within conservation and management measures. (≥75 %).
(c) Long term objectives to guide decision-making, consistent with sustainable development, are implicit within conservation and management measures. (≥65 %).

(d) There are established decision-making processes that result in measures and strategies to achieve the fishery-specific objectives. (≥55 %).

**Audit Question**

(13) Are management measures currently in effect in the fishery designed for the long-term conservation and sustainable use of fishery resources, as opposed to reasons of short-term expediency?

(a) There is evidence that the measures enacted by management have resulted in the long-term maintenance of ecosystem integrity, including maintaining stock abundance at appropriate levels, given its role in the ecosystem and whether it is native to the ecosystem. (≥90 %).

(b) The fishery has a management policy with the objectives to sustain the long-term productivity of all impacted species which if implemented and enforced would ensure that fishery mortality does not threaten the long-term productivity or ecological role of any species in the future. (≥75 %).

(c) Management measures currently in place have not been evaluated objectively but are expected to result in long-term sustainability of fishery resources. (≥65 %).

(d) Measures enacted by management have not been in place long enough to evaluate, or the track record is uncertain. (≥55 %).

**6.1.3 Incentives for sustainable fishing**

**Criterion:** The operator system shall provide economic and social incentives for sustainable fishing and shall not operate with subsidies that contribute to unsustainable fishing.

**Indicator:**

6.1.3.1 The operator shall document operation data such as net economic return for fishery, profit to harvesting sector and gain in per capita income

**Audit Question**

(14) Have mechanisms been established for fisheries monitoring, surveillance, control and enforcement to ensure compliance with their conservation and management measures for the fishery in question?

(a) Regulations and agreed voluntary arrangements are regularly enforced and independently verified, including VMS, logbook reports, dockside monitoring and other similar measures appropriate to the fishery. (A comprehensive monitoring, control and surveillance system has been implemented in the fishery and has demonstrated a consistent ability to enforce relevant management measures, strategies and/or rules.) (≥90 %).

(b) A monitoring, control and surveillance system has been implemented in the fishery and has demonstrated an ability to enforce relevant management measures, strategies and/or rules. (≥75 %).

(c) Enforcement and/or monitoring are in place to ensure goals are successfully met, although effectiveness of enforcement/monitoring may be uncertain (e.g., regulations are enforced by fishing industry or by voluntary/honour system, but without regular independent scrutiny). (≥65 %).
Monitoring, control and surveillance mechanisms exist, and are implemented in the fishery and there is a reasonable expectation that they are effective. (≥55 %).

**Audit Question**
(15) Have these measures proved effective?

(a) There is a high degree of confidence that fishers comply with the management system under assessment, including, providing information of importance to the effective management of the fishery. (≥90 %).

(b) Some evidence exists to demonstrate fishers comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery. (≥75 %).

(c) Fishers are generally thought to comply with the management system under assessment, including, when required, providing information of importance to the effective management of the fishery. (≥65 %).

(d) Sanctions to deal with non-compliance exist, are consistently applied and demonstrably provide effective deterrence. (≥55 %).

**Audit Question**
(16) Has the fishery established its economic sustainability by operating economically and in a financially viable way?

(a) The fishery has procedures to identify potential issues regarding fraudulent, deceptive or dishonest commercial business and consumer practices. (≥90 %).

(b) The fishery has established procedures to address issues regarding fraudulent, deceptive or dishonest commercial business and consumer practices. (≥75 %).

(c) The fishery has described key parameters, assessments or metrics used to characterize the effect of measures to address issues regarding fraudulent, deceptive or dishonest commercial business and consumer practices. (≥65 %).

(d) The fishery understands the issues regarding fraudulent, deceptive or dishonest commercial business and consumer practices and is in the process of establishing counter measures. (≥55 %).

**Audit Question**
(17) Can the fishery provide information on its financial risk management?

(a) The fishery has established procedures to identify potential financial risks and has established an effective strategy to mitigate them. (≥90 %).

(b) The fishery is able to describe key parameters, assessments or metrics used to characterize the effect of measures taken to identify potential financial risks and address them. (≥75 %).

(c) The fishery can describe the measures it plans to take to address potential financial risks as a good practice business strategy. (≥65 %).

(d) The fishery has established procedures to identify potential financial risks. (≥55 %).

### 6.1.4 Fishing methods and gear
**Criterion:** Fishing operation shall make use of fishing gear and practices designed to avoid the capture of non-target species (and non-target size, age, and/or sex of the target species); minimise mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive.

**Indicator:**

6.1.4.1 The operator shall maintain records on the type of gear used and species targeted, total amount of discards, amount of discards of high-risk species and size and age structure of the catch.

**Audit Question**

(16) Does the fishery use fishing gears and practices specifically designed target fish species?

(a) Make use of fishing gear and practices designed to avoid the capture of non-target species and non-target size, age, and/or sex of the target species); minimise mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive. (≥90 %). 

(FAO, 2011:9, 14)

(b) Improvements of the design and use of fishing gear and unwanted catch mitigation devices are being implemented. (≥75 %).

(c) There are research and development programmes for more selective fishing gears or alternative fishing methods that are practical, safe, effective, socio-economically viable and contribute to the sustainable management of the affected species. (≥65 %).

(d) The fishery is developing the capacity of their fishers in technical measures which may be adopted to mitigate bycatch and discards and should provide adequate training to fishers in the use and maintenance of the technology and practices so developed. (≥55 %).

**Audit Question**

(17) Has the fishery adopted gears and practices in such a manner that conflict among fishers using different vessels, gear and fishing methods are minimized?

(a) There are regulations established by fisheries management authorities to avoid the risk of conflict among fishers using different vessels, gear and fishing methods including exclusive areas that trawlers are not allowed to fish within the first three nautical miles from the shore, to allow exclusive usage by non-mechanized craft. (≥90 %).

(b) There are time exclusions and gear regulations which limit the possibility of non-mechanized and trawling crafts being at the area and allowing for regeneration of fish stocks. (≥75 %).

(c) There is almost no interaction among the vessels, gear, and fishing methods of the various fisheries (≥65 %).

(d) The fishery has established a dispute resolution mechanism to address issues and disputes involving allocation of quota and access to marine resources between itself and other stakeholders such as indigenous communities and artisanal fishers. (≥55 %).

**NOTE** Some of the options are detailed in (Bavinck et al., 2013)

**Audit Question**

(18) In the course of deciding on the use of gears, fishing methods, conservation and management of the fisheries resource, were relevant national laws and regulations relating to the traditional practices, needs and interests of indigenous people and local fishing communities highly dependent on these resources for their livelihood taken into account?
(a) The fishery respects the rights of indigenous peoples to exercise an exclusive right in certain areas or as a priority in decision-making, for instance, when stipulating fishing quotas in sea fisheries. (≥90%).

(UN, 1982)

(b) In allocation of fisheries resources, indigenous subsistence users have the highest priority and their rights are preserved in accordance with international obligations. (≥75%).

(c) The fishery gained free, prior and informed consent (FPIC) before starting the operations and the local communities understand likely impacts. (≥65%).

(d) There is a strategy for reducing conflicts among fishermen, scientists, and regulators; and improving the responsiveness of fisheries management to local needs (≥55%).

Audit Question
(19) Are appropriate measures being applied to minimize waste and discards?

(a) The fishery pursues a policy of selective fishing with bycatch and discard reduction or elimination and retention of 100% of their catch in conformity with the national no-discard legislation, the UNGA resolutions and the Code of Conduct for Responsible Fisheries. (≥90%).

(Kelleher, 2005)

(b) There is a “no-discard” legislation which is be enforced to varying degrees, and at times selectively, in recognition of the unpredictable nature of fishing operations. (≥75%).

(c) There is generally some allowance made to ensure that fisheries maintain their economic performance or competitiveness. (≥65%).

(d) There are viable mechanisms for disposal of landings of unwanted bycatch (e.g. fishmeal, long-term price agreements, promotion of markets for/products from unwanted bycatch, new product development and presence of a “buyer of last resort”). (≥55%).

Audit Question
(20) Are appropriate measures being applied to minimize catch of non-target species (both fish and non-fish species)?

(a) Bycatch of non-target species is severely limited and carefully monitored, through MPAs and other methods. There is reduction in bycatch resulting from the use of more selective fishing gears, the introduction of bycatch and discard regulations, improved enforcement of regulatory measures and reduction of effort in some major trawl fisheries. (≥90%).

(b) There is increased retention of bycatch for direct utilization as a result of improved technologies and expanding market opportunities, or for conversion to fishmeal, silage or similar products, and changes in target species to include species previously discarded. (≥75%).

(c) There are bycatch quotas of regulatory discards intended as an incentive to reduce per vessel bycatch and bycatch rates in the fishery which are intended to result in an actual reduction in regulatory discards in the fishery. (≥65%).

(d) There are bycatch action plans to identify the specific bycatch issues in the fishery and detailed actions required to address these issues which is intended to be integrated into the management arrangements for the fishery to enable the actions to be implemented. (≥55%).

Audit Question
(21) Are appropriate measures being applied to minimize impacts on associated, dependent or endangered species?

(a) The fishery complies with national, regional and international measures to reduce interactions with particularly vulnerable bycatch (e.g. juveniles and rare, endangered, threatened or protected species) through identifying and establishing areas where the use of all or certain gears is limited or prohibited, based on the best available scientific information and consistent with international law. (≥90%).

(b) There are measures to use selective fishing gear, such as nets with larger meshes; square mesh panels, separator grids and changes in design and rigging of such gear in order to improve selectivity (≥75%).

(c) The fishery complies with a voluntary code of conduct intended to reduce discarding (≥65%).

(d) The fishery complies due to the targeting of economic incentives for the use of more selective fishing practices (≥55%).

Audit Question (22) Are technical measures being taken in relation to fish size?

(a) The fishery complies with prescribed specific fish size restrictions identified as (i) fish longer or shorter than a specified length or (ii) fish between or outside specified lengths (known as slot size) with the purpose to (1) protect fish until they reach spawning size, (2) protect prime spawning size fish, (3) improve the size of fish in fish populations (≥90%).

(b) There is documentation which stipulated the size and maturity of the targeted species in the fishing zone and, if any, minimum dimensions required by law and the on-board inspector can provide evidence of the conformity with these provisions. (≥75%).

(c) The fishery makes use of fishing gear and practices designed to avoid the capture of non-target size, age, and/or sex of the target species. (≥65%).

(d) There are minimum size limits for the target species and there are many restrictions on the size of mesh in gill nets. (≥55%).

Audit Question (23) Are technical measures being taken in relation to mesh size or gear?

(a) The fishery uses highly selective gears for the target species and sizes, with negligible direct or indirect impact on non-target species, sizes and habitats. (≥90%).

(b) The fishery has determined the mesh sizes of the gillnets and trawl which reduce the capture and mortality of juvenile fish and other unintended species as well as minimizing habitat alteration. (≥75%).

(c) The fishery uses gears which are effective, producing catches of high quality and giving high catches of target species at the lowest cost. (≥65%).

(d) Gill nets may only fish certain mesh sizes. (≥55%).

Audit Question (24) Are technical measures being taken in relation to discards?

(a) The fishery makes use of a range of technical measures such as turtle excluder devices (TEDs), seal saver devices (SSDs), pingers, sorting grids, escape panels, etc., and the responsible authorities have requirements for (i) a framework for the introduction and acceptance of such
measures by industry; (ii) more specifically, advice on the design, operation and financing of incidental catch monitoring; and (iii) assessments of the advantages and disadvantages of the different mitigation measures. \((\geq 90\ %)\).

(b) Non target catches, including discards, of stocks other than the “stock under consideration” are monitored and should not threaten these non-target stocks with serious risk of extinction; if serious risks of extinction arise, effective remedial action should be taken. Monitoring systems providing individual accountability include electronic monitoring (EM) systems and on-board observers. \((\geq 75\ %)\).

(c) The fishery is involved in pilot projects used to demonstrate new control technologies, new systems for data management and changes in fishing regulation or a combination thereof, to provide the industry with an opportunity to test tools, or a combination of tools, and to reduce discards prior to adopting them in a permanent capacity. \((\geq 65\ %)\).

(d) The fishery complies with the discard legislation due high penalties/sanctions imposed by the competent authorities once infringements are detected. \((\geq 55\ %)\).

**Audit Question**

(25) Are technical measures being taken in relation to closed areas and seasons?

(a) The fishery has a management policy intended to avoid certain species and sizes implementing “closed” areas on a permanent basis (marine protected areas), at certain times of the year (e.g. in spawning periods) or by increasing the mesh-size used, either by regulation or on a voluntary basis. \((\geq 90\ %)\).

(b) The fishery complies with the time and area closures which are classic tools of for fisheries management by competent authorities and schedules its operations accordingly. \((\geq 75\ %)\).

(c) Several factors should be taken into account including species composition of fishes, their life-history, fishing activities and types of fishing gear used, climate, fertility of impounded water, etc. Sound basic data will facilitate the decisions to be made. \((\geq 65\ %)\).

(d) Some parts of the fishery are temporarily closed based on fishers’ information about, for example, how many juvenile fish are in a certain area. \((\geq 55\ %)\).

**NOTE** Control of spawning areas and feeding sites of fry and immature fish is intended to allow spawning and also the growth of the fry to the stage when they leave the areas. This is particularly important for lithophilous and phytophilous fish, since spawning may be disrupted and eggs and fry destroyed if fishing is allowed at the wrong time. The correct decision on dates allowing fishing operations is very important and may vary for each species and different areas. It also varies from year to year according to climatic conditions and ecological conditions of a water body (Bhukaswan, 1980).

**Audit Question**

(27) Are technical measures being taken in relation to protection of juveniles or spawners?

(a) The fishery has a protection policy and implements measures which promote respect for marine protected areas (MPAs), estuarine areas and streams which are recognized as spawning and rearing habitats for various fish species. \((\geq 90\ %)\).

(b) There is evidence that at least 50% of the spawning stock is protected, for example through size/sex/season regulations or the inclusion of greater than 50% of the species’ habitat in marine reserves. \((\geq 75\ %)\).

(c) The procedures for monitoring/assessing stocks and procedures for protecting spawning stock must are in place, and can be demonstrated to be effective. \((\geq 65\ %)\).
(d) The procedures for monitoring/assessing stocks and procedures for protecting spawning stock must are in place and are expected to be effective through analogy with similar systems, but have not been demonstrated effective in this fishery. (≥55%).

The main elements of the fishing process in which selective behaviour can be practiced (Eliasen et al., 2014).

Tree diagram showing factors potentially influencing discard behaviour (Eliasen et al., 2014).
Audit Question
(28) Are suitable arrangements in place to promote, to the extent practicable, the development and use of selective, environmentally safe and cost-effective gear and techniques?

(a) The fishery makes use of fishing gear and practices designed to avoid the capture of non-target species (and non-target size, age, and/or sex of the target species); minimise mortality of this catch where it cannot be avoided, and reduce discards of what cannot be released alive. (≥90 %). (FAO, 2011b)

(b) The use of selective gear, such as pelagic trawls, circle hooks, and crab pot escape panels is encouraged, and often mandated. (≥75 %).

(c) The gears and techniques used have been used in other fisheries where they have been shown to minimize bycatch/discards and are environmentally safe. (≥65 %).

(d) There is a clear multi-species management approach with the linking of species/gear management plans. (≥55 %).

6.1.5 Information for research

Criterion: The operator shall have a strategy that addresses the information needs of the fishery management.

Indicator:
6.1.5.1 The operator shall have records on; data management system, total catch data (retained and discarded), Biodiversity of species caught, Fishing effort, Catch per unit effort (CPUE), Size and/or age structure of catch

Audit Question
Is appropriate research conducted into all aspects of fisheries, including biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science?

(a) There is comprehensive information from research conducted on the biology, ecology, technology, environmental science, economics, social science and nutritional science of the fish species targeted by the fishery. (≥90 %).

(b) The fishery utilizes relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. (≥75 %).

(c) The fishery utilizes some relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. (≥65 %).

(d) The fishery utilizes research results conducted in other comparable fisheries to make management decisions. (≥55 %).

Audit Question
Has relevant research been carried out on the resource?

(a) Research has established that there is a reliable quantitative stock and biomass is estimated to be above or fluctuating around an appropriate target reference point with no scientific controversy around that estimate. (≥90 %).

(b) The fishery utilizes fisheries research generated from national, regional and international research institutes to determine the status of the stocks. (≥75 %).
(c) The fishery utilizes secondary research data provided by comparable researches elsewhere which seems to offer reasonable stock estimates. (≥65 %).

(d) The research data utilized by the fishery appears to have completeness gaps due to sample area limitation of the study. (≥55 %).

Audit Question
Does the fishery participate in the national, regional or international research framework to determine the applied research which is required and its proper use?

(a) The fishery participates at the national, regional or international in undertaking research and data collection to improve scientific and technical knowledge on status of fisheries and ecosystems, including data on bycatch, discards and waste and interactions with the ecosystem. Provide sufficient institutional and other support. Adopt appropriate measures, based on the best scientific evidence available. (≥90 %).

(b) The fishery utilizes the co-production of knowledge approach by interacting with local fishers to define important questions and relevant evidence, carry out participatory research, and engage in a joint deliberation to make sense of the observations. (≥75 %).

(c) The fishery and local fishers work together in the design and carrying out of the research and discuss the implementation continuously. (≥65 %).

(d) The fishery consults local fishers to identify problems and then find solutions. (≥55 %).

Audit Question
Are results of research being distributed in a timely and readily understandable fashion in order that the best scientific evidence be made available as a contribution to fisheries conservation, management and development?

(a) Due to the participation of the fishery in research, the results of research are obtained as soon as they are processed and distributed for decision-making in fisheries conservation, management and development. (≥90 %).

(b) The fishery obtains comprehensive research data and information through a research network in which it contributes to design the research projects but does not carry out the research itself. (≥75 %).

(c) The fishery obtains research information through subscription to research organizations and journals working in areas corresponding to the fishery’s operations. (≥65 %).

(d) Some information from research institutions is available on request to the fishery for purposes of decision-making in fisheries conservation, management and development. (≥55 %).

Audit Question
Has relevant research been carried out on climatic and environmental factors?

(a) Research has been conducted with respect to the effects of environmental factors such as coastal construction, pollution and runoff from the land and other anthropogenic stressors as well as impacts of global climate change leading to large-scale systemic effects regarding species bathymetric distribution, geographical distribution, emergence of new species, migration of some species and loss of some species. (≥90 %).

(b) The fishery is monitoring the effects of environmental variability on the natural productivity and has taken cognizance of the increasing importance of climate change. (≥75 %).
(c) The fishery has established an adaptive management to environmental changes as well as managing the effect of the fishery on the ecosystem. (≥65 %).

(d) The fishery is aware of global environmental change that includes climate change as well as other global environmental phenomena (e.g. biodiversity loss) and social and economic changes. (≥55 %).

Audit Question
In the absence of adequate scientific information, is appropriate research being initiated in a timely fashion?
(a) The fishery undertakes collection and sharing of scientific data of stock status and development of scientific advice. (≥90 %).

(b) The fishery gets scientific information through partnership networks engaged in research and ecosystem approach in fisheries management. (≥75 %).

(c) Information is obtained from the monitoring and research activities of the fishery. (≥65 %).

(d) Information is obtained from research literature. (≥55 %).

Audit Question
Are reliable and accurate data required to assess the status of fisheries and ecosystems—including data on bycatch, discards and waste—being collected?
(a) The fishery implements data collection procedures and protocols appropriate to the scale and type of the fishery and taking into account the results of the risk assessment with respect to bycatch and discard problems, including the use of observers, standardized logbooks and vessel position monitoring systems (≥90 %).

(b) The fishery ensures that data collection programs include socioeconomic surveys on, *inter alia*, the value of landings and employment in harvesting sectors and the social and economic impacts of regulatory measures. (≥75 %).

(c) The fishery strives to achieve a level and scope of observer programs sufficient to provide quantitative estimates of total catch, discards, and incidental takes of living aquatic resources. (≥65 %).

(d) The fishery has a policy to collect data on bycatch, discards and waste as part of its obligations under national, regional and international obligations. (≥55 %).

Audit Question
Has the fishery established the research capacity necessary to assess the effects of climate or environment change on fish stocks and aquatic ecosystems?
(a) The fishery has developed research capacity enabling it in understanding of the key environmental trends occurring in the marine environment of interest: (i) changing frequency of *El Niño* events; (ii) decadal variability of ocean currents; (iii) increase in water temperature and salinity; and (iv) change in frequency of storms affecting the coast. (≥90 %).

(b) The fishery is testing its capacity to determine the impacts of environmental variability on fish stocks at the appropriate spatial and temporal scale using some case studies on various target species focusing on parameters such as the recruitment of fish stocks, size at maturity and growth. (≥75 %).

(c) The fishery is enrolled in observer status in national, regional and international research for purposes of creating its own research capacity. (≥65 %).
(d) The fishery understands the effects of climate change and environmental on fisheries stocks and has in place a strategy to develop research capacity in response. (≥55 %).

Audit Question
Has relevant research been carried out on the socio-economic context?

(a) Research has been conducted to identify and characterize the direct and indirect ecological, social and economic impacts of climate change and sea level rise on fisheries resources, associated ecosystems, fishing communities in the operating region of the fishery and mitigation measures are being implemented on this basis. (≥90 %).

(b) Research has been conducted to identify and characterize the direct and indirect ecological, social and economic impacts of climate change and sea level rise on fisheries resources, associated ecosystems, fishing communities in the operating region of the fishery and there are strategies to include these findings in fisheries management planning. (≥75 %).

(c) There are plans for Identify the adaptation strategies and measures that could be pursued to mitigate negative impacts and prepare fishers and fishing communities to adjust, including research, capacity building, education and awareness building; (≥65 %).

(d) Information is available on what the impacts of climate change are likely to be on a site specific basis. (≥55 %).

Audit Question
Has research been carried out on cost-benefits of fishing?
(a) Research has been conducted with themes on benefits to the fishing communities, rights holders, social and economic data on various sectors (commercial, small-scale, subsistence, recreation and existence value) and the socio-economic characteristics of fishing communities. (≥90 %).

