



Public Consultation Benchmark Framework V2.0
Summary of revised components
Section C

Start: 6 April 2020
End: 5 June 2020

■ Introduction

This document provides a summary of all changes to the GSSI Benchmark Framework v1.0 as proposed by the GSSI Expert Working Groups as part of the revision of the GSSI Global Benchmark Tool. The proposed changes are highlighted in blue.

The Expert Working Groups focused on updating and simplifying the Benchmark Framework while maintaining its robustness and its alignment with the FAO guidelines. The scope of the review focused on the following three areas:

Improvement of benchmark component language
Reduction of the number of components to reduce complexity
Inclusion of new FAO guidelines as supplementary components

The proposed changes are subject to a 60-day Public Consultation starting April 6 2020.

▪ Understanding the framework

GSSI's Global Benchmark Tool is made up of 3 parts:

- Benchmark Process: steps a scheme goes through to be recognized by GSSI
- Benchmark Framework: information on GSSI Essential Components, grounded in the CCRF and FAO Guidelines, which a scheme needs to meet to be recognized by GSSI and information on GSSI Supplementary Components, which show a scheme's diverse approach
- Benchmark Result: the statement of GSSI Recognition and Benchmark Report

▪ About the GSSI Benchmark Framework

The GSSI Benchmark Framework includes *GSSI Essential Components* which a seafood certification scheme must meet for recognition, and *GSSI Supplementary Components*, which allow schemes to show their diverse approach and help stakeholders understand where differences exist.

GSSI Essential Components

The GSSI Essential Components are grounded in the CCRF and FAO Guidelines. These are the full range of criteria, which a scheme needs to meet to be recognized by GSSI.

GSSI Supplementary Components

The GSSI Supplementary Components are defined by the GSSI Expert Working Groups and grounded in the CCRF and related FAO documents, ISO normative standards and ISEAL codes. Their purpose is to outline the status of existing practices in seafood certification and they can be built on going forward. A rationale for each GSSI Supplementary Component explains its value to both schemes and stakeholders. The Benchmark Process will verify if a seafood certification scheme meets GSSI Supplementary Components. Meeting GSSI Supplementary Components is not required for GSSI Recognition.

▪ Structure of the Benchmark Framework

The *GSSI Essential Components* and *GSSI Supplementary Components* in the Benchmark Framework are structured in four Sections:

The Benchmark Framework is made up of four Sections:



GSSI Essential Components and GSSI Supplementary Components
for **Governance of a Seafood Certification Scheme**



GSSI Essential Components and GSSI Supplementary Components
for **Operational Management of a Seafood Certification Scheme**



GSSI Essential Components and GSSI Supplementary Components
for **Aquaculture Certification Standards**



GSSI Essential Components and GSSI Supplementary Components
for **Fisheries Certification Standards**

The sections consist of Performance Areas, each of which includes Elements organised by Topic:

