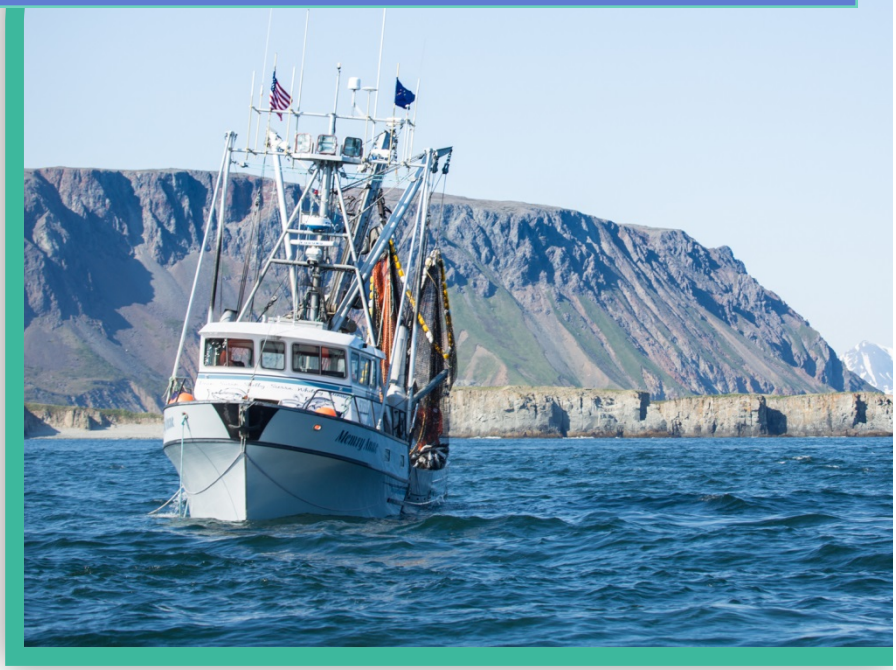
Alaska Responsible Fisheries Management (RFM) Standard Version 1.3

For the assessment of Alaskan Fisheries

November 2015



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FOREWORD

The RFM Standard is composed of Conformance Criteria. The Conformance Criteria presented in this revised RFM Standard Version 1.3 (V 1.3) October 2015, are the result of a minor review of RFM Conformance Criteria (Standard) Version 1.2 (V 1.2) September 2011, by the RFM Conformance Criteria Committee. The changes are limited to grammar corrections, the removal and grouping of repetitive and similar clauses, and the improved specificity of some clauses; specifically those relating to information presented in updated and relevant FAO Guidance Documents e.g. 2011 FAO Guidelines for the Ecolabelling of Fish and Fishery products from Inland Capture Fisheries.

These are considered minor changes to the Standard by the Conformance Criteria Committee and therefore only justify a *revision change* and not a claim of a full review and re-issue of the RFM Standard. Guidance on edits to certain clauses was also given via the GSSI Benchmarking Standard 2015. Details about the Conformance Criteria Committee and their RFM Program of Work can be found on the ASMI Website. http://certification.alaskaseafood.org/improvements

The fundamental basis of the Alaska RFM Standard and Program remains the 1995 FAO Code of Conduct for Responsible Fisheries and the FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Marine Capture Fisheries adopted in 2005 and amended/extended in 2009, also including full reference to the 2011 FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Inland Fisheries which in turn are now supported by a suite of guidelines and support documents published by the UN FAO. ISO 17065 accreditation for Certification is another key fundamental basis of the RFM Program.

As per the FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Marine and Inland Capture Fisheries adopted in 2009 and 2011, respectively, the Alaska Responsible Fisheries Management standards program and certification:

- Is consistent with the 1982 United Nations Convention on the Law of the Sea and the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, the FAO Code of Conduct for Responsible Fisheries and the World Trade Organization (WTO) rules and other relevant international instruments;
- Recognizes the sovereign rights of States and complies with all relevant laws and regulations;
- Is voluntary in nature and market-driven;
- Is transparent, including balanced and fair participation by all interested parties;
- Is non-discriminatory, does not create unnecessary obstacles to trade and allows for fair trade and competition;
- Provides the opportunity to enter international markets;

- Establishes clear accountability for the owners of the scheme and the certification body in conformity with international standards;
- Incorporates reliable, independent auditing and verification procedures;
- Respects that other standards shall be considered equivalent if consistent with it;
- Is based on the best scientific evidence available, also taking into account traditional knowledge of the resources provided thus its validity can be objectively verified;
- Is practical, based upon a viable and verifiable assessment.

The objective of the Alaska RFM Program remains consistent; to provide the fishing industry with a 'Certification of Responsible Fisheries Management' at the highest level of market acceptance, now represented by recognition to the GSSI Benchmarking Standard.

Certification to the RFM Standard will demonstrate that commercial fisheries in Alaska are managed responsibly by the fisheries management authorities in charge, which in turn are operating in accordance with standards aligned to internationally agreed standards and guidance provided by the United Nations Food & Agriculture Organization.

The RFM Standard V1.3 is already subject to a review for improvement and it is anticipated that a new Version 2 (V2) of the RFM Standard will be published in late 2016.

The Alaska RFM Standard Conformance Criteria

The 'RFM Standard' is a tool for use in the evaluation of fisheries to the Alaska Responsible Fisheries Management Certification Program. The Conformance Criteria are formulated from existing publicly available documents principally developed by the United Nations Food and Agriculture Organization (FAO). There are four main normative UNFAO documents supported by other guidance documents. The four key documents were:

- the 1995 FAO Code of Conduct for Responsible Fisheries (CCRF),
- the 2005 FAO Guidelines for Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries (& 2009 extensions),
- the 2011 FAO Guidelines for the Ecolabelling of Fish and Fishery products from Inland Capture Fisheries (the inland capture fishery guidelines are identical to the marine capture fishery guidelines except for the fact that they include additional requirements related to enhancement),
- The 1996 FAO John Caddy Checklist[1].

[1] FAO. Caddy, J.F. A checklist for fisheries resource management issues seen from the perspective of the FAO Code of Conduct for Responsible Fisheries. FAO *Fisheries Circular*. No. 917. Rome, FAO. 1996. 22p.

Collectively, these FAO documents plus the Global Seafood Sustainability Initiative (GSSI) Benchmark Tool for 2015 provide the basis of the scope of fishery certification and the technical requirements that a fishery must be able to demonstrate to become certified against the RFM Standard.

The FAO Committee on Fisheries (COFI) has provided a global, multi-stakeholder process for the documentation of the content of the FAO CCRF and the later, FAO Guidelines for the Ecolabelling of Fish and Fishery Products From Marine and Inland Capture Fisheries.

These documents have global significance in fisheries with respect to setting a global standard for responsible fisheries management. The Conformance Criteria used in the RFM program represent a technical translation of these normative references to facilitate effective measurement of fisheries against the FAO CCRF. The FAO CCRF had already been translated into an audit tool and had been used voluntarily by fisheries for the assessment of compliance (FAO John Caddy Checklist[1]). The John Caddy Checklist places the FAO CCRF into a measurable context to allow the performance of fisheries to be evaluated against its content.

The FAO CCRF consists of a series of statements of principles that need to be placed in an 'operational' context in order to place the measurement of fishery management performance within a practical context. As a way of rendering the implications of the Code more explicit, and at the same time testing to see how close the various fisheries management processes are to meeting its provisions, the provisions of the CCRF, where this was possible, were reformed as a series of specific requirements.

The FAO Guidelines for the Eco-labelling of Fish and Fishery Products from Marine (and later inland) capture fisheries were developed to provide direction to the evaluation of fisheries for certification purposes. The scope of fishery certification is the FAO referenced documents and a set of fishery minimum substantive requirements which the FAO produced in order to create consistency to the basis of certification.

The definition of the 'Responsible Fisheries Management' Certification is traceable to the FAO's own definition of Responsible Fisheries Management as follows:

- The scope of certification principally relates to management provisions and performance for the long-term utilization of fishery stock resources and the wider conservation of the marine environment.
- The Conformance Criteria are formed from a translation of the FAO Code of Conduct for Responsible Fisheries as translated by the Caddy checklist, and the FAO Eco-labelling Guidelines.
- The document establishes auditable criteria for assessing fisheries conformance to the Responsible Fisheries Management Program administered and managed by the Certification Body, accredited against the requirements of ISO Guide 65/ISO 17065.

The FAO CCRF and Guidelines for Eco-labelling clauses used are referenced within the document for each auditable criterion and relate to the following Articles:

- Article 7, Fisheries Management;
- Article 8, Fishing Operations;
- Article 9, Aquaculture (only the part specific to fishery enhancement activities);
- Article 10, Integration of Fisheries into Coastal Area Management;
- Article 12, Fisheries Research;
- Guidelines for Eco-labelling: Min. substantive criteria.

Overall, the "Remit" of the Conformance Criteria focuses on:

Responsible Fisheries Management, including enhancement practices (but excluding full cycle aquaculture), up to the point of landing, with the main objective being the biological sustainability of the "stock under consideration", with consideration for conservation, biodiversity and ecosystem integrity; and due regard to social responsibility and the economic viability of the fishery.

It is also noted that section F of this Conformance Criteria (Serious Impacts of the Fishery on the Ecosystem) should be consulted with the guidance provided in the FAO Ecosystem Approach to Fisheries, Technical Guidelines documents[2].

FAO CCRF Articles 1, 2 and 3 are not referenced directly within the Conformance Criteria as they provide background to the nature, scope, objectives and relationship with other instruments which are described within these opening paragraphs.

Article 4 is not formally included as it describes the implementation of the FAO CCRF itself which draws reference to the promotion of voluntary schemes such as this one. Article 5 provides special requirements for developing countries (which could add a layer of complexity in deciding whether scorings satisfy the criteria for responsible fishing), which currently, has been left outside of the scope of the audit criteria but will be maintained under review.