(b) There is recognition in policy of the need to better understand the social, cultural, environmental and economic impacts of fishing and the need for enhanced research effort to understand community and social cohesion. (≥75 %).

(c) There are research designs incorporating social and cultural dimensions of sustainability as part of the fisheries management. (≥65 %).

(d) The research conducted focuses predominantly on achieving biological and economic sustainability with the socio-economic issues being marginal. (≥55 %).

Audit Question
Has research been carried out on alternative management strategies?

(a) The fishery management has adopted other strategies of fisheries management such as co-management, adaptive management, regime shifts and eco-labelling as alternatives to centralized management. (≥90 %).

(King et al., 2014)

(b) The fisheries management is implementing a strategy of adopting eco-labelling, green products and certification as potential long-term approaches on the way fisheries are carried out throughout the world. Co-management (≥75 %).

(c) The fisheries management is exploring alternative management strategies (≥65 %).

(d) The fishery is implementing obligatory management strategies. (≥55 %).

Audit Question
Are timely and reliable statistics available on catch and fishing effort maintained in accordance with applicable international standards and practices and in sufficient detail to allow sound statistical analysis?

(a) Comprehensive, reliable statistics on many parameters are gathered and made available in-season, on a preliminary basis. After the fishing season, the statistics are reviewed, corrected, and made available to any interested person. (≥90 %).

(b) Updated data and statistics on catch and fishing effort are maintained in the competent authority’s database. (≥75 %).

(c) The fishery obtains statistics and data from international sources such as FAO to complement national data. (≥65 %).

(d) There are ongoing capacity development efforts in the collecting, analysis and use of accurate, reliable and timely data. (≥55 %).

Audit Question
Is research being promoted on the environmental and social impacts of fishing gear and, in particular, on the impact of such gear on biodiversity and coastal fishing communities, being promoted on the environmental impacts?

(a) There is research to limit fishing gear which can damage and remove seabed (benthic) plants and animals such as sensitive sponges, corals, bryozoans (lace corals) and shellfish, which are important settlement surfaces, cover and habitat for other organisms. (≥90 %).
(Ward et al., 2008); (Garcia et al., 2003)

(b) There is research on how to mitigate damage from gears to the seafloor through protection of sensitive or vulnerable seafloor habitats, and limits on the spatial footprint of fishing on fishing effort. (≥75 %).

(c) There is collaborative research to evaluate the effect of the gears the fisheries are using on the environment with a view to adopting the scientifically supported environmentally less damaging fishing gear. (≥65 %).

(d) The fishery is taking into account research findings on the effect of the gears they are using on the environment with a view to adopting the scientifically supported environmentally less damaging fishing gear. (≥55 %).

The passage of this fishing gear over the seabed can be summarized as follows (Kaiser et al., 2001):

- Disturbance of the upper layers of the seabed causing short-term re-suspension of sediments, re-mineralization of nutrients and contaminants, and re-sorting of sediment particles.

- Direct removal, damage, displacement or death of a proportion of the animals and plants living in or on the seabed.

- A short-term attraction of carrion consumers into the path of the fishing gear.

- The alteration of habitat structure (e.g. flattening of wave forms, removal of rock, removal of structural organisms).

Audit Question

Is research being promoted on the environmental and social impacts of fishing gear and, in particular, on the impact of such gear on biodiversity and coastal fishing communities, being promoted on the social impacts?

(a) There is research conducted on the social impacts of fishing gears such as non-selective gears which result in reducing fish stocks; reduction of incomes due to strict regulations on permissible gears, sometimes resulting in occupation changes; bottom trawling non-selective gear causing overfishing and discards directly threatening local fishing communities and to tourism from sport fishing. (≥90 %).

(b) The fishery participates as an observer in research to estimate the social impacts of fishing gears such as non-selective gears which result in reducing fish stocks; reduction of incomes due to strict regulations on permissible gears, sometimes resulting in occupation changes; bottom trawling non-selective gear causing overfishing and discards directly threatening local fishing communities and to tourism from sport fishing. (≥75 %).

(c) The fishery uses results from national, regional and international research organizations to estimate the social impacts of fishing gears such as non-selective gears which result in reducing fish stocks; reduction of incomes due to strict regulations on permissible gears, sometimes resulting in occupation changes; bottom trawling non-selective gear causing overfishing and discards directly threatening local fishing communities and to tourism from sport fishing. (≥65 %).

(d) The fishery subscribes to research publications which help to understand the social impacts of the fishing gears with a view to adopting or modifying their gears. (≥55 %).

Audit Question
Is research being promoted on the environmental and social impacts of fishing gear and, in particular, on the impact of such gear on biodiversity and coastal fishing communities, being promoted on the impact on biodiversity?

(a) There is adequate monitoring, research and data collection on fishing gear impacts to habitat and non-target species which is made publicly available to support ecosystem and spatial management practices. (≥90%).

(b) Fisheries managers are implementing ecologically risk averse strategies to minimize the impacts of fishing gear on habitat and bycatch. These strategies include habitat protection, and access to fishing grounds and quota allocations based on gear substitution. (≥75%).

(c) There are policies to implement, inform and develop policies and management practices that prioritize the minimization of habitat destruction and incidental catch and discarding of target and non-target species. (≥65%).

(d) There are regulatory requirements to develop and implement a national bycatch and discard policy that includes bycatch limits for commonly caught commercial and non-commercial species, as well as for species at risk. (≥55%).

Fishing directly affects the abundance of marine fish populations as well as the age of maturity, size structure, sex ratio, and genetic makeup of those populations (harvest mortality). Fishing affects marine biodiversity and ecosystems indirectly through bycatch, habitat degradation, and through biological interactions (incidental mortality). Through these unintended ecological consequences, fishing can contribute to altered ecosystem structure and function. As commercially valuable populations of fish decline, people begin fishing down the food web, which results in a decline in the mean trophic level of the world catch (Fuller, 2008).

It is important to understand what we mean by the ‘ecosystem effects’ of fishing. This can be summarized as (Kaiser et al., 2001):

(i) The effects of fishing on predator-prey relationships, which can lead to shifts in community structure that do not revert to the original condition upon the cessation of fishing pressure (known as alternative stable states).

(ii) Fishing can alter the population size and body-size composition of species leading to a fauna composed of primarily small individual organisms (this can include the whole spectrum of organisms, from worms to whales).

(iii) Fishing can lead to genetic selection for different body and reproductive traits and can extirpate distinct local stocks.

(iv) Fishing can affect populations of non-target species (e.g. cetaceans, birds, reptiles and elasmobranch fishes) as a result of by-catches or ghost fishing.

(v) Fishing can reduce habitat complexity and perturb seabed (benthic) communities.

Audit Question
Is research being promoted on the environmental and social impacts of fishing gear and, in particular, on the impact of such gear on biodiversity and coastal fishing communities, being promoted on the impact on coastal fisheries?

(a) The is research conducted on fishing gears used, benthic substratum damage, proportion of juvenile fish and discards their impacts on species diversity and structure of marine communities, impacts of each gear on coral reef biodiversity and their relative profitability in multi-gear fisheries. (≥90%).
(b) Research has been conducted on the relationship between gears, catch, fishing effort, habitat variables and communities in order to determine significant variables influencing fish catch levels and to inform policy decisions. (≥75 %).

(c) The fishery uses research results from comparable fisheries or contiguous areas on the effects of specific fishing gears to make decisions of exclusion or use of similar gears. (≥65 %).

(d) The impact of specific fishing gears on coastal fisheries is obtained from research literature to which the fishery subscribes. (≥55 %).

### Impact of Fishing on the Ecosystem (Fuller, 2008)

6.1.6 Customary rights

**Criterion:** The operator observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and incorporates an appropriate dispute resolution framework.

**Indicator:**

6.1.6.1 The operator shall have evidence of verifiable conflict resolution policy: Conflicts and complaints from the community tracked transparently and proof that they are responded to within the stipulated time frame provided and that operations are not inhibiting or restricting local community access to traditional fishing grounds the operator shall document employment in the harvesting sector by fleet and number of indigenous fishers

**Audit Question**

Have attempts been made to identify domestic/customary parties having a (legitimate) interest in the use and management of fisheries resources?
(a) Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for all areas of responsibility and interaction. (≥90 %).

(b) Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are explicitly defined and well understood for key areas of responsibility and interaction. (≥75 %).

(c) Organisations and individuals involved in the management process have been identified. Functions, roles and responsibilities are generally understood. (≥65 %).

(d) National and local regulatory processes are open to the public, and participation by all parties is actively solicited and encouraged — interested parties participate actively and by law, they must be included. (≥55 %).

Audit Question
Are technical measures being taken in relation to areas reserved for particular (e.g. artisanal, local customary access rights) fisheries?

(a) In the ocean, MPAs have been set aside for subsistence needs. Subsistence fishing is of great cultural importance, and is given highest priority. Subsistence fishing in streams is protected from interference from other harvesters. (≥90 %).

(b) Where traditional fishery use rights are applicable, there is documented evidence of a process for consulting and gaining free, prior and informed consent for the right to use the fishery area, and documented evidence of the outcomes. (≥75 %).

(c) Where the competent national authority has determined that there are direct effects on local food security, there is evidence of free, prior and informed consent from local stakeholders. (≥65 %).

(d) Where local stakeholder consent has been sought, describe the area considered to be local and the process to determine that area. (≥55 %).

Audit Question
Have arrangements been made to consult domestic/customary parties and gain their collaboration?

(a) The management system includes consultation processes that regularly seek and accept relevant information from communities (e.g. traditional fisher community leaders, men and women known for their skills in fishing, processing and marketing and community youth leaders) and uses it to obtain more specific and nuanced suggestions and critiques about the management framework and its principles. The management system demonstrates consideration of the information and explains how it is used or not used. (≥90 %).

(b) The management system includes consultation processes that regularly seek and accept relevant information, including local knowledge. The management system demonstrates consideration of the information obtained. (≥75 %).

(c) The management system includes consultation processes that obtain relevant information from the main affected parties, including local knowledge, to inform the management system. (≥65 %).

(d) This consultation is legally mandated at both the federal and state levels, in both statute and regulation. (≥55 %).
Audit Question
Is there a legal framework protecting the rights of traditional/customary fishing communities and other stakeholders which the fishery’s management system must comply with in its operations?

(a) The management system has a mechanism to formally commit to the legal rights created explicitly or established by custom on people dependent on fishing for food and livelihood in a manner consistent with the objectives outlined in Clause 5.3. (≥90 %).

(b) The management system has a mechanism to observe the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives outlined in Clause 5.3. (≥75 %).

(c) The management system has a mechanism to generally respect the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood in a manner consistent with the objectives outlined in Clause 5.3. (≥65 %).

(d) The management system exists within an appropriate legal and/or customary framework which ensures that it is capable of delivering sustainability in the fishery. (≥55 %).

Audit Question
Is there a legally mandated consultation process with traditional/customary fishing communities and other stakeholders that ensures participation and conflict avoidance?

(a) The consultation process provides opportunity and encouragement for all interested and affected parties to be involved, and facilitates their effective engagement. (≥90 %).

(b) The management system has effective consultation processes that are open to interested and affected parties. (≥75 %).

(c) The roles and responsibilities of organisations and individuals who are involved in the management process are clear and understood by all relevant parties. (≥65 %).

(d) The consultation process provides opportunity for all interested and affected parties to be involved. (≥55 %).

Audit Question
Has the adoption of fisheries practices been promoted that avoids conflict with customary resource users?

(a) The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes that is appropriate to the context of the fishery and has been tested and proven to be effective. (≥90 %).

(b) The management system incorporates or is subject by law to a transparent mechanism for the resolution of legal disputes which is considered to be effective in dealing with most issues and that is appropriate to the context of the UoA. (≥75 %).

(c) The management system incorporates or is subject by law to a mechanism for the resolution of legal disputes arising within the system. (≥65 %).

(d) The fishery observes the legal rights created explicitly or established by custom of people dependent on fishing for food or livelihood; and incorporates an appropriate dispute resolution framework. (≥55 %).
Audit Question
Has the adoption of fisheries practices been promoted that avoids conflict with customary resource users and other users of the coastal areas?

(a) The fishery management system has taken into account the scale, scope and complexity of the fishery and its effects – and therefore the number and range of potentially interested stakeholders; past or current level and nature of conflict, or the potential for controversy regarding the fishery; and the ability and/or willingness of key stakeholders to engage constructively in the assessment process. (≥90 %).

(b) Contacting and engaging stakeholders as early in the process as possible will reassure stakeholders that their information or concerns are included in the assessment early enough to receive real consideration and that stakeholder consultation is not being conducted as a procedural requirement after a decision has already been made. (≥75 %).

(c) Early analysis of stakeholder consultation needs will provide critical awareness of conflicting perspectives and potential controversy, and therefore valuable insights into areas that will need attention and specific substantive expertise. (≥65 %).

(d) Particular emphasis should be placed on identifying any groups who have played or are playing a role in any conflict or controversy related to the fishery and the particular issues of contention. (≥55 %).

Audit Question
Have procedures and mechanisms been established at the appropriate administrative level to settle conflicts which arise within the fisheries sector and between fisheries resource users and other users of the coastal area?

(a) The management system or fishery acts proactively to avoid legal disputes or rapidly implements judicial decisions arising from legal challenges. (≥90 %).

(b) The management system or fishery is attempting to comply in a timely fashion with judicial decisions arising from any legal challenges. (≥75 %).

(c) Although the management authority or fishery may be subject to continuing court challenges, it is not indicating a disrespect or defiance of the law by repeatedly violating the same law or regulation necessary for the sustainability for the fishery (≥65 %).

(d) Conflict settlement mechanisms include both administrative (through government agencies) and legal (through courts of law) procedures. (≥55 %).

6.2 Social aspect

6.2.1 Universal Declaration of Human Rights

Principle 2: Respect human rights

Criterion: The operator shall not violate human rights. All workers shall enjoy applicable basic human rights in accordance with the United Nations’ Universal Declaration of Human Rights and subsequent UN Human Rights treaties.

6.2.1.1 The operator shall have a proof of implementing a declaration on social practices supporting human rights.

Audit Question
Does the fishery uphold human rights in line with the Universal Declaration of Human Rights and other international agreements?

(a) The fishery has an implemented declaration on good social practices regarding human rights has been communicated to the employees and signed by the management and the employees' representative(s). (≥90 %).

(b) The fishery’s senior management has approved and communicated to personnel and other relevant parties, human rights expectations of those directly linked to its operations, products or services. (≥75 %).

(c) The fishery has a human rights policy which states human rights expectations of those directly linked to its operations, products or services. (≥65 %).

(d) The fishery has committed to recognize and uphold human rights as stated in the national statutes. (≥55 %).

Audit Question
Has the fishery communicated its commitment to implementing human rights communicated to the workers?

(a) The fishery’s senior management is implementing an approved human rights policy which has been communicated both internally and externally communicated to personnel, business partners and other relevant parties of those directly linked to its operations, products or services. (≥90 %).

(b) The fishery’s senior management has approved, then both internally and externally communicated to personnel, business partners and other relevant parties, human rights expectations of those directly linked to its operations, products or services. (≥75 %).

(c) The fishery has a human rights policy which states human rights expectations of those directly linked to its operations, products or services. (≥65 %).

(d) The fishery has committed to recognize and uphold human rights as stated in the national statutes. (≥55 %).

Audit Question
Are the human rights commitments of the fishery applicable in those cases where the operations of the fishery are carried out by third party contractors?

(a) The fishery’s senior management is implementing an approved human rights policy which is binding to third party contractors and other relevant parties of those directly linked to its operations, products or services. (≥90 %).

(b) The fishery’s senior management has communicated an approved human rights policy which is binding to third party contractors and other relevant parties of those directly linked to its operations, products or services. (≥75 %).

(c) The fishery has a human rights policy which states human rights expectations of third party contractors linked to its operations, products or services. (≥65 %).

(d) The fishery examines records or employment contracts of employees of third party contractors to confirm that their human rights commitments are at the same level or acceptable within the fisheries policy framework. (≥55 %).

Audit Question
How have any previous human rights infringements been addressed?
(a) The fishery has not faced any litigation nor are there registered complaints with respect to human rights infringements. (≥90 %).

(b) Number of final, binding, unappealable decisions of the applicable judicial authority related to the violation of these human rights. (≥75 %).

(c) Previous human rights complaints were resolved out of court through established dispute resolution mechanisms. (≥65 %).

(d) All human rights complaints were addressed within the fishery’s dispute resolution mechanisms with all resolutions settled. (≥55 %).

6.2.2 Labour rights

Principle 3: Respect labour rights

6.2.2.1 Forced or compulsory labour

Criterion: The operator shall not use any type of forced labour, within the context of with ILO Conventions 29 and 105 and national labour laws.

Indicator:

6.2.2.1.1 The operator shall implement a declaration on social practices supporting labour rights and keep records on number of final, binding and unappealable decisions of an applicable judicial authority or compulsory labour that remain unresolved.

Audit Question
Are contracts are clearly stated and understood by employees and not leading workers to being indebted (i.e. no ‘pay to work’ schemes through labour contractors or training credit programs)?

(a) Evidence that fishery does not engage in or support the use of forced, compulsory, bonded, trafficked or otherwise involuntary labour as defined in ILO Convention 29 either directly or through independent third parties (e.g. contractors, etc.) engaged in the operations. (≥90 %).

(b) Workers engaged in the operation(s) of the economic operator confirm that they are not required to lodge their identity documents with anyone and that no part of their salary, benefits or property is retained in order to force them to work or stay on the operation(s). (≥75 %).

(c) Workers are not subject to corporal punishment, mental or physical oppression or coercion, verbal or physical abuse, sexual harassment or any other kind of intimidation. (≥65 %).

(d) Workers engaged in the operation(s) of the bioenergy operator confirm that they are allowed to leave their employment after due notice according to their contractual agreements. (≥55 %).

Audit Question
Are employees free to leave the workplace and manage their own time?

(a) The fishery does not withhold any part of workers’ salaries, benefits, property or documents in order to oblige them to continue working for the employer. (≥90 %).

(b) The employees are not obligated to stay in job to repay debt. (≥75 %).

(c) Spouses and children of workers engaged in the fishery are not obliged to work in the operations of the fishery. (≥65 %).
(d) The fishery has no objection on offering a payroll record of workers who can be interviewed to confirm the above. (≥55 %).

6.2.2.2 Worker safety

Criterion: The operator shall have a written occupational health, safety and hygiene policy and procedures, including issues of risk assessment in accordance with national and internationally recognized standards

Indicator:
6.2.2.2.1 The operator shall document:

(a) Occupational health, safety and hygiene policy
(b) Occupational health, safety and hygiene compliance procedures
(c) Conditions of safety and health are in compliance with the provisions of ILO 184
(d) Records of workers trained in health and safety practices/procedures/policies
(e) Records of health- and safety-related incidents, accidents and violations recorded and mitigated through corrective actions, and proof of insurance (accident/injury) for employee costs in a job-related accident or injury when not covered under national law

Audit Question
Has the employer documented practices, procedures (including emergency response procedures) and policies to protect employees from workplace hazards and to minimize risk of accident or injury and is the information available to employees?

(a) Evidence demonstrating that procedures and measures addressing emergencies and accidents are in place, fully implemented, continuously monitored and improved, and apply to all workers engaged in the operations of the participating operator. (≥90 %).
(b) Evidence demonstrating that all workers understand the economic operators’ accident and emergency prevention, preparedness and response arrangements and measures. (≥75 %).
(c) The fishery maintains, and reviews periodically records of all work-related accidents, incidents and diseases and adjusts its accident and emergency procedures to minimize the risk of work-related accidents. (≥65 %).
(d) Records of workers trained in health and safety practices/procedures/policies. (≥55 %).

Audit Question
Does the employer conduct health and safety training for all employees on a regular basis (once a year and immediately for all new employees), including training on potential hazards and risk minimization, Occupational Safety and Health (OSH) and effective use of PPE?

(a) Objective evidence of a work and safety plan demonstrating that all workers (including subcontractors) are: (≥90 %).
   (i) trained, knowledgeable and regularly using protective equipment and installations,
   (ii) trained and knowledgeable in interpretation of labels, markings, signs, and other safety relevant audio and/or visual signals,
(iii) trained and knowledgeable about work-related health and safety risks and preventative measures for minimizing the risk to health and safety,

(iv) trained and knowledgeable about work-related risks to the environment and/or society,

(v) trained and knowledgeable about accident and emergency procedures,

(vi) trained and knowledgeable about correct application, transport, storage and handling of hazardous substances and waste, and

(vii) trained and knowledgeable about all other aspects of the operation(s) of the participating operator that pose occupational health and safety risks or risks to the environment and/or to society.

(b) Evidence demonstrating that first aid kits, fire extinguishers, and spill and operator contamination response material are available in sufficient quantity (i.e. readily available and accessible to workers) and quality (i.e. current and periodically serviced and appropriate to address the associated hazards and risks) at all sites including mobile facilities and that workers are knowledgeable of such equipment and its use. (≥75 %).

(c) Evidence demonstrating that all workers (including subcontractors) are provided with and regularly use personal protective equipment to protect them from all occupational health and safety hazards associated with their respective jobs. (≥65 %).

(d) Evidence that there is a system of warnings followed by legally-permitted sanctions for workers that do not apply safety requirements. (≥55 %).

Audit Question
What management measures has the fishery put in place to address all health and safety hazards associated with its operations.

(a) Employer makes regular assessments of hazards and risks in the workplace and conducts annual training in the proper use of PPE. For workers who participated in the initial training(s) previously an annual refreshment training may suffice, unless new PPE has been put to use. (≥90 %).

(b) Evidence demonstrating that workers are skilled in the implementation of their prescribed activities and jobs to minimize health and safety risks and the risk of work related accidents. (≥75 %).

(c) Employer provides workers with PPE that is appropriate to known health and safety hazards (≥65 %).

(d) Employer maintains a list of all health and safety hazards (e.g. chemicals). (≥55 %).

