Alaska Responsible Fisheries Management (RFM) Certification Program

Guidance to Performance Evaluation for the Certification of Wild Capture and Enhanced Fisheries in Alaska

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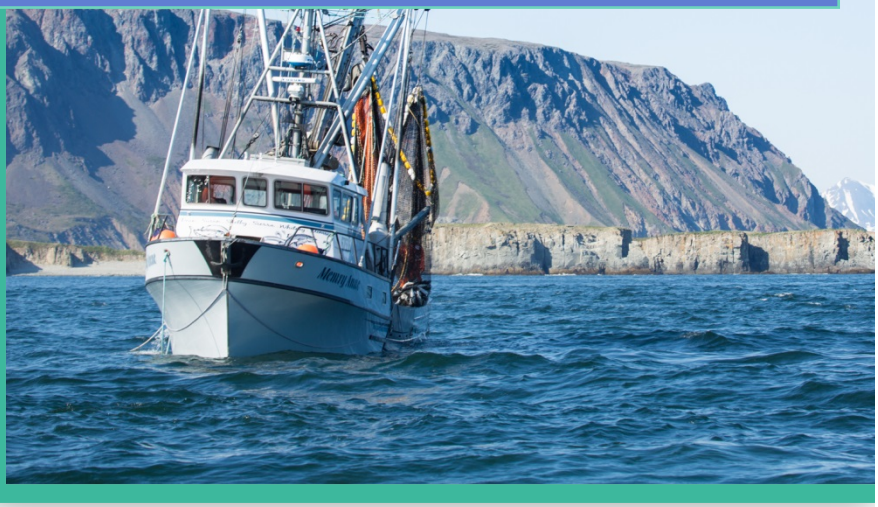

Role of the Alaska Seafood Marketing Institute

The Alaska Seafood Marketing Institute (ASMI) is a public-private partnership between the State of Alaska and the Alaska seafood industry established to foster economic development of the State fisheries. ASMI is playing a key role in the repositioning of Alaska's seafood industry as a competitive market-driven food production industry. Its work to boost the value of Alaska's seafood product portfolio is accomplished through partnerships with retail grocers, foodservice distributors, restaurant chains, foodservice operators, universities, culinary schools, and the media. It conducts consumer campaigns, public relations and advertising activities, and aligns with industry efforts for maximum effectiveness. ASMI also functions as a brand manager of the Alaska Seafood family of brands.

Purpose of this Publication

This publication describes the guidance for assessment used in the evaluation of applicant fisheries to the Alaska Responsible Fisheries Management (RFM) Certification Program. Included are the specific performance levels for each clause given in the Conformance Criteria of the Alaska RFM Program that must be met to demonstrate certification status. Successful applicants will be awarded the claim of *a responsibly managed fishery for sustainable use*.

In combination with the normative documents of the accredited certification program, this publication will provide 1) recommendations for assessors operating on behalf of qualified certification bodies regarding consistent application of performance evaluation of fisheries against the Alaska RFM Conformance Criteria, 2) understanding of how levels of conformance for a given fishery are derived, 3) guidance to assessors for evaluating fishery applicants, and 4) guidance to fishery applicants regarding certification requirements.

Contents

List of Tables

I. Guidance to Performance Evaluation

Conformance Criteria, Confidence Ratings, and Performance Evaluation Outcomes

In the Alaska Responsible Fisheries Management (RFM) assessment process, clauses of the conformance criteria are scored using confidence ratings. A high confidence rating signifies full conformance to a clause. A medium confidence rating results from either gaps in information to demonstrate conformance to a clause, which may be clarified during the certification process, or from limited evidence of conformance to a clause. A low confidence rating signifies absence of evidence. A non-conformance (NC) is assigned when evidence or information acquired is insufficient to meet the intent of the clause (Table 1). Detailed explanations are provided below.

Full Conformance – High Confidence Rating

Sufficient information/evidence is available to demonstrate full conformance to a clause. In these cases a high confidence rating is assigned. Sufficient evidence is that which allows objective determination by the Assessment Team that a fishery fully complies with a given clause in the Alaska RFM Conformance Criteria.

Minor Non-Conformance – Medium Confidence Rating

Information/evidence is broadly available to demonstrate conformance to a clause although there are limited gaps in information that, if available, could clarify aspects of conformance and allow the Assessment Team to assign a high confidence rating. In these cases, a minor improvement is needed to achieve full conformance. For a medium confidence rating, a minor non-conformance is assigned. The Assessment Team will request further clarification of information with the Applicant and management organizations and this may result in the assignment of full conformance to a clause.

Major Non-Conformance – Medium Confidence Rating

Information/evidence is limited to demonstrate conformance to a clause. In these cases, a major improvement is needed to achieve full conformance. For a medium confidence rating, a major non-conformance is assigned. The Assessment Team will request further clarification of information with the Applicant and management organizations to confirm the non-conformance. Where further, substantive evidence is made available, assignment of either minor non-conformance or full conformance to a clause may occur.

Critical Non-Conformance – Low Confidence Rating

Information/evidence is completely absent or contradictive to demonstrate conformance to a clause. Absence of information/evidence results in a low confidence rating. In these cases, a critical non-conformance is assigned. A critical non-conformance will stop the certification assessment, unless the Applicant is able to provide information/evidence that demonstrates higher conformance of the fishery than that initially assessed.

Table 1. Definitions of performance evaluation outcomes

	Definition
Full Conformance	When full conformance to the requirements of a clause is demonstrated.
Minor Non-Conformance	When a minor gap in information/evidence required that demonstrates full conformance to a clause is determined.
Major Non-Conformance	When a major gap in information/evidence required that demonstrates full conformance to a clause is determined.
Critical Non-Conformance	When a complete absence of information/evidence required that demonstrate full conformance to a clause is determined.

Table 2 presents the non-conformance limits before a fishery fails assessment. A critical non-conformance results in the fishery failing the assessment.

Table 2. Fishery fails thresholds per conformance criteria category.

Category of conformance criteria	No. of clauses	Maximum no. of non-conformances (NC) allowed per category		
		Critical NC	Major NC	Minor NC
A) Fishery Management System	30	No Critical NC are allowed; 1 Critical NC = Fail.	1 Major NC allowed per Category (A-F).	3 Minor NCs allowed per Category (A-F).
B) Science and Stock Assessment Activities	20			
C) The Precautionary Approach	9			
D) Management Measures	20			
E) Implementation, Monitoring and Control	9			
F) Serious Impacts of the Fishery on the Ecosystem	35			
SUM Categories A-F (see above)	123	No Critical NC are allowed; 1 Critical NC= Fail.	Up to 6 Major NCs (provided no more than 1 Major NC in any one category) *See Table 3.*	Up to 18 Minor NCs (provided no Major NC in the same category and no more than 3 Minor NCs in any one category) *See Table 3.*

Performance Evaluation Parameters

In the assessment process, each supporting clause is associated with scoring guidance to ensure continuity and consistency across fisheries and Assessment Teams. Scoring is based on a systematic approach to the assessment of the fishery against each clause using a series of Evaluation Parameters (EPs): Process, Current Status and Effectiveness, and Evidence Basis.

These are considered of equal importance and are scored using the categories previously discussed (high confidence rating = full conformance; medium confidence rating = minor or major non-conformance; low confidence rating = critical non-conformance). These EPs break down a clause using the performance related parameters below.

Process

This EP requires that evidence is provided on the process or system used by a fishery management organization to implement or maintain key aspects of fishery management practices. Examples may include systems for data collection, laws and regulations, stock assessment, and enforcement. If evidence on the current process/system of a given process-based requirement is scarce or nonexistent, then this EP is not satisfied resulting in non-conformance.

Current Status/Appropriateness/Effectiveness

This EP requires that the current status, appropriateness and effectiveness of an aspect of fisheries management practices are demonstrated. Examples include data collected, results of stock assessment including stock status, and enforcement data. If evidence on the current status/effectiveness of a given output-based requirement is scarce or nonexistent, then this EP is not satisfied resulting in non-conformance.

Evidence Basis

This EP requires that the availability/quality/adequacy of the evidence that is the base for scoring a given clause is assessed. If evidence availability (e.g., studies, reports, other data, and regulations) is scarce, low quality or non-existent, then this EP is not satisfied resulting in non-conformance.

The Assessment Team follows these guidelines when scoring a clause:

- **If all EPs are satisfied, the clause is scored with a *High Confidence Rating* (Full Conformance).**
- **If one EP (i.e. any) is not satisfied, the clause is scored with a *Medium Confidence Rating* (Minor Non-Conformance).**
- **If two EPs (i.e. any) are not satisfied, the clause is scored with a *Medium Confidence Rating* (Major Non-Conformance).**
- **If more than two EPs (any) are not satisfied, the clause is scored with a *Low Confidence Rating* (Critical Non-Conformance).**

Note that for some conformance criteria, not all EPs are applicable. This is because not all Conformance Criteria clauses require the presence of a process (e.g., a formal procedure), and not all clauses require an evaluation of the current status, the appropriateness and the effectiveness of the subject matter. The balance depends on the construction and type of supporting clause and its requirements. For instance, Current status/Appropriateness/Effectiveness can be used in combination or individually, depending on

the relevance to the clause. Finally, all clauses require the evaluation of the quality and adequacy of the Evidence Basis and this EP is consistent throughout all clauses. When one EP is not required, guidance is structured so that the balance of requirements of other EPs is always three or more. In this way, a balance of requirements for each clause is provided for the scoring process.

The RFM standard and related guidance 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.

Conformance Criteria

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The legal and administrative framework is **not** effective, established, and appropriate for fishery resource conservation and management. In addition, the management system and the fishery **do not** operate in compliance with relevant fishery management requirements. **Lacking in all parameters.**	The legal and administrative framework is **insufficiently** effective, established, and appropriate for fishery resource conservation and management. In addition, the management system and the fishery operate **insufficiently** in compliance with relevant fishery management requirements. **Lacking in two parameters.**	The legal and administrative framework is **moderately** effective, established, and appropriate for fishery resource conservation and management. In addition, the management system and the fishery operate **only moderately** in compliance with relevant fishery management requirements. **Lacking in one parameter.**	Effective legal and administrative framework established at the local and national level is appropriate for fishery resource conservation and management. In addition, 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. **Fulfils all parameters.**

Evaluation Parameters

Process: Management agencies are physically and legally established at local and national level.

Current status: The output of the management organization(s) is in line with fishery resource management needs. Examples may include rule making, scientific research, stock and ecosystem assessments, implementation of rules and regulations, and enforcement activities.

Appropriateness/Effectiveness: The management framework is appropriate for managing the resource. For example, the larger the exploitation, vulnerability, or risks of a fish stock, the more work and precision shall be focused in managing the resource. This shall be done in compliance with legislative and regulatory requirements at the local, national and international level, including the requirements of any regional fisheries management agreement. The management system shall not be subject to continual unresolved or repeated disputes or political instability.

Evidence Basis: Evaluate availability, quality, and adequacy of the evidence. Examples may include fishery

management plans or other relevant information.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Management measures do **not 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. **Lacking in all parameters.**	Management measures **insufficiently 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**.** **Lacking in two parameters.**	Management measures **moderately 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**.** **Lacking in one parameter.**	Management measures **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. **Fulfils all parameters.**

Evaluation Parameters

Note on consideration of biological unity and other biological characteristics. Biological unity and biological characteristics shall be interpreted as relating to the stability or resilience of the stock – i.e. its ability to recover from or resist a shock or disturbance, such as the impact of a fishery. The management system must consider the relative ability of the stock to recover from or resist potential negative impacts. Characteristics considered shall include growth, fecundity, reproduction, lifespan, spawning cycle, population dynamics, impact of gear type, and essential habitat(s) needs and availability. Where life cycle and other biological characteristics are unknown, the management system shall ensure these uncertainties are factored into assessment and managing practices, as per the precautionary approach

Current Status/Appropriateness: If a biological stock unit extends over the jurisdiction of two or more countries to any extent (either by distribution or migration), then exploitation by all parties shall be considered when defining exploitation levels and determining stock health to avoid overfishing/depletion of the resource. The scoring of this parameter shall consider that significant migration may take a species outside the jurisdiction of the managing agency (e.g. for significant feeding or ontogenic migration).

Effectiveness: Managers should conduct an assessment of stock structure and composition as these relate to stock resilience over its entire distribution area. The underlying objective is to preserve genetic variability between and within species, and avoid localized depletions (overall affecting the stock contributing to its resilience and stability). This assessment shall consider, when appropriate, demographic independence of populations or stocks (i.e., if a component stock of a species is demographically independent from another because it is genetically different, has significant difference in age-structure, or if there is insignificant exchange among groups due to distance, environmental barriers, or other reasons).

Effectiveness: The species may spend a portion of its life (migration for feeding, growth or reproduction) in both fresh and

saltwater, in international waters or in another country's jurisdiction, and may suffer mortality or other pressures. These must be accounted for when assessing stock health.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include the presence of genetic studies, age-structure data, stock assessments or other relevant information confirming the biological unit of the stock.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Previously agreed management measures established and applied in the same region are **not** considered. **Lacking in all parameters.**	Previously agreed management measures established and applied in the same region are **insufficiently** considered. **Lacking in two parameters.**	Previously agreed management measures established and applied in the same region are **moderately** considered. **Lacking in one parameter.**	Previously agreed management measures established and applied in the same region are taken into account by management. **Fulfils all parameters.**

Evaluation Parameters

Note: Taken into account means "included and accounted in the basis of management decisions". "Previously agreed measures" includes local or national laws or regulations, and also any management measures put into place by RFMOs. Previous decisions can be reneged, altered and updated or maintained intact but must be included in the decision making process. If previously agreed measures are reneged, altered or updated, there shall be a scientific basis for the changes. Not taken into account may refer to management measures that are ignored although may be still legally binding in the fishery.

Process: There is a process or system that allows the continuity and updating of previously agreed and implemented management measures. Examples may include a specific review process or management plan where these measures can be clearly identified and continued implementation and updating can be carried out.

Current Status/Appropriateness/Effectiveness: Previously agreed-upon management measures established and applied in the same region are included and part of current management decisions. Examples may include international or other agreements not honored by the management system or a management agency. The management system is effectively continuing implementation of agreed management measures.

Evidence Basis: Documentary evidence is available supporting the above.

1.3 Where transboundary, straddling or highly migratory fish stocks and high seas fish stocks are exploited by two or more States, 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.

Low Confidence rating (Critical NC)	Medium Confidence Rating (Major NC0	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** cooperation in formal fishery commission or arrangements that have been appointed to ensure effective conservation and management of the stock(s) in question. **Lacking in all parameters.**	There is **insufficient** cooperation in formal fishery commission or arrangements that have been appointed to ensure effective conservation and management of the stock(s) in question. **Lacking in two parameters.**	There is **moderate** cooperation in formal fishery commission or arrangements that have been appointed to ensure effective conservation and management of the stock(s) in question. **Lacking in one parameter.**	Where transboundary, straddling or highly migratory fish stocks and high seas fish stocks are exploited by two or more States, the applicant management organizations concerned 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. **Fulfils all parameters.**

Evaluation Parameters

Note: This clause qualifies only if stock is either transboundary, straddling, highly migratory, or high seas. If not, this clause is NOT APPLICABLE. This clause is justified by the evidence provided in clause 1.2. Where sub-stocks are referred to as part of an overall stock there shall be sufficient information on biology, distribution, and life cycle that demonstrates the degree of association or disassociation, and basis for the management approach taken, to prevent recruitment failure of the stock or other negative impacts that are likely to be irreversible or very slowly reversible.

Process: There is a mechanism in place by which the applicant organization(s) cooperates for the management of the transboundary stock. This mechanism has the sustainable international exploitation of the stock as its main objective.

Current Status/Appropriateness/Effectiveness: There is evidence that the mechanism described in the process parameter is effective at ensuring the stock is sustainably exploited. This can take the form of evidence that the stock is not overfished or subject to overfishing across the entirety of the range of the biological stock.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include proof of formal agreements, records of meetings and decisions.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)

There is **no** compatibility of management measures for the stock in question. **Lacking in all parameters.**	There is **insufficient** compatibility of management measures for the stock in question. **Lacking in two parameters.**	There is **moderate** compatibility of management measures for the stock in question. **Lacking in one parameter.**	Conservation and management measures established for such stock within the jurisdiction of the relevant States for shared, straddling, high seas and highly migratory stocks, are compatible. Compatibility is achieved in a manner consistent with the rights, competences and interests of the States concerned. **Fulfils all parameters.**

Evaluation Parameters

Note this clause qualifies only if stock is either transboundary, straddling, highly migratory, or high seas. If not, this clause is NOT APPLICABLE. This clause is justified by the evidence provided in clause 1.2. Compatibility of management measures does not mean identical management measures but the approach shall be consistent with respect to the overall management and conservation goals of the shared or straddling stock.

Process: Identification of common objectives for maintenance of stock biomass.

Current Status/Appropriateness/Effectiveness: Implementation of measures fit to achieve the common objectives mentioned above (i.e., similar harvest rates based on stock status, common rebuilding objectives for depleted stocks).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include proof of formal agreements, records of meetings and decisions, stock assessment and other reports.

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 7.1.5

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The non-member or	The non-member or	The non-member or	The State non-member or

participant State is **not** giving effect to any relevant measures adopted by such organization or arrangement. **Lacking in all parameters.**	participant State is **insufficiently** giving effect to any relevant measures adopted by such organization or arrangement. **Lacking in two parameters.**	participant State is **moderately** giving effect to any relevant measures adopted by such organization or arrangement. **Lacking in one parameter.**	participant of a sub-regional or regional fisheries management organization cooperates, 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 or arrangement. **Fulfils all parameters.**

Evaluation Parameters

Note this clause qualifies only if stock is either transboundary, straddling, highly migratory, or high seas. If not, this clause is NOT APPLICABLE. This clause is justified by the evidence provided in clause 1.2.

Process: There is ongoing cooperation in stock assessment, data sharing, and other activities.