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[2] FAO. (2003). The ecosystem approach to fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2. Rome, FAO. 112 p.

FAO. (2008). Fisheries management. 2. The ecosystem approach to fisheries. 2.1 Best practices in ecosystem modelling for informing an ecosystem approach to fisheries. FAO Fisheries Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2, Add. 1. Rome, FAO. 78 p.

FAO. (2009). Fisheries management. 2. The ecosystem approach to fisheries. 2.2 Human dimensions of the ecosystem approach to fisheries. FAO Technical Guidelines for Responsible Fisheries. No. 4, Suppl. 2, Add. 2. Rome, FAO. 88 p.

Article 6 contains General Principles, which although important to the overall definition and scope of the certification are also fully translated within the context of further Articles which form the basis of the Conformance Criteria. In this context, a detailed table of what FAO CCRF articles/sub-articles has not been included in the Conformance Criteria, along with their respective rationales is presented in Appendix 2.

Other references: The FAO CCRF and FAO Guidelines for the Eco-labelling of Fisheries make reference to several other international agreements and references important to the development of responsible fishery practices. These are cited to confirm that the Responsible Fisheries Management Certification Program is consistent with these agreements/ regulations / guidelines:

- World Trade Organization, Technical Barrier to Trade Agreement, Annex 3 – Code of Good Practice for the Preparation, Adoption and Application of Standards
- ISO Guide 59:1994 Code of Good Practice for Standardization
- ISO 17067:2013 Conformity assessment — Fundamentals of product certification and guidelines for product certification schemes
- ISEAL Code of Good Practice for Setting Social and Environmental Standards v5.0, 2010
- ISEAL Code of Good Practice for Assuring Conformance with Social and Environmental Standards, 2012
- ISEAL Code of Good Practice for Assessing the Impacts of Social and Environmental Standards, 2013
- FAO Guidelines on Bycatch Management and Reduction of Discards (2011)
- FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Inland Capture Fisheries (2011)
- FAO Guidelines on the Management of Deep Sea Fisheries on the High Seas (2008)
- FAO Voluntary Guidelines for Securing Sustainable Small Scale Fisheries in the Context of Food Security and Poverty Eradication (2014)
- ISO 17065 the standard for Certification Bodies operating certification
- The GSSI Benchmark Tool for Seafood Certification Programs (2015)
- 1982 United Nations Convention on the Law of the Sea.
- Implementation of the International Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing.
- Technical Guidelines for Responsible Fisheries No. 9.
- EC Regulation 1005/2008 establishing a Community system to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated (IUU) Fishing.
- ISO 14024:1999 Environmental labels and declarations - Type 1 environmental labelling - Principles and Procedures.
- ISO/IEC Guide 59:1994 Code of Good Practice for Standardization, and the
- WTO Technical Barriers to Trade (TBT) Agreement Annex 3 Code of Good Practice for the Preparation, Adoption and Application of Standards, for the Technical Barriers to Trade (TBT) Second Triennial Review Annex 4, Principles for the Development of International Standards, Guides.

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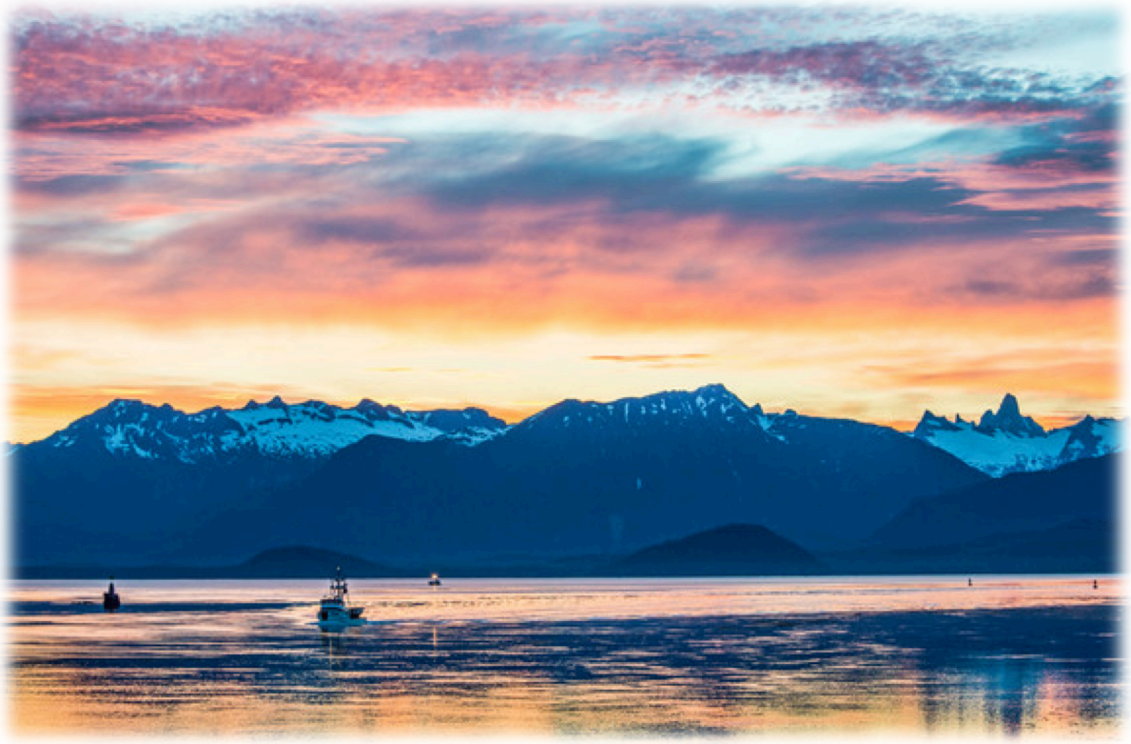
The RFM standard is applicable to governance and management systems for small scale and/or data limited fisheries, where appropriate, provided their performance can be objectively verified, with due consideration to the availability of data and the fact that management systems can differ substantially for different types and scales of fisheries.



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Structure of the Alaska RFM Conformance Criteria

The Alaska RFM Conformance Criteria are divided into the 6 key components of Responsible Fisheries Management (A-F).

A. The Fisheries Management System

B. Science and Stock Assessment Activities

C. The Precautionary Approach

D. Management Measures

E. Implementation, Monitoring and Control

F. Serious Impacts of the Fishery on the Ecosystem

These sections are in turn divided in 13 fundamental clauses, each made up of its supporting criteria. These are presented below.

CONFORMANCE CRITERIA – FUNDAMENTAL CLAUSES

A. The Fisheries Management System

1. There shall be a structured and legally mandated management system based upon and respecting international, national and local fishery laws, for the responsible utilization of the target stock and conservation of the marine environment.

2. Management organizations shall participate in coastal area management institutional frameworks, decision-making processes and activities related to the fishery and its users, in support of sustainable and integrated resource use, and conflict avoidance.

3. Management objectives shall be implemented through management rules and actions formulated in a plan or other framework.

B. Science and Stock Assessment Activities

4. There shall be effective fishery data (dependent and independent) collection and analysis system for stock management purposes.

5. There shall be regular stock assessment activities appropriate for the fishery resource, its range, the species biology and the ecosystem and undertaken in accordance with acknowledged scientific standards to support its optimum utilization.

C. The Precautionary Approach

6. The current state of the stock shall be defined in relation to reference points or relevant proxies or verifiable substitutes allowing for effective management objectives and targets. Remedial actions shall be available and taken where reference points or other suitable proxies are approached or exceeded.

7. Management actions and measures for the conservation of stock and the aquatic environment shall be based on the precautionary approach. Where information is deficient, a suitable method using risk assessment shall be adopted to take into account uncertainty.

D. Management Measures

8. Management shall adopt and implement effective management measures designed to maintain stocks at levels capable of producing maximum sustainable yields, including harvest control rules and technical measures applicable to sustainable utilization of the fishery and be based upon verifiable evidence and advice from available scientific and objective, traditional sources.

9. Fishing operations shall be carried out by fishers with appropriate standards of competence in accordance with international standards and guidelines and regulations.

E. Implementation, Monitoring and Control

10. An effective legal and administrative framework shall be established and compliance ensured, through effective mechanisms for monitoring, surveillance, control and enforcement for all fishing activities within the jurisdiction.

11. There shall be a framework for sanctions for violations and illegal activities of adequate severity to support compliance and discourage violations.

F. Serious Impacts of the Fishery on the Ecosystem

12. Considerations of fishery interactions and effects on the ecosystem shall be based on best available science, local knowledge where it can be objectively verified and using a risk based management approach for determining most probable adverse impacts. Adverse impacts on the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

13. Where fisheries enhancement is utilized, environmental assessment and monitoring shall consider genetic diversity and ecosystem integrity.

FAO DEFINITION OF RESPONSIBLE FISHERIES MANAGEMENT

Responsible fisheries management shall ensure the effective conservation, responsible management and development of living aquatic resources with respect for conservation, biodiversity and ecosystems integrity.

The "Remit" of the RFM Conformance Criteria focuses on:

Responsible Fisheries Management, including enhancement practices (but excluding full cycle aquaculture), up to the point of landing, with the main objective being the biological sustainability of the "stock under consideration", with consideration for conservation, biodiversity and ecosystem integrity; and due regard to social responsibility and the economic viability of the fishery.

In this regard, the stock is maintained at a level which promotes the objective of optimal utilization and maintains its availability for present and future generations, taking into account that longer term changes in productivity can occur due to natural variability and/or impacts other than fishing. In the event that biomass drops well below precautionary target levels, management measures shall allow for restoration within reasonable timeframes of the stocks to such levels (Clause 30 FAO Eco-labelling Guidelines).

RFM FUNDAMENTAL CLAUSES AND SUPPORTING CLAUSES

A. The Fisheries Management System

1. There shall be a structured and legally mandated management system based upon and respecting International, National and local fishery laws, for the responsible utilization of the stock under consideration and conservation of the marine environment.