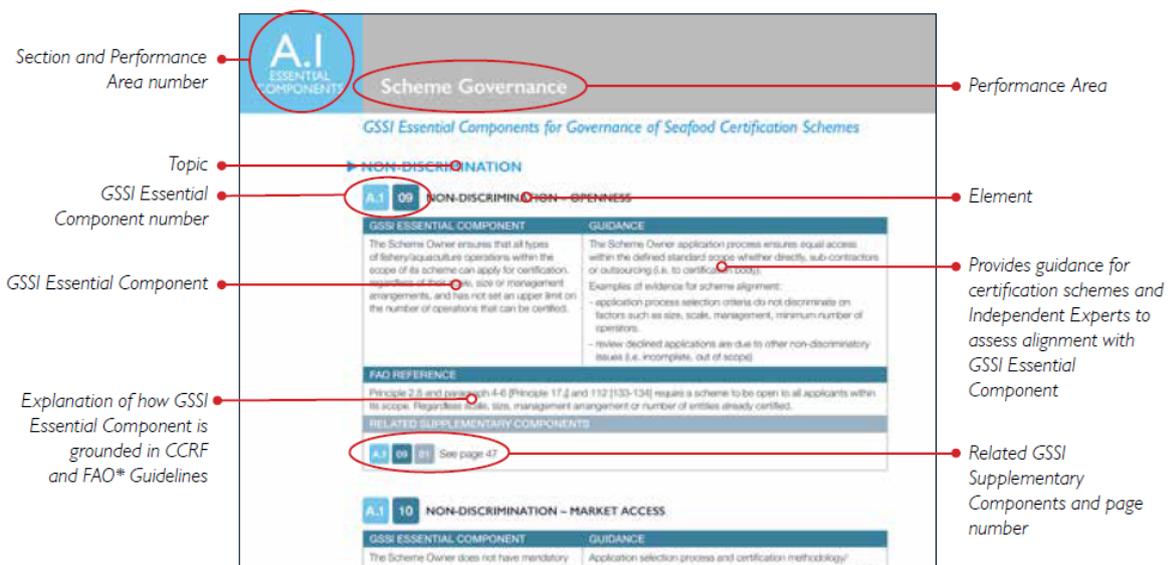


■ **Component texts, Guidance section and reference**

The component text is leading for Independent Experts to assess whether the Scheme Owner is in alignment with the components. If a component includes a list of minimum sub-criteria (“all”, “at least”), all criteria must be met (except when certain criteria are explicitly noted as not applicable for a particular scheme).

Each Component includes a Guidance section. The Guidance is intended to assist the Independent Experts and others in understanding the meaning of the component text and how conformity with that component should be assessed. Examples listed in the guidance are suggestions and not exhaustive. The possibilities for objective evidence can vary depending on the type and structure of the assessed Scheme Owner.

Finally, each Component includes a reference to the respective instruments on which it is based, such as the FAO Code of Conduct for Responsible Fisheries and FAO Guidelines, but also guidelines drafted by ISEAL, ISO & OIE.



▪ **Abbreviations**

BC	Benchmark Committee
CCRF	Code of Conduct for Responsible Fisheries
FAO	Food and Agriculture Organization of the United Nations
FAO Guidelines	FAO Guidelines for Ecolabelling of Fish and Fishery Products from Marine/Inland Capture Fisheries, and FAO Technical Guidelines on Aquaculture Certification.
GSSI	Global Sustainable Seafood Initiative
IE	Independent Expert
ISEAL	Global membership association for sustainability standards
ISO	International Organization for Standardization
OIE	World Organization for Animal Health
SO	Scheme Owner (Seafood Certification Scheme)
UN	United Nations

Section C: Aquaculture

Essential Component C.1.01 & C.2.01 will be combined into one Essential Component (C1.01) in order to streamline the Tool and simplify its usage.

Essential Component C.1.01

Current component:

The standard requires that the decision to treat with antimicrobials agents, and their subsequent application, is consistent with the Principles for Responsible & Prudent Use of Antimicrobial Agents in Aquatic Animals and other guidance of the OIE Aquatic Animal Health Code i.e., by the aquatic animal health professional or other relevant competent authority and in response to a diagnosed disease; see Articles 6.2.7 and 6.2.8 of the 2015 Aquatic Animal Health Code).

New component text:

The standard requires that the decision to treat with antimicrobial-agents, and their subsequent application, is consistent with the Principles for Responsible & Prudent Use of Antimicrobial Agents in Aquatic Animals and other guidance of the OIE Aquatic Animal Health Code i.e., by the aquatic animal health professional or other relevant competent authority and in response to a diagnosed disease; see Articles 6.2.7 and 6.2.8 of the 2015 Aquatic Animal Health Code).

Current guidance text:

The standard is expected to prohibit prophylactic usage for growth promotion and require that all antimicrobials are used in response to a diagnosed disease (i.e., by the aquatic animal health professional or other relevant competent authority) and the audit is expected to include a review of suitable evidence (e.g., records of disease testing etc. prescriptions for treatments).

New guidance text:

The standard is expected to prohibit prophylactic usage for growth promotion and require that all antimicrobials are used in response to a diagnosed disease (i.e., by the aquatic animal health professional or other relevant competent authority) and the audit is expected to include a review of suitable evidence (e.g., records of disease testing etc. prescriptions for treatments). The audit is expected to include a review of evidence (such as written records or through interviews) to ensure consistency with OIE guidelines (2015) Article 6.2.7 “The veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines should indicate precisely to the aquatic animal producer the treatment regime, including the dose, the treatment intervals, the duration of the treatment, the withdrawal period and the amount of antimicrobial agents to be delivered, depending on the dosage and the number of aquatic animals to be treated. The use of antimicrobial agents extra-label/off-label may be permitted in appropriate circumstances in conformity with the relevant legislation” and Article 6.2.8 “Aquatic animal producers should use antimicrobial agents only on the prescription of a veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines, and follow directions on the dosage, method of application, and withdrawal period.”