Audit Question
Are the employees trained in how to identify and prevent known hazards and risks?

(a) Evidence demonstrating that workers are skilled in the implementation of their prescribed activities and jobs to minimize health and safety risks and the risk of work related accidents. (≥90 %).

(b) Health and safety procedures are adapted based on results from risk assessments and changes are implemented to help prevent accidents. (≥75 %).
(c) Employer maintains complete documentation for all occupational health and safety violations health- and safety-related accidents, and investigations. (≥65 %).

(d) Employer implements corrective action plans in response to any accidents that occur. Plans are documented and they include an analysis of root cause, actions to address root cause, actions to remediate, and actions to prevent future accidents of similar nature. (≥55 %).

Audit Question
What are the corrective or administrative measures taken to address health and safety violations health- and safety-related accidents, and investigations?

(a) Employees working in departments where accidents have occurred can explain what analysis has been done and what steps were taken or improvements made. (≥90 %).

(b) Employer maintains documentation to confirm that all personnel are provided sufficient insurance to cover costs related to occupational accidents or injuries (if not covered under national law). Equal insurance coverage must include temporary, migrant or foreign workers. Written contract of employer responsibility to cover accident costs is acceptable evidence in place of insurance. (≥75 %).

(c) Employer keeps records of farm diving operations and a list of all personnel involved. In case an external service provider was hired, a statement that provider conformed to all relevant criteria must be made available to the auditor by this provider. (≥65 %).

(d) Employer maintains evidence of diver certification (e.g. copies of certificates) for each person involved in diving operations. Divers shall be certified through an accredited national or international organization for diver certification. (≥55 %).

6.2.2.3 Freedom to associate

Criterion: The operator shall grant all workers freedom of association and freedom of collective bargaining in accordance with all national and local legislation and ILO Conventions 87 and 98.

Indicator:

6.2.2.3.1 The operator shall demonstrate a clause within the employment contract indicating freedom to join or not join unions and evidence of a mechanism to bargain collectively or have access to representative(s) chosen by workers.

Audit Question
Does the fishery have a documented and implemented policy allowing workers of the fishery freedom to join any trade union, free of any form of interference from employers or competing organizations set up or backed by the employer?

(a) The right to form, join trade unions or not join trade unions shall be stated in the labour contract, subject to national law. Workers engaged in the fishery’s operations confirm that they are aware of, and have the right to freely organize, voluntarily negotiate their working conditions and bargain collectively with the management of the operation(s), as established in ILO Conventions 87 and 98. (≥90 %).

(b) Workers engaged in the fishery’s operations confirm that there is no perceived or actual threat of undue interference by the management and/or their designated representatives of the operation(s) of the economic operator in workers exercising their rights to freely organize, voluntarily negotiate their working conditions and bargain collectively with the management of the operation(s). (≥75 %).
In situations where the rights to freedom of association and collective bargaining are restricted by law, the management of the fishery’s operations allows workers to freely elect their own representatives, does not interfere with such representational mechanisms, and provides a mechanism for workers to freely engage and negotiate with employers without breaking the law analogue to the requirements established in ILO Conventions 87 and 98. (≥65%).

Evidence that workers are not hindered from interacting with external parties outside working hours (e.g. NGOs, trade unions, labour inspectors, agricultural extension workers, certification bodies). (≥55%).

Audit Question
Are union representatives (or worker representatives) chosen by workers without managerial interference and restrictions on access to officials or members?

(a) The union representatives (or worker representatives) are chosen by workers without managerial interference in accordance with the ILO conventions and national labour laws. (≥90%).

(b) Trade union representatives (or worker representatives) have access to their members in the workplace at reasonable times on the premises. (≥75%).

(c) Employer communicates that workers are free to form organizations to advocate for and protect work rights through a formally approved labour relations policy. (≥65%).

(d) Employment contract explicitly states the worker’s right of freedom of association. (≥55%).

Audit Question
Are there outstanding cases against the fishery’s management for violations of employees’ freedom of association and collective bargaining rights?

(a) Local trade union, or where none exists a reputable civil-society organization, confirms no outstanding cases against the farm site management for violations of employees’ freedom of association and collective bargaining rights. (≥90%).

(b) There is documentary evidence that workers are free and able to bargain collectively (e.g. collective bargaining agreements, meeting minutes, or complaint resolutions). (≥75%).

(c) Employer has explicitly communicated a commitment to ensure the collective bargaining rights of all workers. (≥65%).

(d) The fishery management has a stated policy to engage with workers’ representatives and workers’ organizations, and provide them with information needed for meaningful negotiation in a timely manner. (≥55%).

6.2.2.4 Non-discrimination

Criterion: The operator shall not discriminate in the labour and hiring policies and procedures along the lines of race, colour, gender, age, religion, social class, political opinion, nationality, tribe, union membership, personal relationship, civil status or any other motive as indicated by applicable laws, ILO Conventions 100 and 111, and this standard.

Indicator:

6.2.2.4.1 The operator shall demonstrate that;
(a) The provisions of ILO conventions 100 and 111 are implemented.

(b) A publicly available equal opportunities policy exists.

(c) Workers irrespective of gender are remunerated equally for same amount of work.

(d) Evidence of affirmative action in employment for vulnerable groups.

(e) Workers confirm that they are not subjected to any form of discrimination in hiring, remunerations, benefits, access to training, promotions, terminations retirements or any other aspect of employment.

**Audit Question**
Does the fishery have a written anti-discrimination policy in place, stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, union membership, political affiliation, age or any other condition that may give rise to discrimination?

(a) The fishery implements a non-discrimination policy in accordance with the national laws and the provisions of ILO Convention 111. (≥90 %).

(b) Workers engaged in the fishery’s operations confirm that they are not subjected to any form of discrimination in hiring, remuneration, benefits, access to training, promotion, termination, retirement or any other aspect of employment. (≥75 %).

(c) Male and female workers engaged in the fishery’s operations confirm that they have equal access to career development programs (not applicable to family firms or small-scale operators. (≥65 %).

(d) A publicly available equal opportunities policy exists. (≥55 %).

**Audit Question**
Does the fishery have clear and transparent procedures that outline how to raise, file, and respond to discrimination complaints?

(a) Evidence that the grievance mechanism involves an appropriate level of management and addresses concerns promptly, using an understandable and transparent process that provides timely feedback to those concerned, without any retribution. (≥90 %).

(b) Evidence that the mechanism does not impede access to other judicial or administrative remedies available under the law or through existing arbitration procedures, or substitute for grievance mechanisms provided through collective agreements. (≥75 %).

(c) Evidence that the mechanism allows for anonymous complaints to be raised and addressed and that whenever necessary, the worker to be accompanied and/or represented by a colleague or official of a trade union at grievance resolution meetings if they so choose. (≥65 %).

(d) Workers are informed and are aware of the grievance mechanism at the time of recruitment and find it easily accessible to them. (≥55 %).

**Audit Question**
Employer respects the principle of equal pay for equal work and equal access to job opportunities, promotions and raises.

(a) Workers engaged in the operation(s) of the economic operator confirm that men, women and migrant workers earn equal pay for equal work. (≥90 %).
(b) Workers engaged in the fishery’s operations confirm that for piecework, the pay rate allows male and female workers to earn at least the legal minimum wage (or comparable regional wage) for the specific work, based on an eight-hour workday under average conditions. (≥75%).

(c) Special measures of protection or assistance to remedy past discrimination have been put in place such as policies designed to increase employment of underrepresented groups in the workforce or in particular occupations in order to remedy past discrimination, such as affirmative action and employment of members of the local community, with a view to achieving effective equality of opportunity and treatment in the workplace. (≥65%).

(d) The fishery’s employment policy complies the national no-discrimination laws. (≥55%).

Audit Question
Are there any perceived discriminations in the opportunities arising in the fishery?

(a) All managers and supervisors receive training on diversity and non-discrimination. All personnel receive non-discrimination training. Internal or external training acceptable if proven effective. (≥90%).

(b) Evidence that the economic operator has addressed protection of disabled people’s rights under all of their labour policies and procedures including working conditions, access and egress for disabled people. (≥75%).

(c) The fishery ensures that there is no discrimination exercised during retrenchment exercises or off-season downsizing of the fishery’s operations. (≥65%).

(d) Employer maintains a record of all discrimination complaints. These records do not show evidence for discrimination. (≥55%).

6.2.2.5 Child labour

Criterion: The fishery shall not use child labour as stipulated in ILO Conventions 138 and 182. Children may do light work, provided that such work is not dangerous to their health and safety and does not jeopardize their educational, moral, social and physical development. Such work shall be supervised by adults and authorized by a legal guardian.

Indicator:
6.2.2.5.1 The operator shall keep verifiable records of workers’ ages and number of working hours for employed children that support compliance with the criterion.

Audit Question
Does the fishery comply with the national laws regulating the engagement of permanent workers considered to be as children (aged 15 or under) within the international conventions?

(a) Evidence that the economic operator does not engage children of age 15 and under (or the legal national age). (≥90%).

(b) Evidence that, where legally allowed, workers under the age of 18 do not undertake hazardous or dangerous work, as defined by ILO convention 138. (≥75%).

NOTE Examples of hazardous work activities include work (i) with exposure to physical, psychological, or sexual abuse; (ii) underground, underwater, working at heights, or in confined spaces; (iii) with dangerous machinery, equipment, or tools, or involving handling of heavy loads; (iv) in unhealthy environments exposing the worker to hazardous substances, agents, processes, temperatures, noise, or vibration damaging to health; or (v) under difficult conditions such as long hours, late night, or confinement by employer; or (vi) work on floating cages in poor weather conditions shall be considered hazardous.
(c) Evidence demonstrating that in operations where permitted by law, children between 12 and 14 years of age can work part time on family firms, only if they are family members or neighbours in a community where children have traditionally helped with agricultural work. (≥65 %).

(d) Evidence demonstrating that in project operations, the work of children on family firms does not interfere with the child’s education, or to be harmful to the child’s health or physical, mental, spiritual, moral, or social development and that the work day including schooling, transport and work does not exceed 10 hours. (≥55 %).

Audit Question
Young workers are appropriately identified in company policies & training programs, and job descriptions are available for all young workers at the site.

(a) The economic operator provides objective evidence demonstrating that the work of children on family farms does not have negative impacts on the children’s schooling (i.e. this may be verified by interviewing the children and the teachers at the local school). (≥90 %).

(b) The economic operator provides objective evidence demonstrating that the work of children on family farms does not have negative impact on the children’s health and development (i.e. this may be verified by interviewing children and local health service providers). (≥75 %).

(c) On interview, the young workers can offer reasonable and empathetic grounds which are within the stipulated policies of the company (such as social responsibility) that led to their employment in the fishery. (≥65 %).

(d) All young workers (from age 15 to less than 18) are identified and their ages are confirmed with copies of IDs. (≥55 %).

6.2.2.6 Working conditions

Criterion: Workers’ wages and working conditions shall respect all applicable laws and international conventions as well as all relevant collective agreements.

Indicator:

6.2.2.6.1 The operator shall ensure that there are records on worker’s written contract stating their payment policies and procedures and workers have a written contract stating their rights with regards to working hours, leave days among others.

Audit Question
Are the workers of the fishery paid adequate salaries compliant at least with minimum legal wages?

(a) Objective evidence demonstrating that all workers are paid at least the government regulated minimum wage in the specific industry sector for the applicable work as required by law, and that this includes all mandated wages, allowances and benefits. (≥90 %).

(b) Evidence demonstrating that where government regulated minimum wages do not exist in the specific industry sector, the management of the operation(s) of the economic operator has agreed a wage with the workers. (≥75 %).

(c) Workers engaged in the operation(s) of the economic operator confirm that the agreed wage is agreed freely on an annual basis. (≥65 %).
(d) Evidence demonstrating that wage agreements are in line with all applicable laws and international conventions and local collective agreements. (≥55 %).

Audit Question
Does the fishery company grant their workers access to healthcare?

(a) Evidence that fishery implements a health policy which allows its workers and their dependents to access healthcare through compliance with the obligatory national laws and enhanced contributory schemes. (≥90 %).

(b) Evidence that fishery implements a health policy which allows its workers and their dependents to access healthcare through compliance with the obligatory national laws and/or are allowed to subscribe to enhanced contributory schemes on a voluntary basis. (≥75 %).

(c) The fishery pays the mandatory health insurance fund covering the employees and their registered dependents in accordance with the national laws and has internal health facilities which are accessible to employees and their dependents. (≥65 %).

(d) The fishery pays the mandatory health insurance fund covering the employees and their registered dependents in accordance with the national laws. (≥55 %).

Audit Question
Is the fishery company applying the safety measures required by the law?

(a) There is evidence that the fishery is implementing a written and updated occupational health, safety and hygiene policy and procedures, including issues of risk assessment in accordance with the national laws and nationally and internationally recognized standards. (≥90 %).

(b) Evidence demonstrating that workers are skilled in the implementation of their prescribed activities and jobs to minimize health and safety risks and the risk of work related accidents. (≥75 %).

(c) Relevant health and safety risks are identified, procedures are developed to address these risks by employers, and these are monitored. (≥65 %).

(d) Producers and their employees demonstrate an awareness and understanding of health and safety matters. (≥55 %).

6.3 Fisheries resources

Principle 4: Maintain fisheries resources and rebuild depleted fish stocks

6.3.1 Fish stocks status

Criterion: Fishery operations must be conducted in a manner that does not lead to over-fishing or depletion of the resources. Populations that are depleted must be utilized in a manner that demonstrably leads to their recovery.

Indicator: 6.3.1.1 Fishery management shall maintain records indicating current registered fishers, total catch per given period or stock assessment.

Audit Question
Is the fish population analysis updated regularly and in cooperation by a scientific group?
(a) There is a reliable quantitative stock assessment which takes into account the major features relevant to the biology of the species and the nature of the fishery under assessment. (≥90 %).

(b) The assessment estimates stock status relative to reference points that are appropriate to the stock and can be estimated. (≥75 %).

(c) There is a reliable quantitative stock assessment appropriate for the stock and for the harvest control rule. (≥65 %).

(d) The assessment estimates stock status relative to generic reference points appropriate to the species category. (≥55 %).

Audit Question
Does the fishery participate in the collection of fish population data?
(a) The fishery has a comprehensive data collection capability with respect to target species which allows for the fishery to determine the management strategies and impact or outcome status of affected components (e.g., species). (≥90 %).

(b) The fishery collaborates with research organizations by submitting catch data and trends for species of its commercial interest including bycatches. (≥75 %).

(c) The fishery participates as an observer in the data collection by assigning staff to take part in other fisheries with the capacity to collect data as a means of capacity building and estimation of its own data inputs based on its recorded catches and bycatches. (≥65 %).

(d) The fishery subscribes to data collection publications from research organizations working in the operational area of the fishery. (≥55 %).

Audit Question
Have measures been introduced to identify and protect depleted resources and those resources threatened with depletion, and to facilitate the sustained recovery of such stocks?
(a) The potential yield has been estimated and the biological constraints identified enabling target reference points to be established through data collection and fisheries assessment and the necessary environmental impacts identified and monitored, and the management strategy adjusted in response as necessary. (≥90 %).

(b) Assessment has been conducted to establish the spatial distribution of the species as well as the degree of spatial overlap with commercial fishing operations to determine whether the species is at risk of being locally depleted in the assessment area or; if the species has only a limited distribution, so that it is likely to be more severely affected by fishing pressure or; if the species is part of a widely distributed and highly migratory population, the cumulative impacts on the population may be greater as well as more difficult to account for. (≥75 %).

(c) Management nearly always follows scientific advice (e.g., does not have a track record of exceeding advised TACs or otherwise disregarding scientific advice). (≥65 %).

(d) Management only sometimes follows scientific advice (e.g., only sets TACs at or below the recommended level half of the time). (≥55 %).

Audit Question
Is research being conducted into the study and monitoring of human food supplies from aquatic sources and the environments from which they are taken to ensure that there is no adverse health impact on consumers?
(a) Research and monitoring is conducted by the fisheries and marine research authorities, fisheries and aquaculture management authorities, environmental management authorities and food safety
authorities on environmental indicators to ensure that the aquatic resources are not polluted or contaminated so as to affect the safety and health of seafood from specific fisheries operations areas. Sampling and testing of catch in accordance with relevant product standards is conducted prior to market dispatch of seafood. (≥90%).

(b) The fishery operates within areas that are cleared as being safe from contamination and pollution which could impair the health and safety of seafood and render it unsafe for consumption as human food. The fishery conducts in-house testing and also coordinates testing with notified conformity assessment bodies for product certification. (≥75%).

(c) The fishery operates in fishing grounds which are deemed as free of food health and safety hazards and ensures that its fishing gears, vessels and personnel meet health and safety requirements. Conformity assessment bodies regularly conduct inspections and testing for certification purposes. (≥65%).

(d) The fishery’s operations are subject to regulatory controls which give the presumption that its seafood products are safe for consumption as human food. (≥55%).

Audit Question
Have mechanisms been established to (identify, quantify) prevent or eliminate fishing overcapacity?

(a) The fisheries management has established quantitative and qualitative mechanisms to prevent and/or eliminate fishing overcapacity by establishing harvest controls based on the maximum sustainable yield (MSY) and/or maximum economic (MEY) determined from research. (≥90%).

(b) The fisheries management authorities utilize two main approaches to reducing overcapacity, or preventing it from occurring in the first place; (1) regulated open access/incentive blocking instruments (e.g., limited entry; buyback programs; gear and vessel restrictions; aggregate quotas; non-transferable vessel catch limits; individual effort quotas (IEQs)) or (2) assignment of property rights (e.g., individual transferable quotas (ITQs); taxes and royalties; group fishing rights (CDQs, etc.); territorial use rights (TURFs)). (≥75%).

(c) The fisheries management uses an integrated approach to address overcapacity focusing on: (1) resource management, (2) resource restoration and conservation, (3) livelihoods and economic and community development, and (4) restructured governance arrangements. (≥65%).

(d) The fishery observes license limitation has been imposed by fisheries authorities. (≥55%).

Figure 6: The Fisheries Management Dilemma (CRC, 2014)
NOTE 1  Overcapacity or overcapitalization can be defined as a long term problem in a fishery whereby the size of the fishing fleet, its harvesting ability or fishing power exceeds what is necessary to harvest an optimum yield. Since most fisheries are fully exploited or overexploited, existing fishing capacity exceeds what is necessary to harvest the maximum sustainable yield (MSY) and/or maximum economic (MEY). Optimum harvesting levels are set as part of the management objectives for a given fishery. For instance, food security objectives are best met at MSY, whereas profitability and economic efficiency objectives are met at MEY (CRC, 2014).

NOTE 2  Regulatory approaches often involve input controls or output controls or a combination of the two. *Input controls* include measures such as such as gear restrictions, limiting the number of vessels (also a form of managed access), their size, engines used, or outright bans on fishing techniques or gear, as well as seasonal and area closures or establishment of marine reserves. Early fisheries management regimes in Northern countries and an overwhelming majority of the tools used in developing countries mainly rely on input controls. *Output controls* include measures such as a seasonal cap on total landings for the fishery, such as an aggregate quota or total allowable catch (TAC), or individual fishing quotas. Even for output controls, fishermen race to catch as much as they can prior to the total catch limit being reached. This leads to fishing derbies and as in the case of the Alaska halibut fishery (see case study on this fishery). The TAC was caught within a matter of days, leaving much of the halibut fishing fleet and processing plants idle for most of the year (CRC, 2014).

Audit Question
Have the measures to (identify, quantify) prevent or eliminate excess fishing capacity proved effective?
(a) The measures are based on the best available scientific evidence and have resulted in maintaining sustainable levels of fish stocks operating between the maximum sustainable yield (MSY) and the maximum economic (MEY) (≥ 90 %).

(b) The measures have been demonstrated to maintain or restore populations of harvested species at levels which can produce the maximum sustainable yield taking into account relevant environmental and economic factors, including the economic needs of coastal fishing communities. (≥ 75 %).

(c) The measures have taken into account the interests of artisanal and subsistence fishers. (≥ 65 %).

(d) There are qualitatively noticeable levels of reduced overfishing. (≥ 55 %).

Audit Question
Are the arrangements followed for assessment, management of the fishery and the decision-making process in general transparent?
(a) The management process is transparent and includes stakeholder consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. (≥ 90 %).

(b) Decision-making processes respond to *serious and other important issues* identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take account of the wider implications of decisions. (≥ 75 %).

(c) Decision-making processes respond to *serious issues* identified in relevant research, monitoring, evaluation and consultation, in a transparent, timely and adaptive manner and take some account of the wider implications of decisions. (≥ 65 %).

(d) There is limited transparency, stakeholder input or consultation. (≥ 55 %).

Audit Question
Are the conservation and management measures adopted for management of the fishery and the related decision-making process given due publicity in order to ensure that laws, regulations and other legal rules governing their implementation are effectively disseminated?
(a) Comprehensive information on conservation measures, subsidies, allocation, compliance, fisheries management decisions, fisheries data supporting decisions, and the reasons for decisions shall be available openly, publicly and regularly to all stakeholders. (≥ 90 %).
(b) Information on conservation measures, subsidies, allocation, compliance, fisheries management
decisions, fisheries data supporting decisions, and the reasons for decisions, should be made
available to all stakeholders on request. (≥75 %).

(c) At least a general summary of information on conservation measures, subsidies, allocation,
compliance and fisheries management decisions should be available to stakeholders on request.
(≥65 %).

(d) Information on conservation and management measures is treated with confidentiality and can
only be disseminated to the public under legal advisement. (≥55 %).

Audit Question
Are fisheries management measures based on the best scientific evidence?

(a) The fishery management measures are based on the state of art scientific knowledge. (≥90 %).

(b) Fishery management measures utilize consultancy inputs to adopt latest scientific practices (≥75
%
).

(c) The fishery operation depends on cooperative experts to build capacity for scientific updates
repackaged in locally relevant understanding (≥65 %).

(d) The fishery gets updates on scientific information from extension services with noticeable lags
(≥55 %).