FAO CCRF (1995) 7.1.3/7.1.4/7.1.9/7.3.1/7.3.2/7.3.4/7.6.8/7.7.1/10.3.1
FAO Eco (2009) 28
FAO Eco (2011) 35, 37.3

1.1 There shall be an effective legal and administrative framework established at local and national level appropriate for fishery resource conservation and management. The management system and the fishery operate in compliance with the requirements of local, national and international laws and regulations, including the requirements of any regional fisheries management agreement.

FAO CCRF (1995) 7.7.1
FAO Eco (2009) 28
FAO Eco (2011) 35

1.2 Management measures shall consider 1) the whole stock biological unit (i.e. structure and composition contributing to its resilience) over its entire area of distribution 2) the area through which the species migrates during its life cycle and 3) other biological characteristics of the stock.

FAO ECO (2009) 30.3
FAO ECO (2011) 37.3

1.2.1 Previously agreed management measures established and applied in the same region shall be taken into account by management.

FAO CCRF (1995) 7.3.1

1.3 Where trans-boundary, shared, straddling or highly migratory fish stocks and high seas fish stocks are exploited by two or more States (neighboring or not), the applicant management organizations concerned shall cooperate and take part in formal fishery commission or arrangements that have been appointed to ensure effective conservation and management of the stock/s in question and its environment.

1.3.1 Conservation and management measures established for such stock within the jurisdiction of the relevant States for shared, straddling, high seas and highly migratory stocks, shall be compatible. Compatibility shall be achieved in a manner consistent with the rights, competences and interests of the States concerned.

FAO CCRF (1995) 7.1.3, 7.1.4, 7.1.5, 7.3.2, 10.3

1.4 A State not member/participant of a sub-regional or regional fisheries management organization shall cooperate, in accordance with relevant international agreements and law, in the conservation and management of the relevant fisheries resources by giving effect to any relevant measures adopted by such organization/arrangement.

FAO CCRF (1995) 7.1.5

1.4.1 States seeking to take any action through a non-fishery organization which may affect the conservation and management measures taken by a competent sub-regional or regional fisheries management organization or arrangement shall consult with the latter, in advance to the extent practicable, and take its views into account.

FAO CCRF (1995) 7.3.5

1.5 The Applicant fishery's management system shall actively foster international cooperation and coordination on fishery matters with regard to:

- Information gathering and exchange
- Fisheries research
- Fisheries management
- Fisheries development

FAO CCRF (1995) ***7.3.4***

1.6 States and sub-regional or regional fisheries management organizations and arrangements, as appropriate, shall agree on the means by which the activities of such organizations and arrangements will be financed, bearing in mind, *inter alia*, the relative benefits derived from the fishery and the differing capacities of countries to provide financial and other contributions. Where appropriate, and when possible, such organizations and arrangements shall aim to recover the costs of fisheries conservation, management and research.

FAO CCRF (1995) 7.7.4

1.6.1 Without prejudice to relevant international agreements, States shall encourage banks and financial institutions not to require, as a condition of a loan or mortgage, fishing vessels or fishing support vessels to be flagged in a jurisdiction other than that of the State of beneficial ownership where such a requirement would have the effect of increasing the likelihood of non-compliance with international conservation and management measures.

FAO CCRF (1995) 7.8.1

1.7 Procedures shall be in place to keep the efficacy of current conservation and management measures and their possible interactions under continuous review to revise or abolish them in the light of new information.

- Review procedures shall be established within the management system.
- A mechanism for revision of management measures shall exist**.**

FAO CCRF (1995) 7.6.8

1.8 The management arrangements and decision making processes for the fishery shall be organized in a transparent manner.

- Management arrangements
- Decision-making

FAO CCRF (1995) 7.1.9

1.9 Management organizations not party to the Agreement to promote compliance with international conservation and management measures by vessels fishing in the high seas shall be encouraged to accept the Agreement and to adopt laws and regulations consistent with the provisions of the Agreement.

FAO CCRF (1995) 8.2.6

2. Management organizations shall participate in coastal area management institutional frameworks, decision-making processes and activities related to the fishery and its users, in support of sustainable and integrated resource use, and conflict avoidance.

FAO CCRF (1995) 10.1.1/10.1.2/10.1.4/10.2.1/10.2.2/10.2.4

2.1 An appropriate policy, legal and institutional framework shall be adopted in order to achieve sustainable and integrated use of living marine resources, taking into account 1) the fragility of coastal ecosystems and finite nature of their natural resources; 2) allowing for determination of the possible uses of coastal resources and govern access to them, 3) taking into account the rights and needs of coastal communities and their customary practices to the extent compatible with sustainable development. In setting policies for the management of coastal areas, 4) States shall take due account of the risks and uncertainties involved.

FAO CCRF (1995) 10.1.1, 10.1.3, 10.2.3

2.1.1 States shall establish mechanisms for cooperation and coordination among national authorities involved in planning, development, conservation and management of coastal areas.

FAO CCRF (1995) 10.4.1

2.1.2 States shall ensure that the authority or authorities representing the fisheries sector in the coastal management process have the appropriate technical capacities and financial resources.

FAO CCRF (1995) 10.4.2

2.2 Representatives of the fisheries sector and fishing communities shall be consulted in the decision making processes involved in other activities related to coastal area management planning and development**.** The public shall also be kept aware on the need for the protection and management of coastal resources and the participation in the management process by those affected.

FAO CCRF (1995) 10.1.2, 10.2.1

2.3 Fisheries practices that avoid conflict among fishers and other users of the coastal area (e.g. aquaculture, tourism, energy) shall be adopted and fishing shall be regulated in such a way as to avoid risk of conflict among fishers using different vessels, gear and fishing methods. Procedures and mechanisms shall be established at the appropriate administrative level to settle conflicts which arise within the fisheries sector and between fisheries resource users and other coastal users.

FAO CCRF (1995) 7.6.5, 10.1.4, 10.15

2.4 States and sub-regional or regional fisheries management organizations and arrangements shall give due publicity to conservation and management measures and ensure that laws, regulations and other legal rules governing their implementation are effectively disseminated. The bases and purposes of such measures shall be explained to users of the resource in order to facilitate their application and thus gain increased support in the implementation of such measures.

FAO CCRF (1995) 7.1.10

2.5 The economic, social and cultural value of coastal resources shall be assessed in order to assist decision-making on their allocation and use.

FAO CCRF (1995) 10.2.2

2.6 States shall cooperate at the sub-regional level in order to improve coastal area management, and in accordance with capacities, measures shall be taken to establish or promote systems for research and monitoring of the coastal environment, in order to improve coastal area management, and promote multidisciplinary research in support and improvement of coastal area management using physical, chemical, biological, economic, social, legal and institutional aspects.

FAO CCRF (1995) 10.2.4, 10.2.5, 10.3.3

2.7 States shall, within the framework of coastal area management plan, establish management systems for artificial reefs and fish aggregation devices. Such management systems shall require approval for the construction and deployment of such reefs and devices and shall take into account the interests of fishers, including artisanal and subsistence fishers.

FAO CCRF (1995) 8.11.3

2.8 In the case of activities that may have an adverse transboundary environmental effect on coastal areas, States shall:

a) Provide timely information and if possible, prior notification to potentially affected States;
b) Consult with those States as early as possible.

FAO CCRF (1995) 10.3.2

3. Management objectives shall be implemented through management rules and actions formulated in a plan or other framework.

FAO CCRF (1995) 7.3.3/7.2.2
FAO ECO (2009) 28.1, 28.2
FAO ECO (2011) 35.1, 35.2

3.1 Long term management objectives shall be translated into a plan or other management document (taking into account uncertainty and imprecision) and be subscribed to by all interested parties.

FAO CCRF (1995) 7.3.3
FAO ECO (2009) 28.1
FAO ECO (2011) 35.1

3.2 Management measures shall provide *inter alia* that:

3.2.1 Excess fishing capacity shall be avoided and exploitation of the stocks remains economically viable.

3.2.2 The economic conditions under which fishing industries operate shall promote responsible fisheries.

3.2.3 The interests of fishers, including those engaged in subsistence, small-scale and artisanal fisheries shall be taken into account.

3.2.4 Biodiversity of aquatic habitats and ecosystems shall be conserved and endangered species shall be protected. Where relevant, there shall be pertinent objectives, and as necessary, management measures.

FAO CCRF (1995) 7.2.2
FAO ECO (2009) 28.2
FAO ECO (2011) 35.2

3.2.5 There shall be management objectives seeking to avoid, minimize or mitigate impacts of the unit of certification on essential habitats for the stock under consideration and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification.

FAO ECO (2011) 41.3

3.2.6 There shall be management objectives that seek to minimize adverse impacts of the unit of certification, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible.

FAO ECO (2011) 36.9

B. Science and Stock Assessment Activities

4. There shall be effective fishery data (dependent and independent) collection and analysis systems for stock management purposes.

FAO CCRF (1995) 7.1.9/7.4.4/7.4.5/7.4.6/8.4.3/12.4
FAO ECO (2009) 29.1-29.3
FAO Eco (2011) 36.1, 36.3-36.5, 37.4

4.1 All fishery removals and mortality of the target stock(s) shall be considered by management. Specifically, reliable and accurate data required for assessing the status of fishery/ies and ecosystems - including data on retained catch, bycatch, discards and waste shall be collected. Data can include relevant traditional, fisher or community knowledge, provided their validity can objectively be verified. These data shall be collected, at an appropriate time and level of aggregation, by relevant management organizations connected with the fishery, and provided to relevant States and sub-regional, regional and global fisheries organizations.