Current Status/Appropriateness/Effectiveness: Relevant measures are implemented by non-member country.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports detailing results of common surveys or acceptable harvest rates.

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 7.3.5

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no prior** consultation with the fisheries management organization/arrangement.	There is **insufficient** prior consultation with the fisheries management organization/arrangement.	There is **moderate** prior consultation with the fisheries management organization/arrangement.	The State 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 consults with the latter, in advance to the extent practicable, and take its views into account.
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**
Evaluation Parameters Note this clause qualifies only if stock is either transboundary, straddling, highly migratory, or high seas. If not, this clause is NOT APPLICABLE. This clause is justified by the evidence provided in clause 1.2. **Process**: There is a history of prior consultation. **Current Status/Appropriateness/Effectiveness**: The views of the managing fishery organization are taken into account. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include reports detailing action taken by the state in question.			

1.5 The Applicant fishery's management system shall actively foster cooperation between States with regard to 1) information gathering and exchange, 2) fisheries research, 3) fisheries management, and 4) fisheries development.

*FAO CCRF **7.3.4***

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The Applicant fishery's management system does **not** actively foster cooperation between states.	The Applicant fishery's management system fosters **insufficient** cooperation between states with regard to information gathering and exchange, fisheries research, fisheries management, and fisheries development.	The Applicant fishery's management system fosters **moderate** cooperation between states with regard to information gathering and exchange, fisheries research, fisheries management, and fisheries development.	The Applicant fishery's management system **fosters active international cooperation** on fishery matters with regard to information gathering and exchange, fisheries research, fisheries management, and fisheries development.

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Note this clause qualifies only if stock is either transboundary, straddling, highly migratory, or high seas. If not, this clause is NOT APPLICABLE. This clause is justified by the evidence provided in clause 1.2.

Process: The extent to which a formal process or system is available.

Current Status/Appropriateness/Effectiveness: Level of activity, application and level of engagement.

Evidence Basis: Outputs from activity (e.g., reports, minutes, common or collective themes).

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 7.7.4

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The State and sub-regional or regional fisheries management organizations and arrangements, as appropriate do **not** agree on the means by which the activities of such organizations and arrangements are financed.	The State and sub-regional or regional fisheries management organizations and arrangements, as appropriate**, insufficiently** agree on the means by which the activities of such organizations and arrangements are financed.	The State and sub-regional or regional fisheries management organizations and arrangements, as appropriate**, moderately** agree on the means by which the activities of such organizations and arrangements are financed.	Agreement on the means by which the activities of such organizations and arrangements are financed. Where appropriate, and when possible, such organizations and arrangements aim to recover the costs of fisheries conservation, management and

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	research. **Fulfils all parameters.**

Evaluation Parameters

Process: There is an agreed-upon system to finance the fishery management organizations and arrangements.

Current Status/Appropriateness/Effectiveness: The fishery management organizations and arrangements are currently financed using a cost recovery or other system.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include data showing the expenditure and cost recovery derived from fisheries management.

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 7.8.1

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)

The State **does** encourage banks and financial institutions 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. **Lacking in all parameters.**	The State **insufficiently** encourages 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. **Lacking in two parameters.**	The State only **moderately** encourages 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. **Lacking in one parameter.**	The State encourages 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. **Fulfils all parameters.**

Evaluation Parameters

Note: The fishery for the stock under consideration occurs outside the exclusive economic zone (EEZ), there is evidence for presence of flags of convenience, and for IUU fishing. Not Applicable otherwise.

Process: There is a system that encourages banks to require vessels to be flagged outside the jurisdiction of interest.

Current Status/Appropriateness/Effectiveness: There is regulation that directs for vessels to be flagged outside the state's jurisdiction. The fishery for the stock under consideration occurs outside EEZ, and there are flags of convenience operations present, or evidence of illegal, unreported, and unregulated fishing.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include data showing fishery operation by vessels flying a flag different from that of the state where fishing geographically occurs.

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 7.6.8

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)

There are **no** procedures in place to review the efficiency of current conservation and management measures. **Lacking in all parameters.**	There are **insufficiently** effective procedures in place to review the efficiency of current conservation and management measures. **Lacking in two parameters.**	There are **moderately** effective procedures in place to review the efficiency of current conservation and management measures. **Lacking in one parameter.**	Procedures are 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a procedure to review management measures. The procedure includes the use of outcome indicators against which the success of management measures in achieving specific management objectives is measured. The procedure covers all management measures, including those relating to the sustainable exploitation of the target stock, the mitigation of negative impacts on non-target species through bycatch, discarding, and indirect effects, and the protection of ETP species and the physical environment.

Current Status/Appropriateness/Effectiveness: If, as a result of the review process, it is determined that management measures are not achieving the specific management objectives they are designed to achieve, they are revised and updated as appropriate.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include data showing recent regulation revisions.

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 7.1.9

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** transparency in management arrangements and decision making	There is **insufficient** transparency in management arrangements	There is **moderate** transparency in management arrangements	The management arrangements and decision making processes for the fishery are organized in a

processes. **Lacking in all parameters.**	and decision making processes. **Lacking in two parameters.**	and decision making processes. **Lacking in one parameter.**	transparent manner. **Fulfils all parameters.**
Evaluation Parameters **Current Status**: There is transparency in management arrangements. **Effectiveness**: There is transparency in decision making processes. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include records of the management arrangements and decision making processes.			

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 8.2.6

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)

There is **no** accepted Agreement and consistent laws and regulations. **Lacking in all parameters.**	The management system has accepted the Agreement but with **insufficient** adoption of consistent laws and regulations. **Lacking in two parameters.**	The management system has accepted the Agreement but with **moderate** adoption of consistent laws and regulations. **Lacking in one parameter.**	The Fishery Management organization is party to the Agreement to promote compliance with international conservation and management measures by vessels fishing in the high seas or has adopted laws and regulations consistent with the provisions of the Agreement. **Fulfils all parameters.**
Evaluation Parameters Not Applicable if the fishery does not occur in high seas. **Process**: The Agreement is accepted and relevant regulation adopted. **Current Status/Appropriateness/Effectiveness**: These laws are regulating high seas fishing activity. Describe how they accomplish this. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include reports on the management of high seas fishing activities.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
An appropriate policy, legal and institutional frameworks is **not** 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, while 4) taking due account of the risks and uncertainties involved in setting policies for the management of coastal areas. **Lacking in all parameters.**	Policy, legal and institutional frameworks have been adopted but are **insufficient** 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, while 4) taking due account of the risks and uncertainties involved in setting policies for the management of coastal areas. **Lacking in two parameters.**	Policy, legal and institutional frameworks have been adopted but are **moderately** achieving 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, while 4) taking due account of the risks and uncertainties involved in setting policies for the management of coastal areas. **Lacking in one parameter.**	An appropriate policy, legal and institutional framework has been 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, States 4) take due account of the risks and uncertainties involved. **Fulfils all parameters.**

Evaluation Parameters

Process: A mechanism exists by which the integrated management of multiple coastal area uses is conducted, the possible uses of coastal resources are assessed, and access to them is governed. Accordingly, policies for the management of the coastal area are set.

Current Status/Appropriateness/Effectiveness: The coastal management framework includes explicit consideration of the fragility of coastal ecosystems, the finite nature of coastal resources, and the needs of coastal communities, and accounts for the rights and customary practices of coastal communities. These policies take due account of risks and uncertainties.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include coastal management plans or other policy documents and frameworks for resource/coastal management.

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 10.4.1

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** cooperation/coordination with adjacent jurisdictions involved in planning, development, conservation and management of coastal areas. **Lacking in all parameters.**	There is **insufficient** cooperation/coordination with adjacent jurisdictions involved in planning, development, conservation and management of coastal areas. **Lacking in two parameters.**	There is **moderate** cooperation/coordination with adjacent jurisdictions involved in planning, development, conservation and management of coastal areas. **Lacking in one parameter.**	The State establishes mechanisms for cooperation and coordination among national authorities involved in planning, development, conservation and management of coastal areas. **Fulfils all parameters.**
Evaluation Parameters **Process**: There is a mechanism to allow cooperation between neighboring countries to improve coastal resource management. **Current Status/Appropriateness/Effectiveness**: There are records of cooperation. Examples may include fishery, aquaculture, or other agreements or records from international fora. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include reports or data on the international cooperation/information exchange in these events.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** access to appropriate technical capacities and financial resources. **Lacking in all parameters.**	There is **insufficient** access to appropriate technical capacities and financial resources. **Lacking in two parameters.**	There is **moderate** access to appropriate technical capacities and financial resources. **Lacking in one parameter.**	The State ensures that the authority or authorities representing the fisheries sector in the coastal management process have the appropriate technical capacities and financial resources. **Fulfils all parameters.**
Evaluation Parameters			

Process: There are appropriate technical capacities and financial resources.

Current Status/Appropriateness/Effectiveness: It can be determined with confidence that there are appropriate technical capacities and financial resources.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports or data overall operating staff and financial resources/budgets available.

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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating** **(Full Conformance)**
There is **no** consultation with the fishery sector and fishing communities, and **no** attempts to create public awareness. **Lacking in all parameters.**	There is **insufficient** consultation with the fishery sector and fishing communities, and insufficient attempts to create public awareness. **Lacking in two parameters.**	There is **moderate** consultation with the fishery sector and fishing communities, and moderate attempts to create public awareness. **Lacking in one parameter.**	Representatives of the fisheries sector and fishing communities are consulted in the decision making processes involved in other activities related to coastal area management planning and development**.** The public is also kept aware on the need for the protection and management of coastal resources and the participation in the management process by

			those affected. **Fulfils all parameters.**

Evaluation Parameters

Process: Describe how fishery related information is disseminated and the process in place to consult with fishery sector and fishing communities.

Current Status/Appropriateness/Effectiveness: There are records of consultations with fishing communities and the fisheries sector. Attempts have been made to create public awareness on the need for protection and management of coastal resources, and those affected by the management process have been made aware of its provision.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include public records of consultation activities and other available documentation, published on the internet or distributed at public meetings.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Practices for the avoidance of conflict between fishers and other coastal users have **not** been adopted and fishing gear **is not** regulated in such a way as to avoid risk of conflict among fishers using different vessels, gear and fishing methods. Furthermore, procedures and mechanisms **are not** established at the appropriate administrative level to settle conflicts	Practices have been adopted but are largely **ineffective** to avoid conflict between fishers and other coastal users, and fishing gear **is insufficiently** regulated in such a way as to avoid risk of conflict among fishers using different vessels, gear and fishing methods. Furthermore, procedures and mechanisms **are insufficiently** established at the appropriate	Practices have been adopted but are **moderately effective** in avoiding conflict between fishers and other coastal users , and fishing gear **is moderately** regulated in such a way as to avoid risk of conflict among fishers using different vessels, gear and fishing methods. Furthermore, procedures and mechanisms **are moderately** established at the appropriate	Fisheries practices that avoid conflict among fishers and other users of the coastal area (e.g. aquaculture, tourism, energy) are adopted and fishing is regulated in such a way as to avoid risk of conflict among fishers using different vessels, gear and fishing methods. Procedures and mechanisms are established at the appropriate administrative level to settle conflicts which arise within the fisheries

which arise within the fisheries sector and between fisheries resource users and other coastal users. **Lacking in all parameters.**	administrative level to settle conflicts which arise within the fisheries sector and between fisheries resource users and other coastal users. **Lacking in two parameters.**	administrative level to settle conflicts which arise within the fisheries sector and between fisheries resource users and other coastal users. **Lacking in one parameter.**	sector and between fisheries resource users and other coastal users. **Fulfils all parameters.**
Evaluation Parameters **Process**: These practices have been adopted, and there is a process to regulate fishing gear, methods and vessels so as to avoid risk of conflict If conflict arise, there is process that allows to settle conflicts between fishery users and other users. **Current Status/Appropriateness/Effectiveness**: Describe these practices and their effectiveness within the fishery sector, and between fishers and other coastal users. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include laws and regulations or other documents.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Dissemination of information does not exist.	There is **insufficiently** effective information dissemination to allow application and in support of implementation of such measures.	There is **moderately** effective information dissemination to allow application and in support of implementation of such measures.	The State and sub-regional or regional fisheries management organizations and arrangements 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 are explained to

			users of the resource in order to facilitate their application and thus gain increased support in the implementation of such measures.
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that allows for fishery related information to be disseminated.

Current Status/Appropriateness/Effectiveness: There is a record of the disseminated information, and is it disseminated effectively, and the basis and purposes of such regulation explained to users.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include records of such management measures published in the internet or distributed at public meetings.

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 10.2.2

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** assessment of socio-economic and cultural value to assist decision making on resource allocation and use.	There is **insufficient** assessment of socio-economic and cultural value to assist decision making on resource allocation and use.	There is **moderate** assessment of socio-economic and cultural value to assist decision making on resource allocation and use.	The economic, social and cultural value of coastal resources is assessed in order to assist decision-making on their allocation and use.
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Process: There is a system that allows for socio-economic value assessments and cultural value assessments to be carried out.

Current Status/Appropriateness/Effectiveness: There are socio-economic value assessments and cultural value assessments, both of which are effectively assisting decision making on resource allocation and use.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports on social/cultural/economic value of the resource.

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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating** **(Full Conformance)**
There is **no** cooperation at the sub-regional level in order to improve coastal area management and /or establishment or promotion of systems to monitor coastal environment using multidisciplinary research. **Lacking in all parameters.**	There is **insufficient** cooperation at the sub-regional level in order to improve coastal area management and /or establishment or promotion of systems to monitor coastal environment using multidisciplinary research. **Lacking in two parameters.**	There is **moderate** cooperation at the sub-regional level in order to improve coastal area management and /or establishment or promotion of systems to monitor coastal environment using multidisciplinary research. **Lacking in one parameter.**	There is cooperation at the sub-regional level in order to improve coastal area management, and in accordance with capacities, measures are 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system at the sub regional level that allows research and monitoring of the coastal environment and multidisciplinary research in support of coastal area management is promoted.

Current Status/Appropriateness/Effectiveness: Systems of monitoring and research have taken into account physical, chemical, biological, economic, social, legal, and institutional aspects to support coastal area management.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports on the status of the coastal area using the various aspects listed above.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** management plans for artificial reefs or fish aggregation devices integrated within the framework of coastal area management plans taking into account the interest of fishers, including artisanal and subsistence fishers, and requiring approval for the construction and deployment of such reefs and devices.	There are **insufficiently** effective management plans for artificial reefs or fish aggregation devices integrated within the framework of coastal area management plans taking into account the interest of fishers, including artisanal and subsistence fishers and requiring approval for the construction and deployment of such reefs and devices.	There are **moderately** effective management plans for artificial reefs or fish aggregation devices integrated within the framework of coastal area management plans taking into account the interest of fishers, including artisanal and subsistence fishers and requiring approval for the construction and deployment of such reefs and devices.	The state, within the framework of coastal area management plan, has established management systems for artificial reefs and fish aggregation devices. Such management systems require approval for the construction and deployment of such reefs and devices and take into account the interests of fishers, including artisanal and subsistence fishers.

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Note: The use of artificial structures may be appropriate for some stocks but not necessary for all. This clause may therefore not be applicable if such structures are not practical or appropriate for stocks. The use of artificial structures should be considered appropriate if one or more of the species under assessment has benefitted from the use of artificial structures in other fisheries, or if species with similar biological characteristics have benefitted from the use of artificial structures in other fisheries. .

Process: There is a mechanism in place for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. Management plans for artificial reefs or fish aggregation devices integrated within the framework of coastal area management plans take into account the interest of fishers.

Current Status/Appropriateness/Effectiveness: Management plans for artificial reefs or fish aggregation devices have been effectively integrated within the framework of coastal area management plans, and these plans effectively take into account the interest of fishers, including artisanal and subsistence fishers.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, plans, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** provision of timely information or prior notification. **Lacking in all parameters.**	There is **insufficient** provision of timely information or prior notification. **Lacking in two parameters.**	There is **moderate** provision of timely information or prior notification. **Lacking in one parameter.**	In the case of activities that may have an adverse transboundary environmental effect on coastal areas, the state provides timely information and if possible, prior notification to potentially affected States. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system to allow early information sharing with affected neighboring countries in case of transboundary environmental effects that may affect them.

Current Status/Appropriateness/Effectiveness: There are current agreements for or past records of such occurrences. Examples may include oil spills, and aquaculture farms escapes among others.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports or data on the international cooperation in these events.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** long term management objectives translated into a plan or other management document. **Lacking in all parameters.**	There are **insufficiently** clear long term management objectives translated into a plan or other management document that take into account best available scientific evidence and are consistent with the sustainable use of the resource, and subscribed to by important fishery stakeholders. **Lacking in two parameters.**	There are **moderately** clear long term management objectives translated into a plan or other management document that take into account best available scientific evidence and are consistent with the sustainable use of the resource, and subscribed to by important fishery stakeholders. **Lacking in one parameter.**	Scientifically based long term management objectives consistent with the sustainable use of the resource are translated into a plan or other management document which is subscribed to by all interested parties. **Fulfils all parameters.**

Evaluation Parameters

Process: Management objectives based on the best available scientific evidence (which can include traditional knowledge, if verifiable) have been translated into a fishery management plan or similar document.

Current Status/Appropriateness/Effectiveness: The objectives described by the management plan are consistent with the sustainable use of the resource, and are subscribed to by all relevant fishery stakeholders.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include fishery management plan/framework or legal rules.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** avoidance of excess fishing capacity. **Lacking in all parameters.**	There is **insufficient** avoidance of excess fishing capacity. **Lacking in two parameters.**	There is **moderate** avoidance of excess fishing capacity. **Lacking in one parameter.**	Excess fishing capacity is avoided and exploitation of the stocks remains economically viable. **Fulfils all parameters.**

Evaluation Parameters

Process: There are management measures in place to limit and/or reduce the total fishing capacity of the Unit of Certification. This shall include the existence of specific fishing capacity objective(s), which themselves are based on the best available scientific understanding of the level of fishing pressure appropriate to ensure the long-term sustainability of the fishery.