Audit Question
Are fisheries management measures qualified by relevant environmental and economic factors?

(a) The fishery is expected to support economic objectives, such as providing growth and
opportunity, social goals such as preserving rural communities, and environmental objectives
such as providing high quality marine habitats and coastal zones. (≥90 %).

(b) The fisheries management measures are designed to help fisheries managers maximise the
economic and social value of the fisheries while conserving the maritime environment for the long
term. (≥75 %).

(c) Effective management means finding the right balance between economic, environmental and
social objectives while taking into account the role and impact of individual incentives. (≥65 %).

(d) Fisheries management is a response to the tendency of unregulated fisheries to be overused and
depleted. (≥55 %).

(OECD, 2013)

6.3.2 Reference point

Criterion: The fishery shall ensure that the limit and target reference points are appropriate for the stock
and can be estimated.

Indicator:

6.3.2.1 Fishery management shall have records of stock assessment such as mortality and biomass

Audit Question
Has the precautionary approach been applied widely to conservation, management and exploitation of
living aquatic resources in order to protect them and preserve the aquatic environment?
(a) Clear long term objectives that guide decision-making, consistent with the precautionary approach, are explicit within and required by management policy. (≥90 %).

(b) The long-term objectives that guide decision-making, consistent with the precautionary approach, are explicit within management policy. (≥75 %).

(c) Decision-making processes use the precautionary approach and are based on best available information. (≥65 %).

(d) Protection of the resources and the environment has first priority in all fisheries management. (≥55 %).

Audit Question
Has the absence of adequate scientific information been used as a reason for postponing or failing to take conservation and management measures?
(a) The absence of adequate scientific information has not been used as a reason for postponing or failing to take conservation and management measures. (≥90 %).

(b) Management measures are almost never postponed because of the absence of adequate scientific information. (≥75 %).

(c) On the rare occasions, management measures are postponed because of the absence of adequate scientific information because the risk of a blind management action is considered to be greater than the risk of temporarily continuing the status quo. (≥65 %).

(d) Management measures may be postponed because of the absence of adequate scientific information on account of prevailing socioeconomic and political pressures. (≥55 %).

Audit Question
Has there been an attempt to determine for the stock both safe targets for management (Target Reference Points) and limits for exploitation (Limit Reference Points), and, at the same time, the action to be taken if they are exceeded?
(a) There is a reliable quantitative stock assessment, and biomass is estimated to be above or fluctuating around an appropriate target reference point with no scientific controversy around that estimate. (≥90 %).

(b) There are estimates based on the fishery’s ecological capacity calculated from similar operational fisheries and target species. (≥75 %).

(c) Qualitative criteria with some quantitative considerations are used to establish Target Reference Points (TRPs) (corresponding to maximum sustainable yield (MSY)) and Limit Reference Points (LRPs) (≥65 %).

(d) The reference points are established arbitrarily with technical considerations based on expert advice. (≥55 %).

Audit Question
Have formal reference point(s) based on stock size been established?
(a) There are reference points (target and/or limit, (TRPs, LRPs, MSY, MEY)), that trigger management actions including a biological bottom line and/or a catch or effort upper limit beyond which the stock should not be taken. (≥90 %).

(b) Stock status reference points are available, derived either from analytical stock assessment or using empirical approaches. (≥75 %).
Assessments have been made which establish a high level of confidence of both stock status and reference points. (≥65%).

Generic reference points have been established on the basis stock assessments. (≥55%).

Figure 7: The relationship between reference points and reference directions for an indicator of fishing impact (Jennings et al., 2005)

Audit Question
Have target reference point(s) been established?
(a) The target reference point (TRP), generally expressed as a target escapement goal or target harvest rate, shall be a level at which the stock management unit (SMU) maintains high production (such as BEGs or SMSY). (≥90%).

(b) Target reference points are set at levels that allow for recovery of species impacted by the introduction. (≥75%).

(c) Species where management tools and measures are in place, intended to achieve stock management objectives reflected in either limit or target reference points. (≥65%).

(d) A target reference point reflects a management objective to be achieved (e.g., performance consistent with MSY) while the limit reflects an undesirable state to be avoided with high probability (e.g., impaired recruitment). (≥55%).

Audit Question
Have limit reference points been established?
(a) The limit reference point (LRP) shall be a level at which the SMU has a high probability of persistence in the presence of directed fishing and of recovery to high production in the absence of directed fishing. LRPs set boundaries which are intended to constrain harvesting within safe biological limits within which the stocks can produce MSY. Fishery management strategies shall ensure that the risk of exceeding LRPs is very low. If the stock falls below a LRP or is at risk of falling below such a RP, conservation and management action should be initiated to facilitate stock recovery. (≥90%).

(b) The stock management unit (SMU) is at a level which maintains high production and has a low probability of falling below its limit reference point (LRP). (≥75%).

(c) Fishing mortality rate which generates MSY should be regarded as a minimum standard for LRPs (≥65%).

(d) Biomass is above the limit reference point but may be below a target reference point (≥55%).
Audit Question
Have data and assessment procedures been installed measuring the position of the fishery in relation to the reference points established?
(a) There is a robust assessment of the dynamics and status of the species/fishery and periodic review of the process and the data collected. Assessment should include a process to identify any reduction in biological diversity and/or reproductive capacity. Review should take place at regular intervals but at least every three years. (≥90 %).

(b) There are reliable estimates of all removals, including commercial (landings and discards), recreational and indigenous, from the fished stock. These estimates have been factored into stock assessments and target species catch levels. (≥75 %).

(c) There is a reliable information collection system in place appropriate to the scale of the fishery. The level of data collection should be based upon an appropriate mix of fishery independent and dependent research and monitoring. (≥65 %).

(d) All fisheries are closely and quantitatively monitored while they are in progress, in order to avoid exceeding their catch limits. (≥55 %).

Audit Question
Have management actions been agreed to in the eventuality that data sources and analyses indicate that these reference points have been exceeded?
(a) There is a written management plan that details the objectives of management for the target species and the ecosystem more broadly, the decision making process, agreed measures for management of the fishery (e.g. general and specific measures, precautionary measures, contingency plans, issues of particular concern and the actions to address them), and arrangements for monitoring, control, surveillance and enforcement. (≥90 %).

(b) The management plan provides objectives, management rules, limit reference points, pre-agreed management measures that come into force immediately when a precautionary limit reference point is reached, and requires cessation of target fishing if a limit reference point is reached. (≥75 %).

(c) The management response, considering uncertainties in the assessment and precautionary management actions, has a high chance of achieving the objective. (≥65 %).

(d) There are management strategies in place capable of controlling the level of take. (≥55 %).

Audit Question
For new and exploratory fisheries, are procedures in place for promptly applying precautionary management measures, including catch or effort limits?
(a) New or exploratory fisheries shall use cautious conservation and management measures until there are sufficient data to allow the identification of measures for the long-term sustainability and gradual development of the fisheries, in particular, until sufficient information is available to: evaluate the distribution, abundance, and demography of the target species, leading to an estimate of the fishery’s potential yield; review the fishery’s potential impacts on dependent and related species; allow for the scientific formulation of appropriate harvest catch levels, as well as effort levels and fishing gear, where appropriate. (≥90 %).

(b) For any new fishery, the precautionary principle is applied even more strongly than in established fisheries. Exploratory fisheries are severely restricted in time, area, and harvest. (≥75 %).

(c) There are no national laws on exploratory or new fisheries governance but the fishery complies with the provisions of the United Nations Fish Stocks Agreement (UNFSA) (UN-DOALS, 1995). (≥65 %).
There are no national laws on exploratory or new fisheries governance but the fishery utilizes internal best practices. (≥55 %).

**Audit Question**

Have provisions been made for the gradual development of new or exploratory fisheries while information is being collected on the impact of these fisheries, allowing an assessment of the impact of such fisheries on the long-term sustainability of the stocks?

(a) There is an agreed strategy for the development of new or exploratory fisheries that impact on species or ecosystems in ways that have not been fully assessed previously – for example, fisheries that target new species, use significantly modified gear or operate in new areas. These strategies ensure that fishery expansion does not outpace the information needed to determine the management measures for optimal and sustainable use. The strategy provides cautious conservation and management measures until there is sufficient information to allow identification of appropriate measures for incremental development and/or long-term utilization. The strategy includes, *inter alia:* notification of new or exploratory fisheries; precautionary limits on the catch, the fishing effort and the number of operators, further defined for particular sub-areas as appropriate; requirements for information collection and assessment; and specification of how this information and assessment is used to trigger decisions about subsequent fishery development. (≥90 %).

(b) In the absence of a national or legal framework, the fishery management shall be more cautious when information is uncertain, unreliable or inadequate. (≥75 %).

(c) The fishery uses best practices employed in fisheries of similar nature to develop new or exploratory fisheries. (≥65 %).

(d) New or exploratory fisheries are developed gradually with best endeavour whenever scientific information is missing. (≥55 %).

**Audit Question**

Have precautionary management provisions been established early on?

(a) There are established precautionary management provisions including the following measures: (i) precautionary effort limits, particularly where reliable assessments of sustainable exploitation rates of target and main by-catch species are not available; (ii) precautionary measures, including precautionary spatial catch limits where appropriate, to prevent serial depletion of low-productivity stocks; (iii) regular review of appropriate indices of stock status and revision downwards of the limits listed above when significant declines are detected; (iv) measures to prevent significant adverse impacts on vulnerable marine ecosystems; and (v) comprehensive monitoring of all fishing effort, capture of all species and interactions with VMEs. (≥90 %).

(b) Precautionary management provisions are established in accordance with best international practices and instruments such as the FAO Code of Responsible Fisheries and the UNFSA in the absence of national or regional legal framework. (UN-DOALS, 1995; FAO, 2011c). (≥75 %).

(c) The fishery uses precautionary management provisions based on experience and best practices employed in fisheries of similar nature. (≥65 %).

(d) Precautionary management provisions are established as a requirement of licensing provisions. (≥55 %).

**Audit Question**

Has information collection been initiated early to allow impact assessment?

(a) Adequate fisheries information required for fisheries impact assessment has been collected including: (i) level of fisheries resources and composition of commercially important species in the
study areas; (ii) the level and pattern of fishing activity and fisheries production in the study area; (iii) sites of fisheries importance such as nursery and spawning grounds of commercially important species of fish, crustaceans, molluscs and other marine organisms, and seasonal occurrence of juvenile and spawning stocks in the study area; and (iv) aquaculture activity in the study area. (≥90 %).

(b) Information collection is initiated from limited field data collection to address perceived gaps in existing information. (≥75 %).

(c) Existing information regarding the study area has been reviewed including both published and unpublished materials obtained from consultation of local fishermen, marine and fisheries biologists, and non-government organizations and relevant government departments. (≥65 %).

(d) Information for impact assessment has been obtained from review existing information in comparable fisheries operations pending detailed field surveys. (≥55 %).

Audit Question
Have contingency plans been agreed to in advance on the appropriate temporary management response to serious threats to the resource as a result of overfishing or adverse environmental changes or other phenomena adversely affecting the resource?

(a) There are contingency plans for management response to localized and temporary adverse impacts on essential fish habitat (EFH) including (1) localized nonpoint source pollution such as influx of sediment or nutrients, (2) interference with spawning and migration periods, (3) temporary removal feeding opportunities, (4) indirect effects from construction works, (5) direct disturbance or removal of native species, and (6) temporary or permanent habitat disturbance. (≥90 %).

(b) If the stock is estimated as being at or below the biological and / or effort bottom line, management responses such as a zero targeted catch, temporary fishery closure or a ‘whole of fishery’ effort or quota reduction are implemented. (≥75 %).

(c) The contingency plans are reserved by the fisheries management authorities charged with temporary management response to threats to fish stocks. (≥65 %).

(d) The fisheries and their underlying biomass are closely monitored, and fishing is often restricted. (≥55 %).

Audit Question
Have these emergency (temporary) responses been agreed to due to natural phenomena adversely impacting the stock?

(a) Government sector representatives, the disaster-affected population and all other relevant stakeholders are actively involved in planning for disasters, and in defining policy and management responses, in their implementation, and in their monitoring and evaluation. (≥90 %).

(b) Policy and management responses are based on sound information, data and local knowledge, while a lack of information is not used as an excuse for a lack of action. Information is used to reduce exposure to risk, and information about responses is shared. (≥75 %).

(c) Policy and management responses strive to adhere to any robust policy and management frameworks, and to relevant guidelines and standards that may already be in place. At the same time governance is responsive to conditions on the ground, and adapts policy and management measures to the specific needs faced in emergency situations. (≥65 %).
(d) In the event of a decline in the stock, for any reason, fishing is promptly curtailed. Support is provided to government staff, sector representation, and other stakeholders so as to increase capacities to prepare for and respond to emergency situations. (≥55%).

(Cattermoul et al., 2013)

Audit Question
Have these emergency (temporary) responses been agreed to due to fishing adversely impacting the stock?

(a) Emergency measures are the subject of public rule making procedures in which the stakeholders are given the opportunity to provide their inputs and understand their role in times of emergencies. Emergency measures may be instituted if fishing activities are deemed to have an adverse impact in spawning, breeding, feeding, and growth to maturity of stocks. (≥90%).

(b) If natural phenomena have a significant adverse impact on the stocks, conservation and management measures shall be adopted to ensure that fishing activity does not exacerbate that impact. (≥75%).

(c) Notification is issued of impending emergency actions in good time to allow stakeholders take necessary conservatory measures. (≥65%).

(d) Because of precautionary management and strict controls on escapements and TACs, overfishing virtually never occurs. (≥55%).

Audit Question
Have management measures taken into account the need to avoid excess capacity and promote conditions under which the interests of fishermen, especially the small-scale, artisanal and subsistence fishery sectors, are protected, the biochemistry conserved, depleted stocks restored and adverse environmental impacts assessed and corrected?

(a) The overall fishery management framework, as well as the principles and objectives behind the approaches and institutional arrangements involved, are articulated in simple terms and take into account the interests of small-scale, artisanal and subsistence fishery sectors. Areas designated small-scale, artisanal and subsistence fishery sectors are protected from mechanized trawling. (≥90%).

(b) There are clear provisions on the allocated rights and responsibilities in fishing and fisheries management for small-scale, artisanal and subsistence fishery sectors. (≥75%).

(c) The small-scale, artisanal and subsistence fishery sectors participate in the co-management of the fisheries areas in which they operate. (≥65%).

(d) The legal framework provides for the protection of small-scale fisheries which serve as livelihood for host communities. (≥55%).

Audit Question
Are interests of small-scale, etc., fishermen accounted for?

(a) The national legislative framework has domesticated the international jurisdiction by providing for preferential access rights to the small-scale fishing units in its 12 nautical mile (22 km) ‘territorial sea’ (UN, 1982). This zone is allocated to those units which do not use mechanical propulsion on their crafts and those which do but operated by small-scale and /or artisanal fishing crafts. The national fisheries authorities enforce compliance. (≥90%).

(Cochrane et al., 2009).

(b) The 12 nautical mile (22 km) ‘territorial sea’ is reserved for small-scale, artisanal and subsistence fishery sectors but is also accessed by commercial trawlers due to deficient enforcement by the national fisheries authorities (NFA). (≥75%).
(c) The national legislation has not allocated the 12 nautical mile (22 km) ‘territorial sea’ is reserved for small-scale, artisanal and subsistence fishery sectors but authorities recognize the need for preferential allocation. (≥65 %).

(d) The fisheries restrict their fishing operations beyond the 12 nautical mile (22 km) ‘territorial sea’ on account good practices even in the absence of national legislation. (≥55 %).

6.3.3 Stock rebuilding

Criterion: Strategies for rebuilding depleted stocks shall be put in place within the shortest possible time frame.

Indicator:
6.3.3.1 Fishery management shall have records of stock assessment such as mortality, biomass of key species and size spectrum of fish community.

Audit Question
Where the stock is reduced or depleted, is there evidence of stock rebuilding/recovery or restoration within a specified timeframe?

(a) If overfished, depleted, endangered or threatened species are targeted and/or retained, management has a rebuilding or recovery strategy in place with a high likelihood of success in an appropriate timeframe not exceeding one generation time for the stock, and best management practices are in use to minimize mortality of these species to the greatest extent possible, and harvest control rules are in place that will allow for rebuilding. (≥90 %).

(b) If overfished, depleted, endangered or threatened species are targeted and/or retained, management has a rebuilding or recovery strategy in place whose eventual success is probable, or best management practices to minimize mortality of “stocks of concern” are in use where needed and are believed to be effective (≥75 %).

(c) A rebuilding timeframe is specified for the stock that is the shorter of 20 years or 2 times its generation time. For cases where 2 generations is less than 5 years, the rebuilding timeframe is up to 5 years. (≥65 %).

(d) Some fisheries are closed during low stock and limited fishing allowed following recovery while rebuilt stocks are closely monitored to ensure sustainability. (≥55 %).

Audit Question
Have the rebuilding measures been evaluated for effectiveness?

(a) There is strong evidence that the rebuilding strategies are rebuilding stocks, or it is highly likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe. (≥90 %).

(b) There is evidence that the rebuilding strategies are rebuilding stocks, or it is likely based on simulation modelling, exploitation rates or previous performance that they will be able to rebuild the stock within the specified timeframe. (≥75 %).

(c) Monitoring is in place to determine whether the rebuilding strategies are effective in rebuilding the stock within the specified timeframe. (≥65 %).

(d) Fishery has characteristics of “ineffective” management for “management strategy and implementation” and/or “recovery of stocks of concern”. (≥55 %).
Audit Question
Has the fishery used enhancement in stock rebuilding?
(a) Enhancement activities are not used as a stock rebuilding strategy. (≥90 %).
(b) Enhancement activities are very seldom used as a stock rebuilding strategy. (≥75 %).
(c) Enhancement activities are not routinely used as a stock rebuilding strategy but may be temporarily in place as a conservation measure to preserve or restore wild diversity threatened by human or natural impacts. (≥65 %).
(d) (≥55 %).

Audit Question
Have adverse environmental impacts on the stocks from human activities been assessed and, where appropriate, rectified?
(a) Spills of fuels and other materials are promptly cleaned up and stocks allowed to recover. Many man-made barriers to fish passage (e.g., culverts) have been removed so that migrating salmon can use the entire length of a stream. (≥90 %).
(b) Banning of bottom trawling on seabed habitats and which have adverse impacts on vulnerable marine ecosystems (VMEs) (≥75 %).
(c) Fishing avoids or minimizes capture of non-target species, adverse impacts on habitats, and mortality or injuries to threatened, endangered or protected species. (≥65 %).
(d) Implement appropriate fishing methods designed to minimize adverse impacts on habitat, especially in critical or sensitive zones such as spawning and nursery areas (≥55 %).

Audit Question
Have the impacts of environmental factors on target species and those species associated with, dependent on, or belonging dependent on the target stocks, been assessed?
(a) The fisheries management authorities have assessed the impacts of environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks, and also the relationship among the populations in the ecosystem. Such impacts include: direct impact on the target species; direct impacts on the bycatch species (including discards and by-mortality; indirect impacts on other organisms transmitted through the food chain (i.e. by changing the abundance of predators, prey or competitors of a population); and direct impact of fishing on the physical or chemical environment. (≥90 %).
(b) Environmental impacts are identified and monitored, and the management strategy adjusted in response as necessary. (≥75 %).
(c) Environmental impacts are extrapolated from adjacent studies for consideration in the fisheries. (≥65 %).
(d) Cyclical short-term and long-term or decadal environmental variabilities as well as climate change effects are considered as important but assessments are limited. (≥55 %).

Audit Question
Have the management measures developed taken into account the whole stock unit over its entire area of stock distribution?
(a) The fisheries management jurisdiction covers the whole stock unit over its entire area of distribution and takes into account previously agreed management measures established and applied in the same region. The stock distribution is determined by a combination of traditional
hunting techniques, assessment of oceanic physical-biochemical conditions and where possible satellite imaging. (≥90 %).

(b) Stock assessments are conducted to give managers, fishermen, and the public a sense of the effectiveness of management strategies that sustain fish populations, ecosystems, and the socioeconomic viability of fisheries. (≥75 %).

(c) The fisheries management authorities use data obtained from adjacent marine jurisdictions to approximate stock distribution and suitable management measures. (≥65 %).

(d) Manage measures take into account entire stock distribution in national jurisdiction. (≥55 %).

Audit Question
Has the best scientific evidence available been used to determine, inter alia, the area of distribution of the resource?

(a) Scientific models using data collected from the fisheries and relevant traditional knowledge are used to determine the resource status and distributions within the fishing units. (≥90 %).

(b) The fisheries management authorities maintain strong links to scientific research organizations which provide scientific and management advice for management of the marine resources. (≥75 %).

(c) There are a variety of management measures commonly used in small-scale or low-value fisheries that nonetheless can achieve quite adequate levels of protection for stocks in the face of uncertainty about the state of the resource. (≥65 %).

(d) Consultancy services incorporate requirements for scientific evidence. (≥55 %).

Audit Question
Have all removals and the biological unity and other biological characteristics of the stock been considered?

(a) The fisheries management jurisdiction covers the whole stock unit over its entire area of distribution and takes into account previously agreed management measures established and applied in the same region, all removals and the biological unity and other biological characteristics of the stock. (≥90 %).

(b) The fisheries management authorities have considered biological parameters of particular relevance to fisheries, such as growth rate, natural mortality, maximum size and age, size and age of sexual maturation, diet, spawning season and population dynamics. (≥75 %).

(c) Encourage traditional customary use of biological resources compatible with sustainable use and conservation. (≥65 %).

(d) Apply Biological Reference Points (BRPs) where possible. (≥55 %).

6.3.4 Harvest strategy

Criterion: The harvest strategy shall be responsive to the state of the stock and designed to achieve stock management objectives reflected in the target and limit reference points.