FAO CCRF (1995) 7.3.1, 7.4.6, 7.4.7*, 12.4*
FAO Eco (2009) 29.1-29.3
FAO Eco (2011) 36.1, 36.3, 36.4

4.1.1 Timely, complete and reliable statistics shall be compiled on catch and fishing effort and maintained in accordance with applicable international standards and practices and in sufficient detail to allow sound statistical analysis for stock assessment. Such data shall be updated regularly and verified through an appropriate system. The use of research results as a basis for the setting of management objectives, reference points and performance criteria, as well as for ensuring adequate linkage, between applied research and fisheries management (e.g. adoption of scientific advice) shall be promoted. Results of analysis shall be distributed accordingly as a contribution to fisheries conservation, management and development.

FAO CCRF (1995) 7.4.4, 12.3, 12.13
FAO Eco (2009) 29.1, 29.3
FAO Eco (2011) 36.3, 36.5

4.1.2 In the absence of specific information on the “stock under consideration”, generic evidence based on similar stocks can be used for fisheries with low risk to that “stock under consideration”. However, the greater the risk of overfishing, the more specific evidence is necessary to ascertain the sustainability of intensive fisheries.

FAO Eco (2009) 30.4
FAO ECO (2011) 37.4

4.2 An observer scheme designed to collect accurate data for research and support compliance with applicable fishery management measures shall be established.

FAO CCRF (1995) 8.4.3
FAO Eco (2009) 29.2bis

4.3 Sub-regional or regional fisheries management organizations or arrangements shall compile data and make them available, in a manner consistent with any applicable confidentiality requirements, in a timely manner and in an agreed format to all members of these organizations and other interested parties in accordance with agreed procedures.

FAO CCRF (1995) 7.4.6/7.4.7

4.4 States shall stimulate the research required to support national policies related to fish as food.

FAO CCRF (1995) 12.7

4.5 States shall ensure that a sufficient knowledge of the economic, social, marketing and institutional aspects of fisheries is collected through data gathering, analysis and research and that comparable data are generated for ongoing monitoring, analysis and policy formulation.

FAO CCRF (1995) 7.4.5, 12.9

4.6 States shall investigate and document traditional fisheries knowledge and technologies, in particular those applied to small scale fisheries, in order to assess their application to sustainable fisheries conservation, management and development.

FAO CCRF (1995) 12.12

4.7 States conducting scientific research activities in waters under the jurisdiction of another State shall ensure that their vessels comply with the laws and regulations of that State and international law.

FAO CCRF (1995) 12.14

4.8 States shall promote the adoption of uniform guidelines governing fisheries research conducted on the high seas and shall, where appropriate, support the establishment of mechanisms, including, *inter alia*, the adoption of uniform guidelines, to facilitate research at the sub-regional or regional level and shall encourage the sharing of such research results with other regions.

FAO CCRF (1995) 12.15, 12.16

4.9 States and relevant international organizations shall promote and enhance the research capacities of developing countries, *inter alia*, in the areas of data collection and analysis, information, science and technology, human resource development and provision of research facilities, in order for them to participate effectively in the conservation, management and sustainable use of living aquatic resources.

FAO CCRF (1995) 12.18

4.10 Competent national organizations shall, where appropriate, render technical and financial support to States upon request and when engaged in research investigations aimed at evaluating stocks which have been previously unfished or very lightly fished.

FAO CCRF (1995) 12.19

4.11 Relevant technical and financial international organizations shall, upon request, support States in their research efforts, devoting special attention to developing countries, in particular the least developed among them and small island developing countries.

FAO CCRF (1995) 12.20

5. There shall be regular stock assessment activities appropriate for the fishery, its range, the species biology and the ecosystem, undertaken in accordance with acknowledged scientific standards to support its optimum utilization.

FAO CCRF (1995) 7.2.1/12.2/12.3/12.5/12.6/12.7/12.17
FAO Eco (2009) 29-29.3, 31
FAO Eco (2011) 42

5.1 An appropriate institutional framework shall be established to determine the applied research which is required and its proper use (i.e. assess/evaluate stock assessment model practices and/or model) for fishery management purposes.

FAO CCRF (1995) 12.2/12.6

5.1.1 With the use of less elaborate methods for stock assessment frequently used for small scale or low value capture fisheries resulting in greater uncertainty about the state of the stock under consideration, more precautionary approaches to managing fisheries on such resources shall be required, including where appropriate, lower level of utilization of resources. A record of good management performance may be considered as supporting evidence of the adequacy and the management system.

FAO Eco (2011) 42

5.1.2 States shall ensure that appropriate research is conducted into all aspects of fisheries including biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science. Results of analyses shall be distributed in a timely and readily understandable fashion in order that the best scientific evidence is made available as a contribution to fisheries conservation, management and development. States shall also ensure the availability of research facilities and provide appropriate training, staffing and institution building to conduct the research, taking into account the special needs of developing countries.

*FAO CCRF (1995) 12.1/*7.4.2

5.2 There shall be established research capacity necessary to assess and monitor 1) the effects of climate or environment change on fish stocks and aquatic ecosystems, 2) the state of the stock under State jurisdiction, and for 3) the impacts of ecosystem changes resulting from fishing pressure, pollution or habitat alteration.

FAO CCRF (1995) 12.5
FAO Eco (2009) 31

5.3 Management organizations shall cooperate with relevant international organizations to encourage research in order to ensure optimum utilization of fishery resources.

FAO CCRF (1995) 12.7

5.4 The fishery management organizations shall directly, or in conjunction with other States, develop collaborative technical and research programs to improve understanding of the biology, environment and status of trans-boundary aquatic stocks.

FAO CCRF (1995) 12.7, 12.17

5.5 Data generated by research shall be analysed and the results of such analyses published in a way that ensures confidentiality is respected, where appropriate.

FAO CCRF (1995) 12.3

C. The Precautionary Approach

6. The current state of the stock shall be defined in relation to reference points or relevant proxies or verifiable substitutes allowing for effective management objectives and targets. Remedial actions shall be available and taken where reference point or other suitable proxies are approached or exceeded.

FAO CCRF (1995) 7.5.3, 7.6.1
FAO Eco (2009) 29.2-29.2bis, 29.6, 30-30.2
FAO Eco (2011) 36.2, 36.3, 37, 37.1, 37.2

6.1 States shall establish safe target reference point(s) for management.

6.2 States shall establish safe limit reference point(s) for exploitation (i.e. consistent with avoiding recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible). When a limit reference point is approached, measures shall be taken to ensure that it will not be exceeded. For instance, if fishing mortality (or its proxy) is above the associated limit reference point, actions should be taken to decrease the fishing mortality (or its proxy) below that limit reference point.

6.3 Data and assessment procedures shall be installed measuring the position of the fishery in relation to the reference points. Accordingly, the stock under consideration shall not be overfished (i.e. above limit reference point or proxy) and the level of fishing permitted shall be commensurate with the current state of the fishery resources, maintaining its future availability, taking into account that long term changes in

productivity can occur due to natural variability and/or impacts other than fishing.

FAO CCRF (1995) 7.5.3, 7.6.1
FAO Eco (2009) 29.2-29.2bis, 29.6, 30-30.2
FAO Eco (2011) 36.2, 36.3, 37, 37.1, 37.2

6.4 Management actions shall be agreed to in the eventuality that data sources and analyses indicate that these reference points have been exceeded.

FAO CCRF (1995) 7.5.3
FAO Eco (2009) 29.6, 30.2
FAO Eco (2011) 36.3

7. Management actions and measures for the conservation of stock and the aquatic environment shall be based on the precautionary approach. Where information is deficient a suitable method using risk assessment shall be adopted to take into account uncertainty.

FAO CCRF (1995) 7.5.1/7.5.4/7.5.5/12.3
FAO ECO (2009) 29.6/32
FAO Eco (2011) 36.7

7.1 The precautionary approach shall be applied widely to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. This should take due account of stock enhancement procedures, where appropriate. Absence of scientific information shall not be used as a reason for postponing or failing to take conservation and management measures. Relevant uncertainties shall be taken into account through a suitable method of risk assessment, including those associated with the use of introduced or translocated species[3].

FAO Eco (2009) 29.6
FAO Eco (2011) 36.7

7.1.1 In implementing the precautionary approach, States shall take into account, *inter alia*, of uncertainties relating to the size and productivity of the stocks, reference points, stock condition in relation to such reference points, levels and distribution of fishing mortality and the impact of fishing activities, including discards, on non-target and associated or dependent species as well as environmental and socio-economic conditions.

FAO CCRF (1995) 7.5.2

7.1.2 In the absence of adequate scientific information, appropriate research shall be initiated in a timely fashion.

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[3] FAO Technical Guidelines for Responsible Fisheries No.2 – Precautionary approach to capture fisheries and species introductions.

FAO CCRF (1995) 7.5.1, 12.3
FAO Eco (2009) 29.6/32

7.2 In the case of new or exploratory fisheries, States shall adopt as soon as possible cautious conservation and management measures, including, *inter alia*, catch limits and effort limits. Such measures should remain in force until there are sufficient data to allow assessment of the impact of the fisheries on the long-term sustainability of the stocks, whereupon conservation and management measures based on that assessment should be implemented. The latter measures should, if appropriate, allow for the gradual development of the fisheries.

FAO CCRF (1995) 7.5.4

7.2.3 Contingency plans shall be agreed in advance for the appropriate management response to serious threats to the resource as a result of overfishing or adverse environmental changes or other phenomena adversely affecting the fishery resource. Such measures may be temporary and shall be based on best scientific evidence available.

FAO CCRF (1995) 7.5.5

D. Management Measures

8. Management shall adopt and implement effective management measures designed to maintain stocks at levels capable of producing maximum sustainable yields, including harvest control rules and technical measures applicable to sustainable utilization of the fishery and be based upon verifiable evidence and advice from available scientific and objective, traditional sources.