Current Status/Appropriateness/Effectiveness: The fishing capacity of the Unit of Certification is at or below the level of the specific fishing capacity objective(s).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include fishery reports on harvest recommendation and harvest or fleet reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is an **absence** of favorable economic conditions that promote responsible fishing. **Lacking in all parameters.**	There is an **insufficient** presence of favorable economic conditions that promote responsible fishing. **Lacking in two parameters.**	There is a **moderate** presence of favorable economic conditions that promote responsible fishing. **Lacking in one parameter.**	The economic conditions under which fishing industries operate promote responsible fisheries. **Fulfils all parameters.**

Evaluation Parameters

Process: Where best available scientific evidence determines that it is necessary, there are management measures in place to ensure the economic conditions under which the fishery operates promote responsible fisheries.

Current Status/Appropriateness/Effectiveness: There is evidence for the general economic value of the resource and its benefit to fishermen. There is enforcement data that supports the occurrence of responsible fishing practices.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include economic reports or enforcement data.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** accounting of interests of fishers including those engaged in subsistence, small-scale and artisanal fisheries. **Lacking in all parameters.**	There is **insufficient** accounting of interests of fishers including those engaged in subsistence, small-scale and artisanal fisheries. **Lacking in two parameters.**	There is **moderate** accounting of interests of fishers including those engaged in subsistence, small-scale and artisanal fisheries. **Lacking in one parameter.**	The interests of fishers, including those engaged in subsistence, small-scale and artisanal fisheries are taken into account. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system or process in place that identifies the interests of small scale fishers, either through stakeholder engagement or social research, in a way which permits the utilization of the information during the management measure development process.

Current Status/Appropriateness/Effectiveness: There is evidence that the interest of small scale fishers are effectively taken into account during the development of management measures, and there is no evidence that small-scale fisheries are severely adversely impacted by any management measures currently in place.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include dedicated quotas, public meeting records, laws and regulations.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** conservation of aquatic habitats and ecosystems' biodiversity and endangered species protection, and where relevant, pertinent objectives, and as	There is **insufficient** conservation of aquatic habitats and ecosystems' biodiversity and endangered species protection, and where relevant, pertinent	There is **moderate** conservation of aquatic habitats and ecosystems' biodiversity and endangered species protection, and where relevant, pertinent	Biodiversity of aquatic habitats and ecosystems is conserved and endangered species are protected. Where relevant, there are pertinent objectives, and as necessary, management

necessary, management measures. **Lacking in all parameters.**	objectives, and as necessary, management measures. **Lacking in two parameters.**	objectives, and as necessary, management measures. **Lacking in one parameter.**	measures. **Fulfils all parameters.**

Evaluation Parameters

Process: There are management measures in place specifically designed to ensure that the biodiversity of aquatic habitats and ecosystems are conserved, and endangered species are protected. This shall reflect the existence of specific management objectives and measures which are based on the best available scientific evidence.

Current Status/Appropriateness/Effectiveness: The management measures currently in place have been successful in meeting the management objectives. There is no evidence that the fishery is currently having a significant adverse impact on aquatic habitats or ecosystems, and it is not putting any ETP species at risk of extinction.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include laws and regulations, fisheries management plans and species status reports.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** management objectives for avoidance, minimization or mitigation of impacts on essential fish habitats and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification for the "stock under consideration" **Lacking in all parameters.**	There are **insufficiently** clear objectives for avoidance, minimization or mitigation of impacts on essential fish habitats and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification for the "stock under consideration" **Lacking in two parameters.**	There are **moderately clear** objectives for avoidance, minimization or mitigation of impacts on essential fish habitats and on habitats that are highly vulnerable to damage by the fishing gear of the unit of certification for the "stock under consideration" **Lacking in one parameter.**	There are 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. **Fulfils all parameters.**

Evaluation Parameters **Process**: There is a mechanism in place by which the habitats essential to the stock under consideration and the potential impacts of the fishery (i.e. employing bottom contact gear) upon them are identified. This or a similar mechanism shall also be in place to identify habitats which are highly vulnerable to fishery activities by the Unit of Certification. The information provided by these mechanisms shall be used to produce specific management objectives related to avoiding significant negative impacts on habitats. When identifying highly vulnerable habitats, there value to ETP species shall be also considered, with habitats essential to ETP species being categorized accordingly. Note that this clause shall consider Alaska specific designation of important and essential fish habitats categorized as such at the State and federal level. **Current Status/Appropriateness/Effectiveness**: There is evidence that the objectives described above are in place, and that effective management measures relative to those have been implemented. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include various regulations, fishery management plans, data and reports.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** management objectives that seek to minimize adverse impacts of the fishery, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. **Lacking in all parameters.**	There are **insufficiently clear** management objectives that seek to minimize adverse impacts of the fishery, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. **Lacking in two parameters.**	There are **moderately clear** management objectives that seek to minimize adverse impacts of the fishery, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. **Lacking in one parameter.**	There are management objectives that seek to minimize adverse impacts of the fishery, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process in place by which adverse impacts of the fishery, including any enhancement activities, on the structure, processes and function of aquatic ecosystems that are likely to be irreversible or very slowly reversible are identified. This process results in setting relative management objectives. Management priority shall be focused primarily towards minimizing and avoiding impacts.

Current Status/Appropriateness/Effectiveness: There are management measures in place which have been developed to achieve the objectives described in the process parameter, and have been successful in doing so.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include fishery management plans, or other regulatory document or laws.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** consideration of all fishery removals and mortality of the target stock through collection of reliable and accurate data on the status of fisheries and ecosystems (including data on retained catch, bycatch, discards and waste) performed by relevant management organizations at appropriate time and level of aggregation, provided to relevant States or organizations as appropriate. **Lacking in all parameters.**	There is **insufficient** consideration of all fishery removals and mortality of the target stock through collection of reliable and accurate data on the status of fisheries and ecosystems (including data on retained catch, bycatch, discards and waste) performed by relevant management organizations at appropriate time and level of aggregation, provided to relevant States or organizations, as appropriate. **Lacking in two parameters.**	There is **moderate** consideration of all fishery removals and mortality of the target stock through collection of reliable and accurate data on the status of fisheries and ecosystems (including data on retained catch, bycatch, discards and waste) performed by relevant management organizations at appropriate time and level of aggregation, provided to relevant States or organizations, as appropriate. **Lacking in one parameter.**	All fishery removals and mortality of the target stock(s) are 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 are collected. Data can include relevant traditional, fisher or community knowledge, provided their validity can objectively be verified. These data are 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, as appropriate.

			Fulfils all parameters.

Evaluation Parameters

Note that provision of data to relevant States and sub-regional, regional and global fisheries organizations is dependent on the nature of the stock (i.e., shared, high seas stock) and the type or arrangement in place for co-management (i.e., commission, arrangement etc.). This part of the clause does not apply in cases where stocks occur entirely in one's State EEZ/jurisdiction and "co-management" with another country is not required.

Process: There is a process or system that allows for effective data collection (including data on retained catch, bycatch, discards and waste) on the status of fisheries and ecosystems for management purposes. In the case of stocks fished by more than one state, this includes a system or agreement with other states to ensure mortality and removals data are available for the entirety of the biological stock. Some fisheries and/or fish stock are hard to monitor for various reasons, including remoteness of operation/distribution and complexity of fishing operations, posing particular challenges with the collection and maintenance of adequate, reliable and current data and/or other information. Assessors shall acknowledge and explain these challenges, data collection and maintenance to cover all stages of fishery development, in accordance with applicable international standards and practices.

Current Status/Appropriateness/Effectiveness: There are appropriate and reliable data collection and estimation methods. Reliable and accurate data are collected on retained catch, bycatch, discards and waste (for directed and non-directed fisheries), and the direct and indirect impacts of the fishery on the ecosystem. Such information is disseminated to all relevant fishery management authorities. Overall, the data collection system is considered effective for the purposes of this clause if fishery scientists believe there is a high probability that the total estimated mortality is an accurate reflection of the actual total mortality across the entire biological stock. Fishery data are collected with a frequency and level of aggregation which allows the effective and informed management of the stock by all relevant authorities. The appropriate level of aggregation will often be the entire biological stock, but could also reflect specific habitats, gear types, sub-populations etc. The requirements for data collection are focussed on the need to assess the effects of the unit of certification on non-target stocks. Non-target catches and discards refers to species/stocks that are taken by the unit of certification other than the stock for which certification is being sought. The adequacy of data relates primarily to the quantity and type of data collected (including sampling coverage) and depends crucially on the nature of the systems being monitored and purposes to which the data are being put. Some analysis of the precision resulting from sampling coverage would normally be part of an assessment of adequacy and reliability. The currency of data is important inter alia because its capacity for supporting reliable assessment of current status and trends declines as it gets older. Adequate, reliable and current data and/or other information can include relevant traditional, fisher or community knowledge, provided its validity can be objectively verified (i.e. the knowledge has been collected and analysed though a systematic, objective and well-designed process, and is not just hearsay).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports, catch and observer data.

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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating (Full Conformance)**
There is **no** availability of timely, complete and reliable statistics to allow sound analysis and regular maintenance, update and verification of such data. Also, there is **no** promotion/use and distribution of this data to ensure a link between applied research and fisheries management.	There is **insufficient** availability of timely, complete and reliable statistics to allow sound analysis and regular maintenance, update and verification of such data. Also, there is **insufficient** promotion/use and distribution of this data to ensure a link between applied research and fisheries management.	There is **moderate** availability of timely, complete and reliable statistics to allow sound analysis and regular maintenance, update and verification of such data. Also, there is **moderate** promotion/use and distribution of this data to ensure a link between applied research and fisheries management.	Timely, complete and reliable statistics are 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 are 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) is promoted. Results of analysis are distributed accordingly as a contribution to fisheries conservation, management and development.
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**
Evaluation Parameters **Process**: There is a process or system that allows for the production, maintenance, update, and verification of statistical data to international standards. Such standards include the FAO coordinating working party on fishery statistics Handbook of			

Fishery Statistical Standards. Also, there is a process for the use and distribution 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).

Current Status/Appropriateness/Effectiveness: There is evidence for the production, maintenance, updating and review of statistical data on catch and fishing effort in the fishery under assessment. There is evidence that the best and most up-to-date scientific information is used to inform the fisheries management process. Where there is a legal requirement for the advice of scientific authorities to be adopted, this shall be viewed as conformance with this evaluation parameter.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports and other data.

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

Low Confidence Rating	Medium Confidence Rating	Medium Confidence Rating	High Confidence Rating

(Critical NC)	(Major NC)	(Minor NC)	(Full Conformance)
If appropriate, there is **no** use of generic evidence based on similar stocks for fisheries with low risk to that "stock under consideration". **Lacking in all parameters.**	If appropriate, there is **insufficient** availability or use of generic evidence based on similar stocks for fisheries with low risk to that "stock under consideration", taking into account that the greater the risk of overfishing, the more specific evidence is necessary to ascertain the sustainability of intensive fisheries. **Lacking in two parameters.**	If appropriate, there is **moderate** availability or use of generic evidence based on similar stocks for fisheries with low risk to that "stock under consideration", taking into account that the greater the risk of overfishing, the more specific evidence is necessary to ascertain the sustainability of intensive fisheries. **Lacking in one parameter.**	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. **Fulfils all parameters.**

Evaluation Parameters

Note: if the fishery for the stock under consideration is managed fully using stock-specific information then this clause can be scored with full conformance.

Process: There is a process that allows for the use of generic evidence based on similar stocks for fisheries with low risk to that "stock under consideration". The greater the risk, the more specific evidence is necessary to assess sustainability. In principle, 'generic evidence based on similar stocks' should not suffice, but it may be adequate where there is low risk to the stock under consideration. In general, "Low risk to the stock under consideration" would suggest that there is very little chance of the stock becoming overfished, for example where the exploitation rate is very low and the resilience of the stock is high. However, the evidence for low risk and the justification for using surrogate data shall come from the stock assessment itself.

Current Status/Appropriateness/Effectiveness: Information has been utilized from generic evidence based on similar fishery situations. Based on the risk of overfishing, the information utilized is of higher precision to account for higher risks (i.e. intensive fisheries).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports and other data.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No observer scheme	Observer scheme	Observer scheme	An observer scheme designed

designed to collect accurate data for research and to support compliance. **Lacking in all parameters.**	established but there is **insufficient** collection of accurate data for research and to support compliance. **Lacking in two parameters.**	established but there is **moderate** collection of accurate data for research and to support compliance. **Lacking in one parameter.**	to collect accurate data for research and support compliance with applicable fishery management measures is established. **Fulfils all parameters.**

Evaluation Parameters

Process: Presence of an observer program. There may be cases where collection of accurate data for research and support compliance could be established without the use of observers (i.e., inspection scheme, enforcement, port sampling, at shore inspection, voluntary or compulsory logbooks, e-logbooks, electronic monitoring (video), or bycatch surveys). The reliability and accurateness of that system(s) would need to be verified accordingly. Note also that some fisheries observer programs are designed to collect biological data and in others they also serve mainly as a compliance or enforcement tool. This shall be considered accordingly in the overall evaluation of this clause). The core focus of the clause shall go back to questioning whether the required data for fisheries management are collected or if there are important data gaps (e.g., because of the absence of an observer program).

Current Status/Appropriateness/Effectiveness: The data collected by the observer program is considered accurate and useful.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment, observer, survey, observer or other reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** compilation and distribution of data in	There is **insufficient** compilation and distribution	There is **moderate** compilation and distribution	Sub-regional or regional fisheries management

accordance with confidentiality requirements. **Lacking in all parameters.**	of data in accordance with confidentiality requirements. **Lacking in two parameters.**	of data in accordance with confidentiality requirements. **Lacking in one parameter.**	organizations or arrangements 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. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if no regional or sub-regional body is involved in fishery management between one or more countries.

Process: There is a system within the regional or sub-regional body structure that allows for data distribution in line with confidentiality requirements.

Current Status/Appropriateness/Effectiveness: There is evidence proving that confidentiality requirements are satisfied when data is distributed to the various parties.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports where confidentiality requirements have been effected.

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

FAO CCRF 12.7

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** stimulation of research required to support national policies related to fish as food.	There is **insufficient** stimulation of research required to support national policies related to fish as food.	There is **moderate** stimulation of research required to support national policies related to fish as food.	The State stimulates the research required to support national policies related to fish as food.

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Process: There is research to support national policies related to fish as food.

Current Status/Appropriateness/Effectiveness: There is evidence of this research.

Evidence Basis: Availability, quality, and adequacy of the evidence.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** assessment of socio-economic, marketing and institutional aspects of fisheries for ongoing monitoring, analysis and policy formulation.	There is **insufficient** assessment of socio-economic, marketing and institutional aspects of fisheries for ongoing monitoring, analysis and policy formulation.	There is **moderate** assessment of socio-economic, marketing and institutional aspects of fisheries for ongoing monitoring, analysis and policy formulation.	The state ensures that the economic, social, marketing and institutional aspects of fisheries are adequately researched and that comparable data are generated for ongoing monitoring, analysis and policy formulation.

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Process: There is a system in place by which knowledge of the economic, social, marketing and institutional aspects of fisheries is collected.

Current Status/Appropriateness/Effectiveness: These data are used for ongoing monitoring, analysis and policy formulation.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports on social/cultural/economic value of the resource.

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 12.12

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** investigation and documentation traditional fisheries technology applied to small scale fisheries. **Lacking in all parameters.**	There is **insufficient** investigation and documentation traditional fisheries technology applied to small scale fisheries. **Lacking in two parameters.**	There is **moderate** investigation and documentation traditional fisheries technology applied to small scale fisheries. **Lacking in one parameter.**	The State investigates and documents 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. **Fulfils all parameters.**

Evaluation Parameters

Process: Traditional fisher knowledge has been investigated. Note that for highly developed fisheries that knowledge may already have been integrated into fisheries management.

Current Status/Appropriateness/Effectiveness: There are records of the documentation of small scale fisher practices.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various fisheries reports.

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 12.14

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Research vessels do **not** comply with the laws and regulations of that State and international law. **Lacking in all parameters.**	Research vessels **insufficiently** comply with the laws and regulations of that State and international law. **Lacking in two parameters.**	Research vessels **moderately** comply with the laws and regulations of that State and international law. **Lacking in one parameter.**	The state conducting scientific research activities in waters under the jurisdiction of another State ensures that their vessels comply with the laws and regulations of that State and international law. **Fulfils all parameters.**

Evaluation Parameters

Note: If the stock is fully managed by one state and there is no need for shared stock research (between two or more jurisdictions), then this clause is not applicable.

Process: There is a system in place to manage the conduct of research vessels operating in waters under the jurisdiction of other states

Current Status/Appropriateness/Effectiveness: If so, there is record of such shared research activities and they comply with required regulations.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include survey reports.

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 12.15, 12.16

Low Confidence Rating	Medium Confidence	Medium Confidence	High Confidence Rating

(Critical NC)	Rating (Major NC)	Rating (Minor NC)	(Full Conformance)
Does **not** promote adoption of uniform guidelines governing high seas research or sharing of data between regions or sub-regions. **Lacking in all parameters.**	**Insufficiently** promote adoption of uniform guidelines governing high seas research and sharing of data between regions or sub-regions. **Lacking in two parameters.**	**Moderately** promote adoption of uniform guidelines governing high seas research and sharing of data between regions or sub-regions. **Lacking in one parameter.**	States promote the adoption of uniform guidelines governing fisheries research conducted on the high seas and, 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 encourage the sharing of such research results with other regions. **Fulfils all parameters.**

Evaluation Parameters

If the stock is fully managed by one state and there is no need for shared stock research (between two or more jurisdictions), then this clause is not applicable.

Process: There is a mechanism in place to allow the development and review of guidelines governing fisheries research conducted on the high seas.

Current Status/Appropriateness/Effectiveness: There is a record of uniform high seas research guidelines or a mechanism to create them.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include survey reports, high seas guidelines.