Indicator:

6.3.4.1 Fishery management shall have records of stock assessment such as yields, fishing effort and spawning biomass.
Audit Question
Is the level of fishing permitted at a level which maintains high stock productivity and has a low probability of recruitment overfishing?
(a) The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives where there is a high degree of certainty that the stock is above the point of recruitment impairment (PRI). (≥90 %).
(b) The harvest strategy is responsive to the state of the stock and is designed to achieve stock management objectives where it is highly likely that the stock is above the point of recruitment impairment (PRI). (≥75 %).
(c) The harvest strategy is responsive to the state of the stock and the elements of the harvest strategy work together towards achieving stock management objectives where it is highly likely that the stock is above the point of recruitment impairment (PRI). (≥65 %).
(d) The harvest strategy is expected to achieve stock management objectives where it is highly likely that the stock is above the point of recruitment impairment (PRI). (≥55 %).

Audit Question
Has the harvest strategy been monitored, evaluated and reviewed?
(a) The performance of the harvest strategy has been fully evaluated and periodically reviewed and evidence exists to show that it is achieving its objectives including being clearly able to maintain stocks at target levels. (≥90 %).
(b) The harvest strategy may not have been fully evaluated, monitored or evaluated but evidence exists that it is achieving its objectives. (≥75 %).
(c) Monitoring and evaluation are in place that is expected to determine whether the harvest strategy is working. (≥65 %).
(d) The harvest strategy is likely to work based on prior experience or plausible argument. (≥55 %).

Audit Question
Is shark finning taking place?
(a) There is a high degree of certainty that shark finning is not taking place. (≥90 %).
(b) It is highly likely that shark finning is not taking place. (≥75 %).
(c) It is likely that shark finning is not taking place. (≥65 %).

(d) (≥55 %).

Audit Question
Have alternative measures been considered/reviewed?
(a) There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock, and they are implemented, as appropriate. (≥90 %).
(b) There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock and they are implemented as appropriate. (≥75 %).
(c) There has been a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of the target stock. (≥65 %).
Audit Question
Are fishing vessels allowed to operate on the resource in question without specific authorization?
(a) Vessels are prohibited from fishing for the resource without specific authorization. All fishing vessels must be licensed by the national fisheries management authority in a manner consistent with international law for the high seas or in conformity with national legislation within areas of national jurisdiction. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Audit Question
Have attempts been made to measure fleet capacity operating in the fishery?
(a) There is an advanced system for the monitoring and assessment of capacity which requires the collection and analysis of more specific data and information, such as: vessels — hold, engine power, engine efficiency, vessel size, electronics (fish finding equipment); gear: type and size; biological characteristics of stocks including biomass, fishing mortality, age/size structure, uncertainty in stock assessments; participants: numbers of participants, skill levels; costs and earnings surveys; employment; information on subsidies; fishing operations relative to fish distribution; reaction of fishing industry to management; and existence and adequacy of access controls. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Audit Question
Have mechanisms been established where excess capacity exists to reduce capacity to levels commensurate with sustainable use of the resource? Have mechanisms been established to (identify, quantify) prevent or eliminate fishing overcapacity?
(a) The fisheries management has established quantitative and qualitative mechanisms to prevent and/or eliminate fishing overcapacity by establishing harvest controls based on the maximum sustainable yield (MSY) and/or maximum economic (MEY) determined from research. (≥90 %).

(b) The fisheries management authorities utilize two main approaches to reducing overcapacity, or preventing it from occurring in the first place; (1) regulated open access/incentive blocking instruments (e.g., limited entry; buyback programs; gear and vessel restrictions; aggregate quotas; non-transferable vessel catch limits; individual effort quotas (IEQs)) or (2) assignment of property rights (e.g., individual transferable quotas (ITQs); taxes and royalties; group fishing rights (CDQs, etc.); territorial use rights (TURFs)). (≥75 %).

(c) The fisheries management uses an integrated approach to address overcapacity focusing on: (1) resource management, (2) resource restoration and conservation, (3) livelihoods and economic and community development, and (4) restructured governance arrangements. (≥65 %).

(d) The fishery observes license limitation has been imposed by fisheries authorities. (≥55 %).
Has the fishery been regulated in such a manner that conflict among fishers using different vessels, gear and fishing methods are minimized?

(a) There are regulations established by fisheries management authorities to avoid the risk of conflict among fishers using different vessels, gear and fishing methods including exclusive areas that trawlers are not allowed to fish within the first three nautical miles from the shore, to allow exclusive usage by non-mechanized craft. (≥ 90%).

(b) There are time exclusions and gear regulations which limit the possibility of non-mechanized and trawling crafts being at the area and allowing for regeneration of fish stocks. (≥ 75%).

(c) There is almost no interaction among the vessels, gear, and fishing methods of the various fisheries (≥ 65%).

(d) The fishery has established a dispute resolution mechanism to address issues and disputes involving allocation of quota and access to marine resources between itself and other stakeholders such as indigenous communities and artisanal fishers. (≥ 55%).

NOTE Some of the options are detailed in (Bavinck et al., 2013)

Audit Question
What are the management mechanisms adopted by the fishery and its fleet to demonstrate responsible fishing?

(a) The fleet implements a management program that guarantees that any live animals that may be accidentally caught are immediately released in the water under conditions that guarantee high chances of survival. (≥ 90%).

(b) A management system to prevent possible accidental catching of endangered species must be implemented. (≥ 75%).

(c) The fishing company must adopt a responsible recording method of discarded fish (young individuals or undesired species). (≥ 65%).

(d) The fishing company must adopt a responsible recording method of accidental catching. (≥ 55%).

Audit Question
What are the measures that the fishery has adopted to demonstrate compliance with responsible fishing?

(a) The fishing company implements "Threshold Reference Limits" or "Precaution Limits" for both, biomass and quantity of fish caught. (≥ 90%).

(b) The fleet has a full-time on-board inspector, approved by Friend of the Sea, who reports the compliance with the Friend of the Sea criteria, upon request of the latter. (≥ 75%).

(c) The fleet is equipped with measures to minimize losses and guarantees a quick retrieval, where possible, of the fishing device to avoid "ghost fishing" (≥ 65%).

(d) (≥ 55%).

6.3.5 Harvest control rules and tools

Criterion: The operator shall define harvest control rules that are consistent with the harvest strategy and ensure that the exploitation rate is reduced as limit reference points are approached.

Indicator:
6.3.5.1 Fishery management shall have records on lengths, weights of fish harvested and mean length in population in mixed fishery.

**Audit Question**
Are there well-defined and effective harvest control rules (HCRs) designed and applied for the fishery?

(a) The HCRs are expected to keep the stock fluctuating at or above a target level consistent with MSY, or another more appropriate level taking into account the ecological role of the stock, most of the time. (≥90 %).

(b) Well defined HCRs are in place that ensure that the exploitation rate is reduced as the PRI is approached, are expected to keep the stock fluctuating around a target level consistent with (or above) MSY, or for key LTL species a level consistent with ecosystem needs. (≥75 %).

(c) Generally understood HCRs are in place or available that are expected to reduce the exploitation rate as the point of recruitment impairment (PRI) is approached. (≥65 %).

(d) (≥55 %).

**Audit Question**
Are the harvest control rules (HCRs) designed for robustness to uncertainty?

(a) The HCRs take account of a wide range of uncertainties including the ecological role of the stock, and there is evidence that the HCRs are robust to the main uncertainties. (≥90 %).

(b) The HCRs are likely to be robust to the main uncertainties. (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

**Audit Question**
Have the harvest control rules (HCRs) been evaluated for effectiveness?

(a) Evidence clearly shows that the tools in use are effective in achieving the exploitation levels required under the HCRs. (≥90 %).

(b) Available evidence indicates that the tools in use are appropriate and effective in achieving the exploitation levels required under the HCRs. (≥75 %).

(c) There is some evidence that tools used or available to implement HCRs are appropriate and effective in controlling exploitation. (≥65 %).

(d) (≥55 %).

**Audit Question**
What are the control tools used in the harvest strategy?

(a) There are harvest control which utilize tools such as: TCA (Total catching allowed); use of a logbook; size of mesh; size of the net; minimum fish size which have been shown to be achieving the desired objectives. (≥90 %).
There are harvest control which utilize tools such as: TCA (Total catching allowed); logbooks; size of mesh; size of the net; minimum fish size are likely achieving the desired objectives. (≥75%).

There are harvest control which utilize tools such as: TCA (Total catching allowed); logbooks; size of mesh; size of the net; minimum fish size are expected to be achieving the desired objectives. (≥65%).

There are harvest control which utilize tools such as: TCA (Total catching allowed); logbooks; size of mesh; size of the net; minimum fish size have the potential to achieve the desired objectives. (≥55%).

6.4 Ecosystem approach

Principle 5: Maintain ecosystems integrity

6.4.1 Fishing operations

Criterion: All fishing operations shall conserve aquatic ecosystems.

Indicator:

6.4.1.1 Fishery management shall have records on diversity of the ecosystems retained, structure of the ecosystem and productivity of fish stocks (including reproductive capacity)

Audit Question

Is there adequate information and knowledge of the impacts of the fishery on the ecosystem?

(a) Main interactions between the fishery and these ecosystem elements can be inferred from existing information, and have been investigated in detail. (≥90%).

(b) Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, and some have been investigated in detail. (≥75%).

(c) Main impacts of the fishery on these key ecosystem elements can be inferred from existing information, but have not been investigated in detail. (≥65%).

(d) Information is adequate to identify and broadly understand the key elements of the ecosystem. (≥55%).

Audit Question

Understanding of component functions

(a) The impacts of the fishery on target species, primary, secondary and ETP species and Habitats are identified and the main functions of these components in the ecosystem are understood. (≥90%).

(b) The main functions of the components (i.e., target species, primary, secondary and ETP species and Habitats) in the ecosystem are known. (≥75%).

(c) (≥65%).

(d) (≥55%).
(a) Adequate information is available on the impacts of the fishery on the components and elements to allow the main consequences for the ecosystem to be inferred. (≥90 %).

(b) Adequate information is available on the impacts of the fishery on these components to allow some of the main consequences for the ecosystem to be inferred. (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

**Audit Question**

**Monitoring**

(a) Information is adequate to support the development of strategies to manage ecosystem impacts. (≥90 %).

(b) Adequate data continue to be collected to detect any increase in risk level. (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

**Audit Question**

Does the fishery have information on the areas designated as biodiversity-protected areas under applicable national laws and regulations?

(a) The fishery provides a map of the location of the designated biodiversity-protected areas (including contiguous and non-contiguous parts of the designated protected area). (≥90 %).

(b) The fishery provides maps showing the location of the designated biodiversity-protected area where limited fishery activities are allowed. (≥75 %).

(c) The fishery describes how fishery operations impacts (adversely or beneficially) the biodiversity goals prescribed by management authorities for the protected area and directly influenced environment. (≥65 %).

(d) Document permits obtained from the management authorities for operations in the protected areas. (≥55 %).

### 6.4.2 Retained species

**Criterion:** Activities by the operator shall not pose a risk of serious or irreversible harm to the retained species nor hinder recovery of depleted retained species.

**Indicator:**

**6.4.2.1** Fishery management shall have records on spawning stock biomass of key retained species and level of fishing mortality for key retained species

**Audit Question**

Where practicable, is there a requirement that fishing gear, methods and practices are sufficiently selective as to minimize impacts on associated or dependent species and that the intent of related regulations is not circumvented by technical devices and that information on new developments and requirements is made available to all fishers?

(a) All types of fishing gear are restricted in their operation, and usually in their construction and there is inspection of the on-board equipment and absence of forbidden devices and fishing
methods, chemical substances and explosives. Several fishing methods (e.g., pelagic longline, benthic gillnets) are completely illegal. (≥90 %).

(b) Documentation with regard to fishing operations, retained catch of fish and non-fish species and as regards discards, the information required for stock assessment as decided by relevant management bodies is collected and forwarded systematically to those bodies. (≥75 %).

(c) Assessments of the implications of habitat disturbance are carried out prior to the introduction on a commercial scale of new fishing gear, methods and operations to an area. (≥65 %).

(d) The laws and regulations regarding fisheries have taken into account the range of selective gears, methods and strategies available to the industry. (≥55 %).

(Tully, 2008)

Audit Question
Have the impacts of environmental factors on target species and those species associated with, dependent on, or belonging dependent on the target stocks, been assessed?

(a) The fisheries management authorities have assessed the impacts of environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks, and also the relationship among the populations in the ecosystem. Such impacts include: direct impact on the target species; direct impacts on the bycatch species (including discards and by-mortality; indirect impacts on other organisms transmitted through the food chain (i.e. by changing the abundance of predators, prey or competitors of a population); and direct impact of fishing on the physical or chemical environment. (≥90 %).

(b) Environmental impacts are identified and monitored, and the management strategy adjusted in response as necessary. (≥75 %).

(c) Environmental impacts are extrapolated from adjacent studies for consideration in the fisheries. (≥65 %).

(d) The stocks of both target and non-target species of fishes, crustaceans, mammals, and birds are closely monitored. (≥55 %).

Audit Question
Are appropriate measures being applied to minimize impacts on associated, dependent or endangered species?

(a) The fishery complies with national, regional and international measures to reduce interactions with particularly vulnerable bycatch (e.g. juveniles and rare, endangered, threatened or protected species) through identifying and establishing areas where the use of all or certain gears is limited or prohibited, based on the best available scientific information and consistent with international law. (≥90 %).

(b) There are measures to use selective fishing gear, such as nets with larger meshes; square mesh panels, separator grids and changes in design and rigging of such gear in order to improve selectivity; and through carefully monitored MPAs. (≥75 %).

(c) The fishery complies with a voluntary code of conduct intended to reduce discarding (≥65 %).

(d) The fishery complies due to the targeting of economic incentives for the use of more selective fishing practices (≥55 %).

Primary species outcome
Audit Question
What is the stock status of the main primary species? (Is there a quantitative breakdown of catches in the fishery under assessment? Is this independent and reflective of conditions across the fishery? For those stocks that are considered as main, have stock assessments been carried out, and do these stock assessments refer to the stock status relative to reference points? Are proxies or other indicators of stock status available? Are the main primary species likely to be above the point of recruitment impairment (PRI)? If the fishery catches a stock which may be depleted to the PRI, can it be demonstrated that the fishery under assessment has measures in place to ensure it is not the cause for this depletion, or hindering any recovery? Are there other fisheries that also capture the species categorized as main primary in the fishery under assessment? Do the other fisheries catch a significant proportion of any species which are below the PRI? Do they collectively have measures in place to ensure they do not hinder recovery of the species? Where management of main primary is based on reference points, does the empirical assessment which supports this allow the confidence limits to be demonstrated? Is confidence high?)

(a) There is a high degree of certainty that main primary species are above PRI and are fluctuating around a level consistent with MSY. (≥90 %).

(b) Main primary species are highly likely to be above the PRI or, if the species is below the PRI, there is either evidence of recovery or a demonstrably effective strategy in place between all fisheries under assessment which categorize this species as main, to ensure that they collectively do not hinder recovery and rebuilding. (≥75 %).

(c) Main primary species are likely to be above the PRI, or if the species is below the PRI, the fishery under assessment has measures in place that are expected to ensure that the fishery under assessment does not hinder recovery and rebuilding. (≥65 %).

(d) The fishery under assessment aims to maintain primary species above the point where recruitment would be impaired (PRI) and does not hinder recovery of primary species if they are below the PRI. (≥55 %).

Audit Question
What is the stock status of the minor primary species? (Are there minor primary species in the fishery? Are stock assessments available for these minor primary species? Are proxy or other indicators available? Are the minor primary species highly likely to be above the PRI? Or do stock assessments indicate that the species is depleted below the PRI? Where stocks are below PRI has the cause of the stock depletion been identified? Is there evidence to demonstrate that the fishery under assessment is not hindering the recovery of stocks below PRI?)

(a) Minor primary species are highly likely to be above the PRI. Or, if below the PRI, there is evidence that the fishery under assessment does not hinder the recovery and rebuilding of minor primary species. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Primary species management strategy

Audit Question
Is there a strategy in place that is designed to maintain or to not hinder rebuilding of primary species and to minimise the mortality of unwanted catch?

(a) There is a strategy in place for the UoA for managing main and minor primary species. (≥90 %).
(b) There is a **partial strategy** in place for the UoA, if necessary, that is expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are highly likely to be above the PRI. (≥75 %).

(c) There are **measures** in place for the UoA, if necessary, that are expected to maintain or to not hinder rebuilding of the main primary species at/to levels which are likely to be above the PRI. (≥65 %).

(d) (≥55 %).

**Audit Question**
Does the fishery under assessment regularly review the management strategy designed to maintain or to not hinder rebuilding of primary species and implement measures, as appropriate, to minimise the mortality of unwanted catch?

(a) **Testing** supports **high confidence** that the partial strategy/strategy will work, based on information directly about the UoA and/or species involved. (≥90 %).

(b) There is some **objective basis for confidence** that the measures/partial strategy will work, based on some information directly about the UoA and/or species involved. (≥75 %).

(c) The measures are considered **likely** to work, based on plausible argument (e.g., general experience, theory or comparison with similar UoAs/species). (≥65 %).

(d) (≥55 %).

**Audit Question**
Are the measures contained in the management strategy designed to maintain or to not hinder rebuilding of primary species implemented to minimise the mortality of unwanted catch?

(a) There is **clear evidence** that the partial strategy/strategy is being **implemented successfully** and is achieving its overall objective of maintaining or to not hinder rebuilding of the primary species at/to levels which are above the PRI. (≥90 %).

(b) There is **some evidence** that the measures/partial strategy is being **implemented successfully**. (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

**Audit Question**
Is shark finning taking place in the fishery?

(a) There is a **high degree of certainty** that shark finning is not taking place. (≥90 %).

(b) It is **highly likely** that shark finning is not taking place. (≥75 %).

(c) It is **likely** that shark finning is not taking place. (≥65 %).

(d) (≥55 %).

**Audit Question**
Has the fisheries management strategy reviewed alternative measures to maintain or to not hinder rebuilding of primary species and to minimise the mortality of unwanted catch?
(a) There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of all primary species, and they are implemented, as appropriate. (≥90 %).

(b) There is a regular review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species and they are implemented as appropriate. (≥75 %).

(c) There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of unwanted catch of main primary species. (≥65 %).

(d) (≥55 %).

Primary species information
Audit Question
Is the information on the nature and amount of primary species adequate to determine the risk posed by the fishery under assessment and the effectiveness of the strategy to manage primary species?

(a) Quantitative information is available and is adequate to assess with a high degree of certainty the impact of the UoA on main primary species with respect to status. (≥90 %).

(b) Some quantitative information is available and is adequate to assess the impact of the UoA on the main primary species with respect to status. OR If RBF is used to score PI 2.1.1 for the UoA: Some quantitative information is adequate to assess productivity and susceptibility attributes for main primary species. (≥75 %).

(c) Qualitative information is adequate to estimate the impact of the UoA on the main primary species with respect to status. OR If RBF is used to score PI 2.1.1 for the UoA: Qualitative information is adequate to estimate productivity and susceptibility attributes for main primary species. (≥65 %).

(d) (≥55 %).

Audit Question
Is the level of information available for minor primary species adequate for assessment of impact? Is catch profiling information available which adequately captures the amount of mortality on minor species attributable to the fishery? Is all the information for the stock assessment of minor primary species available?

(a) Some quantitative information is adequate to estimate the impact of the UoA on minor primary species with respect to status. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Audit Question
Is the appropriate information collected (or monitoring programmes in place) to determine whether the management measures are achieving their objectives? Where the wider management of primary species requires certain information — such as effort, fishing pattern or quota uptake — do the reporting and monitoring systems effectively provide this information? Are there additional sources of information (such as voluntary reporting or observer reports) which provide further information in relation to management measures? Do the stock assessments or advice for primary species indicate that all the required information is in place and verifiable?
(a) Information is adequate to support a **strategy** to manage **all** primary species, and evaluate with a **high degree of certainty** whether the strategy is achieving its objective. (≥90 %).

(b) Information is adequate to support a **partial strategy** to manage **main** primary species. (≥75 %).

(c) Information is adequate to support **measures** to manage **main** primary species. (≥65 %).

(d) (≥55 %).

6.4.3 **Bycatch species**

**Criterion:** Activities by the operator shall not pose a risk of serious or irreversible harm to the bycatch species or species groups and does not hinder recovery of depleted by catch species or species groups.

**Indicator:**

6.4.3.1 Fishery management shall have records on proportion of bycatch species in total catch and evidence of adherence to the management plan of the target fishery

**Audit Question**

Has assessments been carried out to confirm that the secondary species do not include species included in the IUCN red list of the endangered species (assessment carried out not more than 10 years before and classified in the category Vulnerable or High Risk)?

(a) There is a list of the species that are generally caught accidentally which is comparable with the accidental catches actually occurring on site at the time of unloading. The list must also be compared with the database of the IUCN red list www.redlist.org. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Where possible certifiers require some empirical evidence to support scoring for this PI and will refer to the following data - ideally in published form:

• Empirical catch composition data (perhaps with seasonal and spatial patterns).

• Any available stock assessments for stocks which comprise more than 5% of the catch (although these won't contain reference points - or else the species would be treated as a primary species - they may still offer relative indications of stock status and fishing mortality).

• Stock assessments for any stocks which may be less resilient to fishing pressure (e.g. most long lived species like shark) which comprise 2-5% of the catch.

• Management measures for any main stocks shown to be depleted.

• Where stock assessments are lacking, any other evidence which may provide some information (albeit with less certainty) about stock status. For example, time series of catch and effort, ecosystem descriptions.

• Life history characteristics providing indications of species productivity, vulnerability and susceptibility to capture.
Audit Question
What actions are taken by the fishery to avoid excessive accidental catch?
(a) In case the accidental catch (young individuals or undesired species) is over 8% in weight, the fleet must be withdrawn from the fishing zone. (≥90 %).

(b) The Auditor must obtain a copy of the relevant procedure. The document must include reference to size and maturity of the targeted species in the fishing zone and, if any, minimum dimensions required by law. The on-board inspector must provide evidence of the conformity with these provisions. (≥75 %).