FAO CCRF (1995) 7.1.1/7.1.2/7.1.6/7.4.1/7.6.1/7.6.9/12.3
FAO Eco (2009) *29.2/29.4/30*
FAO Eco (2011) 36.2, 36.3

8.1 Conservation and management measures shall be designed to ensure the long-term sustainability of fishery resources at levels which promote the objective of optimum utilization, and be based on verifiable and objective scientific and/or traditional, fisher or community sources.

FAO CCRF (1995) 7.1.1 Others 7.4.1/7.6.7
FAO Eco (2009) 29.2/29.4
FAO Eco (2011)36.2

8.1.1 Management targets are consistent with achieving maximum sustainable yield (MSY) (or a suitable proxy) on average, or a lesser fishing mortality if that is optimal in the circumstances of the fishery (e.g. multispecies fisheries) or to avoid severe adverse impacts on dependant predators.

FAO Eco (2009) 29.2
FAO Eco (2011) 36.3

8.1.2 In the evaluation of alternative conservation and management measures, their cost-effectiveness and social impact shall be considered.

FAO CCRF (1995) 7.6.7

8.1.3 Studies shall be promoted which provide an understanding of the costs, benefits and effects of alternative management options designed to rationalize fishing, in particular, options relating to excess fishing capacity and excessive levels of fishing effort.

FAO CCRF (1995) 7.4.3

8.2 States shall prohibit dynamiting, poisoning and other comparable destructive fishing practices.

FAO CCRF (1995) 8.4.2

8.3 States shall seek to identify domestic parties having a legitimate interest in the use and management of the fishery. When deciding on use, conservation and management of the resource, due recognition shall be given, where relevant, in accordance with national laws and regulations, to the traditional practices, needs and interests of indigenous people and local fishing communities which are highly dependent on these resources for their livelihood. Arrangements shall be made to consult all the interested parties and gain their collaboration in achieving responsible fisheries.

FAO CCRF (1995) 7.1.2, 7.1.6, 7.6.6

8.4 Mechanisms shall be established where excess capacity exists, to reduce capacity to levels commensurate with sustainable use of the resource. Fleet capacity operating in the fishery shall be measured and monitored. States shall maintain, in accordance with recognized international standards and practices, statistical data, updated at regular intervals, on all fishing operations and a record of all authorizations to fish allowed by them.

FAO CCRF (1995) 7.1.8, 7.6.3, 8.1.2, 8.1.3

8.5 Technical measures shall be taken into account, where appropriate, in relation to:

- fish size
- mesh size or gear
- closed seasons
- closed areas
- areas reserved for particular (e.g. artisanal) fisheries
- protection of juveniles or spawners

8.6 Fishing gear shall be marked in accordance with national legislation in order that the owner of the gear can be identified. Gear marking requirements shall take into account uniform and internationally recognizable gear marking systems.

FAO CCRF (1995) 8.2.4

8.7 Measures shall be introduced to identify and protect depleted resources and those resources threatened with depletion, and to facilitate the sustained recovery/restoration of such stocks. Also, efforts shall be made to ensure that resources and habitats critical to the well-being of such resources which have been adversely affected by fishing or other human activities are restored.

FAO CCRF (1995) 7.6.10, 7.2.2e
FAO Eco (2009) 30

8.8 States and relevant groups from the fishing industry shall measure performance and encourage the development, implementation and use of selective, environmentally safe and cost effective gear, technologies and techniques that sufficiently selective as to minimize catch, waste and discards of non-target species - both fish and non-fish species and impacts on associated or dependent species. The use of fishing gear and practices that lead to the discarding of catch shall be discouraged and the use of fishing gear and practices that increase survival rates of escaping fish shall be promoted. Inconsistent methods, practices and gears shall be phased out accordingly.

FAO CCRF (1995) 7.2.2*, 7.6.4, 7.6.9, 8.4.5, 8.5.2*

8.9 Technologies, materials and operational methods or measures including, to the extent practicable, the development and use of selective, environmentally safe and cost effective fishing gear and techniques shall be applied to minimize the loss of fishing gear, the ghost fishing effects of lost or abandoned fishing gear, pollution and waste.

FAO CCRF (1995) 7.2.2, 8.4.6, 8.4.1

8.10 The intent of fishing selectivity and fishing impacts related regulations shall not be circumvented by technical devices and information on new developments and requirements shall be made available to all fishers.

FAO CCRF (1995) 8.5.1

8.11 Assessment and scientific evaluation shall be carried out on the implications of habitat disturbance impact on the fisheries and ecosystems prior to the introduction on a commercial scale of new fishing gear, methods and operations. Accordingly, the effects of such introductions shall be monitored.

FAO CCRF (1995) 8.4.7, 12.11

8.12 International cooperation shall be encouraged with respect to research programs for fishing gear selectivity and fishing methods and strategies, dissemination of the results of such research programs and the transfer of technology.

FAO CCRF (1995) 8.5.4

8.13 States and relevant institutions involved in the fishery shall collaborate in developing standard methodologies for research into fishing gear selectivity, fishing methods and strategies, and on the behaviour of target and non-target species in relation to such fishing gear as an aid for management decisions and with a view to minimizing non utilized catches.

FAO CCRF (1995) 8.5.3/12.10

8.14 Policies shall be developed for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. States shall ensure that, when selecting the materials to be used in the creation of artificial reefs as well as when selecting the geographical location of such artificial reefs, the provisions of relevant international conventions concerning the environment and the safety of navigation are observed.

FAO CCRF (1995) 8.11.1, 8.11.2

9. Fishing operations shall be carried out by fishers with appropriate standards of competence in accordance with international standards and guidelines and regulations.

FAO CCRF (1995) 8.1.7/8.1.10/8.2.4/8.4.5

9.1 States shall enhance through education and training programs the education and skills of fishers and, where appropriate, their professional qualifications. Such programs shall take into account agreed international standards and guidelines.

FAO CCRF (1995) 8.1.7/8.4.1

9.2 States, with the assistance of relevant international organizations, shall endeavor to ensure through education and training that all those engaged in fishing operations be given information on the most important provisions of the FAO CCRF (1995), as well as provisions of relevant international conventions and applicable environmental and other standards that are essential to ensure responsible fishing operations.

FAO CCRF (1995) 8.1.10

9.3 States shall, as appropriate, maintain records of fishers which shall, whenever possible, contain information on their service and qualifications, including certificates of competency, in accordance with their national laws.

FAO CCRF (1995) 8.1.8

E. Implementation, Monitoring and Control

10. An effective legal and administrative framework shall be established and compliance ensured through effective mechanisms for monitoring, surveillance, control and enforcement for all fishing activities within the jurisdiction.

FAO CCRF (1995) 7.1.7/7.7.3/7.6.2/8.1.1/8.1.4/8.2.1

FAO ECO (2009) 29.5

FAO Eco (2011) 36.6

10.1. Effective mechanisms shall be established for fisheries monitoring, surveillance, control and enforcement measures including, where appropriate, observer programs, inspection schemes and vessel monitoring systems, to ensure compliance with the conservation and management measures for the fishery in question. This could include relevant traditional, fisher or community approaches, provided their performance could be objectively verified.

FAO CCRF (1995) 7.1.7 Others 7.7.3/8.1.1
FAO Eco (2009) 29.5
FAO Eco (2011) 36.6

10.2 Fishing vessels shall not be allowed to operate on the resource in question without specific authorization.

FAO CCRF (1995) 7.6.2 Other 8.1.2, 8.2.1

10.3 States involved in the fishery shall, in accordance with international law, within the framework of sub-regional or regional fisheries management organizations or arrangements, cooperate to establish systems for monitoring, control, surveillance and enforcement of applicable measures with respect to fishing operations and related activities in waters outside their national jurisdiction.

FAO CCRF (1995) 8.1.4

10.3.1 States which are members of or participants in sub-regional or regional fisheries management organizations or arrangements shall implement internationally agreed measures adopted in the framework of such organizations or arrangements and consistent with international law to deter the activities of vessels flying the flag of non-members or non-participants which engage in activities which undermine the effectiveness of conservation and management measures established by such organizations or arrangements. In that respect, Port States shall also proceed, as necessary, to assist other States in achieving the objectives of the FAO CCRF (1995), and should make known to other States details of regulations and measures they have established for this purpose without discrimination for any vessel of any other State.

FAO CCRF (1995) 7.7.5/8.3.1

10.4 Flag States shall ensure that no fishing vessels entitled to fly their flag fish on the high seas or in waters under the jurisdiction of other States unless such vessels have been issued with a Certificate of Registry and have been authorized to fish by the competent authorities. Such vessels shall carry on board the Certificate of Registry and their authorization to fish.

FAO CCRF (1995) 8.2.2

10.4.1 Fishing vessels authorized to fish on the high seas or in waters under the jurisdiction of a State other than the flag State shall be marked in accordance with uniform and internationally recognizable vessel marking systems such as the FAO Standard Specifications and Guidelines for Marking and Identification of Fishing Vessels.

FAO CCRF (1995) 8.2.3

11. There shall be a framework for sanctions for violations and illegal activities of adequate severity to support compliance and discourage violations.

FAO CCRF (1995) 7.7.2/8.2.7

11.1 National laws of adequate severity shall be in place that provide for effective sanctions.

11.2 Sanctions applicable in respect of violations and illegal activities shall be adequate in severity to be effective in securing compliance and discouraging violations wherever they occur. Sanctions shall also be in force that affects authorization to fish and/or to serve as masters or officers of a fishing vessel, in the event of non-compliance with conservation and management measures.

FAO CCRF (1995) 7.7.2/8.1.9/8.2.7

11.3 Flag States shall take enforcement measures in respect of fishing vessels entitled to fly their flag which have been found by them to have contravened applicable conservation and management measures, including, where appropriate, making the contravention of such measures an offence under national legislation.

FAO CCRF (1995) 8.2.7

F. Serious Impacts of the Fishery on the Ecosystem

12. Considerations of fishery interactions and effects on the ecosystem shall be based on best available science, local knowledge where it can be objectively verified and using a risk based management approach for determining most probable adverse impacts. Adverse impacts of the fishery on the ecosystem shall be appropriately assessed and effectively addressed.