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 12.18

Low Confidence Rating	Medium Confidence	Medium Confidence	High Confidence Rating

(Critical NC)	Rating (Major NC)	Rating (Minor NC)	(Full Conformance)
Does **not** enhance research capacity of developing countries. **Lacking in all parameters.**	**Insufficiently** enhance research capacity of developing countries. **Lacking in two parameters.**	**Moderately** enhance research capacity of developing countries. **Lacking in one parameter.**	States and relevant international organizations 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. **Fulfils all parameters.**

Evaluation Parameters

Note: This clause is only applicable when the Unit of Certification includes a transboundary stock which is fished by one or more developing countries.

Process: There is a mechanism in place by which the research capacities of developing countries can be developed and enhanced. This could include, but is not limited to, the provision of personnel, equipment, or funding, or cooperation on data collection and stock assessment.

Current Status/Appropriateness/Effectiveness: There are recognizable examples of instances in the history of the fishery under assessment where actions by the managers of the Unit of Certification have promoted or enhanced the research capacity of one or more developing nations in the ways described above.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or reports.

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 12.19

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Does **not** render technical and financial support. **Lacking in all parameters.**	**Insufficiently** render technical and financial support. **Lacking in two parameters.**	**Moderately** render technical and financial support. **Lacking in one parameter.**	Competent national organizations, 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. **Fulfils all parameters.**

Evaluation Parameters

Note: This criterion does not apply to fully developed fisheries, as defined by the FAO. The FAO definition of a developed fishery is "a fishery which, following a period of rapid and steady increase of fishing pressure and catches, has reached its level of maximum average yearly production. It is usually understood that such a fishery is yielding close to its maximum sustainable yield".

Process: There is a mechanism to allow a national organization to render technical and financial support to the State.

Current Status/Appropriateness/Effectiveness: There is a record of the provided technical and financial support.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or reports.

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 12.20

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Competent national organizations, where appropriate, do **not** render technical and financial support towards research effort. **Lacking in all parameters.**	Competent national organizations, where appropriate, **insufficiently** render technical and financial support towards research effort. **Lacking in two parameters.**	Competent national organizations, where appropriate, **moderately** render technical and financial support towards research effort. **Lacking in one parameter.**	Competent national organizations, 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. **Fulfils all parameters.**

Evaluation Parameters

Note: this clause is relevant where the fishery is within a developing region/small island region and management of the resource is performed through an international organization.

Process: The international management component of the fishery is engaged in processes that support the fishery based in developing countries.

Current Status/Appropriateness/Effectiveness: There is a record of the provided technical and financial support.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or reports.

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) for fishery management purposes.

FAO CCRF 12.2, 12.6

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Establishment of appropriate institutional framework for applied research does **not** exist. **Lacking in all parameters.**	The appropriate institutional framework is established to determine the applied research required, but there is **insufficient** use for fishery management purposes. **Lacking in two parameters.**	The appropriate institutional framework is established to determine the applied research required, but there is **moderate** use for fishery management purposes. **Lacking in one parameter.**	An appropriate institutional framework is established to determine the applied research required, and its proper use (i.e., assess and evaluate stock assessment models or practices) for fishery management purposes. **Fulfils all parameters.**

Evaluation Parameters

Process: There is an established institutional framework for fishery management purposes that determines applied research needs and use.

Current Status/Appropriateness/Effectiveness: There is evidence to substantiate that essential research for fishery management purposes is determined and carried out. This research generally includes routine stock(s) and ecosystem assessment reports.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include description of the overall process of research assessment and peer review, stock and ecosystem assessment reports.

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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating (Full Conformance)**
With the use of less elaborate methods for stock assessment frequently used for small scale or low value capture fisheries, more precautionary approaches to managing fisheries on such resources are **not** required, including where appropriate, lower level of utilization of resources. **Lacking in all parameters.**	With the use of less elaborate methods for stock assessment frequently used for small scale or low value capture fisheries, more precautionary approaches to managing fisheries on such resources are **insufficiently** required, including where appropriate, lower level of utilization of resources. **Lacking in two parameters.**	With the use of less elaborate methods for stock assessment frequently used for small scale or low value capture fisheries, more precautionary approaches to managing fisheries on such resources are **moderately** required, including where appropriate, lower level of utilization of resources. **Lacking in one parameter.**	With the use of less elaborate methods for stock assessment frequently used for small scale or low value capture fisheries, more precautionary approaches to managing fisheries on such resources are required, including where appropriate, lower level of utilization of resources. **Fulfils all parameters.**

Evaluation Parameters

Note: if the fishery for the stock under consideration has sufficient data collected through regular stock assessment activities for its management then this clause can be scored with full conformance.

Process: There is a process that allows for the application of more precautionary approaches to managing fisheries (e.g. lower exploitation rates) on resources assessed through stock assessment methods resulting in greater uncertainty about the state of the stock under consideration.

Current Status/Appropriateness/Effectiveness: There is evidence for the application of precautionary approaches to managing fisheries (e.g. lower exploitation rates) on resources assessed through stock assessment methods resulting in in greater uncertainty about the state of the stock under consideration.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports and other data.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The state does **not** conduct and make available appropriate research into the following aspects of fisheries: biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science, or provide appropriate training, staffing and institution building to conduct the research. **Lacking in all parameters.**	The state conducts and makes available **insufficiently** appropriate research into the following aspects of fisheries: biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science, or provide appropriate training, staffing and institution building to conduct the research. **Lacking in two parameters.**	The state conducts and makes available **moderately** appropriate research into the following aspects of fisheries: biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science, or provide appropriate training, staffing and institution building to conduct the research. **Lacking in one parameter.**	States ensure that appropriate research is conducted into all aspects of fisheries including biology, ecology, technology, environmental science, economics, social science, aquaculture and nutritional science. The research is disseminated accordingly. States 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There are organizations and processes in place to permit research into all aspects of fisheries, as listed in the clause.

Current Status/Appropriateness/Effectiveness: Research is carried out in fisheries biology, fisheries ecology, fisheries technology, environmental science, fisheries economics, social science, aquaculture, nutritional science. In fisheries where there is no demonstrable nutritional science being conducted, but all other types of research are carried out, the fishery shall be deemed compliant with this evaluation parameter.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment, economic value, fleet and other reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** established capacity for assessment and monitoring of 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. **Lacking in all parameters.**	There is an **insufficiently** established capacity for assessment and monitoring of 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. **Lacking in two parameters.**	There is a **moderately** established capacity for assessment and monitoring of 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. **Lacking in one parameter.**	There is 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system that establishes the required research capacity needed 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.

Current Status/Appropriateness/Effectiveness: There is evidence to demonstrate that there is sufficient research capacity in place for assessing and monitoring the state of the stock under consideration, impacts of fishing pressure, pollution and habitat alteration and the effects of climate or environment change on fish stocks and aquatic.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock, ecosystem and habitat assessment reports.

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

FAO 12.7

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** cooperation of management organizations with relevant international organizations to encourage research in order to ensure optimum utilization of fishery resources. **Lacking in all parameters.**	There is **insufficient** cooperation of management organizations with relevant international organizations to encourage research in order to ensure optimum utilization of fishery resources. **Lacking in two parameters.**	There is **moderate** cooperation of management organizations with relevant international organizations to encourage research in order to ensure optimum utilization of fishery resources. **Lacking in one parameter.**	Management organizations cooperate with relevant international organizations to encourage research in order to ensure optimum utilization of fishery resources. **Fulfils all parameters.**

Evaluation Parameters

Process: There is cooperation or interaction between international organizations to ensure optimum utilization of resource.

Current Status/Appropriateness/Effectiveness: There is evidence available to substantiate that such cooperation or interaction has taken place. There is data available that substantiates cooperation activities.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include outputs resulting from meetings or other research.

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 transboundary aquatic stocks.

FAO CCRF 12.7, 12.17

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** development of collaborative technical and research programs to improve understanding of the biology, environment and status of transboundary aquatic stocks. **Lacking in all parameters.**	There is **insufficient** development collaborative technical and research programs to improve understanding of the biology, environment and status of transboundary aquatic stocks. **Lacking in two parameters.**	There is **moderate** development of collaborative technical and research programs to improve understanding of the biology, environment and status of transboundary aquatic stocks. **Lacking in one parameter.**	The fishery management organizations directly, or in conjunction with other States, develop collaborative technical and research programs to improve understanding of the biology, environment and status of transboundary aquatic stocks. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if stock in not transboundary in nature.

Process: The collaborative technical and research programs to improve understanding of the biology, environment and status of transboundary aquatic stocks have been developed.

Current Status/Appropriateness/Effectiveness: There is evidence available to substantiate that such cooperation or interaction has taken place. There are data on such collaborations for transboundary aquatic stock understanding.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include outputs resulting from meetings or other research.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** analysis of research data, or publication of that data in a way that ensures confidentiality, where appropriate. **Lacking in all parameters.**	There is **insufficient** analysis of research data or publication of that data in a way that ensures confidentiality, where appropriate. **Lacking in two parameters.**	There is **moderate** analysis of research data, or publication of that data in a way that ensures confidentiality, where appropriate. **Lacking in one parameter.**	Data generated by research is analyzed and the results of such analyses published in a way that ensures confidentiality is respected, where appropriate. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that allows analysis of research data, ensuring, where appropriate, their confidentiality.

Current Status/Appropriateness/Effectiveness: There is evidence data was properly analyzed. Data was published respecting, where appropriate, confidentiality agreements. The rules of confidentiality are effectively respected.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or reports.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No safe target reference points have been established. **Lacking in all parameters.**	Target reference points have been established but considered **insufficiently** safe. **Lacking in two parameters.**	Target reference points have been established but considered **moderately** safe. **Lacking in one parameter.**	Target reference points have been established and are consistent with achieving MSY. **Fulfils all parameters.**

Evaluation Parameters

Process: A target reference point(s) or proxy has been officially established. Managers shall be able to apply technical measures to reduce fishing pressure in the event that reference points are approached or exceeded.

Current Status/Appropriateness/Effectiveness: The official target reference point or proxy is consistent with achieving maximum sustainable yield (MSY) or a suitable proxy, and there is evidence that it has been used as an objective by the management process. If there are historical instances of the reference point being approached or exceeded, managers have taken remedial action as appropriate. In the context of reference points, when data are insufficient to estimate reference points directly other measures of productive capacity can serve as reasonable substitutes or "proxies". Suitable proxies may be, for example, standardized cpue as a proxy for biomass or specific levels of fishing mortality and biomass which have proven useful in other fisheries and can be used with a reasonable degree of confidence in the absence of better defined levels. It is important to note that the use of a proxy may involve additional uncertainty, and if so, should trigger the use of extra precaution in the setting of biological reference points.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports or fishery management plans.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No safe limit reference points for exploitation have been established. **Lacking in all parameters.**	Limit reference point is established but considered **insufficiently** safe, and measures taken are **insufficient** to ensure that it will not be exceeded. **Lacking in two parameters.**	Limit reference point is established but considered **moderately** safe, and measures taken are **moderate** to ensure that it will not be exceeded. **Lacking in one parameter.**	There are established 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 are 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 are taken to decrease the fishing mortality (or its proxy) below that limit reference point. **Fulfils all parameters.**

Evaluation Parameters

Process: A scientifically based limit reference point or proxy has been officially established, together with the measure to be taken to ensure it will not be exceeded.

Current Status/Appropriateness/Effectiveness: The stock under assessment shall not currently be overfished (as defined by the competent Alaska authorities) according to the best available scientific understanding. The stock is currently estimated to be on the sustainable side of this reference point (e.g. SSB is above limit reference point, F is below F_{lim}, etc.). The limit reference point or proxy is consistent with avoiding recruitment overfishing and other severe negative impacts on the stock. There are mechanisms in place (e.g. harvest control rule or mechanism) to ensure that the level of fishing pressure is reduced if the limit reference point is approached or reached, and these mechanisms are consistent with ensuring to a high degree of certainty that the limit reference point will not be exceeded and that actions are taken to decrease the fishing mortality (or its proxy) below that limit reference point. The level of Blim should be set on the basis of historical information, applying an appropriate level of precaution according to the reliability of that information. In addition, an upper limit should be set on fishing mortality, Blim, which is the fishing mortality rate that, if sustained, would drive biomass down to the Blim level It is important to clarify that for salmon, spawning escapement goals are a suitable proxy for the intent of this clause. Escapement goal performance shall be considered as a suitable reference point for salmon management. Specific to this point, underperforming salmon stocks that do not meet their escapement goals shall be appropriately managed within the Stock of Concern framework by the State of Alaska and scored accordingly within the assessment.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports or fishery management plans.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** measurement of the position of the fishery in relation to the reference points exists, and maintenance of the level of fishing permitted is **not** commensurate (i.e. avoiding overfishing) with the current state of the fishery resources. **Lacking in all parameters.**	The measurement of the position of the fishery in relation to the reference points is carried out, but the maintenance of the level of fishing permitted is **insufficiently** commensurate (i.e. avoiding overfishing) with the current state of the fishery resources. **Lacking in two parameters.**	The measurement of the position of the fishery in relation to the reference points is carried out, but the maintenance of the level of fishing permitted is only **moderately** commensurate (i.e. avoiding overfishing) with the current state of the fishery resources. **Lacking in one parameter.**	Data and assessment procedures are installed measuring the position of the fishery in relation to the reference points. Accordingly, the stock under consideration is not overfished (i.e. it is above limit reference point or proxy) and the level of fishing permitted is 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. **Fulfils all parameters.**

Evaluation Parameters

Process: Data and assessment procedures (i.e. stock assessment process) are in place to measure the position of the fishery in relation to the target and limit reference points.

Current Status/Appropriateness/Effectiveness: The current status of the stock in relation to reference points, is used to determine the level of fishing permitted, to ensure the latter is commensurate with the current state of the fishery resources (i.e. close to or above target reference point and most importantly, not overfished or below its limit reference point or proxy) taking into account that long term changes in productivity can occur due to natural variability and/or impacts other than fishing. The stock shall be ideally positioned above the midway point between target and limit reference point. It is important to clarify that, for salmon, spawning escapement goals are a suitable proxy for the intent of this clause. Escapement goal performance shall be considered as a suitable reference point for salmon management. Specific to this point, underperforming salmon stocks that do not meet their escapement goals shall be appropriately managed within the Stock of Concern framework by the State of Alaska.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports or fishery management plans.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** agreement of management actions in the eventuality that data sources and analyses indicate that reference points have been exceeded. **Lacking in all parameters.**	There is an **insufficiently** effective agreement of management actions in the eventuality that data sources and analyses indicate that reference points have been exceeded. **Lacking in two parameters.**	There is a **moderately** effective agreement of management actions in the eventuality that data sources and analyses indicate that reference points have been exceeded. **Lacking in one parameter.**	Management actions are agreed in the eventuality that data sources and analyses indicate that these reference points have been exceeded. **Fulfils all parameters.**

Evaluation Parameters

Process: There is an agreed process or system in the eventuality that the data sources and analyses indicate that these reference points have been exceeded.

Current Status/Appropriateness/Effectiveness: In the eventuality that the current level of the stock has exceeded target or limit reference point, the agreed management action (i.e., harvest control rule or framework) shall be immediately implemented and fishing reduced or halted as necessary. The harvest control rule is effective at keeping or bringing back the stock at acceptable biological levels (i.e. avoid overfishing).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports or fishery management plans.

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[1].

FAO Eco (2009) 29.6

FAO Eco (2011) 36.7

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The precautionary approach is **not** applied to conservation, management and exploitation of living aquatic resources. **Lacking in all parameters.**	The precautionary approach is **insufficiently** applied to conservation, management and exploitation of living aquatic resources. **Lacking in two parameters.**	The precautionary approach is **moderately** applied to conservation, management and exploitation of living aquatic resources. **Lacking in one parameter.**	The precautionary approach is applied to conservation, management and exploitation of living aquatic resources in order to protect them and preserve the aquatic environment. **Fulfils all parameters.**

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

Evaluation Parameters

Process: There are management measures, regulations, and laws that command or direct for the use of the precautionary approach (PA) to conservation, management and exploitation of the aquatic resources under assessment. This could either take the form of an explicit commitment to the application of the PA, or could be evidenced by an over-arching approach applied throughout the management literature.

Current Status/Appropriateness/Effectiveness: There is evidence for the practical application of the PA to resource management and conservation. Note that the PA may be integrated in stock assessment practices, in specific management measures enacted for everyday fisheries operations, or other measures. Application of the PA takes in due account of stock enhancement procedures, where appropriate, and relevant uncertainties are taken into account using a suitable method of risk assessment, including those associated with the use of introduced or translocated species.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports, fishery management plans and other documents.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** implementation of the precautionary approach, taking into account 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. **Lacking in all parameters.**	There is **insufficient** implementation of the precautionary approach, taking into account 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. **Lacking in two parameters.**	There is **moderate** implementation of the precautionary approach, taking into account 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. **Lacking in one parameter.**	In implementing the precautionary approach, the State takes into account, *inter alia*, 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system in place under which the potential uncertainties listed above can be examined and taken into account during the decision-making process.

Current Status/Appropriateness/Effectiveness: There is evidence to demonstrate that in the fishery under assessment, uncertainties considered include those associated with 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.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports, fishery management plans and other documents.

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

FAO CCRF (1995) 7.5.1, 12.3

FAO Eco (2009) 29.6/32

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
In the absence of adequate scientific information, appropriate research is **not** initiated in a timely fashion. **Lacking in all parameters.**	In the absence of adequate scientific information, appropriate research is **sometime** initiated in a timely fashion. **Lacking in two parameters.**	In the absence of adequate scientific information, appropriate research is **often** initiated in a timely fashion. **Lacking in one parameter.**	In the absence of adequate scientific information, appropriate research is initiated in a timely fashion. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that identifies weaknesses in the scientific information available to fishery managers, and initiates additional research as necessary.