(c) Verify the existence of relative procedure. Verify the logbook and evidence of on board observers. Verify during unload operation a maximum of 8% of young individuals and undesired species. (≥65 %).

(d) (≥55 %).

Secondary species outcome

Audit Question
Is there a quantitative breakdown of catches in the fishery under assessment? Is this independent and reflective of conditions across the fishery? Can it be established which elements of the catch are considered secondary, as opposed to primary or ETP? Of the secondary species can it be determined which are main? Is there any information available about the stock status of any secondary species which have been classified as main? Where species are below biologically based limits are there measures in place to reduce the impact of the fishery? Is there any ecosystem description or catch composition time series available that may provide some empirical evidence of relative status of any such species? Are there any other MSC fisheries which have catches of any depleted secondary species - if so are their catches considerable?

Does the fishery under assessment have the aim of maintaining secondary species above a biologically based limit and does not hinder recovery of secondary species if they are below a biologically based limit?

(a) There is a high degree of certainty that main secondary species are above biologically based limits. (≥90 %).

(b) Main secondary species are highly likely to be above biologically based limits. OR. If below biologically based limits, there is either evidence of recovery or a demonstrably effective partial strategy in place such that the UoA does not hinder recovery and rebuilding. AND. Where catches of a main secondary species outside of biological limits are considerable, there is either evidence of recovery or a, demonstrably effective strategy in place between those MSC UoAs that also have considerable catches of the species, to ensure that they collectively do not hinder recovery and rebuilding. (≥75 %).

(c) Main secondary species are likely to be above biologically based limits. OR. If below biologically based limits, there are measures in place expected to ensure that the UoA does not hinder recovery and rebuilding. (≥65 %).

(d) (≥55 %).

Minor secondary species stock status

Audit Question
Is there a quantitative breakdown of catches in the fishery? Is this independent and reflective of conditions across the fishery? Of the secondary species can it be determined which are minor? Is there any information available, including proxy indicators about the stock status of any secondary species
which have been classified as minor? Is there any ecosystem description or catch composition time series available that may provide some empirical evidence of relative status of any such species? Are minor secondary species highly likely to be above biologically based limits? Or are there indications that minor secondary species are below biologically based limit?

Does the fishery under assessment have the aim of maintaining minor secondary species above a biologically based limit and does not hinder recovery of minor secondary species if they are below a biologically based limit?

(a) Minor secondary species are highly likely to be above biologically based limits. OR. If below biologically based limits there is evidence that the UoA does not hinder the recovery and rebuilding of minor secondary species. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Good practice requires that minor species are above biologically based limits or in the case that stocks are below biologically based limits that there are measures or strategy in place in the fishery that ensures that it does not hinder the recovery of that minor secondary species.

Secondary species management strategy

Audit Question
Are all species classified as secondary and main in the fishery subject to management measures? Can it be demonstrated that management measures or partial strategy are not necessary - i.e. that the fishery has no impact on secondary species? Do the measures in place form a cohesive strategy enabling managers to have real oversight of trends in stock status and an ability to respond appropriately? Are there additional measures that the fishery is undertaking to ensure they do not hinder the recovery of any depleted species?

There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species; and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch — Management strategy in place

(a) There is a strategy in place for the UoA for managing main and minor secondary species. (≥90 %).

(b) There is a partial strategy in place, if necessary, for the UoA that is expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery. (≥75 %).

(c) There are measures in place, if necessary, which are expected to maintain or not hinder rebuilding of main secondary species at/to levels which are highly likely to be above biologically based limits or to ensure that the UoA does not hinder their recovery. (≥65 %).

(d) (≥55 %).

Audit Question
Is there evidence available to demonstrate that the management of each secondary species is working? Are there arguments that can be drawn from analogous fisheries to suggest that the management in place is likely to be sufficient? Is there evidence that the fishery’s own efforts to fish selectively are working? Have any formal evaluations been undertaken of any fishery management plans for secondary species caught by the fishery?
There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species; and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch — Management strategy evaluation

(a) **Testing** supports **high confidence** that the partial strategy/strategy will work, based on information directly about the UoA and/or species involved. (≥90%).

(b) There is **some objective basis for confidence** that the measures/partial strategy will work, based on some information directly about the UoA and/or species involved. (≥75%).

(c) The measures are considered **likely** to work, based on plausible argument (e.g., general experience, theory or comparison with similar UoAs/species). (≥65%).

(d) (≥55%).

**Audit Question**
Is all the management for each secondary species actually operational and doing exactly what it is supposed to? Are there inspections, or certificates, or observer reports that can be presented to the certifier to demonstrate that all the management that should be in place, is in place? If the fleet takes additional measures to avoid capture of certain species, can this be independently verified? Is there evidence from stock status that management is working?

There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species; and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch — Management strategy implementation

(a) There is **clear evidence** that the partial strategy/strategy is being implemented successfully and is achieving its overall objective. (≥90%).

(b) There is **some evidence** that the measures/partial strategy is being implemented successfully. (≥75%).

(c) (≥65%).

(d) (≥55%).

**Audit Question**
Are there any shark species in the catch profile of the fishery or in the landings statistics? Are sharks landed with fins naturally attached? Does the fishery process sharks on board or are fins cut on board? Is there any national regulation on shark finning? Are there any RFMO conservation measures, national or international MoU or agreements on shark finning? What's the level of observer coverage? Is there any other monitoring system in place (e.g., dockside monitoring, video camera, vessel monitoring systems (VMS))?

Shark finning

(a) There is a **high degree of certainty** that shark finning is not taking place (≥90%).

(b) It is **highly likely** that shark finning is not taking place. (≥75%).

(c) It is **likely** that shark finning is not taking place. (≥65%).

(d) (≥55%).
**Audit Question**
Are there secondary species which are unwanted in the catch and have high mortality? If there are unwanted secondary species in the catch, have measures been taken to reduce mortality of catches of these species, such as gear modifications, seasonal or area closures, improved handling practices or other technical measures? Is there evidence to demonstrate how well the measures taken to reduce unwanted secondary species mortality are working? Has any review been carried out of potential alternative measures to reduce mortality of unwanted species? Have the results and recommendations of any review or testing been implemented within the management system?

*There is a strategy in place for managing secondary species that is designed to maintain or to not hinder rebuilding of secondary species; and the UoA regularly reviews and implements measures, as appropriate, to minimise the mortality of unwanted catch — Review of alternative measures to minimise mortality of unwanted catch*

(a) There is a **biennial** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of **unwanted** catch of all secondary species, and they are implemented, as appropriate. (≥90 %).

(b) There is a **regular** review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of **unwanted** catch of main secondary species and they are implemented as appropriate. (≥75 %).

(c) There is a review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality of **unwanted** catch of main secondary species. (≥65 %).

(d) (≥55 %).

**NOTE** Good practice requires an objective basis, to ensure that the management strategy/partial strategy will work. Availability of research studies and reports demonstrating effectiveness of the strategy in the fishery or in similar fisheries will be useful to fisheries.

**Secondary species information**
There is a requirement that the information on the nature and amount of secondary species taken is adequate to determine the risk posed by the fishery and the effectiveness of the strategy to manage secondary species. Good practice requires that good quality information is available for each secondary species. This could be in the form of published material, preferably peer reviewed or other credible sources.

**Audit Question**
Does the information that is routinely collected allow managers to determine for any/all secondary species the catch, effort, changes in species biology (size or sex ratio), unobserved mortality etc.? If qualitative information is used to support management, is this considered robust or reliable? Are there several sources of data collection? Is there data available which details the impact of the fishery's fishing gear on secondary species? If the RBF is used, is there data to allow all the attributes to be scored with confidence? Is there qualitative or quantitative information on the impacts of any species which are out of scope, but which are not ETP, such as birds, reptiles, amphibians, mammals? If the secondary species are close to or below their biologically based limit, are data collection methods with higher levels of verifiability and lower levels of bias used?

Is the information adequate for assessment of of impact on main secondary species?
(a) Quantitative information is available and is **adequate to assess with a high degree of certainty** the impact of the UoA on main secondary species with respect to status. (≥90 %).

(b) Some quantitative information is available and is **adequate to assess** the impact of the UoA on the main secondary species with respect to status. Or: Some quantitative information is adequate to assess productivity and susceptibility attributes for main secondary species. (≥75 %).
(c) Qualitative information is **adequate to estimate** the impact of the UoA on the main secondary species with respect to status. Or: Qualitative information is adequate to estimate productivity and susceptibility attributes for main secondary species. (≥65 %).

(d) (≥55 %).

**Audit Question**

Is relevant information collected to determine the impact of the fishery on minor secondary species? Is there data available which details the impact of the fishery on the minor secondary species in the catch? Is there evidence or any supporting data that can be used to determine the stock status of secondary minor species, or relative trends in stock status?

Is the information adequate for assessment of impact on minor secondary species?

(a) Some quantitative information is adequate to estimate the impact of the UoA on minor secondary species with respect to status. (≥90 %).

(b) Availability of central database detailing landings, effort, licencing etc. for recent years. Stock assessments or other information sources for any/all minor species. (≥75 %).

(c) Key parameters for any species assessed using the RBF species range, life history traits, and post-capture mortality. (≥65 %).

(d) Observer reports or other assessment (including published studies) on impacts on minor secondary species. (≥55 %).

**Audit Question**

Does management activity collect appropriate information to manage the main and minor secondary species caught in the fishery? Is the impact of the fishery on the secondary species quantified and understood? Are the key biological characteristics of the species understood, to enable management to be appropriately tailored? Is the species or stock range understood, to enable management to be undertaken at the appropriate jurisdiction? Does the monitoring or assessment in place allow managers to determine, with confidence, whether management efforts are working to safeguard stock status (and any other management objectives)?

Is the information adequate for an effective management strategy?

(a) Information is adequate to support a **strategy** to manage all secondary species, and evaluate with a **high degree of certainty** whether the strategy is **achieving its objective**. (≥90 %).

(b) Information is adequate to support a **partial strategy** to manage main secondary species. (≥75 %).

(c) Information is adequate to support **measures** to manage main secondary species. (≥65 %).

(d) Observer reports or other monitoring information which capture information relevant to the management of secondary species, or the impact of the fishery on those species. (≥55 %).

**6.4.4 Endangered, threatened and protected (ETP) species**

**Criterion:** The operator shall have a comprehensive strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, that is designed to achieve above national and international requirements for the protection of ETP species. The operator shall have in place precautionary management strategies designed to:
(a) meet national and international requirements;
(b) ensure the fishery does not pose a risk of serious or irreversible harm to ETP species;
(c) ensure the fishery does not hinder recovery of ETP species; and
(d) minimize mortality of ETP species.

NOTE Many fisheries occur in areas where endangered, threatened or protected species also occur. Possible impacts may be poorly understood, but may include entanglement, direct capture and mortality, impacts on behavioural or migratory patterns, indirect impacts due to competition for resources, loss of habitat and pollution. In many cases there are strategies (comprising many mea

Indicator
6.4.4.1 The operator shall document per cent ETP species in the total catch and mortality or injuries of ETP species. The fishery shall also have protection plans for ETP species and habitat or a development schedule for plans and records of activities undertaken under the plans.

ETP species outcome

Audit Question
Is there a clear understanding of what species are considered ETP, present in the area of the fishery? Are there any out of scope species in the area of the fishery which are classified by IUCN as vulnerable, endangered or critically endangered? Are limits on catches for these species stipulated in relevant legislation? Is the distribution and abundance of the ETP species in the area of the fishery known? Are ETP species that interact with the fishery within specified limits? Has the impact of the fishery on all relevant ETP species been independently quantified? Are there other MSC fisheries operating in the same area and has the cumulative impact of all relevant MSC fisheries been considered?

What are the effects of the fisheries under assessment on the population/stocks within national or international limits, where applicable?

(a) Where national and/or international requirements set limits for ETP species, there is a high degree of certainty that the combined effects of the MSC UoAs are within these limits. (≥90 %).
(b) Where national and/or international requirements set limits for ETP species, the combined effects of the MSC UoAs on the population/stock are known and highly likely to be within these limits. (≥75 %).
(c) Where national and/or international requirements set limits for ETP species, the effects of the UoA on the population/stock are known and likely to be within these limits. (≥65 %).
(d) Records of interaction with a fishery in logbooks, scientific reports, observer data etc (≥55 %).

NOTE The first scoring issue focuses on the impact of the fishery on the status of ETP species against limits set in national or international requirements. If there is no applicable national legislation or international binding agreement that sets limits on mortality, then this scoring issue is not scored.

Audit Question
Is independent quantitative data available on the level of direct impact (i.e. capture) of ETP species in the fishery? Has the fishery carried independent on-board observers, which record level of ETP interactions? Are there characteristics of the gear in use that mean direct interaction with ETP species is unlikely? If so, is there evidence available to support this?

What are the direct effects of the fishery on ETP species?
(a) There is a high degree of confidence that there are no significant detrimental direct effects of the UoA on ETP species. (≥90 %).

(b) Direct effects of the UoA are highly likely to not hinder recovery of ETP species. (≥75 %).

(c) Known direct effects of the UoA are likely to not hinder recovery of ETP species. (≥65 %).

(d) Records of any testing or inspecting of any ETP mitigating management measures (e.g. gear modifications). (≥55 %).

NOTE This is from direct capture or direct contact with fishing gear. Good practice requires fisheries to demonstrate there are no significant effect on ETP species or the fishery is not likely to hinder recovery of ETP species.

Audit Question
Are there any management measures in place designed to mitigate against any indirect effects on ETP species? Is there any published academic research (whether locally or from other analogous situations) which may provide inside and perhaps empirical data in relation to the potential for unacceptable indirect impacts? Is there ecosystem modeling in place which could enable the possible consequences of removal of target species, bycatch species or habitat impacts on ETP species in the area?

What are the indirect effects of the fishery on ETP species?
(a) There is a high degree of confidence that there are no significant detrimental indirect effects of the UoA on ETP species. (≥90 %).

(b) Indirect effects have been considered for the UoA and are thought to be highly likely to not create unacceptable impacts. (≥75 %).

(c) Records of any testing or inspecting of any ETP mitigating management measures designed to limit indirect impact (e.g. spatial measures). (≥65 %).

(d) Published research papers on other indirect impacts on ETP species - such as noise, or pollution. (≥55 %).

NOTE This could include competition for resources or impacts of pollution/noise. Good practice will require that fisheries are able to show with a high level of confidence that there are no unacceptable indirect impacts on ETP species.

Have the possible indirect impacts of the fishery on ETP species been considered?
Scoring issue (c)

Audit Question
Does the fishery meet national and international requirements for protection of ETP species and thus posing no risk of serious or irreversible harm to ETP species and does not hinder recovery of ETP species?
(a) There is a high degree of confidence that there are no significant detrimental effects (direct and indirect) of the fishery on ETP species. (≥90 %).

(b) There is a high degree of certainty that the effects of the fishery are within limits of national and international requirements for protection of ETP species. (≥75 %).

(c) The effects of the fishery are known and are highly likely to be within limits of national and international requirements for protection of ETP species and are unlikely to create unacceptable impacts. (≥65 %).

(d) Known effects of the fishery are likely to be within limits of national and international requirements for protection of ETP species. (≥55 %).
ETP species management strategy

Audit Question

Are there national and international requirements for protection of any/all ETP species vulnerable to being impacted in the area the fishery operates? Are there measures in place to minimize the fishery's impact on any/all ETP populations? Are these measures brought together in a strategic and cohesive manner, in a way which demonstrates that the measures are appropriate and tailored to the identified risks? Is there evidence which can be used to demonstrate with confidence that these measures/strategy are adequate to meet or exceed national or international requirements?

Is there a management strategy in place in line with national and international requirements for effective management of ETP species?

(a) There is a comprehensive strategy in place for managing the UoA’s impact on ETP species, including measures to minimize mortality, which is designed to achieve above national and international requirements for the protection of ETP species. (≥90 %).

(b) There is a strategy in place for managing the UoA’s impact on ETP species, including measures to minimize mortality, which is designed to be highly likely to achieve national and international requirements for the protection of ETP species. (≥75 %).

(c) There are measures in place that minimize the UoA-related mortality of ETP species, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species. (≥65 %).

(d) A description of the ETP strategy, either for all ETP species or for a specific ETP species - perhaps in a standalone document, or included in the fisheries management plan, or a national sector-wide policy document. (≥55 %).

NOTE This scoring issue will only be scored where there are national and international requirements for the protection of the specific ETP species. This scoring issue describes the measures that are in place and the degree to which these have been designed to cohesively work together toward an effective management strategy that will meet the national and international requirements for protection of the ETP species. Good practice fisheries will have a robust management strategy that covers all possible impacts (including indirect impacts), is well-supported by appropriate data and monitoring, evaluates its performance to highlight changing risks and consider ways to improve. Good practice will seek to implement mitigation measures to prevent interactions between fisheries and ETP species. In some cases fisheries will be closed to certain areas, or at different seasons to prevent mortality, some may have gear modifications to prevent interaction with species and some fisheries may also have quota allocations and limits that may close a fishery if mortality or interaction with ETP species occurs.

Audit Question

Has the fishery established precautionary management strategies designed to meet national and international requirements; ensure the fishery does not pose a risk of serious or irreversible harm to ETP species; ensure the fishery does not hinder recovery of ETP species; and minimise mortality of ETP species?

(a) There is a comprehensive strategy in place for managing the fishery's impact on ETP species, and there is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. (≥90 %).

(b) There is a comprehensive strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, that is designed to achieve above national and international requirements for the protection of ETP species. (≥75 %).

(c) There is a strategy in place for managing the fishery's impact on ETP species, including measures to minimise mortality, that is designed to be highly likely to achieve national and international requirements for the protection of ETP species. (≥65 %).
There are measures in place that minimise mortality, and are expected to be highly likely to achieve national and international requirements for the protection of ETP species (≥55%).

Audit Question
Are there measures in place to minimise the fishery impact on any/all ETP populations? Are these measures brought together in a strategic and cohesive manner, in a way which demonstrates that the measures are appropriate and tailored to the identified risks? Is there evidence which can be used to demonstrate with confidence that these measures/strategy are adequate to ensure the fishery is not hindering recovery of ETP species?

Is there an alternative management strategy in place?
(a) There is a comprehensive strategy in place for managing ETP species, to ensure the UoA does not hinder the recovery of ETP species. (≥90%).
(b) There is a strategy in place that is expected to ensure the UoA does not hinder the recovery of ETP species. (≥75%).
(c) There are measures in place that are expected to ensure the UoA does not hinder the recovery of ETP species. (≥65%).
(d) Any regulatory backing of measures within the strategy or the strategy itself (i.e. licence conditions or regulations on technical measures). (≥55%).

NOTE This scoring issue provides alternative SGs in situations where the country has no national legislation or the legislation does not specify requirements for protection and rebuilding of ETP species, or is not party to international agreements for the protection of ETP species that specify requirements for protection and rebuilding.

Audit Question
Is there evidence that can be provided to support the selection of the ETP management measures and provide confidence that they will work? Is there research or analytical assessments, from this fishery or from analogous fisheries that can be used to provide objective basis for confidence that the measures in place will work? Has the strategy for managing the fishery impact on ETP populations ever been analyzed or evaluated? If there is only plausible argument to support confidence that the measures in place will work, is this adequate? And how could this be augmented by some appropriate analysis?

Has the management strategy been evaluated for effectiveness?
(a) The strategy/ comprehensive strategy is mainly based on information directly about the UoA and/or species involved, and a quantitative analysis supports high confidence that the strategy will work. (≥90%).
(b) There is an objective basis for confidence that the partial strategy/ strategy will work, based on information directly about the UoA and/or the species involved. (≥75%).
(c) The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar UoAs/ species). (≥65%).
(d) Published research on the efficacy of certain management measures (e.g. gear modifications) for any/all ETP species. (≥55%).

NOTE The third scoring issue addresses the degree of confidence, and the analysis that supports that confidence, that the measures or strategies in place will work. Good practice requires that there be a high degree of confidence that the strategy or comprehensive strategy will work and this must be informed by some quantitative analysis of the fishery.

Audit Question
Is the strategy and the measures which comprise the strategy fully implemented? Is there evidence which can be provided to demonstrate to the certifiers that all measures are indeed implemented? Are inspections carried out on any gear modifications? Are certificates of compliance issued? Are
regulations/license conditions enacted where necessary to ensure the measures of the strategy are implemented (and legally binding)? Are there other independent sources of verification to provide evidence of implementation (i.e. observer reports)? Can verification be provided where the fleet is engaged in Codes of Conduct or voluntary reporting?

Is the management strategy being implemented?
(a) There is clear evidence that the strategy/comprehensive strategy is being implemented successfully and is achieving its objective as set out in scoring issue (a) or (b). (≥90 %).
(b) There is some evidence that the measures/strategy is being implemented successfully. (≥75 %).
(c) Evidence of regulatory implementation of measures (i.e. licence conditions or regulations on technical measures) for any/all ETP species. (≥65 %).
(d) Evidence of compliance of binding regulations (i.e. inspection certificates for any gear modifications). (≥55 %).

NOTE The 4th scoring issue primarily seeks to ensure full implementation of the measures/strategy/comprehensive strategy. Good practice requires that there is evidence of implementation of the strategy and that it is meeting its objective to minimize ETP mortality in line with national or international protection or ensure that the fishery does not hinder its recovery.

Audit Question
Were the measures which comprise the management strategy selected following review of alternative possible measures? Have examples of ETP mitigation measures from other fisheries and/or recommended by national or international bodies been reviewed and considered for the fishery? Does the management strategy for ETP species recognize the need for regular review, with particular emphasis on alternative measures? Is it stated how frequently such reviews should take place? Does management/fleet respond to the conclusions of such reviews and implement any alternative measures that are likely to be more effective than current measures? If not, why not?

Have alternative measures been reviewed to minimise mortality of ETP species?
(a) There is a biennial review of the potential effectiveness and practicality of alternative measures to minimise UoA-related mortality ETP species, and they are implemented, as appropriate. (≥90 %).
(b) There is a regular review of the potential effectiveness and practicality of alternative measures to minimize fishery under assessment-related mortality of ETP species and they are implemented as appropriate. (≥75 %).
(c) There is a review of the potential effectiveness and practicality of alternative measures to minimize fishery under assessment-related mortality of ETP species. (≥65 %).
(d) (≥55 %).