FAO CCRF (1995) 7.2.3/8.4.7/8.4.8/12.11
FAO ECO (2009) 29.3/31
FAO Eco (2011) 41-41.4

12.1 States shall assess 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 assess the relationship among the populations in the ecosystem.

FAO CCRF (1995) 7.2.3

12.2 Adverse environmental impacts on the resources from human activities shall be assessed and, where appropriate, corrected.

FAO CCRF (1995) 7.2.2

12.3 The most probable adverse impacts of the fishery on the ecosystem/environment shall be considered, taking into account available scientific information, and local knowledge. In the absence of specific information on the ecosystem impacts of fishing for the unit of certification, generic evidence based on similar fishery situations can be used for fisheries with low risk of severe adverse impact. However, the greater the risk the more specific evidence shall be necessary to ascertain the adequacy of mitigation measures.

FAO Eco (2009) 30.4, 31, 31.4
FAO Eco (2011) 41.4

12.4 Impacts that are likely to have serious consequences shall be addressed. This may take the form of an immediate management response or a further analysis of the identified risk. In this context, full recognition should be given to the special circumstances and requirements in developing countries and countries in transition, including financial and technical assistance, technology transfer, training and scientific cooperation.

FAO Eco (2009) 29.3, 29.4, 31
FAO Eco (2011) 41

12.5 Appropriate measures shall be applied to minimize:

- catch, waste and discards of non-target species (both fish and non-fish species).
- impacts on associated, dependent or endangered species

FAO CCRF (1995) 7.6.9
FAO Eco (2009) 31.1

12.5.1 There shall be management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible.

FAO ECO (2011) 41

12.6 Non target catches, including discards, of stocks other than the “stock under consideration” shall be monitored and shall not threaten these non-target stocks with serious risk of extinction, recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible; if such impacts arise, effective remedial action shall be taken.

FAO Eco (2009) 31.1
FAO Eco (2011) 41.1

12.7 The role of the “stock under consideration” in the food web shall be considered, and if it is a key prey species in the ecosystem, management objectives and measures shall be in place to avoid severe adverse impacts on dependent predators.

FAO Eco (2009) 31.2
FAO Eco (2011) 41.2

12.8 States shall introduce and enforce laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78).

FAO CCRF (1995) 8.7.1

12.9 There shall be knowledge of the essential habitats for the "stock under consideration" and potential fishery impacts on them. Impacts on essential habitats and on habitats that are highly vulnerable to damage by the fishing gear involved shall be avoided, minimized or mitigated. In assessing fishery impacts, the full spatial range of the relevant habitat shall be considered, not just that part of the spatial range that is potentially affected by fishing.

FAO Eco (2009) 31.3
FAO Eco (2011) 41.3

12.10 Research shall be 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.

FAO CCRF (1995) 8.4.8/ 7.6.4

12.11 There shall be outcome indicator(s) consistent with achieving management objectives for non-target stocks (i.e. avoiding overfishing and other impacts that are likely to be irreversible or very slowly reversible).

FAO ECO (2011) 41.1

12.12 There shall be outcome indicator(s) consistent with achieving management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible.

FAO ECO (2011) 41

12.13 There shall be outcome indicator(s) consistent with achieving management objectives for avoiding, minimizing or mitigating the impacts of the unit of certification on essential habitats for the "stock under consideration" and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification.

FAO ECO (2011) 41.3

12.14 There shall be outcome indicator(s) consistent with achieving management objectives that seek to avoid severe adverse impacts on dependent predators resulting from the unit of certification fishing on a stock under consideration that is a key prey species.

FAO ECO (2011) 41.2

12.15 There shall be outcome indicator(s) consistent with achieving management objectives that seek to minimize adverse impacts of the unit of certification, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. Any modifications to the habitat for enhancing the stock under consideration must be reversible and not cause serious or irreversible harm to the natural ecosystem's structure, processes and function.

FAO ECO (2011) 36.9, 41

13. Where fisheries enhancement is utilized, environmental assessment and monitoring shall consider genetic diversity and ecosystem integrity.

FAO CCRF (1995) 9.1.2/9.1.3/9.1.4/9.1.5/9.3.1/9.3.5
FAO Eco (2011) 36.9,38, 39, 40, 41, 43

13.1 State shall promote responsible development and management of aquaculture, including an advanced evaluation of the effects of aquaculture development on genetic diversity and ecosystem integrity, based on the best available scientific information (and/or traditional, fisher or community objective and verifiable knowledge). Significant uncertainty is to be expected in assessing possible adverse ecosystem impacts of fisheries, including culture and enhancement activities. This issue can be addressed by taking a risk assessment/risk management approach.

FAO CCRF (1995) 9.1.2
FAO Eco (2011) 41

13.1.1 In the case of enhanced fisheries, the fishery management system should take due regard of the natural production processes and be appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimising adverse impacts on ecosystem structure and function.

FAO CCRF (1995) 9.3.1
FAO Eco (2011) 36.9, 41

13.2 State shall produce and regularly update aquaculture development strategies and plans, as required, to ensure that aquaculture development is ecologically sustainable and to allow the rational use of resources shared by aquaculture and other activities.

FAO CCRF (1995) 9.1.3

13.2.1 State shall ensure that the livelihoods of local communities, and their access to fishing grounds, are not negatively affected by aquaculture developments.

FAO CCRF (1995) 9.1.4

13.3 Effective procedures specific to aquaculture of fisheries enhancement shall be established to undertake appropriate environmental assessment and monitoring with the aim of minimizing adverse ecological changes such as those caused by inputs from enhancement activities and related economic and social consequences.

FAO CCRF (1995) 9.1.5/9.2.5

13.4 With due regard to the assessment approach employed, stock assessment of fisheries that are enhanced through aquaculture inputs shall consider the separate contributions from aquaculture and natural production.

FAO Eco (2011) 43

13.5 Any modification to the habitat for enhancing the stock under consideration is reversible and do not cause serious or irreversible harm to the natural ecosystem's structure and function.

FAO Eco (2011) 41

13.5.1 Efforts shall be undertaken to minimize the harmful effects of introducing non-native species or genetically altered stocks used for aquaculture including culture based fisheries into waters.

13.5.2 Steps shall be taken to minimize adverse genetic disease and other effects of escaped farmed fish on wild stocks.

FAO CCRF (1995) 9.3.1

13.5.3 Research shall be promoted to develop culture techniques for endangered species to protect, rehabilitate and enhance their stocks, taking into account the critical need to conserve genetic diversity of endangered species.

FAO CCRF (1995) 9.3.5

13.6 State shall protect transboundary aquatic ecosystems by supporting responsible aquaculture practices within their national jurisdiction and by cooperation in the promotion of sustainable aquaculture practices.

FAO CCRF (1995) 9.2.1

13.7 State shall, with due respect to their neighbouring States and in accordance with international law, ensure responsible choice of species, siting and management of aquaculture activities which could affect trans boundary aquatic ecosystems.

FAO CCRF (1995) 9.2.2

13.8 State shall consult with their neighbouring States, as appropriate, before introducing non-indigenous species into trans-boundary aquatic ecosystems.

FAO CCRF (1995) 9.2.3

13.9 State shall establish appropriate mechanisms, such as databases and information networks to collect, share and disseminate data related to their aquaculture activities to facilitate cooperation on planning for aquaculture development at the national, sub-regional, regional and global level.

FAO CCRF (1995) 9.2.4

13.10 State shall cooperate in the elaboration, adoption and implementation of international codes of practice and procedures for introductions and transfers of aquatic organisms.

FAO CCRF (1995) 9.3.2

13.11 States shall, in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, encourage adoption and promote the use of appropriate practices/procedures in the selection and genetic improvement of broodstocks, the introduction of non-native species, and in the production, sale and transport of eggs, larvae, fry, broodstock or other live materials. States shall facilitate the preparation and implementation of appropriate national codes of practice and procedures to this effect.

FAO CCRF (1995) 9.3.3, 9.3.4

13.12 Enhanced fisheries may be supported in part by stocking of organisms produced in aquaculture facilities or removed from wild stocks other than the "stock under consideration". Aquaculture production for stocking purposes should be managed and developed according to the above provisions, especially in relation to maintaining the integrity of the environment, the conservation of genetic diversity, disease control, and quality of stocking material.

FAO Eco (2011) 36.8, 40

13.13 Regarding the enhanced components of the "stock under consideration", provided that a natural reproductive stock component is maintained and fishery production is based primarily on natural biological production within the ecosystem of which the "stock under consideration" forms a part, enhanced fisheries shall meet the following criteria:

- the species shall be native to the fishery's geographic area or introduced historically and have subsequently become established as part of the "natural" ecosystem;
- there shall be natural reproductive components of the "stock under consideration";
- the growth during the post-release phase shall be based upon food supply from the natural environment and the production system shall operate without supplemental feeding.

FAO Eco (2011) 38

13.14 In the case of enhanced fisheries, “stock under consideration” may comprise naturally reproductive components and components maintained by stocking. In the context of avoiding significant negative impacts of enhancement activities on the natural reproductive components of “stock under consideration”:

- naturally reproductive components of enhanced stocks shall not be overfished;
- naturally reproductive components of enhanced stocks shall not be substantially displaced by stocked components. In particular, displacement shall not result in a reduction of the natural reproductive stock component below abundance-based target reference points (or their proxies) defined for the regulation of harvest.