FAO reference:

Paragraphs 19, 20, & 22 of the Technical Guidelines on Aquaculture Certification require that the guidelines and standards set by the OIE in its Aquatic Animal Health Code (2015) should be the normative basis for standards, and that farms implement management programs based on these. The Code, while primarily focused on transboundary movements of aquatic animals, also describes common practice for activities related to aquatic animal health, including the use of veterinary drugs. Article 6.2.7 (AAHC 2015) states that “*The responsibilities of veterinarians or other aquatic animal health professionals are to carry out a thorough clinical assessment of the aquatic animal(s), including as*

appropriate: clinical examination, post-mortem examination, bacteriology with culture and sensitivity, and other laboratory tests to arrive at the most definitive diagnosis possible before initiating a specific course of treatment with an antimicrobial agent. Evaluation of environmental factors and husbandry at the production site (e.g. water quality) should be considered as potential primary factors leading to infection and should be addressed prior to prescribing a course of antimicrobial agent treatment. If therapy with an antimicrobial agent is deemed necessary it should be initiated as soon as possible. The selection of the agent should be based on the knowledge and experience of the veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines. As soon as possible, susceptibility testing of the target microorganism should be used to confirm the choice of treatment. Results of all susceptibility tests should be retained and should be available to the Competent Authority.” Paragraph 23 of the Technical Guidelines on Aquaculture Certification requires antimicrobials are used legally. Paragraph 30 outlines controls on antimicrobial usage, while 52 requires all chemicals are used responsibly to minimize their adverse impacts on the environment.

OIE Aquatic Animal Health Code (AAHC) (2015). Article 6.2.7.

Essential Component C.1.02

Current component text:

The standard requires that the application of antimicrobial agents is consistent with the guidelines outlines in Principles for Responsible and Prudent Use of Antimicrobial Agents in Aquatic Animals of the OIE Aquatic Animal Health Code (Articles 6.2.7 and 6.2.8 of the 2015 Code).

New component text:

The standard requires [that the decision to treat with antimicrobial agents, and their subsequent application, is consistent with the Principles for Responsible & Prudent Use of Antimicrobial Agents in Aquatic Animals and other guidance of the OIE Aquatic Animal Health Code i.e., by the aquatic animal health professional or other relevant competent authority and in response to a diagnosed disease](#); see Articles 6.2.7 and 6.2.8 of the 2015 Aquatic Animal Health Code).

Current guidance text:

The audit is expected to include a review of evidence (such as written records or through interviews) to ensure consistency with OIE guidelines (2015) Article 6.2.7 “The veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines should indicate precisely to the aquatic animal producer the treatment regime, including the dose, the treatment intervals, the duration of the treatment, the withdrawal period and the amount of antimicrobial agents to be delivered, depending on the dosage and the number of aquatic animals to be treated. The use of antimicrobial agents extra-label/off-label may be permitted in appropriate circumstances in conformity with the relevant legislation” and Article 6.2.8 “Aquatic animal producers should use antimicrobial agents only on the prescription of a veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines, and follow directions on the dosage, method of application, and withdrawal period.”

New guidance text:

The standard is expected to prohibit prophylactic usage for growth promotion and require that all antimicrobials are used in response to a diagnosed disease (i.e., by the aquatic animal health professional or other relevant competent authority) and the audit is expected to include a review of suitable evidence (e.g., records of disease testing etc. prescriptions for treatments).

The audit is expected to include a review of evidence (such as written records or through interviews) to ensure consistency with OIE guidelines (2015) Article 6.2.7 “The veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines should indicate precisely to the aquatic animal producer the treatment regime, including the dose, the treatment intervals, the duration of the treatment, the withdrawal period and the amount of antimicrobial agents to be delivered, depending on the dosage and the number of aquatic animals to be treated. The use of antimicrobial agents extra-label/off-label may be permitted in appropriate circumstances in conformity with the relevant legislation” and Article 6.2.8 “Aquatic animal producers should use antimicrobial agents only on the prescription of a veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines, and follow directions on the dosage, method of application, and withdrawal period.”