NOTE This scoring issue requires that there is a review of alternative measures to minimize the fishery related ETP mortality, to the extent practicable, and for these alternative measures to be implemented ‘if appropriate’. Good practice requires that the review of alternative measures is carried out regularly and at least every 2 years, and that the measures are implemented as appropriate, i.e. when they are likely to be more effective at minimizing the mortality of the ETP species and also practical and cost effective to implement and do not negatively impact other species and or habitats.

Audit Question
Does the fishery have adequate information on the CITES-listed endangered, threatened or protected (ETP) species in the area of operation to make management decisions?
(a) Accurate and verifiable information is available on the magnitude of all impacts, mortalities and injuries and the consequences for the status of ETP species. (≥90 %).
(b) Information is sufficient to determine whether the fishery may be a threat to protection and recovery of the ETP species, and to allow fishery related mortality and the impact of fishing to be quantitatively estimated. (≥75 %).

(c) Information is adequate to support measures to manage the impacts and qualitatively estimate the fishery related mortality on ETP species. (≥65 %).

(d) Information is adequate to broadly understand the impact of the fishery on ETP species. (≥55 %).

**ETP Species Information**

There is a wide spectrum of information that may be required such as status and distribution of ETP species (migratory patterns etc.), vulnerability of ETP species to impact from fishing (both direct and indirect), fishing effort distribution and gear characteristics (including information of efficacy of any measures applied). Taken in combination, the available information should be sufficient to support the management of fishery impacts on ETP species, including:

- Information to determine the outcome status of ETP species.
- Information for the development of the management strategy.
- Information to assess the effectiveness of the management strategy.

**Audit Question**

Is there information available on the ETP species present in the fishing area, including population status and trends, spatial and migratory patterns? Are the key productivity attributes of the ETP species known, along with their vulnerability to the fishing gear? Is there reliable quantitative information available on the level of impact (both direct and indirect) on ETP species, particularly catch rates (per unit effort)? Is the information on both the impact of the fishery and the status of the ETP stock adequate to allow the consequences to ETP status to be determined? If qualitative information is used to support management, is this considered robust or reliable? Are there several sources of data?

Is the information on ETPs adequate for assessment of impacts?

(a) Quantitative information is available to assess with a high degree of certainty the magnitude of UoA-related impacts, mortalities and injuries and the consequences for the status of ETP species. (≥90 %).

(b) Some quantitative information is adequate to assess the UoA related mortality and impact and to determine whether the UoA may be a threat to protection and recovery of the ETP species. Or: Some quantitative information is adequate to assess productivity and susceptibility attributes for ETP species. (≥75 %).

(c) Qualitative information is adequate to estimate the UoA related mortality on ETP species. Or: Qualitative information is adequate to estimate productivity and susceptibility attributes for ETP species. (≥65 %).

(d) ETP species status reports or assessment of populations. (≥55 %).

**NOTE** This scoring issue focuses on information about the impact of the fishery on the ETP species in the area of the fishery, ideally including the consequential impacts on their population status. Good practice requires quantitative information, of sufficient quality and coverage to provide a high degree of certainty of both the impact of the fishery on ETP species, and the consequence to those populations.

**Audit Question**

Is the information collected tailored to the needs of the management strategy and does it provide a quantitative indication of whether the measures that comprise the management strategy are working? Does the information in relation to impact allow a quantitative assessment over time, which enables changes in relative impact to be determined as management measures (and strategies) are added or
refined? Where measures within the management strategy are implemented, is there evidence, either from past research or from evaluations or modelling that these are demonstrably effective? Where new management measures are proposed or introduced, is this linked to a consideration of the information required to monitor its performance and the cost and administrative practicalities of obtaining this information?

Is the information adequate for an effective management strategy?

(a) Information is adequate to support a comprehensive strategy to manage impacts, minimize mortality and injury of ETP species, and evaluate with a high degree of certainty whether a strategy is achieving its objectives. (≥90 %).

(b) Information is adequate to measure trends and support a strategy to manage impacts on ETP species (≥75 %).

(c) Information is adequate to support measures to manage the impacts on ETP species (≥65 %).

(d) Information on spatial and temporal distribution of ETP species, where this is relevant to the management strategies that are in place. (≥55 %).

NOTE The information requirements in this scoring issue are closely linked to the needs of the management strategy to enable the efficacy of the strategy to be determined. Good practice requires that information related to the performance of the management strategy allows a high degree of certainty, including information that allows detection of any changes in level of risk to ETP species. This information should be tailored to the management strategy and should be inclusive of injuries and trends.

6.4.5 Habitats

Criterion: The operator shall not cause serious or irreversible harm to habitat structure with particular attention to the occurrence of vulnerable habitat types, considered on a national, regional or bioregional basis and function.

Indicator:

6.4.5.1 The operator shall document area of the fishery impacted by gear, amount of habitat protected by the fishery and area of fish nursery habitat degraded. The fishery shall maintain records of any modification to the habitat.

Habitats Outcome

Audit Question

Has the fishery carried out assessment of its possibility of causing serious or irreversible harm to habitat structure and function in its areas of operation?

(a) There is evidence that the fishery is highly unlikely to reduce structure and function of the VME or minor habitats to a point where there would be serious or irreversible harm. (≥90 %).

(b) There is evidence that the fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm. (≥75 %).

(c) The fishery is highly unlikely to reduce habitat structure and function to a point where there would be serious or irreversible harm. (≥65 %).

(d) The fishery is unlikely to reduce structure and function of habitats to a point where there would be serious or irreversible harm. (≥55 %).

Audit Question

Is there a good understanding of the commonly encountered habitats in the managed area? Can the substratum, geomorphology and biota of the commonly encountered habitats be described? Is the preferred habitat of the target species known? Is there any evidence (such as from the documents listed
above) that can support the conclusion that the fishery is not causing a serious or irreversible harm? Are there areas protected from fishing or where fishing does not occur where the habitat being assessed is in a favourable status?

What is the status of the commonly encountered habitats?
(a) There is evidence that the UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm. (≥90 %).

(b) The UoA is highly unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm. (≥75 %).

(c) The UoA is unlikely to reduce structure and function of the commonly encountered habitats to a point where there would be serious or irreversible harm. (≥65 %).

(d) Assessments of rate of recovery from fishing for relevant gears and habitats – ideally peer reviewed. (≥55 %).

NOTE This scoring issue assesses the likelihood of the fishery causing serious or irreversible harm to the commonly encountered habitat(s). A commonly encountered habitat regularly comes into contact with the gear used by the fishery. For example this could be a habitat whose range overlaps with the fishery range because it is favoured by the target species or be a habitat that the fishery’s gear is designed to exploit. Note that there can be more than one commonly encountered habitat. Good practice requires there is either very low interaction of the gear with the seabed, or where the gear interacts with the habitat, the interaction does not lead to significant changes in the structure and function of the habitats that are commonly encountered by the gear (or if so these would be rapidly reversible). In addition, the fishery is able to provide evidence that the interaction between the gear and the commonly encountered habitat does not lead to serious or irreversible harm.

Audit Question
Is there understanding about the presence of all possible habitats that could be classified as VMEs in the managed area? Is there any mapping that captures the location and distribution of VMEs? Have there been dedicated studies looking at the status of VME habitats in the managed area? Can it be demonstrated that the gear would not cause serious or irreversible harm on the VME, if encountered? Are VMEs protected from fishing?

What is the status of the vulnerable marine ecosystems?
(a) There is evidence that the UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm. (≥90 %).

(b) The UoA is highly unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm. (≥75 %).

(c) The UoA is unlikely to reduce structure and function of the VME habitats to a point where there would be serious or irreversible harm. (≥65 %).

(d) Assessments of rate of recovery from fishing for relevant gears and habitats – ideally peer reviewed. (≥55 %).

NOTE This scoring issue assesses the likelihood of the fishery causing serious or irreversible harm to VME habitats and only applies when VME habitats are encountered. The FAO provide guidance on the definition of a VME habitat, which is essentially those that are either (i) unique or rare, (ii) functionally significant (i.e. supporting a key life stage, such as nursery areas), (iii) fragile, (iv) have life history traits that may make recovery difficult (such as slow growth rates) and/or (v) structurally complex.

To perform well against this scoring issue, the interaction of the gear with the VME habitat should not lead to significant changes in the structure and function of the VME it encounters. In addition, the fishery is able to provide evidence that the interaction of the gear with the VME habitat between the gear and the VME does not lead to serious or irreversible harm. The MSC defines serious or irreversible harm to VMEs as any reduction in habitat structure and function below 80% of the unimpacted level. This difference in definition derives from VMEs generally having longer recovery times (i.e. more than 20 years) and from the special status afforded VMEs in international and customary law.
Audit Question
Are there minor habitats that may be less commonly encountered (but are not VMEs) featured in relevant habitat mapping or gear impact studies? Do fishers and managers have an understanding of the minor habitats that are encountered? Is there any evidence that can support the conclusion that the fishery is not causing a serious or irreversible harm to these habitats? Is there any understanding (ideally supported by data) of the relative abundance of these habitats over time?

What is the status of minor habitats?
(a) There is **evidence** that the UoA is highly unlikely to reduce structure and function of the minor habitats to a point where there would be serious or irreversible harm. (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Habitats management strategy

Audit Question
Does the management authority identify habitats, consider the potential for impact on these habitats from fishing and take appropriate management action? Is there clear administrative responsibility for managing the impacts of fishing on habitats? Has the fishery or management authority specifically considered what the impacts of the fishery may be on habitats and designed a cohesive set of measures to ensure the fishery does not cause serious or irreversible harm to habitats? And is this documented? Has management done all it reasonably can to ensure that the impact of the fishery on habitats does not cause serious or irreversible harm? Does management make use of the information described in PI 2-4.3 to continue to verify that management is achieving its objectives? Are there any other MSC fisheries or non-MSC fisheries which impact on habitats? Is the impact of any other fisheries covered in the management strategies? Are these other fisheries subject to the same rules and regulations to minimise impact on VMEs?

Is there a strategy in place designed to ensure that the fishery does not pose a risk of serious or irreversible harm to habitat types?

(a) There is clear evidence that the strategy for managing the impact of the fishery on habitat types is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its objective. (≥90 %).

(b) There is a strategy in place for managing the impact of the fishery on habitat types. The strategy is mainly based on information directly about the fishery and/or habitats involved, and testing supports high confidence that the strategy will work. (≥75 %).

(c) There is a partial strategy in place with some objective basis for confidence that it will work is implemented successfully. (≥65 %).

(d) There are measures in place which are considered likely to work, based on plausible argument (e.g. general experience, theory or comparison with similar fisheries/habitats). (≥55 %).

NOTE The first scoring issue looks at the extent of the management in place to address the fishery's impact on habitats to ensure that there is no serious or irreversible impacts to those habitats. Good practice requires there to be a cohesive, strategically designed set of measures for addressing the particular habitat interaction. Even fisheries that do not regularly contact benthic habitats should have a management strategy in place to mitigate the impact since gear loss or unexpected seafloor change could occur.

Audit Question
Is there a plausible argument to offer confidence that the management measures/partial strategy/strategy described in scoring issue (a) will work to safeguard the habitats from serious or irreversible harm? Is there evidence available to support this 'plausible argument'? Do the management feedback mechanisms in place provide confidence that the management measures/partial strategy/strategy are achieving their objectives? Is there information available on the fishery's habitat impacts to enable the effects of different management measures to be tested? Is there a requirement to review or evaluate management measures in place to safeguard habitats - in particular VME habitats?

Management strategy evaluation
(a) **Testing** supports high confidence that the partial strategy/strategy will work, based on information directly about the UoA and/or habitats involved. (≥90 %).

(b) There is some **objective basis for confidence** that the measures/ partial strategy will work, based on information directly about the UoA and/or habitats involved. (≥75 %).

(c) The measures are **considered likely** to work, based on plausible argument (e.g., general experience, theory or comparison with similar UoAs/ habitats). (≥65 %).

(d) (≥55 %).

NOTE This scoring issue assesses the degree of supporting evidence to indicate that the management will meet its objectives. Good practice requires that there is some empirical supporting evidence, sufficient to provide a high degree of confidence that the management will work, this may include systematic monitoring or research providing reliable information on all major points of interaction between the fishery and the habitat(s) appropriate to the scale and intensity of the fishery.

Audit Question
Is there evidence available to demonstrate that the partial strategy or strategy described in scoring issue (a) is indeed in place and has been implemented as intended? Are there observer reports or evidence from electronic monitoring of vessel movements (such as VMS) to indicate that spatial measures are complied with? Have the measures contained in the partial strategy or strategy been enshrined in legislation or regulation? Are fishers aware of the measures detailed in the partial strategy or strategy and their responsibility with respect these? Is there evidence that the implemented management has been successful in achieving its aims?

Management strategy implementation
(a) There is **clear quantitative evidence** that the partial strategy/strategy is being implemented successfully and is achieving its objective, as outlined in scoring issue (a). (≥90 %).

(b) There is **some quantitative evidence** that the measures/ partial strategy is being implemented successfully. (≥75 %).

(c) Evidence (e.g. risk assessment and/or quantitative modelling) on the status of VMEs indicating that their conservation status is not deteriorating. (≥65 %).

(d) Evidence from observer reports that management measures/partial strategy/ strategy are effectively managing fleet activity. (≥55 %).

NOTE The third scoring issue relating to the management of habitat impacts is intended to ensure that the management described in scoring issue (a) has been implemented. Good practice requires not only that there is clear quantitative evidence of implementation, but also that the management is achieving its aims - i.e. ensuring there is no serious or irreversible harm.

Audit Question
Does the management strategy for this fishery recognize and seek to comply with any specific VME protection measures in place to address the impacts of MSC and non-MSC fisheries? Has the design of the management strategy been tailored to ensure it is compatible with similar strategies in other fisheries? Is the management sufficient to ensure the cumulative impact of all MSC and non-MSC fisheries does not
cause serious or irreversible harm to any habitats that have been classified as VMEs by any of the relevant management authorities?

Is the fishery in compliance with the strategy to avoid a risk of serious or irreversible harm to habitat types?
(a) There is clear quantitative evidence that the fishery complies with both its management requirements and with protection measures afforded to VMEs by other fisheries, where relevant. (≥90 %).

(b) There is some quantitative evidence that the fishery complies with both its management requirements and with protection measures afforded to VMEs by other fisheries, where relevant. (≥75 %).

(c) There is qualitative evidence that the fishery complies with its management requirements to protect VMEs. (≥65 %).

(d) Evidence that the fishery complies with any management measures applied within the 'managed area', such as areas closed to particular gears, no-take zones or measures applied to identify and protect VMEs. (≥55 %).

NOTE This scoring issue only applies if the fishery impacts a VME and/or if another fishery impacts a VME in the fishery's managed area. This scoring issue seeks to ensure that the fishery complies with any relevant management requirements for the protection of VME habitats, including those which may be in place in overlapping fisheries. Good practice requires a stronger evidence base of compliance with both the fishery's own management requirements to protect VMEs, as well as those implemented by other relevant fisheries.

Habitats information

Audit Question
Is there a good understanding of the spatial distribution of the main habitats and minor habitats, both in the area of the fishery and beyond? And is there an awareness of the locations of vulnerable habitats? Have there been seabed mapping studies (either in the past or on-going), which have provided outputs that can be used by managers to determine the distribution of habitats? Does the available mapping cover the whole habitat range (including beyond the boundaries of the fishery)?

Is the quality of available information adequate to determine the risk posed to the habitat by the fishery and the effectiveness of its strategy to manage impacts on the habitat?

(a) The distribution of all habitats is known over their range, with particular attention to the occurrence of vulnerable habitats. (≥90 %).

(b) Some quantitative information is available and is adequate to estimate the types and distribution of the main habitats. (≥75 %).

(c) The nature, distribution and vulnerability of the main habitats in the fishery area are known at a level of detail relevant to the scale and intensity of the fishery. (≥65 %).

(d) The types and distribution of the main habitats are broadly understood and the qualitative information is adequate to estimate the types and distribution of the main habitats. (≥55 %).

NOTE This scoring issue focuses on the quality of information relating specifically to habitat distribution (i.e. habitat mapping) and the occurrence of vulnerable habitats. Good practice requires that the distribution of all habitats (main and minor) is known over their entire range and not limited to the specific area in which the fishery operates.

Audit Question
Have any studies been done looking at the impacts of the fishery's gear on the habitats that are present in the fishery's area? Are there gear impact studies from comparable fisheries that may enable the impact of
the fishery's gear to be assessed in this case? Is it possible to produce an accurate overlap map of the fishery's spatial distribution and the habitat distribution? Have studies been done on the frequency of fishing gear interaction with habitats?

Is the information available adequate for the assessment and monitoring of impacts of the habitats and the effectiveness of its strategy to manage impacts on the habitat?

(a) The physical impacts of the gear on all habitats have been quantified fully and changes in all habitat distributions over time are measured. (≥90%).

(b) Information is adequate to allow for identification of the main impacts of the fishery on the main habitats, and there is reliable information on the spatial extent of interaction and on the timing and location of use of the fishing gear. Adequate information continues to be collected to detect any increase in risk to the main habitats. (≥75%).

(c) Some quantitative information is available and is adequate to estimate the consequence and spatial attributes of the main habitats. (≥65%).

(d) Qualitative information is adequate to broadly understand the nature of the main impacts of gear use on the main habitats, including spatial overlap of habitat with fishing gear. (≥55%).

NOTE This scoring issue relating to habitats information seeks to ensure that information is adequate to understand the impact of the fishery's gear on the habitats found within the fishery's area. In order for any impact to be appropriately estimated, the spatial and temporal distribution of the fishing activity and its overlap with different habitats must also be understood. Good practice requires that there are directly applicable studies relating to the particular gear and the particular habitats, demonstrating the scale of impact. This can be combined with a high level of understanding of the spatial and temporal overlap between fleet operations and habitat distribution.

Audit Question
Have more than one habitat mapping exercise been carried out in the fishery's area? Is there clear governmental responsibility for the on-going collection of habitat information? Have any external/academic studies been undertaken on the habitats in the fishery's area that contribute to an understanding of changes in habitat status over time? Where habitat management measures (such as gear restrictions or area closures) are implemented, is there monitoring in place to demonstrate that these are achieving the objective of improving habitat outcome status?

Monitoring
(a) Changes in all habitat distributions over time are measured. (≥90%).

(b) Adequate information continues to be collected to detect any increase in risk to the main habitats. (≥75%).

(c) (≥65%).

(d) (≥55%).

NOTE This scoring issue relates to changes in risk and habitat distribution over time. An understanding of temporal changes in habitat health and distribution is essential, compared with a single snapshot mapping exercise, as it enables management to determine that management measures are working and provides verification that activities are not contributing to increasing risk to the habitats. Good practice requires that habitat mapping is repeated at timely intervals so that the relative changes may be recorded and responded to.

6.4.6 Ecosystem

Criterion: The operator shall have strategy in place that consists of a plan, containing measures to address all main impacts of the fishery on the ecosystem. The plan and measures shall be based on well-understood functional relationships between the fishery and the components and elements of the ecosystem.
**Indicator:**

**6.4.6.1** The operator shall have a plan to address all main impacts of the fishery on the ecosystem.

**Ecosystem outcome**

**Audit Question**

Is the fishery small scale, using selective and low impact gear, targeting a well-controlled and precautionary quantity of a resource which shares an ecosystem niche with many other species? If so, no further action is likely to be required. Is there an understanding of the trophic relationships in the ecosystem in which the fishery operates? Is the ecosystem role of the target species and any species or habitats impacted by the fishery under assessment understood? Is there any evidence available to indicate the changes in ecosystem balance (changes in relative balance of key species, habitats)? Is there an understanding of the indirect effects of the fishery on the ecosystem, such as impacts of waste products from the fishery?

Has the fishery done an ecosystem impact analysis to establish the current ecosystem status and demonstrate that it does not cause serious or irreversible harm to the key elements of ecosystem structure and function?

(a) There is evidence that the fishery under assessment is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm. (≥90%).

(b) The fishery under assessment is highly unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm. (≥75%).

(c) The fishery under assessment is unlikely to disrupt the key elements underlying ecosystem structure and function to a point where there would be a serious or irreversible harm. (≥65%).

(d) The licensing authorities were satisfied with other assessments and did not require the fishery to demonstrate any impact analysis. (≥55%).

**NOTE** Key ecosystem elements are the features of an ecosystem considered as being most crucial to giving the ecosystem its characteristic nature and dynamics, and are considered relative to the scale and intensity of the fishery under assessment. They are features most crucial to maintaining the integrity of its structure and functions and the key determinants of the ecosystem resilience and productivity. Good practice requires that the operation of the fishery does not reduce those key features that are crucial to maintaining the integrity and structure of the ecosystem and does not adversely impact ecosystem productivity. This includes not causing serious changes to biological diversity.

**Management strategy in place**

**Audit Question**

Is there any ecosystem-specific management in place? Do the measures in place to address impacts of the fishery on target species and habitats and other species collectively fully address the need for ecosystem management? Is the ecosystem where the fishery occurs subject to specific data collection, analysis and review and does this in turn influence management decision-making? Is there a requirement within the management framework, or management plan, to give consideration to ecosystem effects in setting fishery-specific rules?

Is there in place a management strategy with measures to ensure the fishery does not pose a risk of serious or irreversible harm to ecosystem structure and function?

(a) There is a strategy that consists of a plan in place which contains measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. (≥90%).
(b) There is a partial strategy in place which takes into account available information and is expected to restrain impacts of the fishery on the ecosystem. \((\geq 75 \%)\).

(c) There are measures in place, if necessary which take into account the potential impacts of the fishery on key elements of the ecosystem. \((\geq 65 \%)\).

(d) The fishery complies with government measures which are expected take into account the potential impacts of the fishery on key elements of the ecosystem \((\geq 55 \%)\).