FAO Eco (2011) 39

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Appendix 1

Background to the development of the FAO Code of Conduct for Responsible Fisheries (CCRF)

The International Conference on Responsible Fishing, held in 1992 in Cancún (Mexico) requested the Food and Agriculture Organization of the United Nations (FAO) to prepare an international Code of Conduct which would lead to responsible, sustained fisheries worldwide. The outcome of this Conference, particularly the Declaration of Cancún, was an important contribution to the 1992 United Nations Conference on Environment and Development (UNCED), in particular its Agenda 21. Subsequently, the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks was convened, to which FAO provided important technical back-up. In November 1993, the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas was adopted at the Twenty-seventh Session of the FAO Conference. Noting these and other important developments in world fisheries, the FAO Governing Bodies recommended the formulation of a global Code of Conduct for Responsible Fisheries which would be consistent with these instruments and, in a non-mandatory manner, establish principles and standards applicable to conservation, management and development of all fisheries.

The Code, which was unanimously adopted on 31 October 1995 by the FAO Conference, provides a necessary framework for national and international efforts to ensure sustainable exploitation of aquatic living resources in harmony with the environment. The FAO CCRF is voluntary. However, certain parts of it are based on relevant rules of international law, including those reflected in the United Nations Convention on the Law of the Sea of 10 December 1982. The FAO CCRF is global in scope, and is directed toward members and non-members of FAO, fishing entities, sub regional, regional and global organizations, whether governmental or non-governmental, and all persons concerned with the conservation of fishery resources and management and development of fisheries, such as fishers, those engaged in processing and marketing of fish and fishery products and other users of the aquatic environment in relation to fisheries. The FAO CCRF provides principles and standards applicable to the conservation, management and development of all fisheries. It also covers the capture, processing and trade of fish and fishery products, fishing operations, aquaculture, fisheries research and the integration of fisheries into coastal area management. Finally, the reference to States includes the European Community in matters within its competence, and the term “fisheries” applies equally to capture fisheries and aquaculture.

Background to the FAO Ecolabelling Guidelines for Fish and Fishery Products from Marine Capture Fisheries

In October 1998, FAO convened a Technical Consultation on the Feasibility of Developing Non-discriminatory Technical Guidelines for Ecolabelling of Products from Marine Capture Fisheries. This consultation identified a number of principles to be observed by ecolabelling schemes:

- be consistent with the FAO Code of Conduct for Responsible Fisheries;
- be voluntary and market-driven;
- be transparent;
- be non-discriminatory, by not creating obstacles to trade and allowing for fair competition;
- establish clear accountability for the promoters of schemes and for the certifying bodies, in conformity with international standards;
- include a reliable auditing and verification process;
- recognize the sovereign rights of states and comply with all relevant laws and regulations;
- ensure equivalence of standards among countries;
- be based on the best scientific evidence;
- be practical, viable and verifiable;
- ensure that labels communicate truthful information and provide for clarity.

The guidelines draw upon various sources including relevant guides of the International Organization for Standardization (ISO), the WTO Agreement on Technical Barriers to Trade (TBT), in particular, Annex 3 Code of Good Practice for the Preparation, Adoption and Application of Standards, and the work of the International Social and Environmental Accreditation and Labelling (ISEAL) Alliance.

At the recommendation of the Sub-Committee FAO organized a Technical Consultation in October 2004 to finalize the draft guidelines for their consideration by the 26th Session of COFI in March 2005.

The FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries, as updated in revision 1 of 2009, are applicable to ecolabelling schemes that are designed to certify and promote labels for products from well-managed marine capture fisheries and focus on issues related to the sustainable use of fisheries resources. The Ecolabelling Guidelines sets forth the minimum substantive requirements and criteria for assessing whether a fishery can be certified and an ecolabel awarded to a fishery. Ecolabelling schemes may apply additional or more stringent requirements and criteria related to sustainable use of the resources. The requirements and criteria presented in Ecolabelling Guidelines are to be based on and interpreted in accordance with the current suite of agreed international instruments addressing fisheries, in particular the 1982 UN Convention on the Law of the Sea, the 1995 UN

Fish Stocks Agreement and the 1995 Code of Conduct for Responsible Fisheries, as well as related documentation including the 2001 Reykjavik Declaration on Responsible Fisheries in the Marine Ecosystem.

In 2011, the FAO published the Ecolabelling Guidelines for Inland Fisheries which revised the previous guidelines in 2009 and provided further criteria for enhanced fisheries.

Appendix 2

Table of rationales for exclusion of FAO CCRF articles/sub-articles from the Conformance Criteria (all other articles/sub-articles are otherwise included).

Article/sub-article of the FAO CCRF	Rationale for exclusion
Preface/Introduction	Sets the Code in context within the wider field of worldwide fisheries and fish production. Not formally referenced in the Conformance Criteria.
Article 1: Nature and Scope of the Code	Nature and scope of the Code is an introduction to the development and the aims of the Code. A short reference to this is provided above as Appendix 1. Not included in Conformance Criteria as it is only a general introductory article.
Article 2: Objectives of the Code	The very general overarching objectives of the Code. Not formally referenced within the Conformance Criteria but indirectly addressed by the totality of the other clauses included.
Article 3: Relationship with Other International Instruments	Explains the relationship of the Code with other international instruments. Not included as this is still part of the introduction to the Code and out of scope for direct assessment of Responsible Fisheries Management.
Article 4: Implementation, Monitoring and Updating	Implementation, monitoring and updating of the Code by member and non-member States. Not included as this is still part of the introduction to the Code and out of scope for direct assessment of Responsible Fisheries Management.

Article 5: Special Requirement of Developing Countries	Could add a layer of complexity in deciding whether the scorings provided are to be regarded as satisfying or not satisfying the criteria for responsible fishing. Not considered at present, but potential to be considered in the future if developing countries fisheries will be assessed for Responsible Fisheries Management.
Article 6: General Principles	The very general principles behind Responsible Fisheries. Not formally referenced, but elaborated later in the entirety of the Conformance Criteria.
Article 7.2: Management Objectives	
7.2.1	Not formally referenced in text but elaborated fully within Conformance Criteria referencing clause 7.2.2 of the CCRF.
Article 8.1: Duties of all States	
8.1.5	Health and Safety based. Out of scope.
8.1.6	Search and Rescue based. Out of scope.
Article 8.2: Flag State Duties	
8.2.1	The context of this clause is currently assessed within section 11 of the Conformance Criteria.
8.2.5	Health and Safety based. Out of scope.
8.2.8	Insurance coverage related. Out of scope.

8.2.9	Repatriation related. Out of scope.
8.2.10	Health and Safety/Accidents related. Out of scope.
8.3 Port State Duties	
8.3.2	Vessel Assistance related. Out of Scope.
8.4 Fishing Operations	
8.4.1	Largely Health and safety related, the rest of the clause (related to loss of fishing gear and protection of the marine environment) is referenced within the conformance criteria.
8.4.4	Quality related. Out of Scope.
8.6 Energy Optimization	Energy related. Out of scope.
8.7 Protection of the aquatic environment	
8.7.2	Individual Vessel Audit related. Out of Scope.
8.7.3	Individual Vessel Audit related. Out of Scope.
8.7.4	Individual Vessel Audit related. Out of Scope.
8.8 Protection of the atmosphere	Gas emissions to atmosphere related. Out of scope.
8.9 Harbours and landing places for fishing vessels	Largely harbour design and services quality related. Relevant to a chain of custody certification. Out of scope.

8.10	Abandoned fishing gear has been considered within the context of other clauses. Not Formally referenced within the Conformance Criteria.
8.11 Artificial reefs and fish aggregation devices	
8.11.4	Safety of navigation related. Out of scope.
9.1 Responsible development of aquaculture, including culture based fisheries, in areas under national jurisdiction	
9.1.1	Already addressed indirectly throughout Section 14 of the Conformance Criteria.
9.4 Responsible aquaculture at the production level	Full cycle aquaculture at production level. Out of scope.
10.3 Regional Cooperation	
10.3.1	Not formally referenced within the Conformance Criteria, but fully addressed within Section 1 and 2.
11 Post-harvest practices and trade	Post harvest practices related. Out of scope.
12 Fisheries Research	
12.8	Health and Safety related. Out of scope for this assessment.

Appendix 3

Conformance Criteria Version 1.2 - changes to reduce repetition within the various clauses and streamline the overall requirements of the document.

Change number	Change description
1	Clause 1.2, 1.2.1, 1.2.2 fused together.
2	Clause 1.2.3 fused with clause 4.1.
3	Clause 1.3 fused with clause 1.4.
4	Clause 1.5 modified wording from “cooperation with States” to “international cooperation and coordination on fishery matters” to better reflect clause 7.3.4 of the CCRF, from which it was derived.
5	Clause 2.1, 2.1.1, 2.1.2 fused together.
6	Clause 2.2 fused with 2.4.1.
7	Clause 2.3, 2.3.1, 2.11 fused together.
8	Clause 2.6, 2.6.1, 2.8 fused together.
9	Clause 2.10 moved up in Section 2.
10	Clause 3.2.5, 9.1 fused together.
11	Clause 4.1, 4.1.1 fused together.
12	Clause 4.1.2 and 5.5.1 fused together.
13	Clause 4.3, 4.5 fused together.
14	Clause 5.1 and 5.1.1 have been switched in number.
15	Clause 5.2 and 5.2.1 have been fused together.
16	Clause 5.5.2 fused with clause 7.1.1.
17	Clause 5.6 moved to Section 8.
18	Clause 5.7 moved under fundamental clause 8 as more relevant.