Current Status/Appropriateness/Effectiveness: There is evidence that such a process has been applied in the case of the fishery under assessment, including examples of initiated research. Depending on the situation, appropriate research or further analysis of the identified risk is initiated in a timely fashion.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or scientific reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
For new and exploratory fisheries, **no** procedures are in place for promptly applying precautionary management measures, including catch or effort limits, and **no** provisions have been made for their gradual introduction and development, by establishing cautious conservation measures while sufficient data are collected to evaluate the impacts of the new fishery. **Lacking in all parameters**.	For new and exploratory fisheries, **insufficiently effective** procedures are in place for promptly applying precautionary management measures, including catch or effort limits, and **insufficient** provisions have been made for their gradual introduction and development, by establishing cautious conservation measures while sufficient data are collected to evaluate the impacts of the new fishery. **Lacking in two parameters.**	For new and exploratory fisheries, **moderately effective** procedures are in place for promptly applying precautionary management measures, including catch or effort limits, and **moderate** provisions have been made for their gradual introduction and development, by establishing cautious conservation measures while sufficient data are collected to evaluate the impacts of the new fishery. **Lacking in one parameter.**	In the case of new or exploratory fisheries, States adopt as soon as possible cautious conservation and management measures, including, *inter alia*, catch limits and effort limits. Such measures 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 are implemented. The latter measures allow, if appropriate, for the gradual development of the fisheries. **Fulfils all parameters.**

Evaluation Parameters

Note. This clause is only applicable for new or exploratory fisheries.

Process: For new or exploratory fisheries there is a process that allows the immediate application of precautionary management measures and provisions, including catch or effort limits, and for the impact assessment of such fisheries on the long-term sustainability of the stocks.

Current Status/Appropriateness/Effectiveness: There is evidence for the implementation of these catch and effort limits, and other management measures including the impact assessment performed for these fisheries.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or scientific reports.

7.3 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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No contingency plan has been drawn up to introduce temporary management measures to ensure that fishing activity does not exacerbate serious threats to the resource caused by natural phenomena. **Lacking in all parameters.**	A contingency plan has been drawn up to introduce temporary management measures, but it is **insufficiently** effective to ensure that fishing activity does not exacerbate serious threats to the resource caused by natural phenomena. **Lacking in two parameters.**	A contingency plan has been drawn up to introduce temporary management measures, but it is only **moderately** effective to ensure that fishing activity does not exacerbate serious threats to the resource caused by natural phenomena. **Lacking in one parameter.**	Contingency plans are 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 are be based on best scientific evidence available. **Fulfils all parameters.**
Evaluation Parameters **Process**: There is an agreed contingency plan to avoid serious threat to the resource. **Current Status/Appropriateness/Effectiveness**: There is evidence of effectiveness for this contingency plan. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include fishery management plans, regulations or other records.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no effective** conservation and management measures designed to ensure long term sustainability of fishery resource at levels which promote the objective of optimum utilization based on verifiable and objective information. **Lacking in all parameters.**	There are **insufficiently effective** conservation and management measures designed to ensure long term sustainability of fishery resource at levels which promote the objective of optimum utilization based on verifiable and objective information. **Lacking in two parameters.**	There are **moderately effective** conservation and management measures designed to ensure long term sustainability of fishery resource at levels which promote the objective of optimum utilization based on verifiable and objective information. **Lacking in one parameter.**	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. **Fulfils all parameters.**

Evaluation Parameters

Process: The process by which management measures are developed for the fishery utilizes the best available scientific evidence, including traditional sources where these are verifiable, and also considers the cost-effectiveness and social impact of potential new measures.

Current Status/Appropriateness/Effectiveness: There is evidence that the management measures in place are effective at achieving the long-term optimum yield, which is defined by the FAO as "the harvest levels for a species that achieves the greatest overall benefits, including economic, social and biological considerations". If the stock has been maintained above the limit reference point this shall be taken as evidence that management measures are effective in avoiding overfishing.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports, fishery management plans, regulations or other management measures.

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 dependent predators.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating

			(Full Conformance)
Management targets are **not** 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 dependent predators. **Lacking in all parameters.**	Management targets are **insufficiently** 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 dependent predators. **Lacking in two parameters.**	Management targets are **moderately** 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 dependent predators. **Lacking in one parameter.**	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 dependent predators. **Fulfils all parameters.**
Evaluation Parameters **Process**: There is a process that allows for the creation of management targets consistent with achieving MSY or a proxy, 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 dependent predators. **Current Status/Appropriateness/Effectiveness**: There is evidence of management targets consistent with achieving MSY or a proxy, 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 dependent predators. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include stock assessment reports, fishery management plans, regulations or other management measures.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** evaluation of alternative conservation and	There is **insufficient** evaluation of alternative	There is **moderate** evaluation of alternative	In the evaluation of alternative conservation and

management measures with consideration of their cost-effectiveness and social impact. **Lacking in all parameters.**	conservation and management measures with consideration of their cost-effectiveness and social impact. **Lacking in two parameters.**	conservation and management measures with consideration of their cost-effectiveness and social impact. **Lacking in one parameter.**	management measures, their cost-effectiveness and social impact are considered. **Fulfils all parameters.**

Evaluation Parameters

Process: The process by which management measures are developed for the fishery allows for consideration of the cost-effectiveness and social impact of potential new or modified management measures.

Current Status/Appropriateness/Effectiveness: There is evidence for the consideration of the cost-effectiveness and social impact of potential new or modified management measures.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include reports, fishery management plans, regulations or other management measures.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Studies are **not** promoted on the cost, benefits, and effects of alternative management options for rationalizing fishing,	There is **insufficient** promotion of studies on the cost, benefits, and effects of alternative management options for rationalizing	There is **moderate** promotion of studies on the cost, benefits, and effects of alternative management options for rationalizing	Studies are promoted which provide an understanding of the costs, benefits and effects of alternative management options designed to rationalize

especially relating to excessive capacity of fishing effort. **Lacking in all parameters.**	fishing, especially relating to excessive capacity of fishing effort. **Lacking in two parameters.**	fishing, especially relating to excessive capacity of fishing effort. **Lacking in one parameter.**	fishing, in particular, options relating to excess fishing capacity and excessive levels of fishing effort. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a need and a process that allows, as appropriate, for studies to understand the costs, benefits, and effects of alternative management options designed to rationalize fishing.

Current Status/Appropriateness/Effectiveness: There is evidence for studies conducted on of alternative management options designed to rationalize fishing.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various evaluation or reports on fishing rationalization.

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

FAO CCRF (1995) 8.4.2

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** prohibition of dynamiting, poisoning and other comparable destructive fishing practices.	There is **insufficiently** effective prohibition of dynamiting, poisoning and other comparable destructive fishing practices.	There is **moderately** effective prohibition of dynamiting, poisoning and other comparable destructive fishing practices.	The State prohibits dynamiting, poisoning and other comparable destructive fishing practices.

Lacking in all parameters.	Lacking in two parameters.	Lacking in one parameter.	Fulfils all parameters.
Evaluation Parameters **Process**: There are management measures, or regulations, or laws that prohibit destructive fishing practices. **Current Status/Appropriateness/Effectiveness**: The regulations or laws effectively prohibit dynamiting, poisoning and other comparable destructive fishing practices. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include laws, fishery management plans, regulations, and enforcement data.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No attempts have been made to identify and consult with domestic parties (giving due recognition where	**Insufficient** attempts have been made to identify and consult with domestic parties (giving due	**Moderate** attempts have been made to identify and consult with domestic parties (giving due	States seek to identify domestic parties having a legitimate interest in the use and management of the

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) having a legitimate interest in the use and management of fisheries resource. **Lacking in all parameters.**	recognition 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) having a legitimate interest in the use and management of fisheries resource. **Lacking in two parameters.**	recognition 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) having a legitimate interest in the use and management of fisheries resource. **Lacking in one parameter.**	fishery. When deciding on use, conservation and management of the resource, due recognition is 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 are made to consult all the interested parties and gain their collaboration in achieving responsible fisheries. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that allows for identifying and consulting with domestic parties (giving due recognition 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) having a legitimate interest in the use and management of fisheries resource.

Current Status/Appropriateness/Effectiveness: In accordance with national laws and regulations, there is evidence that domestic parties having a legitimate interest in the use and management of the fishery (as described above) have been identified and encouraged to collaborate in the fisheries management process.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include laws, fishery management plans, regulations, and meeting records.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** measurement of fleet capacity operating in the fleet, and maintenance of regularly updated statistical data on all fishing	There is **insufficient** measurement of fleet capacity operating in the fleet, and maintenance of regularly updated statistical	There is **moderate** measurement of fleet capacity operating in the fleet, and maintenance of regularly updated, statistical	There is collection of measurement of fleet capacity operating in the fleet, and maintenance of regularly updated, statistical

operations allowed. Furthermore, mechanisms are **not** established where excess capacity exists, to reduce capacity to levels commensurate with sustainable use of the resource. **Lacking in all parameters.**	data on all fishing operations allowed. Furthermore, mechanisms are **insufficiently** established where excess capacity exists, to reduce capacity to levels commensurate with sustainable use of the resource. **Lacking in two parameters.**	data on all fishing operations allowed. Furthermore, mechanisms are **moderately** established where excess capacity exists, to reduce capacity to levels commensurate with sustainable use of the resource. **Lacking in one parameter.**	data on all fishing operations allowed. Furthermore, mechanisms are established where excess capacity exists, to reduce capacity to levels commensurate with sustainable use of the resource. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system to measure fleet capacity and maintain regularly updated data on all fishing operations.

Research has been conducted to determine or estimate the fishing capacity commensurate with the sustainable use of the resource. There are mechanisms in place to measure the total fishing capacity within the Unit of Certification, and to reduce this capacity if it is determined to exceed the sustainable level.

Current Status/Appropriateness/Effectiveness: There is evidence of the size of fleet capacity and of data describing fishing operation and that the mechanisms described above are successful at maintaining the effective fishing capacity of the Unit of Certification at a level commensurate with the sustainable use of the resource. Management mechanisms which restrict the application of fishing capacity, such as quotas, shall be considered valid mechanisms in relation to this parameter.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include, fleet reports or other documents or reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No technical measures are taken into account, where appropriate, in relation to fish size, mesh size or gear, closed seasons, closed areas,	**Insufficient** technical measures are taken into account, where appropriate, in relation to fish size, mesh size or gear, closed seasons,	**Moderate** technical measures are taken into account, where appropriate, in relation to fish size, mesh size or gear, closed seasons,	Technical measures are 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, and protection of juveniles or spawners. **Lacking in all parameters.**	closed areas, areas reserved for particular (e.g. artisanal) fisheries, and protection of juveniles or spawners. **Lacking in two parameters.**	closed areas, areas reserved for particular (e.g. artisanal) fisheries, and protection of juveniles or spawners. **Lacking in one parameter.**	areas reserved for particular (e.g. artisanal) fisheries, and protection of juveniles or spawners. **Fulfils all parameters.**

Evaluation Parameters

Process: The management system has taken into account technical measures, where and as appropriate to the fishery and stock under assessment, in relation to fish size, mesh size or gear, closed seasons, closed areas, areas reserved for particular (e.g. artisanal) fisheries, and protection of juveniles or spawners.

Current Status/Appropriateness/Effectiveness: Technical measures are related to sustainability objectives, ensuring sustainable exploitation of the target stock, and minimizing the potential negative impacts of fishery activities on non-target species, ETP species, and the physical environment.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various reports, fishery management plans, regulations or other.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** gear marking, in accordance with national legislation in order that the owner of the gear can be identified, that takes into account internationally recognizable gear marking systems.	There is **insufficient** gear marking, in accordance with national legislation in order that the owner of the gear can be identified, that takes into account internationally recognizable gear marking systems.	There is **moderate** gear marking, in accordance with national legislation in order that the owner of the gear can be identified, that takes into account internationally recognizable gear marking systems.	Fishing gear is marked in accordance with national legislation in order that the owner of the gear can be identified. Gear marking requirements take into account uniform and internationally recognizable

			gear marking systems.
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**
Evaluation Parameters **Process**: There is regulation for gear marking. **Current Status/Appropriateness/Effectiveness**: Fixed gear is marked according to national legislation, and lost gear can be identified back to owner. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include various fleet reports and regulations.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** allowance for recovery or active restoration for depleted stocks, resources and habitats critical to the well-being of such resources which have been adversely affected by fishing or other human activities.	There is **insufficient** allowance for recovery or active restoration for depleted stocks, resources and habitats critical to the well-being of such resources which have been adversely affected by fishing or other human activities.	There is **moderate** allowance for recovery or active restoration for depleted stocks, resources and habitats critical to the well-being of such resources which have been adversely affected by fishing or other human activities.	Measures are 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 are 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

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	activities are restored. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that identifies depleted stocks, resources and habitats. A depleted stock is usually a stock which had undergone overfishing. Accordingly, stock status is below limit reference point and the ability of the stock to recover has been impaired.

Current Status/Appropriateness/Effectiveness: There is evidence that where depleted or adversely affected stocks, resources and habitats have been identified, efforts have been made to ensure they are restored or allowed to recover.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include laws and regulations, fishery management plans, and stock assessment reports.

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*

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** encouragement for the development, implementation and use of selective, environmentally safe and cost effective gear, technologies and techniques that are sufficiently selective as to increase survival rates	There is **insufficient** encouragement for the development, implementation and use of selective, environmentally safe and cost effective gear, technologies and techniques that are sufficiently selective	There is **moderate** encouragement for the development, implementation and use of selective, environmentally safe and cost effective gear, technologies and techniques that are sufficiently selective	States and relevant groups from the fishing industry measure performance and encouragement of the development, implementation and use of selective, environmentally safe and cost effective gear,

of escaping fish, minimize catch, waste and discards of non-target species - both fish and non-fish species, and impacts on associated or dependent species. **Lacking in all parameters.**	as to increase survival rates of escaping fish, minimize catch, waste and discards of non-target species - both fish and non-fish species, and impacts on associated or dependent species. **Lacking in two parameters.**	as to increase survival rates of escaping fish, minimize catch, waste and discards of non-target species - both fish and non-fish species, and impacts on associated or dependent species. **Lacking in one parameter.**	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 are discouraged and the use of fishing gear and practices that increase survival rates of escaping fish are promoted. Inconsistent methods, practices and gears are phased out accordingly. **Fulfils all parameters.**

Evaluation Parameters

Process: The management system and relevant groups from the fishing industry have encouraged the development of technologies and operational methods to reduce waste and discard of the target species. 'Relevant groups' includes fishers, processers, distributers and marketers. There are mechanisms in place by which the selectivity, environmental impact and cost-effectiveness of gears included in the Unit of Certification are measured.

Current Status/Appropriateness/Effectiveness: Such technologies and operational methods have been implemented. The methods in use are effective in reducing waste and discards of the target species. There is evidence that the gears used in the fishery are appropriate, in terms of selectivity, environmental impact and cost-effectiveness, as assessed by the responsible scientific authority of the fishery. Methods shall be considered successful if there is evidence that the fishery under assessment is not causing significant risk of overfishing to non-target species.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various reports, regulations or other data.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Pollution, waste, and catch	Technologies, materials and	Technologies, materials and	Technologies, materials and

by lost or abandoned gear is **not** minimized. **Lacking in all parameters.**	operational methods or measures including, to the extent practicable, the development and use of selective, environmentally safe and cost effective fishing gear and techniques are **insufficiently** applied to minimize the loss of fishing gear, the ghost fishing effects of lost or abandoned fishing gear, pollution and waste. **Lacking in two parameters.**	operational methods or measures including, to the extent practicable, the development and use of selective, environmentally safe and cost effective fishing gear and techniques are **moderately** applied to minimize the loss of fishing gear, the ghost fishing effects of lost or abandoned fishing gear, pollution and waste. **Lacking in one parameter.**	operational methods or measures including, to the extent practicable, the development and use of selective, environmentally safe and cost effective fishing gear and techniques are applied to minimize the loss of fishing gear, the ghost fishing effects of lost or abandoned fishing gear, pollution and waste. **Fulfils all parameters.**

Evaluation Parameters

Process: There has been development of technologies, materials and operational methods that minimize the loss of fishing gear and the ghost fishing effects of lost or abandoned fishing gear and a system to minimize pollution, waste, catch by lost or abandoned gear.

Current Status/Appropriateness/Effectiveness: Technologies, materials and operational methods that minimize the loss of fishing gear and ghost fishing are applied whenever appropriate. Also, these measures are effective in minimizing, to the extent practicable, pollution, waste, and catch by lost or abandoned gear.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Information on new developments and requirements is **not** made available to all fishers.	Information on new developments and requirements is **insufficiently** made available to all fishers.	Information on new developments and requirements is **moderately** made available to all fishers.	The intent of fishing selectivity and fishing impacts related regulations is not circumvented by technical devices and information on new developments and requirements is made

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	available to all fishers. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system that makes available information on new developments and requirements to all fishers to avoid circumvention of fishing regulation.

Current Status/Appropriateness/Effectiveness: The adopted methods are successful and effective making known fishing regulation to the participants. Enforcement data are highlighting significant violations.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The implications of commercial scale introductions of a new gear or fishing operations on the fish habitat are **not** considered prior to its introduction. **Lacking in all parameters.**	The implications of commercial scale introductions of a new gear or fishing operations on the fish habitat are **insufficiently** considered prior to its introduction. **Lacking in two parameters.**	The implications of commercial scale introductions of a new gear or fishing operations on the fish habitat are **moderately** considered prior to its introduction. **Lacking in one parameter.**	Assessment and scientific evaluation is 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 are monitored. **Fulfils all parameters.**

Evaluation Parameters

Note: this clause is not applicable if new gear has not been introduced in the past 3 years.

Process: New gear has been recently introduced on a commercial scale within the last 3 years, or there is a plan to introduce new gear in the forthcoming future.

Current Status/Appropriateness/Effectiveness: An appropriate assessment of potential risks has been carried out. There is evidence to suggest that the assessment is adequate to support habitat conservation and fishery management purposes. Additionally, there is a monitoring regime in place.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
International cooperation is **not** encouraged for research programs for fishing selectivity and fishing methods strategies, and dissemination of information and technology transfer. **Lacking in all parameters.**	International cooperation is **insufficiently** encouraged for research programs for fishing selectivity and fishing methods strategies, and dissemination of information and technology transfer. **Lacking in two parameters.**	International cooperation is **moderately** encouraged for research programs for fishing selectivity and fishing methods strategies, and dissemination of information and technology transfer. **Lacking in one parameter.**	International cooperation is 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system of international information exchange to allow knowledge to be shared

Current Status/Appropriateness/Effectiveness: There is evidence for international information exchange, such as meeting records or other information.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data and reports.