NOTE The first scoring issue rates the extent of the management that is in place to address ecosystem impacts and the degree to which measures are strategically combined to specifically address ecosystem impacts. Good practice requires that a fishery, regardless of how benign their impact, has a strategy (i.e. a focused, cohesive and strategic arrangement) to address all of the fisheries impacts on the ecosystem.

**Audit Question**

Does management subject proposed decisions to ecosystem modeling, or some form of ecological impact assessment to ensure that there are no unintended impacts on the ecosystem? Are ecosystem management measures/strategies objectively tested in any other way? Are there any systems for review of ecosystem health, perhaps at a regional level, which identifies which management measures are in place, how these are working, and what future requirements may be?

Have the measures in the management strategy been evaluated and implemented to establish that they work to make the fishery minimize risk of serious or irreversible harm to ecosystem structure and function?

(a) There is clear evidence that the partial strategy/strategy is being implemented successfully and is achieving its objectives. \((\geq 90 \%)\).

(b) Testing supports high confidence that the partial strategy/strategy will work and there is some evidence that the measures/partial strategy is being implemented successfully. \((\geq 75 \%)\).

(c) There is some objective basis for confidence that the measures/partial strategy will work, based on some information directly about the fishery and/or the ecosystem involved. \((\geq 65 \%)\).

(d) The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/ecosystems). \((\geq 55 \%)\).

**Audit Question**

Are all of the management measures/strategies that have been described earlier in the PI fully in place? Is there evidence that can be presented to the certifiers to confirm that the measures are fully implemented? Have ecosystem management measures been in place for several years and does this enable the results of these measures to be clearly indicated? Is there agreement among stakeholders that the ecosystem management measures/strategies are functioning as intended? Where the fleet has undertaken to do additional voluntary measures is it possible to demonstrate that this is actually happening?

**Implementation**

(a) There is **clear evidence** that the partial strategy/strategy is being **implemented successfully and is achieving its objective as set out in scoring issue (a)**. \((\geq 90 \%)\).

(b) There is **some evidence** that the measures/partial strategy is being **implemented successfully**. \((\geq 75 \%)\).

(c) Evidence from stock assessments/advice demonstrating that ecosystem considerations are shaping management decision-making. \((\geq 65 \%)\).
(d) Evidence that any voluntary measures at the fleet level are being carried out - i.e. completed logbooks, or inspection records. (≥55 %).

NOTE The final scoring issue in relation to ecosystem management seeks to confirm that management described earlier in the same PI is being implemented as intended. And that the stated management approach is indeed shaping operations and outcomes. Good practice requires that the management is being implemented and seen to be achieving its aims. This implies that not only has the management been put in place, but that it is shaping operations and decision-making and that there is some evidence to demonstrate this.

Audit Question
Has the biodiversity of aquatic ecosystems been conserved (as a result of operation of the fishery in question)?

(a) Measures enacted by management have resulted in the long-term maintenance of ecosystem integrity, including maintaining stock abundance at appropriate levels, given its role in the ecosystem and whether it is native to the ecosystem. (≥90 %).

(b) A management system is in place that enforces all local, national and international laws to ensure long-term productivity of the resource and integrity of the ecosystem by adhering to the precautionary approach and responding to changing circumstances. (≥75 %).

(c) Measures enacted by management have not been in place long enough to evaluate, or the track record is uncertain. (≥65 %).

(d) Management measures currently in place are likely to conserve or reduce decline in native stock and/or allow depleted native stocks to recover. (≥55 %).

Audit Question
Does the fleet operate in protected areas?

(a) There is evidence that the fishery prioritizes avoidance of no-take zones where no extraction is permitted for protection of marine biodiversity and critical habitats (e.g., protecting depleted stocks and their habitats during the rebuilding phase of a fishery—stopping fishing on stocks that have collapsed, or are close to collapse, to allow the resource to recover), and only operates in protected areas where fishing is allowed to support the biodiversity conservation goals. (≥90 %).

(b) Evidence that where avoidance is not strictly enforced, the fishery implements adaptive management measures to minimize impacts and restore biodiversity and ecosystem services as per the objectives of the marine protected area. (≥75 %).

(c) Evidence that where the objectives of the marine protected area was to support local and traditional sustainable marine-based livelihoods and communities; facilitate the resolution of multiple stakeholder conflicts; protect cultural and archaeological sites; allocating use rights in specific locations in order to reduce competition between user groups or to enhance opportunities for certain groups of users (for example, artisanal or recreational fishers), the fishery conducts stakeholder consultations to get consent for its operations within agreed operational framework and mitigation measures. (≥65 %).

(d) In circumstances where the fishery operates within a legally protected area or an internationally recognized area, the fishery management demonstrates that the operation is nevertheless legally permitted. (≥55 %).
Audit Question
The role of the stock in the food chain was taken into account.

(a) If the fishery catches “exceptional species”, the ecological and food web impacts have been scientifically assessed and the management scheme protects enough biomass to allow these exceptional species to fulfill their ecological role (e.g., through the harvest control rule). (≥90%).

(b) If the fishery catches “exceptional species”, policies are in place to protect ecosystem functioning (e.g., a substantial proportion of the fishery area is protected in no-take marine reserves, or there is a maximum catch or a minimum biomass based on ecosystem considerations), though these may not be explicit or based on scientific assessment. (≥75%).

(c) The fishery catches “exceptional species” and lacks policies to protect the ecosystem role of these species, but scientific assessment to account for these species’ ecological roles is underway. (≥65%).

(d) The fishery catches “exceptional species” and there are no explicit efforts to incorporate ecological role into management. (≥55%).

Ecosystem information

Audit Question
Is there good understanding of all the species in the area of the fishery? Is there a good understanding of the fauna and habitat forming species in the area of the fishery? Is there spatial understanding of the
ecosystem functionality of different areas (spawning, nursery or feeding areas)? Is there understanding of which species are the key predators, which are the key prey and any keystone species? Is there an understanding of the trophic relationships that exist between the key species in the ecosystem? Is there an understanding of ecosystem variations and the possible impacts of climate change on the ecosystem?

What is the quality and reliability of the information with respect of the area of the fishery?
(a) Information is adequate to broadly understand the key elements of the ecosystem. (≥90 %).
(b) Information is adequate to identify the key elements of the ecosystem (≥75 %).
(c) Any ecosystem summaries, which combine descriptions of species, trophic levels and habitats. (≥65 %).
(d) Any reviews of changes in the ecosystem over time, which may provide an indication of the key elements of the ecosystem. (≥55 %).

NOTE The first scoring issue examines the state of knowledge of the ecosystem (without reference to the fishery). Good practice requires that the ecosystem information is sufficient to enable the key elements of the ecosystem to be broadly understood.

Audit Question
Has government research or local academic research investigated the impacts of the fishery on the key elements of the ecosystem? Are there any other sources of information that enable the impacts of the fishery on key elements of the ecosystem to be inferred? Does ecosystem modeling work enable the impacts of the fishery on key ecosystem elements to be inferred?

Has there been investigation to establish adequate knowledge of the impacts of the fishery under assessment on the ecosystem?
(a) Main interactions between the UoA and these ecosystem elements can be inferred from existing information, and have been investigated in detail. (≥90 %).
(b) Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, and some have been investigated in detail. (≥75 %).
(c) Main impacts of the UoA on these key ecosystem elements can be inferred from existing information, but have not been investigated in detail. (≥65 %).
(d) Modelling outputs which enable the impacts of the fishery on other key elements of the ecosystem to be inferred. (≥55 %).

NOTE This scoring issue on ecosystem information assesses the state of knowledge of the impacts of the fishery under assessment on the key ecosystem elements. Good practice requires that the impacts of the fishery on the key ecosystem elements have been investigated.

Audit Question
Are the species (both flora and fauna) all included in an ecosystem description? Is the contribution of the suite of species affected by the fishery to ecosystem structure and function fully understood?

Understanding of component functions
(a) The impacts of the UoA on P1 target species, primary, secondary and ETP species and Habitats are identified and the main functions of these components in the ecosystem are understood. (≥90 %).
(b) The main functions of the components (i.e., target species, primary, secondary and ETP species and Habitats) in the ecosystem are known. (≥75 %).
(c) Evidence of components (i.e. target, primary, secondary and ETP species and Habitats) function in ecosystem descriptions. (≥65 %).

(d) Evidence of components (i.e. target, primary, secondary and ETP species and Habitats) function in ecosystem models. (≥55 %).

NOTE This scoring issue of the ecosystem information assesses the degree to which the ecosystem functions components (i.e. target, primary, secondary and ETP species and habitats) are understood. Good practice requires that not only are the ecosystem functions of the components understood, but that the impact of the fishery on these are identified.

Audit Question
Is the information available on the impacts of the fishery on components (i.e. target, primary, secondary and ETP species and Habitats) sufficient that the ecosystem consequences of those impacts may also be inferred? Are there any studies or research that looks at the impacts on the overall ecosystem caused by the fishery impact on target, primary, secondary and ETP species or Habitats? Has the ecosystem consequences of any habitat loss caused by the fishery been assessed? Have the knock-on ecosystem consequences of the removal of species (whether target, primary, secondary or ETP) been modelled?

Information relevance
(a) Adequate information is available on the impacts of the UoA on the components and elements to allow the main consequences for the ecosystem to be inferred. (≥90 %).

(b) Adequate information is available on the impacts of the UoA on these components to allow some of the main consequences for the ecosystem to be inferred. (≥75 %).

(c) Evidence of components (i.e. target, primary, secondary and ETP species and Habitats) function in ecosystem descriptions. (≥65 %).

(d) Evidence of components (i.e. target, primary, secondary and ETP species and Habitats) function in ecosystem models (≥55 %).

NOTE This scoring issue in relation to ecosystem information seeks to ensure that the information of the impacts of the fishery on the components (i.e. target, primary, secondary and ETP species and Habitats) is sufficient to allow the consequential impacts on the ecosystem to be inferred. Good practice requires that there is at least adequate information to allow 'the main' consequences for the ecosystem to be inferred.

Audit Question
Is the information collected adequate to inform management about whether ecosystem management efforts are working or not? Would future changes in the ecosystem, in particular those changes caused by the fishery, be identified in routine data collection programs? Do the ecosystem elements of the fishery management plan specify the data that should be collected in relation to the ecosystem? Where ecosystem objectives expressed in the management plan are 'well defined and measurable', is data being collected to enable the progress against these objectives to be measured?

Monitoring
(a) Information is adequate to support the development of strategies to manage ecosystem impacts. (≥90 %).

(b) Adequate data continue to be collected to detect any increase in risk level. (≥75 %).

(c) A list of routine ecosystem sampling requirements. (≥65 %).

(d) Ecosystem specific work included in research plans. (≥55 %).

NOTE The final scoring issue in relation to ecosystem information examines the degree of on-going monitoring and requires that data 'continue to be collected'. This focuses on ensuring that future changes to the ecosystem attributable to the fishery would be reflected in future data collection exercises. Good practice requires continued collection of information adequate to give management good feedback response.
6.5 Climate change aspect

Principle 6: Contribute to the mitigation and adaptation to the detrimental effects of climate change.

6.5.1 Climate change mitigation and adaptation

Criterion: The operator shall have an integrated management programme to continually reduce water pollution, air pollution and emissions, including greenhouse gases.

Indicator:
6.5.1.1 The operator shall have programme for reduction of water pollution and air pollution and a documented emissions reduction strategies.

Audit Question
Has the fishery established a strategy to monitor the effects of environmental change on the natural productivity of the fishery?
(a) The fishery has a monitoring strategy on variability of the fishery’s productivity due to long-term impacts of climate change with the possibility of triggering adjustments to reference points and indicators used to determine stock status. (≥90 %).

(b) The fishery has factored impacts on their productivity on known ecosystem changes (for instance relating to climate change, multi-decadal environmental cycles) and has taken these into account by adjusting target/limit reference points and by reconsidering the species against their ecological status. (≥75 %).

(c) The fishery is aware that unknown factors may include unpredictable effects from climate, environmental or anthropogenic non-fishery related factors, which could, for example, lead to periods of low recruitment or growth, high natural mortality or migration. (≥65 %).

(d) The fishery is aware that long-term climate and ecosystem changes often affect production and abundance of fisheries. (≥55 %).

Audit Question
Does the fishery have a management plan applied to identify potential air emission sources and contaminants having impacts including consideration of bad odour, sulfur oxides (SOx), nitrogen oxides (NOx), particulate matter (PM), volatile organic compounds (VOC), carbon monoxide (CO), ammonia (NH3) and heavy metals?
(a) The fishery has developed and implemented an air quality management plan, which: (a) identifies all sources of air pollution in the operations of the participating operator; (b) identifies the pollutants released, including carbon monoxide, nitrogen oxides, volatile organic compounds, particulate matter, sulphur compounds, dioxins and other substances recognized as potentially harmful to the environment and/or human health; (c) identifies each source of emissions and the amount and nature of emissions per source; (d) identifies measures implemented to mitigate air pollution, or else provides the rationale for not utilizing such strategies; (e) monitors the effectiveness of the measures identified and implemented to mitigate air pollution; (f) complies with applicable national and international air quality standards and models. (≥90 %).

(b) Evidence that Best Available Technology (BAT) to prevent or reduce air pollution and mitigate its effects and associated risks, has been identified and implemented. (≥75 %).

(c) Results of air quality measuring and monitoring of pollutants recognized as potentially harmful for the environment or human health (≥65 %).
(d) The fishery has identified all the potential air emission sources, emission rates and impacts that were identified by applying the procedures in place. (≥55%).

NOTE 1 The cradle-to-gate assessment of capture fisheries food products shall include the following activities, where they occur: (a) Fishing, including preparation and transport to and from fishing fields; (b) Landing and auctioning; (c) Processing and storing; (d) Transport and distribution including packing (PAS 50-2, 2012:8-10).

NOTE 2 The entity responsible for the undertaking of a cradle-to-gate GHG emissions assessment for an aquatic food product shall record the outcome and supporting information in a manner that cannot be misconstrued as a complete cradle-to-grave GHG emissions assessment. Where the results of a cradle-to-gate assessment are to be made known to other parties (e.g. to a subsequent stage of the supply chain), all relevant supporting information should also be made available. For aquatic food products, the following additional information shall be provided in conjunction with the assessment outcome.

(a) Confirmation as to what constitutes the gate in the cradle-to-gate GHG emissions assessment (e.g. cradle to fish farm gate, cradle to landing, cradle to retailer or food service gate).

(b) Determination and reporting of the GHG emissions and removals associated with one kg of product (including packaging) at the “gate”. This may be in addition to other units of analysis defined.

(c) Information required for calculation of the emissions and removals in subsequent life cycle stages.

(d) Information as to any potential carbon storage in the product over the 100-year assessment period, including data sources from which the quantity of stored carbon was calculated.

(PAS 50-2, 2012:16).

Audit Question
What are the measures taken to address identified air emissions and impacts?

(a) The fishery avoids the release of pollutants or, minimizes and/or controls the intensity and mass flow of their release to air due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts. (≥90%).

(b) Plans to reduce pollution and emissions, including greenhouse gases, are developed, implemented and monitored. (≥75%).

(c) Stable, secure and efficient energy supply and increase in renewable energy component. (≥65 %).

(d) Description in the air management plan of strategy for air pollution mitigation (≥55 %).

Audit Question
What are the value and trends of key parameters or metrics used to measure the effect of addressing the identified air emissions and impacts?

(a) (≥90 %).

(b) (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Audit Question
Has the fishery identified the impacts of its operations on the change in water quality, e.g. through eutrophication, pollution and other changes in conditions for aquatic species?

(a) The fishery avoids the release of pollutants or, minimizes and/or controls the intensity and mass flow of their release to water and land due to routine, non-routine, and accidental circumstances with the potential for local, regional, and transboundary impacts. (≥90%).
(b) Evidence that best available practices to maintain or enhance the quality of water resources to their optimal level are implemented in fishery operations to ensure sustained water supply, ecosystem functioning and ecological services. (≥75 %).

(c) Evidence that sufficient precautions have been taken to contain effluents from the fishery operations and prevent contamination of water resources. This includes treatment and/or recycling of waste water and the establishment of buffer zones between the operation site and surface or ground water resources. (≥65 %).

(d) Evidence that emergency plans and measures are in place, known and implemented in the operation(s) in case accidental contamination of water resources is identified. (≥55 %).

6.5.2 Reduction of ozone layer depleting compounds

Criterion: The operator shall implement measures to reduce and ultimately phase out ozone depleting compounds as stipulated in the Montreal Protocol on Substances that Deplete the Ozone Layer, including but not restricted to CFCs, HCFCs, and HFCs.

Indicator:

6.5.2.1 The operator shall have integrated programme for reduction of emissions

Audit Question
Has the fishery assessed the GHG emissions and removals arising from its operations?
(a) Sufficient data to allow the calculation of GHG emissions and GHG removals of a life cycle stage (≥90 %).

(b) Partial carbon footprint of the bioenergy product calculated as the sum of GHG emissions and removals of one or more processes expressed in gCO2 equivalents per delivered unit (≥75 %).

(c) Life cycle carbon footprint calculated as the sum of GHG emissions and GHG removals expressed in gCO2 equivalents per MJ energy delivered and functional unit (≥65 %).

(d) The fishery has developed a methodology to calculate its Carbon Footprint per product unit and undertake to reduce it every year. (≥55 %).

Audit Question
What measures has the fishery taken to limit the use of ozone layer depleting substances?

(a) The company does not use CFC, HCFC, HFC or other refrigerants that cause ozone depletion. (≥90 %).

(b) Company uses only ammonia and Freon gases. No evidence of ozone depleting chemicals seen anywhere on site. (≥75 %).

(c) There are actions or strategies to achieve energy efficiencies and to increase renewable energy use (≥65 %).

(d) The fishery has signed up a sector agreement with the relevant authorities under which the fishery agrees on a voluntary basis to assist in reducing greenhouse gas emissions by introducing strategies to (a) reduce energy use; or (b) increase use of renewable energy sources; or (c) carry out other avoidance or mitigation activities. (≥55 %).

6.6 Environmental management
Principle 7: Responsible waste management

6.6.1 Waste management

Criterion: The operator shall have an integrated waste management programme for the waste products it generates. This will be based on the concept of the waste management hierarchy, that is: source reduction, especially as regards lost fishing gear, oil spills and on-board spoilage of catch; reuse; recycling and reprocessing; waste treatment and waste disposal; and ensuring proper management of unavoidable pollution and waste. The waste reduction hierarchy should be used in a flexible manner based on the life cycle approach.

Indicator:

6.6.1.1 The operator shall have waste management programme and reports such as environmental impact assessment on fishing activities, log of unaccounted for fishing gears and emergency, contingency plans for oil discharges into coastal and inland waters

Audit Question
Can the company provide information on how wastes are addressed?
(a) The fishery has described procedures applied to identify potential impacts of generated wastes on human health and the environment, the percentage that is reused, recycled, recovered or disposed. (≥90 %).
(b) The fishery describes the measures taken to address potential impacts of generated wastes on human health and the environment, including handling, separation, storing, reusing, recycling, recovering and disposal. (≥75 %).
(c) There is a report of the value of key parameters or metrics used to quantify the effect of measures taken to address potential impacts of generated wastes on human health and the environment. (≥65 %).
(d) There is a list of the generated wastes and the annual quantities of the listed wastes generated in units of mass or volume per unit of production. (≥55 %).

Audit Question
The fishing company complies with national and international regulations, especially those concerning the reduction of the environmental footprint of fishing, such as, but not only:
(a) The fishery has minimized catch by lost and abandoned gear of commercial species and other organisms been minimized (≥90 %).
(b) The fishery uses selective and environmentally-safe and cost-effective fishing methods (≥75 %).
(c) (≥65 %).
(d) (≥55 %).

Audit Question
How have pollution and waste been minimized?
(a) The fishing company recycles, re-uses or re-processes all materials used during fishing, conservation and transport of the fish up to the selling point, including packaging. (≥90 %).
(b) The fishing company implements measures to prevent dispersion of waste in the sea (including fuels and lubricants and plastic matter). (≥75 %).
The fishing company utilises all the chemical non-toxic alternatives available in order to reduce the use of toxic, persistent or bio-accumulating substances. (≥65 %).

6.7 Resource use efficiency

Principle 8: Efficient use of resources

6.7.1 Energy management

Criterion: According to the size, capacity and complexity of the operations, the operator shall have an energy efficiency plan with goals and implementation activities for increased efficiency, for reducing dependency on non-renewable sources and for increasing the use of renewable energy.

Indicator:

6.7.1.1 The operator shall have records of units of total energy used in a fisheries operations and document measures taken to address energy efficiencies.

Audit Question
Does the fishery keep a register of the energy consumption, updated at least once a year?

(a) Units of total energy inputs to the production process per unit delivered. (≥90 %).

(b) Measures taken to address energy efficiency. (≥75 %).

(c) (≥65 %).

(d) (≥55 %).

Audit Question
Has the fishery provided information on how energy use and efficiency are addressed?

(a) There is a clear methodology and assumptions used to calculate the energy balance of the fishery and measures taken to address energy efficiency in the processes. (≥90 %).

(b) There is sufficient data to allow calculation of units of energy required to operate and maintain the fishery’s processes (≥75 %).

(c) There is a high likelihood of calculating units of energy required to operate and maintain the fishery process(es) (analogous to partial carbon footprint) (≥65 %).

(d) There approximations of units of energy required to operate and maintain the fishery processes across the life cycle (≥55 %).
Annex A
(normative)

Competencies for fishery assessment team

Fishery Team Leader Qualification and Competency Criteria

Fishery Team Member Qualification and Competency Criteria

Fishery Team Qualification and Competency Criteria
References


CRC (2014), *Addressing the Overcapacity Issue in Small-Scale Fisheries*. Rhode Island, USA: Coastal Resources Center (CRC), Graduate School of Oceanography, University of Rhode Island. available at http://www.crc.uri.edu/download/RKF13_Overcapacity.pdf [20 October 2016].