19	Clause 6.1 deleted. The requirements of 6.1 are completely spelled out in clause 6.1.1, 6.1.2, 6.1.3, 6.1.4.
20	Clause 6.1.5 moved to Section 7 as more relevant to implementation of the precautionary approach.
21	Clause 7.2, 7.2.1, 7.2.2 have been fused together and modified accordingly to fully reflect clause 7.5.4 of the CCRF.
22	Clause 8.2, 8.2.1 fused together.
23	Clause 8.3 and 8.3.1 fused together.
24	Clause 8.4 and 8.4.2 fused with clause 9.3.
25	In clause 8.4.1 “discards” is taken out as this is repeated in clause 9.3.
26	Heading of fundamental clause 9 has been deleted and collapsed into fundamental clause 8 (also reflected on page 7). Now the heading of fundamental 8 groups all supporting clauses of fundamental clause 8 and 9. This was done because fundamental 9 was extremely similar to fundamental 8 and because its supporting clauses were more relevant to fundamental 8.
27	Clause 9.2 fused with clause 8.2.
28	Clause 9.5 fused to clause 9.3.
29	Clause 9.9 fused with clause 9.9.1.
30	Clause 9.9.2 moved under fundamental clause 2 as more relevant to CZM
31	Clause 12.1.1 fused with clause 12.2.1.
32	Clause 13.1.2 fused with clause 13.1.3.
33	Clause 13.4 fused with clause 9.4.
34	Clause 13.5.1 moved under fundamental clause 8.
35	Some clauses have been renumbered as a result of this revision process.

Appendix 4

Update of the Conformance Criteria Version 1.2 to V 1.3 to fully reflect the requirements of the 2011 FAO Guidelines for the Ecolabelling of Fish and Fishery products from Inland Capture Fisheries.

Added to Clause 1.1 - The management system and the fishery operate in compliance with the requirements of local, national and international laws and regulations, including the requirements of any regional fisheries management agreement.
Added to Clause 1.2 – (i.e. structure and composition contributing to resilience).
Added to Clause 3.1 - (taking into account uncertainty and imprecision).
Added to Clause 3.2.4 - Where relevant, there shall be pertinent objectives, and as necessary, management measures.
Added to Clause 4.1 - Data can include relevant traditional, fisher or community knowledge, provided their validity can objectively be verified.
Added to Clause 4.1.1 - (e.g. adoption of scientific advice)
Clause 4.1.2 added - In the absence of specific information on the "stock under consideration", generic evidence based on similar stocks can be used for fisheries with low risk to that "stock under consideration". However, the greater the risk of overfishing, the more specific evidence is necessary to ascertain the sustainability of intensive fisheries. *FAO Eco (2009) 30.4* *FAO ECO (2011) 37.4*
Clause 5.1.1 added - With the use of less elaborate methods for stock assessment frequently used for small scale or low value capture fisheries resulting in greater uncertainty about the state of the stock under consideration, more precautionary approaches to managing fisheries on such resources shall be required, including where appropriate, lower level of utilization of resources. A record of good management performance may be considered as supporting evidence of the adequacy and the management system. *FAO Eco (2011) 42*
Clause 6.2 modified to read - States shall establish safe limit reference point(s) for exploitation (i.e. consistent with avoiding recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible). When a limit reference point is approached, measures shall be taken to ensure that it will not be exceeded. For instance, if fishing mortality (or its proxy) is above the associated limit reference point, actions should be taken to decrease the fishing mortality (or its proxy) below that limit reference point.

Clause 6.3 modified to read - Data and assessment procedures shall be installed measuring the position of the fishery in relation to the reference points. Accordingly, the stock under consideration shall not be overfished (i.e. above limit reference point or proxy) and the level of fishing permitted shall be commensurate with the current state of the fishery resources, maintaining its future availability, taking into account that long term changes in productivity can occur due to natural variability and/or impacts other than fishing.
Clause 7.1 added - This should take due account of stock enhancement procedures, where appropriate. Absence of scientific information shall not be used as a reason for postponing or failing to take conservation and management measures. Relevant uncertainties shall be taken into account through a suitable method of risk assessment, including those associated with the use of introduced or translocated species.
Clause 7.1.2. deleted – "Accordingly, relative conservation and management measures shall not be postponed". This is now included within clause 7.1.
Added to Clause 8.1 - fisher or community.
Clause 8.1.1 added - Management targets are consistent with achieving maximum sustainable yield (MSY) (or a suitable proxy) on average, or a lesser fishing mortality if that is optimal in the circumstances of the fishery (e.g. multispecies fisheries) or to avoid severe adverse impacts on dependant predators. *FAO Eco (2009) 29.2* *FAO Eco (2011) 36.3*
Added to Clause 10.1 - This could include relevant traditional, fisher or community approaches, provided their performance could be objectively verified.
Clause 12.4 modified to read - Impacts that are likely to have serious consequences shall be addressed. This may take the form of an immediate management response or a further analysis of the identified risk. In this context, full recognition should be given to the special circumstances and requirements in developing countries and countries in transition, including financial and technical assistance, technology transfer, training and scientific cooperation. *FAO Eco (2009) 29.3, 29.4, 31* *FAO Eco (2011) 41*
Clause 12.6 modified to read - Non target catches, including discards, of stocks other than the "stock under consideration" shall be monitored and shall not threaten these non-target stocks with serious risk of extinction, recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible; if such impacts arise, effective remedial action shall be taken. *FAO Eco (2009) 31.1* *FAO Eco (2011) 41.1*
Clause 13.1 modified to read - States shall promote responsible development and management of

aquaculture, including an advanced evaluation of the effects of aquaculture development on genetic diversity and ecosystem integrity, based on the best available scientific information (and/or traditional, fisher or community objective and verifiable knowledge). Significant scientific uncertainty is to be expected in assessing possible adverse ecosystem impacts of fisheries, including culture and enhancement activities. This issue can be addressed by taking a risk assessment/risk management approach. *FAO CCRF (1995) 9.1.2* *FAO Eco (2011) 41*
Clause 13.1.1 modified to read - In the case of enhanced fisheries, the fishery management system should take due regard of the natural production processes and be appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimising adverse impacts on ecosystem structure and function. *FAO CCRF (1995) 9.3.1* *FAO Eco (2011) 36.9, 41*
Clause 13.4 added - With due regard to the assessment approach employed, stock assessment of fisheries that are enhanced through aquaculture inputs shall consider the separate contributions from aquaculture and natural production. *FAO Eco (2011) 43*
Clause 13.5 added - Any modification to the habitat for enhancing the stock under consideration are reversible and do not cause serious or irreversible harm to the natural ecosystem's structure and function. *FAO Eco (2011) 41*
Clause 13.11 and 13.12 fused to read - States shall, in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, encourage adoption and promote the use of appropriate practices/procedures in the selection and genetic improvement of broodstocks, the introduction of non-native species, and in the production, sale and transport of eggs, larvae, fry, broodstock or other live materials. States shall facilitate the preparation and implementation of appropriate national codes of practice and procedures to this effect. *FAO CCRF (1995) 9.3.3, 9.3.4*
Clause 13.12 added - Enhanced fisheries may be supported in part by stocking of organisms produced in aquaculture facilities or removed from wild stocks other than the "stock under consideration". Aquaculture production for stocking purposes should be managed and developed according to the above provisions, especially in relation to maintaining the integrity of the environment, the conservation of genetic diversity, disease control, and quality of stocking material. *FAO Eco (2011) 36.8, 40*
Clause 13.13 added - Regarding the enhanced components of the "stock under consideration",

provided that a natural reproductive stock component is maintained and fishery production is based primarily on natural biological production within the ecosystem of which the "stock under consideration" forms a part, enhanced fisheries shall meet the following criteria:

- the species shall be native to the fishery's geographic area or introduced historically and have subsequently become established as part of the "natural" ecosystem;
- there shall be natural reproductive components of the "stock under consideration";
- the growth during the post-release phase shall be based upon food supply from the natural environment and the production system shall operate without supplemental feeding.

FAO Eco (2011) 38

Clause 13.14 added - In the case of enhanced fisheries, "stock under consideration" may comprise naturally reproductive components and components maintained by stocking. In the context of avoiding significant negative impacts of enhancement activities on the natural reproductive components of "stock under consideration":

- naturally reproductive components of enhanced stocks shall not be overfished;
- naturally reproductive components of enhanced stocks shall not be substantially displaced by stocked components. In particular, displacement shall not result in a reduction of the natural reproductive stock component below abundance-based target reference points (or their proxies) defined for the regulation of harvest.

FAO Eco (2011) 39

Appendix 5

Update the Conformance Criteria Version 1.2 to V 1.3 to increase specificity of requirements referring to management objectives and related indicators.

Clauses Added/modified
Clause added - 3.2.5 There shall be management objectives seeking to avoid, minimize or mitigate impacts of the unit of certification on essential habitats for the stock under consideration and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification. FAO ECO (2011) 41.3
Clause added – 3.2.6 There shall be management objectives that seek to minimize adverse impacts of the unit of certification, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. FAO ECO (2011) 36.9
Clause added - 12.5.1 There shall be management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. FAO ECO (2011) 41
Clause modified - 12.7 The role of the "stock under consideration" in the food web shall be considered, and if it is a key prey species in the ecosystem, management objectives and measures shall be in place to avoid severe adverse impacts on dependent predators. FAO ECO (2011) 41.2
Clause added - 12.11 There shall be outcome indicator(s) consistent with achieving management objectives for non-target stocks (i.e. avoiding overfishing and other impacts that are likely to be irreversible or very slowly reversible). FAO ECO (2011) 41.1
Clause added - 12.12 There shall be outcome indicator(s) consistent with achieving management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. FAO ECO (2011) 41
Clause added - 12.13 There shall be outcome indicator(s) consistent with achieving management objectives for avoiding, minimizing or mitigating the impacts of the unit of certification on essential habitats for the "stock under consideration" and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification. FAO ECO (2011) 41.3
Clause added - 12.14 There shall be outcome indicator(s) consistent with achieving management objectives that seek to avoid severe adverse impacts on dependent predators resulting from the unit of certification fishing on a stock under consideration that is a key prey species. FAO ECO (2011) 41.2

Clause added - 12.15 There shall be outcome indicator(s) consistent with achieving management objectives that seek to minimize adverse impacts of the unit of certification, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. Any modifications to the habitat for enhancing the stock under consideration must be reversible and not cause serious or irreversible harm to the natural ecosystem's structure, processes and function.

FAO ECO (2011) 36.9, 41

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