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 behavior 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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating (Full Conformance)**
There are **no** standard methodologies developed for studies on fishing gear selectivity and methods been decided by States and relevant institutions involved. **Lacking in all parameters.**	There are **insufficient** standard methodologies developed for studies on fishing gear selectivity and methods been decided by States and relevant institutions involved. **Lacking in two parameters.**	There are **moderate** standard methodologies developed for studies on fishing gear selectivity and methods been decided by States and relevant institutions involved. **Lacking in one parameter.**	States and relevant institutions involved in the fishery collaborate in developing standard methodologies for research into fishing gear selectivity, fishing methods and strategies, and on the behavior 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. **Fulfils all parameters.**
Evaluation Parameters			

Process: There is collaborative research into fishing gear selectivity, fishing methods and strategies.

Current Status/Appropriateness/Effectiveness: There is evidence of such research, and the results have been applied accordingly in fisheries management.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** policies developed for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. **No** care has been taken in the selection of materials to use in constructing artificial reefs, in the selection of sites for their deployment, or to ensure that relevant conventions concerning the environment and the safety of navigation have been observed. **Lacking in all parameters.**	There are **insufficiently** effective policies developed for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. **Insufficient** care has been taken in the selection of materials to use in constructing artificial reefs, in the selection of sites for their deployment, or to ensure that relevant conventions concerning the environment and the safety of navigation have been observed. **Lacking in two parameters.**	There are **moderately** effective policies developed for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. **Moderate** care has been taken in the selection of materials to use in constructing artificial reefs, in the selection of sites for their deployment, or to ensure that relevant conventions concerning the environment and the safety of navigation have been observed. **Lacking in one parameter.**	Policies are developed for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. States 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. **Fulfils all parameters.**

Evaluation Parameters

Note: The use of artificial structures may be appropriate for some stocks but not necessary for all. This clause may therefore not be applicable if such structures are not practical or appropriate for stocks. The use of artificial structures should be considered appropriate if one or more of the species under assessment has benefitted from the use of artificial structures in

other fisheries, or if species with similar biological characteristics have benefitted from the use of artificial structures in other fisheries.

Process: There is a mechanism in place for identifying potential for increasing stock populations and enhancing fishing opportunities through the use of artificial structures. This mechanism ensures that where artificial structures are deemed appropriate, environmental protection, safety, and navigation are considered in their application.

Current Status/Appropriateness/Effectiveness: This mechanism has been applied to the fishery under assessment, resulting either in the conclusion that artificial structures are inappropriate or in the use of artificial structures. Care has been taken in the selection of materials to use in constructing artificial reefs, the selection of sites for their deployment and to ensure that relevant conventions concerning the environment and the safety of navigation have been observed.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No education and training programs for fishers have been implemented that meet international standards and guidelines. **Lacking in all parameters.**	**Insufficiently** effective education and training programs for fishers have been implemented that meet international standards and guidelines. **Lacking in two parameters.**	**Moderately** effective education and training programs for fishers have been implemented that meet international standards and guidelines. **Lacking in one parameter.**	States enhance through education and training programs the education and skills of fishers and, where appropriate, their professional qualifications. Such programs take into account agreed international standards and guidelines. **Fulfils all parameters.**

Evaluation Parameters

Process: There are implemented education programs for fishers.

Current Status/Appropriateness/Effectiveness: These programs are effective in training fishers, in line with international

standards and guidelines. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include various data, websites.

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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating** **(Full Conformance)**
There are **no** education and training measures making fishers aware of the key provisions of FAO CCRF and other applicable environmental and other standards essential for responsible fisheries. **Lacking in all parameters.**	There are **insufficient** education and training measures making fishers aware of the provisions of the key FAO CCRF and other applicable environmental and other standards essential for responsible fisheries. **Lacking in two parameters.**	There are **moderate** education and training measures making fishers aware of the provisions of the key FAO CCRF and other applicable environmental and other standards essential for responsible fisheries. **Lacking in one parameter.**	States, with the assistance of relevant international organizations, 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, as well as provisions of relevant international conventions and applicable environmental and other standards that are essential to ensure responsible fishing operations. **Fulfils all parameters.**
Evaluation Parameters			

Process: There are relevant measures of the code and other applicable environmental and other standards being exposed to fishers for their training.

Current Status/Appropriateness/Effectiveness: These programs are effective in training fishers, in line with international standards and guidelines and key CCRF principles.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data, websites.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** records kept of fishers, including wherever possible, qualification in accordance with their national laws. **Lacking in all parameters.**	There are **insufficient** records kept of fishers, including wherever possible, qualification in accordance with their national laws. **Lacking in two parameters.**	There are **moderately** appropriate records kept of fishers, including wherever possible, qualification in accordance with their national laws. **Lacking in one parameter.**	The State maintains, as appropriate, records of fishers which, whenever possible, contain information on their service and qualifications, including certificates of competency, in accordance with their national laws. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system to collect and maintain fishermen records.

Current Status/Appropriateness/Effectiveness: These records are considered accurate and effective for management purposes.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data or reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** mechanisms established for fisheries monitoring, surveillance and control. **Lacking in all parameters.**	There are **insufficiently** effective mechanisms established for fisheries monitoring, surveillance and control. **Lacking in two parameters.**	There are **moderately** effective mechanisms established for fisheries monitoring, surveillance and control. **Lacking in one parameter.**	Effective mechanisms are 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. **Fulfils all parameters.**
Evaluation Parameters			

Process: There are mechanisms established for fisheries monitoring, surveillance, control and enforcement.

Current Status/Appropriateness/Effectiveness: These mechanisms are effective, and include effective observer, inspection scheme, and vessel monitoring schemes where appropriate for the type of fishery under assessment. Monitoring, surveillance, control and enforcement mechanisms can be considered effective if they are sufficiently broad to cover the entirety of the Unit of Certification, there is evidence that rules and regulations are consistently enforced, and there is no evidence of frequent or widespread violation of fishery regulations. This could include relevant traditional, fisher or community approaches, provided their performance could be objectively verified. With respect to fisheries in the high seas, the legal obligations of UNCLOS and UNFSA have particular relevance. Evidence of the performance of the legal framework can be derived from the assessment of conformance with requirements covering compliance and enforcement.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include rules and regulations, enforcement reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The local management body does **not** maintain an updated record of all authorization to fish, or vessels are permitted to operate on the resource in question without specific authorization. **Lacking in all parameters.**	Fishing vessels are not allowed to operate on the resource in question without authorization, and the local management body maintain an **insufficiently** updated record of all authorization to fish. **Lacking in two parameters.**	Fishing vessels are not allowed to operate on the resource in question without authorization, and the local management body maintain a **moderately** updated record of all authorization to fish. **Lacking in one parameter.**	Fishing vessels are not allowed to operate on the resource in question without specific authorization. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism or system established to maintain a record of fishing authorizations.

Current Status/Appropriateness/Effectiveness: This mechanism is effective for maintaining updated records of fishing authorizations and ensuring fishing vessels operate with appropriate authorization.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various data.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Within a regional framework involving other regional bodies, the local management body is **not** cooperating in establishing systems for monitoring, control and surveillance and enforcement of measures regulating fishing operations in waters outside their national jurisdiction. **Lacking in all parameters.**	Within a regional framework involving other regional bodies, the local management body is cooperating **insufficiently** in establishing systems for monitoring, control and surveillance and enforcement of measures regulating fishing operations in waters outside their national jurisdiction. **Lacking in two parameters.**	Within a regional framework involving other regional bodies, the local management body is cooperating **moderately** in establishing systems for monitoring, control and surveillance and enforcement of measures regulating fishing operations in waters outside their national jurisdiction. **Lacking in one parameter.**	States involved in the fishery do, 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. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if the fishery does not occur outside the State's Exclusive Economic Zone.

Process: There is a mechanism or system established to conduct enforcement operations outside the country jurisdiction.

Current Status/Appropriateness/Effectiveness: This mechanism is enforcing operations in internationally occurring fisheries. If the stock under consideration is not transboundary, then the Standard need only be concerned with the effectiveness and suitability of the monitoring, surveillance, control and enforcement activities at the national level for the fishery of which the Unit of Certification is a part. If the Unit of Certification is part of a national fleet fishing on a transboundary stock, then it is still likely to be the effectiveness and suitability of the monitoring, surveillance, control and enforcement activities at the national level shall be assessed. If the Unit of Certification covers all the fishing on the stock under consideration, then the monitoring, surveillance, control and enforcement all of the national fleets is of concern and shall be assessed (to ensure full consideration of total fishing mortality on the stock under consideration).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include enforcement reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The State has **not** implemented internationally agreed measures 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 regional organizations or arrangements. **Lacking in all parameters.**	The State has **insufficiently** implemented internationally agreed measures 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 regional organizations or arrangements. **Lacking in two parameters.**	The State has **moderately** implemented internationally agreed measures 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 regional organizations or arrangements. **Lacking in one parameter.**	The state which is members of or participants in sub-regional or regional fisheries management organizations or arrangements implements 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 also proceed, as necessary, to achieve and to assist other States in achieving the objectives of the FAO CCRF, and 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. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if the fishery does not occur outside the State's Exclusive Economic Zone.

Process: There are regulations established against vessels flying the flag of non-members or non-participants country which may engage in activities which undermine the effectiveness of conservation and management measures established by regional bodies.

Current Status/Appropriateness/Effectiveness: These measures are effective in deterring such practices.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include enforcement or other reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
No Certificate of Registry has been issued to vessels.	An **insufficient** number of vessels have been issued the Certificate of Registry.	A **moderate** number of vessels have been issued the Certificate of Registry.	The flag State ensures 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 carry on board the Certificate of Registry and their authorization to fish.
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Not applicable if no foreign vessels fish in the State's EEZ, or if its vessels do not fish in high seas or in another State's EEZ.

Process: There are foreign vessels fishing in State's EEZ. State's EEZ vessels do not fish in high seas or in another State's EEZ.

Current Status/Appropriateness/Effectiveness: These vessels have been issued with a Certificate of Registry and they are required to carry it on board.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, regulations and other data or reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Vessels have **not** been 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. **Lacking in all parameters.**	An **insufficient** number of vessels have been 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. **Lacking in two parameters.**	A **moderate** number of vessels have been 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. **Lacking in one parameter.**	Fishing vessels authorized to fish on the high seas or in waters under the jurisdiction of a State other than the flag State, are 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. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if no foreign vessels fish in the State's EEZ or if its vessels do not fish in high seas or in another State's EEZ.

Process: There are foreign vessels fishing in State's EEZ. State's EEZ vessels do not fish in high seas or in another State's EEZ.

Current Status/Appropriateness/Effectiveness: Foreign vessels authorized to fish in the State's EEZ or its vessels fishing in another State's EEZ have been marked accordingly to international guidelines.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, regulations and other data or reports.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
National laws of adequate severity are **not** in place that provide for effective sanctions. **Lacking in all parameters.**	National laws of adequate severity are in place but **insufficient** to provide for effective sanctions. **Lacking in two parameters.**	National laws of adequate severity are in place but considered **moderate** in providing for effective sanctions. **Lacking in one parameter.**	National laws of adequate severity are in place that provide for effective sanctions. **Fulfils all parameters.**

Evaluation Parameters

Process: The system of national laws is of adequate severity to provide for effective sanctions.

Current Status/Appropriateness/Effectiveness: There is evidence to substantiate that national laws are of adequate severity to provide for effective sanctions.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, regulations and other data or reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Sanctions considered effective in severity to deter violators are **not** in force. **Lacking in all parameters.**	Sanctions are in force but **insufficiently** effective to affect 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. **Lacking in two parameters.**	Sanctions are in force but **moderately** effective to affect 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. **Lacking in one parameter.**	Sanctions applicable in respect of violations and illegal activities are adequate in severity to be effective in securing compliance and discouraging violations wherever they occur. Sanctions are 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. **Fulfils all parameters.**

Evaluation Parameters

Process: The system of sanctions in place is sufficiently severe to deter violations and illegal activities. The system shall be considered adequate in severity if the potential sanctions include fines, suspension or withdrawal of permission to fish, and confiscation of catch or equipment.

Current Status/Appropriateness/Effectiveness: There is evidence to substantiate that sanctions for violations of regulations (e.g., suspension, withdrawal or refusals of fishing permit or of the right to fish) are adequate in severity to secure compliance and discourage violations.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, regulations and other data or reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** enforcement measures for fishing vessels entitled to fly their State flag when the vessels have been found by the State to have contravened applicable conservation and management measures. **Lacking in all parameters.**	There are **insufficiently** effective enforcement measures available for fishing vessels entitled to fly their State flag when the vessels have been found by the State to have contravened applicable conservation and management measures. **Lacking in two parameters.**	There are **moderately** effective enforcement measures available for fishing vessels entitled to fly their State flag when the vessels have been found by the State to have contravened applicable conservation and management measures. **Lacking in one parameter.**	Flag States take enforcement measures with fishing vessels entitled to fly their flag if the vessels have been found by the State to have contravened applicable conservation and management measures. These enforcement measures will include, where appropriate, making the contravention of such measures an offence under national legislation. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if no foreign vessels fish in the State's EEZ or if its vessels do not fish in high seas or in another State's EEZ.

Process: If applicable, the system of enforcement measures is effective for foreign vessels fishing in the State's EEZ or for its vessels fishing in high seas or in another State's EEZ.

Current Status/Appropriateness/Effectiveness: There is evidence to substantiate enforcement action in these cases i.e., boarding, violations.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various laws, regulations and other data or enforcements reports.

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.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** assessment of the impacts of environmental factors on target stocks and associated species in the same ecosystems. **Lacking in all parameters.**	There is **insufficient** assessment of the impacts of environmental factors on target stocks and associated or dependent species in the same ecosystems, and the relationships among these species. **Lacking in two parameters.**	There is **moderate** assessment of the impacts of environmental factors on target stocks and associated or dependent species in the same ecosystems, and the relationships among these species. **Lacking in one parameter.**	The State assesses 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 the relationship among the populations in the ecosystem. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that allows for the assessment and monitoring of environmental factors (e.g. climatic, oceanographic) on target stocks and associated species in the same ecosystem, and to assess the relationships between species in the ecosystem.

Current Status/Appropriateness/Effectiveness: There is evidence that assessments have been conducted to determine the impacts of environmental factors on the target stock and on associated or dependent species (to the stock) in the same ecosystems, and on the relationships among these species. The results of these studies are in sufficient detail to allow informed management of the fishery.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports**.**

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

FAO CCRF (1995) 7.2.2

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** assessment and corrections where	There is **insufficient** assessment and corrections,	There is **moderate** assessment and corrections	Adverse environmental impacts on the

appropriate, of adverse environmental impacts on the resources from human activities. Most or all of the potential impacts listed in the evaluation parameters are not considered. **Lacking in all parameters.**	where appropriate, of adverse environmental impacts on the resources from human activities. Many of the potential impacts listed in the evaluation parameters are not considered. **Lacking in two parameters.**	where appropriate, of adverse environmental impacts on the resources from human activities. Some of the potential impacts listed in the evaluation parameters are not considered. **Lacking in one parameter.**	resources from human activities are assessed and, where appropriate, corrected. All potential impacts listed in the evaluation parameters are considered. **Fulfils all parameters**.

Evaluation Parameters

Process: There is a process that allows for the assessment of environmental impacts and their minimization or correction.

Current Status/Appropriateness/Effectiveness: There is evidence of appropriate assessments made to elucidate the impacts environmental impacts on the resources from human activities. Human impacts include both fishing and non-fishing activities. Examples may include overfishing of the target stock, significant bycatch of associated species, gear-habitat interactions, and where relevant, mining, dredging, pollution, introduction of exotic species, and conversion of important aquatic habitats.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)

There is **no** accounting of most probable adverse impacts of the fishery on the ecosystem/environment. Few or no probable impacts are considered. There is **no** use of generic evidence on the ecosystem impact of fishing for the unit of certification. **Lacking in all parameters.**	There is **insufficient** accounting of most probable adverse impacts of the fishery on the ecosystem/environment. Many probable impacts are not considered. There is **insufficient** availability or use of generic evidence on the ecosystem impact of fishing for the unit of certification. **Lacking in two parameters.**	There is **moderate** accounting of most probable adverse impacts of the fishery on the ecosystem/environment. Some probable impacts are not considered. There is **moderate** availability or use of generic evidence on the ecosystem impact of fishing for the unit of certification. **Lacking in one parameter.**	The most probable adverse impacts of the fishery on the ecosystem/environment are 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 is necessary to ascertain the adequacy of mitigation measures. **Fulfils all parameters.**

Evaluation Parameters

Process: There is specific information on the ecosystem impacts of fishing for the unit of certification present. Also, there is a mechanism in place by which the most probable adverse impacts of the fishery on the ecosystem and environment are assessed using the best available scientific knowledge (which may include traditional knowledge where this is verifiable), and management objectives aimed at avoiding these impact are developed.