FAO reference:

Paragraphs 19, 20, & 22 of the Technical Guidelines on Aquaculture Certification require that the guidelines and standards set by the OIE should be the normative basis for standards, and that farms implement management programs based on these. The Aquatic Animal Health Code, while primarily focused on transboundary movements of aquatic animals, also describes common practice for activities related to aquatic animal health, including the use of veterinary drugs: Article 6.2.7 “*The veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines should indicate precisely to the aquatic animal producer the treatment regime, including the dose, the treatment intervals, the duration of the treatment, the withdrawal period and the amount of antimicrobial agents to be delivered, depending on the dosage and the number of aquatic animals to be treated. The use of antimicrobial agents extra-label/off-label may be permitted in appropriate circumstances in conformity with the relevant legislation*” and Article 6.2.8 “*Aquatic animal producers should use antimicrobial agents only on the prescription of a veterinarian or other aquatic animal health professional authorized to prescribe veterinary medicines, and follow directions on the dosage, method of application, and withdrawal period.*” Paragraphs 23 and 52 of the Technical Guidelines on Aquaculture Certification require responsible use of chemicals.
OIE Aquatic Animal Health Code (2015). Articles 6.2.7 and 6.2.8.

Essential Component C.1.03 has a changed component text. The current wording can be regarded as excluding the self-employed and others that are not employees.

Current Component:

The standard requires that workers employed in husbandry activities have been adequately trained and are aware of their responsibilities in aquatic animal health management practices.

New component:

The standard requires that workers **with responsibilities in aquatic animal husbandry** have been adequately trained and are aware of their responsibilities in aquatic animal health management practices.

Current Guidance:

The audit is expected to include a review of evidence that relevant workers have been appropriately trained and aware of their responsibilities. Examples of suitable evidence could include suitable training or appropriate qualifications, and interviews with staff. The training of workers may be a component in a broader management system e.g., a health management plan.

Proposed Guidance:

Unchanged

FAO reference:

Paragraph 19 of the Technical Guidelines on Aquaculture Certification requires that the guidelines and standards set by the OIE should be the normative basis for standards. The Aquatic Animal Health Code (2015), while primarily focused on transboundary movements of aquatic animals, also describes common practice for activities related to aquatic animal health, including the use of veterinary drugs. Paragraph 26 of the Technical Guidelines on Aquaculture Certification specifically requires that workers are trained on good aquatic animal health practices.

Essential Component C.1.08 has a changed component text. The rationale for this change is twofold: (1) Clear statements in the component are required to ensure an auditor is directed to look for these specific sections of the AAHMP; (2) Required components of operational fish health management practices should be bulleted as "must" elements. This includes the use of effective vaccines. This needs to be a stated requirement in the standard to ensure the auditor reviews it, not a general statement.

Current Component:

The standard requires the aquaculture facility to have operational fish health management practices, specifically favoring effective biosecurity and available vaccines, including introductions and transfers of farmed animals where relevant, which is overseen by an aquatic animal health professional.

New component:

The standard requires the aquaculture facility to have operational fish health management practices. Evidence must be shown that these address the following elements (where relevant to the species, scale, and production system covered by the Standard's scope):

1. Effective biosecurity
2. Identification and use of suitable available vaccines
3. Introductions and transfers of farmed animals (where relevant, which is overseen by an aquatic animal health professional).

Current Guidance:

It is expected that the standard will contain sufficient elements and/ or audit of culture practices for an operational program relative to the scale, species, and production systems covered by the standard's scope, including a focus on disease prevention (e.g. the use of vaccines). The content of the measures are expected to be overseen (but not necessarily full time employment) of an aquatic animal health professional.

Proposed Guidance:

Unchanged

FAO reference:

Paragraphs 19, 20, & 22 of the Technical Guidelines on Aquaculture Certification require that the guidelines and standards set by the OIE in its Aquatic Animal Health Code (2015) should be the normative basis for standards and that farms implement management programs based on these. The Code, while primarily focused on transboundary movements of aquatic animals, also describes common practice for activities related to aquatic animal health, including the use of veterinary drugs.