Current Status/Appropriateness/Effectiveness: There are management measures in place which have been developed to achieve the objectives described in the process parameter. All probable negative impacts are considered. Such impacts may include significant impacts on non-target fishery resources (including discards), gear-habitat interactions, endangered, threatened, protected (ETP) species interactions, and food web interactions. If information has been utilized from generic evidence based on similar fishery situations, based on the risk of severe adverse impact, the information shall be of higher precision for higher risk. For example, keystone species or species with relative low growth rates, high catchability, or fisheries with significant ETP, bycatch of non-target fishery resources (or non-target stocks or species or harvests or discards), or with important concerns for gear–habitat interactions can be considered high risk. If information specific to the unit of certification area is available, generic evidence based on similar fishery situations may not be necessary.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating	Medium Confidence Rating	Medium Confidence Rating	High Confidence Rating

(Critical NC)	(Major NC)	(Minor NC)	(Full Conformance)
There is **no** addressing of significant impacts employing an immediate management response or a further analysis of the identified risk. **Lacking in all parameters.**	Impacts that are likely to have serious consequences are **insufficiently** addressed employing an immediate management response or a further analysis of the identified risk. **Lacking in two parameters.**	Impacts that are likely to have serious consequences are **moderately** addressed employing an immediate management response or a further analysis of the identified risk. **Lacking in one parameter.**	Impacts that are likely to have serious consequences are 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process that allows for impacts that are likely to have serious consequences to be addressed.

Current Status/Appropriateness/Effectiveness: If there are impacts likely to have serious consequences, there is evidence available to support the use 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.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** application of appropriate measures to minimize catch, waste and discards of non-target species (both fish and non-fish species) and impacts on associated, dependent or	There is **insufficient** application of appropriate measures to minimize catch, waste and discards of non-target species (both fish and non-fish species) and impacts on associated, dependent or endangered	There is **moderate** application of appropriate measures to minimize catch, waste and discards of non-target species (both fish and non-fish species) and impacts on associated, dependent or endangered	Appropriate measures are applied to minimize catch, waste and discards of non-target species (both fish and non-fish species) and impacts on associated, dependent or endangered

endangered species. **Lacking in all parameters.**	species. **Lacking in two parameters.**	species. **Lacking in one parameter.**	species. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism by which management measures are developed to minimize the catch, waste and discarding of non-target species and the impact of the fishery on associated, dependent and ETP species. This system shall include the development of specific management objectives.

Current Status/Appropriateness/Effectiveness: There are measures in place to minimize catch, waste, and discards of non-target species (both fish and non-fish species). These measures are considered effective at achieving the specific management objectives described in the process parameter.

There are measures in place to minimize impacts on associated, dependent, or endangered species. These measures are considered effective at achieving the specific management objectives described in the process parameter.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** 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	There are **insufficiently** effective management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any	There are **moderately** effective management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any	There are effective management objectives that seek to ensure that endangered species are protected from adverse impacts resulting from interactions with the unit of certification and any

enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. **Lacking in all parameters.**	associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. **Lacking in two parameters.**	associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. **Lacking in one parameter.**	associated culture or enhancement activity, including recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process in place that allows for the creation of 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. A note on data collections. The adequacy of data relates primarily to the quantity and type of data collected (including sampling coverage) and depends crucially on the nature of the systems being monitored and purposes to which the data are being put. Some analysis of the precision resulting from sampling coverage would normally be part of an assessment of adequacy and reliability. The currency of data is important inter alia because its capacity for supporting reliable assessment of current status and trends declines as it gets older. The requirements for data collection are focussed on the effects of the unit of certification on endangered species.

Current Status/Appropriateness/Effectiveness: There is evidence of effective management objectives in place in the fishery under assessment (e.g. in a fishery management plan) 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.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include fishery management plans, stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Non-target catches, including discards, of stocks other than the "stock under consideration" are **not** monitored and may threaten these non-target stocks with serious risk of extinction, recruitment overfishing or	Non-target catches, including discards, of stocks other than the "stock under consideration" are **insufficiently** monitored and may threaten these non-target stocks with serious risk of extinction,	Non-target catches, including discards, of stocks other than the "stock under consideration" are **moderately** monitored and may threaten these non-target stocks with serious risk of extinction,	Non-target catches, including discards, of stocks other than the "stock under consideration" are monitored and may 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 are **not** taken. **Lacking in all parameters.**	recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. If such impacts arise, effective remedial action are **insufficiently** taken. **Lacking in two parameters.**	recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible. If such impacts arise, effective remedial action are **moderately** taken. **Lacking in one parameter.**	other impacts that are likely to be irreversible or very slowly reversible. If such impacts arise, effective remedial action are taken. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system to monitor non-target catches and discards of stocks other than the stock under consideration, and to determine the likelihood that these catches and discards represent a significant risk to the affected species. The assessment of risks shall support the achievement of appropriate management objectives for bycatch species.

Current Status/Appropriateness/Effectiveness: If catches endanger these stocks with serious risk of extinction, recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible serious risk of extinction, effective remedial action is taken by the management organization. Examples of irreversible or very slowly reversible effects on bycatch species include excessive depletion of very long-lived organisms. To mitigate effects that are likely to be irreversible or very slowly reversible requires those effects to be made less severe such that they are no longer likely to be irreversible or very slowly reversible. Examples of management measures may include incidental take allowances, bycatch caps, prohibited retention, safe release practices, or use of bycatch reduction devices or practices. Remedial action shall be considered effective if it reduces the impact of the fishery on non-target species to the point where there is no longer a risk of extinction.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** consideration of the role of the "stock under consideration" in the food web, especially if it is a key prey species in the ecosystem, to avoid severe adverse impacts on dependent predators.	There is **insufficient** consideration of the role of the "stock under consideration" in the food web, especially if it is a key prey species in the ecosystem, with objectives and measures to avoid severe adverse impacts on	There is **moderate** consideration of the role of the "stock under consideration" in the food web, especially if it is a key prey species in the ecosystem, with objectives and measures to avoid severe adverse impacts on	The role of the "stock under consideration" in the food web is considered, and for a key prey species in the ecosystem, with objectives and management measures are in place to avoid severe adverse impacts on

Lacking in all parameters.	dependent predators. **Lacking in two parameters.**	dependent predators. **Lacking in one parameter.**	dependent predators. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place by which the role of the stock under consideration in the food web is assessed and monitored, and its relative importance as a prey species is determined. If the species is considered by the relevant scientific authority to be an important prey species, there shall be specific management objectives relating to minimizing the impacts of the fishery on dependent predators. The FAO Guidelines require that all sources of fishing mortality on the stock under consideration are taken into account (whether or not it is a prey species) in assessing the state of the stock under consideration, including discards, unobserved mortality, incidental mortality, unreported catches and catches in other fisheries.

Current Status/Appropriateness/Effectiveness: There are management measures in place which have been developed to achieve the management objectives described in the process parameter, and there is evidence to demonstrate that they are successful to this end. If the species under assessment is not considered to be a key prey species, then this parameter shall be considered fulfilled.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** introduction and enforcement of laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating there to (MARPOL 73/78). **Lacking in all parameters.**	There is insufficiently **effective** introduction and enforcement of laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating there to (MARPOL 73/78). **Lacking in two parameters.**	There is moderately **effective** introduction and enforcement of laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating there to (MARPOL 73/78). **Lacking in one parameter.**	The State has introduced and enforces laws and regulations based on the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating there to (MARPOL 73/78). **Fulfils all parameters.**

Evaluation Parameters **Process**: The appropriate regulations have been implemented. **Current Status/Appropriateness/Effectiveness**: These regulations and their enforcement are effective and in line with the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating there to (MARPOL 73/78). **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** knowledge basis for avoidance, minimization or mitigation of impacts on essential habitats and on habitats that are highly vulnerable to damage by the fishing gear involved or for consideration of the full spatial range of relevant habitat. **Lacking in all parameters.**	There is an **insufficient** knowledge basis for avoidance, minimization or mitigation of impacts on essential habitats and on habitats that are highly vulnerable to damage by the fishing gear involved or for consideration of the full spatial range of relevant habitat.	There is a **moderate** knowledge basis for avoidance, minimization or mitigation of impacts on essential habitats and on habitats that are highly vulnerable to damage by the fishing gear involved or for consideration of the full spatial range of relevant habitat.	There is 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 are avoided, minimized or mitigated. In assessing fishery impacts, the full spatial range of the relevant habitat are considered, not

	Lacking in two parameters.	**Lacking in one parameter.**	just that part of the spatial range that is potentially affected by fishing. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place by which the potential impacts of the fishery upon habitats essential to the stock under consideration and on habitats that are highly vulnerable to damage are identified. This or a similar mechanism shall also be in place to identify habitats which are highly vulnerable to fishery activities by the Unit of Certification. The information provided by these mechanisms shall be used to produce specific management objectives related to avoiding significant negative impacts on habitats. The knowledge of the habitats in question can therefore include relevant traditional, fisher or community knowledge, provided its validity can be objectively verified (i.e. the knowledge has been collected and analysed though a systematic, objective and well-designed process, and is not just hearsay). When identifying highly vulnerable habitats, their value to ETP species shall be considered, with habitats essential to ETP species being categorized accordingly.

Current Status/Appropriateness/Effectiveness: There are management measures in place which have been developed to achieve the objectives described in the process parameter, and have been successful in doing so.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating** **(Full Conformance)**
Research is **not** promoted on the environmental and social impacts of fishing gear and its impacts on biodiversity and coastal fishing communities. **Lacking in all parameters.**	**Insufficient** research is promoted on the environmental and social impacts of fishing gear and its impacts on biodiversity and coastal fishing communities. **Lacking in two parameters.**	**Moderate** levels of research are promoted on the environmental and social impacts of fishing gear and its impacts on biodiversity and coastal fishing communities. **Lacking in one parameter.**	Research is 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. **Fulfils all parameters.**

Evaluation Parameters

Process: Research is promoted on the environmental and social impacts of fishing gear and its impacts on biodiversity and coastal fishing communities, as applicable to the fishery.

Current Status/Appropriateness/Effectiveness: There is evidence for this research, and is it considered appropriate for overall fisheries management purposes.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **not** 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). **Lacking in all parameters.**	There are **insufficiently** effective 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). **Lacking in two parameters.**	There are **moderately** effective 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). **Lacking in one parameter.**	There are effective 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). **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process to set 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).

Current Status/Appropriateness/Effectiveness: There is evidence of 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).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include fishery management, stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** outcome indicators 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. **Lacking in all parameters.**	There are **insufficiently** effective outcome indicators 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. **Lacking in two parameters.**	There are **moderately** effective outcome indicators 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. **Lacking in one parameter.**	There are effective outcome indicators 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process in place that allows for the creation of effective outcome indicators 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.

Current Status/Appropriateness/Effectiveness: There is evidence for established outcome indicators (e.g. in a fishery management plan or other regulation) that seek to ensure that endangered species are protected (through state or federal regulations) 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. Management objectives shall be achieved accordingly.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include fishery management plans, stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** outcome indicator(s) consistent with achieving management objectives for avoidance, minimization or mitigation of impacts 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. **Lacking in all parameters.**	There are **insufficiently** effective outcome indicator(s) consistent with achieving management objectives for avoidance, minimization or mitigation of impacts 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. **Lacking in two parameters.**	There are **moderately** effective outcome indicator(s) consistent with achieving management objectives for avoidance, minimization or mitigation of impacts 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. **Lacking in one parameter.**	There are effective outcome indicator(s) consistent with achieving management objectives for avoidance, minimization or mitigation of impacts 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place that allows the establishment of outcome indicator(s) consistent with achieving management objectives for avoidance, minimization or mitigation of impacts 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.

Current Status/Appropriateness/Effectiveness: There are outcome indicators and management measures in place which have been developed to achieve the objectives described in the process parameter, and have been successful in doing so.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** 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. **Lacking in all parameters.**	There are **insufficiently** effective 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. **Lacking in two parameters.**	There are **moderately** effective 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. **Lacking in one parameter.**	There are effective 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place that allows the establishment of 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. Mortality in Alaska is usually accounted for all removals of given species. The State and federal fish accounting systems operate in depth and make an explicit effort to document all removals, to confirm with regulations in force. The assessors shall ensure that all removals are accounted in the system (fish ticket, eLanding) for stock assessment and management purposes.

Current Status/Appropriateness/Effectiveness: There is evidence for outcome indicators and management measures in place which have been developed to achieve the objectives described in the process parameter, and have been successful in doing

so.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various stock and ecosystems assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** 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 are **not** reversible and cause serious or irreversible harm to the natural ecosystem's structure, processes and function. **Lacking in all parameters.**	There are **insufficiently** effective 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 are **insufficiently** reversible and cause serious or irreversible harm to the natural ecosystem's structure, processes and function. **Lacking in two parameters.**	There are **moderately** effective 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 are **moderately** reversible and cause serious or irreversible harm to the natural ecosystem's structure, processes and function. **Lacking in one parameter.**	There are effective 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 are reversible and cause serious or irreversible harm to the natural ecosystem's structure, processes and function. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process to allow for drafting effective 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. There is also a process to allow any modifications to the habitat for enhancing the stock under consideration and serious or irreversible harm to the natural ecosystem's structure, processes and function to be reversed.

Current Status/Appropriateness/Effectiveness: There is evidence for 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 are reversible and cause serious or irreversible harm to the natural ecosystem's structure, processes and function.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Section 13 of the standard is only applicable when the fishery under assessment utilizes fisheries enhancement techniques.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The effects of aquaculture on genetic diversity and ecosystem integrity are **not** evaluated scientifically. **Lacking in all parameters.**	The effects of aquaculture on genetic diversity and ecosystem integrity are **insufficiently** evaluated, utilizing best available scientific information. **Lacking in two parameters.**	The effects of aquaculture on genetic diversity and ecosystem integrity are **moderately** evaluated, utilizing best available scientific information. **Lacking in one parameter.**	States promotes 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is evaluation of the effects of aquaculture development on genetic diversity and ecosystem integrity, based on the best available scientific information.

Current Status/Appropriateness/Effectiveness: The research is deemed appropriate for maintaining genetic diversity and ecosystem integrity. 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.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and assessment reports.

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, minimizing adverse impacts on ecosystem structure and function.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
In the case of enhanced fisheries, the fishery management system does **not** take due regard of the natural production processes and is **not** appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimizing adverse impacts on ecosystem structure and function. **Lacking in all parameters.**	In the case of enhanced fisheries, the fishery management system take **insufficient** regard of the natural production processes and is **insufficiently** appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimizing adverse impacts on ecosystem structure and function. **Lacking in two parameters.**	In the case of enhanced fisheries, the fishery management system take **moderate** regard of the natural production processes and is **moderately** appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimizing adverse impacts on ecosystem structure and function. **Lacking in one parameter.**	In the case of enhanced fisheries, the fishery management system take due regard of the natural production processes and is appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimizing adverse impacts on ecosystem structure and function. **Fulfils all parameters.**

Evaluation Parameters

Process: There are processes through which the management system can take due regard of the natural production processes, and which are appropriate for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, and for minimizing adverse impacts on ecosystem structure and function.

Current Status/Appropriateness/Effectiveness: There is evidence that the management system has taken due regard of the natural production processes (natural and enhanced populations) and is effective for the conservation of genetic diversity, biodiversity, protection of endangered species, maintenance of integrity of aquatic communities and ecosystems, minimizing adverse impacts on ecosystem structure and function.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There are **no** regularly updated aquaculture development strategies and plans, to ensure that aquaculture development is ecologically sustainable and to allow the rational use of resources shared by aquaculture and other activities. **Lacking in all parameters.**	Regularly updated aquaculture development strategies and plans, are **insufficiently** appropriate to ensure that aquaculture development is ecologically sustainable and to allow the rational use of resources shared by aquaculture and other activities. **Lacking in two parameters.**	Regularly updated aquaculture development strategies and plans, are **moderately** appropriate to ensure that aquaculture development is ecologically sustainable and to allow the rational use of resources shared by aquaculture and other activities. **Lacking in one parameter.**	States 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There are defined strategies and plans for aquaculture development in accordance with ecological sustainability and rational use of resources shared by aquaculture and other activities.

Current Status/Appropriateness/Effectiveness: If studies have concluded that aquaculture developments are ecologically sustainable in the interested unit of certification area, the aquaculture developments allow the rational sharing of resources with other activities.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The livelihoods of local communities, and their access to fishing grounds, have been **negatively** affected by aquaculture developments. **Lacking in all parameters.**	Livelihoods of local communities, and their access to fishing grounds, are affected by aquaculture developments to a **significant degree**. **Lacking in two parameters.**	Livelihoods of local communities, and their access to fishing grounds, are affected by aquaculture developments to a **small degree**. **Lacking in one parameter.**	The state ensures that the livelihoods of local communities, and their access to fishing grounds, are not negatively affected by aquaculture developments. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place by which the impacts of aquaculture developments on local communities and access to fishing grounds are predicted and monitored. The outputs of this mechanism are used to define management objectives related to minimizing the negative impacts of aquaculture developments.

Current Status/Appropriateness/Effectiveness: Measures, regulations and policies are in place which have been designed to achieve the objectives described in the process parameter, and have been successful in doing so.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Procedures are **not** in place for environmental assessment and monitoring to minimize adverse ecological and related economic and social changes from aquaculture. **Lacking in all parameters.**	Procedures are in place for environmental assessment and monitoring but are **insufficiently** effective to minimize adverse ecological and related economic and social changes from aquaculture. **Lacking in two parameters.**	Procedures are in place for environmental assessment and monitoring but are only **moderately** effective to minimize adverse ecological and related economic and social changes from aquaculture. **Lacking in one parameter.**	The State ensures that the livelihoods of local communities, and their access to fishing grounds, are not negatively affected by aquaculture developments. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place by which the potential environmental impacts of fisheries enhancement and aquaculture are predicted and monitored. This mechanism shall be used to develop management objectives related to the minimization of adverse ecological changes.

Current Status/Appropriateness/Effectiveness: Management measures and regulations are in place which have been developed to achieve the management objectives described in the process parameter, and are successful.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
With due regard to the assessment approach employed, stock assessment of fisheries that are enhanced through aquaculture inputs does **not** consider the separate contributions from aquaculture and natural production. **Lacking in all parameters.**	With due regard to the assessment approach employed, stock assessment of fisheries that are enhanced through aquaculture inputs **insufficiently** considers the separate contributions from aquaculture and natural production. **Lacking in two parameters.**	With due regard to the assessment approach employed, stock assessment of fisheries that are enhanced through aquaculture inputs **moderately** considers the separate contributions from aquaculture and natural production. **Lacking in one parameter.**	With due regard to the assessment approach employed, stock assessment of fisheries that are enhanced through aquaculture inputs consider the separate contributions from aquaculture and natural production. **Fulfils all parameters.**

Evaluation Parameters

Process: As appropriate, there is a mechanism for stock assessment of fisheries that are enhanced through aquaculture inputs which considers the separate contributions from aquaculture and natural production.

Current Status/Appropriateness/Effectiveness: There is evidence for stock assessment of fisheries that are enhanced through aquaculture inputs which considers the separate contributions from aquaculture and natural production.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and assessment reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Modifications to the habitat for enhancing the stock under consideration is **not** reversible and cause serious or irreversible harm to the natural ecosystem's structure and function. **Lacking in all parameters.**	Modifications to the habitat for enhancing the stock under consideration is **insufficiently** reversible and may cause serious or irreversible harm to the natural ecosystem's structure and function. **Lacking in two parameters.**	Modifications to the habitat for enhancing the stock under consideration is **moderately** reversible and may cause serious or irreversible harm to the natural ecosystem's structure and function. **Lacking in one parameter.**	Modifications 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a system that allows for the prevention or reversing of habitat modifications that may cause serious or irreversible harm to the natural ecosystem's structure and function.

Current Status/Appropriateness/Effectiveness: There is evidence that are no or minimal habitat modifications and that these modifications to the habitat for enhancing the stock under consideration are reversible and cause none to insignificant harm to the natural ecosystem's structure and function.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and assessment reports.

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.

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Efforts are **not** undertaken to minimize the harmful effects of introducing non-native species or genetically altered stocks used for aquaculture, including culture-based fisheries. **Lacking in all parameters.**	Efforts are undertaken but are deemed **insufficient** to minimize the harmful effects of introducing non-native species or genetically altered stocks used for aquaculture, including culture-based fisheries. **Lacking in two parameters.**	Efforts are undertaken but are deemed **moderately** successful in minimizing the harmful effects of introducing non-native species or genetically altered stocks used for aquaculture, including culture-based fisheries. **Lacking in one parameter.**	Efforts are undertaken to minimize the harmful effects of introducing non-native species or genetically altered stocks used for aquaculture including culture-based fisheries. **Fulfils all parameters.**

Evaluation Parameters

Process: There are introduced non-native species or genetically altered stocks used for aquaculture, including culture based fisheries.

Current Status/Appropriateness/Effectiveness: Efforts are made to minimize recognized harmful issues or effects, and, these efforts are considered effective.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Steps are **not** taken to minimize adverse genetic, disease and other effects of escaped farmed fish on wild stocks. **Lacking in all parameters.**	**Insufficient** steps are taken to minimize adverse genetic, disease and other effects of escaped farmed fish on wild stocks. **Lacking in two parameters.**	**Moderate** steps are taken to minimize adverse genetic, disease and other effects of escaped farmed fish on wild stocks. **Lacking in one parameter.**	Steps are taken to minimize adverse genetic, disease and other effects of escaped farmed fish on wild stocks. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process capable to deal with adverse genetic, disease and other effects of escaped farmed fish on wild stocks.

Current Status/Appropriateness/E**ffectiveness**: The management measures in place are effective in minimizing adverse genetic, disease and other effects of escaped farmed fish on wild stocks.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating	Medium Confidence	Medium Confidence	High Confidence Rating

(Critical NC)	Rating (Major NC)	Rating (Minor NC)	(Full Conformance)
Research is **not** promoted to develop culture techniques for endangered species to protect, rehabilitate and enhance their stocks. The critical need to conserve genetic diversity of endangered species is **not** taken into account. **Lacking in all parameters.**	Research is **insufficiently** promoted to develop culture techniques for endangered species to protect, rehabilitate and enhance their stocks. The critical need to conserve genetic diversity of endangered species is **insufficiently** taken into account. **Lacking in two parameters.**	Research is **moderately** promoted to develop culture techniques for endangered species to protect, rehabilitate and enhance their stocks. The critical need to conserve genetic diversity of endangered species is **moderately** taken into account. **Lacking in one parameter.**	Research is 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. **Fulfils all parameters.**

Evaluation Parameters

Not applicable if enhancement activities are not geared towards endangered species rehabilitation.

Process: There is a process in place to recognize if the fishery in question is composed of one or more endangered species in need of rehabilitation.

Current Status/Appropriateness/Effectiveness: Research into rehabilitation techniques for endangered species and the conservation of genetic diversity is being promoted. The research has taken into account the critical need to conserve genetic diversity of endangered species.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)

There is **no** support of sustainable aquaculture practices that protect transboundary aquatic ecosystems in accord with international norms. **Lacking in all parameters.**	There is **insufficient** support of sustainable aquaculture practices that protect transboundary aquatic ecosystems in accord with international norms. **Lacking in two parameters.**	There is **moderate** support of sustainable aquaculture practices that protect transboundary aquatic ecosystems in accord with international norms. **Lacking in one parameter.**	States protect transboundary aquatic ecosystems by supporting responsible aquaculture practices within their national jurisdiction and by cooperation in the promotion of sustainable aquaculture practices. **Fulfils all parameters.**

Evaluation Parameters

Process: Management measures are in place to support sustainable aquaculture practices and these are in accord with international practices.

Current Status/Appropriateness/Effectiveness: These measures are effective in promoting national sustainable aquaculture practices.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

13.7 State shall, with due respect to their neighboring 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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** ensuring of responsible choice of species, sites and management procedures	There is **insufficient** ensuring of responsible choice of species, sites and management procedures	There is **moderate** ensuring of responsible choice of species, sites and management procedures	The State, with due respect to their neighboring States and in accordance with international law, ensures responsible choice

promoted in line with international law, where this could affect transboundary aquatic ecosystems. **Lacking in all parameters.**	promoted in line with international law, where this could affect transboundary aquatic ecosystems. **Lacking in two parameters.**	promoted in line with international law, where this could affect transboundary aquatic ecosystems. **Lacking in one parameter.**	of species, siting and management of aquaculture activities which could affect transboundary aquatic ecosystems. **Fulfils all parameters.**

Evaluation Parameters

Process: Management measures are in place ensuring responsible choice of species, siting and management of aquaculture activities which could affect transboundary aquatic ecosystems.

Current Status/Appropriateness/Effectiveness: There is evidence for the responsible in-country choice of species, sites and management procedures. This is considered effective in minimizing potential risks to transboundary aquatic ecosystems.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

FAO CCRF (1995) 9.2.3

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** appropriate consultation with a neighboring state with adjacent jurisdiction prior to the introduction of exotic species.	There is **insufficiently** appropriate consultation with a neighboring state with adjacent jurisdiction prior to the introduction of exotic species.	There is **moderately** appropriate consultation with a neighboring state with adjacent jurisdiction prior to the introduction of exotic species.	The State consults with their neighboring States, as appropriate, before introducing non-indigenous species into transboundary aquatic ecosystems.

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Process: There is a policy in place dictating the procedure to be followed prior to the introduction of non-indigenous species.

Current Status/Appropriateness/Effectiveness: This policy includes a requirement that neighboring states be consulted prior to the introduction of a non-indigenous species into a transboundary area. If there is evidence that such an introduction has occurred in the past, there shall also be evidence that the policy has been followed.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
There is **no** regional public database on aquaculture enterprises compiled with their species and characteristics to facilitate international cooperation.	There is a regional public database on aquaculture enterprises but it is **insufficiently** compiled with their species and characteristics to facilitate	There is a regional public database on aquaculture enterprises but it is **moderately** compiled with their species and characteristics to facilitate	States establish appropriate mechanisms, such as databases and information networks to collect, share and disseminate data related to their aquaculture activities to

	international cooperation.	international cooperation.	facilitate cooperation on planning for aquaculture development at the national, sub-regional, regional and global level. **Fulfils all parameters.**
Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	
Evaluation Parameters **Process**: A publically available database has been established. **Current Status/Appropriateness/Effectiveness**: The information is disseminated properly and the database is available for public access so to facilitate international cooperation. **Evidence Basis:** Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.			

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The international code of practice for introductions or transfers of aquatic organisms is **not** observed.	The international code of practice for introductions or transfers of aquatic organisms is **insufficiently** observed.	The international code of practice for introductions or transfers of aquatic organisms is **moderately** observed.	States cooperate in the elaboration, adoption and implementation of international codes of practice and procedures for introductions and transfers of aquatic organisms.

Lacking in all parameters.	**Lacking in two parameters.**	**Lacking in one parameter.**	**Fulfils all parameters.**

Evaluation Parameters

Process: There is an international code of practice developed.

Current Status/Appropriateness/Effectiveness: The code of practice is being effectively observed by the country of interest.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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 brood stocks, the introduction of non-native species, and in the production, sale and transport of eggs, larvae, fry, brood stock 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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
The State, in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, has **not** encouraged	The State, in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, has **insufficiently**	The State, in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, has **moderately**	The State in order to minimize risks of disease transfer and other adverse effects on wild and cultured stocks, encourage adoption of

adoption of appropriate practices in the genetic improvement of brood stocks, the introduction of non-native species, the production, sale and transport of eggs, larvae or fry, brood stock, or other live materials, and in the preparation and implementation of appropriate national codes of practice and procedures to this effect. **Lacking in all parameters.**	encouraged adoption of appropriate practices in the genetic improvement of brood stocks, the introduction of non-native species, and in the production, sale and transport of eggs, larvae or fry, brood stock, or other live materials, and preparation and implementation of appropriate national codes of practice and procedures to this effect. **Lacking in two parameters.**	encouraged adoption of appropriate practices in the genetic improvement of brood stocks, the introduction of non-native species, the production, sale and transport of eggs, larvae or fry, brood stock, or other live materials, and in the preparation and implementation of appropriate national codes of practice and procedures to this effect. **Lacking in one parameter.**	appropriate practices in the genetic improvement of brood stocks, the introduction of non-native species, and in the production, sale and transport of eggs, larvae or fry, brood stock or other live materials. States facilitate the preparation and implementation of appropriate national codes of practice and procedures to this effect. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a mechanism in place to assess and monitor the risks of disease transfer and other adverse effects on wild and cultured stocks, codified as management objectives in a code of practice or set of procedures.

Current Status/Appropriateness/Effectiveness: Management measures shall be implemented to achieve the objectives described in the code of practice, and there is evidence of their success at doing so. Care is taken to avoid both movement of genotypes or species between catchment areas, river or lake systems, and contamination of local wild genotypes from hatchery animals of the same species. Appropriate practices have been adopted for the genetic improvement of brood stocks to avoid impoverishment of their genetic pool. Appropriate procedures are being published for the selection, production, sale, and transport of brood stocks, eggs, larvae, and fry. There has been preparation and implementation of appropriate codes of practice and procedures to accomplish the above mentioned items.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Enhanced fisheries may be supported in part by stocking of organisms produced in aquaculture facilities or removed from wild stocks other than the	Enhanced fisheries may be supported in part by stocking of organisms produced in aquaculture facilities or removed from wild stocks other than the	Enhanced fisheries may be supported in part by stocking of organisms produced in aquaculture facilities or removed from wild stocks other than the	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

"stock under consideration". Aquaculture production for stocking purposes is **not** managed and developed in accordance with provisions entailing the maintenance of environmental integrity, the conservation of genetic diversity, disease control, and quality of stocking material. **Lacking in all parameters.**	"stock under consideration". Aquaculture production for stocking purposes is **insufficiently** managed and developed in accordance with provisions entailing the maintenance of environmental integrity, the conservation of genetic diversity, disease control, and quality of stocking material. **Lacking in two parameters.**	"stock under consideration". Aquaculture production for stocking purposes is **moderately** managed and developed in accordance with provisions entailing the maintenance of environmental integrity, the conservation of genetic diversity, disease control, and quality of stocking material. **Lacking in one parameter.**	consideration". Aquaculture production for stocking purposes is 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process in place to develop enhanced fisheries supported in part by stocking of organisms produced in aquaculture facilities or removed from wild stocks other than the "stock under consideration", whereby aquaculture production for stocking purposes is managed and developed in accordance with provisions entailing the maintenance of environmental integrity, the conservation of genetic diversity, disease control, and quality of stocking material. As appropriate, there are also management objectives and measures consistent with avoiding significant negative impacts of enhancement activities on the natural reproductive stock component of the stock under consideration and any other wild stocks from which the organisms for stocking are being removed.

Current Status/Appropriateness/Effectiveness: These measures are effective. There is evidence of enhancement practices managed and developed in accordance with the maintenance of the integrity of the environment, the conservation of genetic diversity, disease control, and quality of stocking material.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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

Low Confidence Rating (Critical NC)	Medium Confidence Rating (Major NC)	Medium Confidence Rating (Minor NC)	High Confidence Rating (Full Conformance)
Regarding the enhanced components of the "stock under consideration",	Regarding the enhanced components of the "stock under consideration",	Regarding the enhanced components of the "stock under consideration",	Regarding the enhanced components of the "stock under consideration", provided that a

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 **do not** meet the following criteria: 1) the species is native to the fishery's geographic area or introduced historically and have subsequently become established as part of the "natural" ecosystem; 2) there is a natural reproductive components of the "stock under consideration"; 3) the growth during the post-release phase is based upon food supply from the natural environment and the production system operates without supplemental feeding. **Lacking in all parameters.**	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 **insufficiently** meet the following criteria: 1) the species is native to the fishery's geographic area or introduced historically and have subsequently become established as part of the "natural" ecosystem; 2) there is a natural reproductive components of the "stock under consideration"; 3) the growth during the post-release phase is based upon food supply from the natural environment and the production system operates without supplemental feeding. **Lacking in two parameters.**	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 **moderately** meet the following criteria: 1) the species is native to the fishery's geographic area or introduced historically and have subsequently become established as part of the "natural" ecosystem; 2) there is a natural reproductive components of the "stock under consideration"; 3) the growth during the post-release phase is based upon food supply from the natural environment and the production system operates without supplemental feeding. **Lacking in one parameter.**	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 meet the following criteria: 1) the species is native to the fishery's geographic area or introduced historically and have subsequently become established as part of the "natural" ecosystem; 2) there is a natural reproductive components of the "stock under consideration"; 3) the growth during the post-release phase is based upon food supply from the natural environment and the production system operates without supplemental feeding. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process in place by which enhanced fisheries are managed, and which includes consideration of the origin of enhanced species, the maintenance of naturally reproducing components, and the food supply during the post-release phase. The intent of this clause does not refer to net pen rearing after fish are removed from hatcheries, but to the time when salmon are released in the wild for their ocean migration.

Current Status/Appropriateness/Effectiveness: There is evidence to demonstrate that the species in the stock under consideration is native to the fishery's geographic area, or was introduced historically and has subsequently become established as part of the "natural" ecosystem.

Current Status/Appropriateness/Effectiveness: There is evidence to demonstrate that there is a naturally reproductive component of the "stock under consideration".

Current Status/Appropriateness/Effectiveness: There is evidence to demonstrate that the growth of the stocked component during the post-release phase is based upon food supply from the natural environment and the production system operates without supplemental feeding.

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and

reports.

13.14 In the case of enhanced fisheries, the "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

Low Confidence Rating (Critical NC)	**Medium Confidence Rating (Major NC)**	**Medium Confidence Rating (Minor NC)**	**High Confidence Rating (Full Conformance)**
In the case of enhanced fisheries, the "stock under consideration" may comprise naturally reproductive components and components maintained by stocking. In	In the case of enhanced fisheries, the "stock under consideration" may comprise naturally reproductive components and components maintained by stocking. In	In the case of enhanced fisheries, the "stock under consideration" may comprise naturally reproductive components and components maintained by stocking. In	In the case of enhanced fisheries, the "stock under consideration" may comprise naturally reproductive components and components maintained by stocking. In the context of avoiding significant

the context of avoiding significant negative impacts of enhancement activities on the natural reproductive components of "stock under consideration": 1) naturally reproductive components of enhanced stocks **are** overfished; and 2) naturally reproductive components of enhanced stocks **are** substantially displaced by stocked components. In particular, displacement **results** in a reduction of the natural reproductive stock component below abundance-based target reference points (or their proxies) defined for the regulation of harvest. **Lacking in all parameters.**	the context of avoiding significant negative impacts of enhancement activities on the natural reproductive components of "stock under consideration": 1) the **majority** of naturally reproductive components of enhanced stocks **are** overfished; and 2) naturally reproductive components of enhanced stocks **are often** substantially displaced by stocked components. In particular, displacement **results** in a **significant** reduction of the natural reproductive stock component below abundance-based target reference points (or their proxies) defined for the regulation of harvest. **Lacking in two parameters.**	the context of avoiding significant negative impacts of enhancement activities on the natural reproductive components of "stock under consideration": 1) significant **few** of the naturally reproductive components of enhanced stocks **are** overfished; 2) **significant few** naturally reproductive components of enhanced stocks **are** substantially displaced by stocked components. In particular, displacement **results** in a **minor** reduction of the natural reproductive stock component below abundance-based target reference points (or their proxies) defined for the regulation of harvest. **Lacking in one parameter.**	negative impacts of enhancement activities on the natural reproductive components of "stock under consideration": 1) naturally reproductive components of enhanced stocks are not overfished; and 2) naturally reproductive components of enhanced stocks are not substantially displaced by stocked components. In particular, displacement does 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. **Fulfils all parameters.**

Evaluation Parameters

Process: There is a process in place to manage the naturally reproductive components and components maintained by stocking of the "stock under consideration", to avoid significant negative impacts of enhancement activities on the naturally reproductive components (for example, overfishing or displacement).

Current Status/Appropriateness/Effectiveness: There is evidence to demonstrate that the naturally reproductive components of enhanced stocks are not overfished.

Current Status/Appropriateness/Effectiveness: There is evidence to support that the naturally reproductive components of enhanced stocks are not substantially displaced by stocked components, and specifically not resulting in a reduction of the natural reproductive stock component below abundance-based target reference points (or their proxies) as defined for the regulation of harvest (e.g. escapement goals).

Evidence Basis: Availability, quality, and adequacy of the evidence. Examples may include various regulations, data and reports.

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