Supplementary Component C.1.08.06 will be deleted. The component is considered redundant because any farm that does not comply with his requirement would not be sustainable.

Component:

The standard requires the aquaculture facility to establish, implement, and maintain a written plan for improving survival rate (or similar system that incorporates survival rates (e.g., recovery), including defined annual targets.

Guidance:

Verification that a written plan exists that includes actions directed at increasing the survival rate (such as increasing vaccination, biosecurity, water quality etc.) and that suitable records are kept on survival rate and the factors being considered in the plan, and that the plan is operational (e.g. by interview) is expected.

Aligned standards will also be considered in alignment with C.1.08.01

FAO reference:

Paragraphs 19, 20, & 22 of the Technical Guidelines on Aquaculture Certification require that the guidelines and standards set by the OIE should be the normative basis for standards and that farms implement management programs based on these.

Supplementary Component C.1.10.01 has a changed component text. Recording released parasites with meaningful accuracy amongst the wild stock is probably impossible. An Independent Expert commented that this sets the bar so high as to be effectively unattainable. Consequently visible evidence of problematic infection e.g. rising levels of lice on wild salmon & sea trout stocks adjacent to salmonid farms is the preferred measure.

Current Component:

Where the production system allows the discharge of parasites that are a known concern to local wildlife, the standard requires monitoring and adapting farming practices based on trigger limits of relevant parasite numbers on wild fish where this is feasible.

Proposed Component:

Where the production system allows the discharge of parasites that are a known concern to local wildlife, the standard requires monitoring and adapting farming practices based [on parasite prevalence on wild fish](#).

Current Guidance:

Examples of pathogens or parasites that are a known concern include sea lice on farmed salmon; appropriate practices could be specified in the standard or a suitable risk assessment or other justification could be given to determine whether or not this Supplementary Component is applicable. The certification scheme or standard is expected to address the monitoring of pathogen or parasite numbers on wild fish or a similar system that is likely to be effective at finding evidence of impact if it's occurring (possibly performed by third parties or government), and that appropriate trigger limits (e.g., expert opinions, scientific literature) and adaptive management plans exist and are employed to reduce the pressure on wild populations (such as by treating fish, fallowing, etc.).
Verification that the system is operational is also expected.
Aligned standards will also be considered in alignment with C.1.10

Proposed Guidance:

Unchanged

FAO reference:

Paragraphs 19, 20, & 22 of the Technical Guidelines on Aquaculture Certification require that the guidelines and standards set by the OIE should be the normative basis for standards and that farms implement management programs based on these. The Aquatic Animal Health Code, while primarily focused on transboundary movements of aquatic animals, also describes common practice for activities related to aquatic animal health, including the use of veterinary drugs. Paragraph 22 specifically addresses the spread of disease between farms and natural fauna. Aquaculture facilities have the potential to introduce and locally amplify parasites numbers above those generally found in the wild. With a few exceptions, these issues remain poorly understood or studied. However, where these issues are known, these Supplementary Components verify that the issue is managed based on indicators of impacts on wild populations.

Essential Component C.2.02 has a changed component and guidance text. The rationale for this is that the current component exhibits insufficient rigor and specificity. This is deemed to be a particular issue where the most environmentally damaging chemicals are involved.

Current Component:

The standard requires appropriate controls for all chemicals, incl. veterinary drugs, that enter the environment (whether already covered by GSSI Essential Components or not) in order to minimize adverse impacts on environmental quality.

New component:

The standard requires appropriate controls for all chemicals, incl. veterinary drugs, that enter the environment during or after use (whether already covered by GSSI Essential Components or not) in order to minimize adverse impacts on environmental quality. [Manufacturer's guidance or equivalent directions should be followed, and where appropriate, chemicals that pose a high risk of adverse impacts to environmental quality should be specifically defined by the standard](#)

Current Guidance:

It is expected that the standard will require all chemicals used by the aquaculture facility and that will enter the environment are at least used according to the manufacturer's guidance (such as on label requirements or Safety Data Sheets (SDS) or, in the case of veterinary drugs, the guidance of the aquatic animal health professional.

In addition, for chemicals that pose a high risk of adverse impacts to environmental quality -- these could be specifically defined by the standard (e.g., copper-based anti-foulant treatments in marine cage aquaculture) or identified through a risk based self-assessment by the farmer (e.g., an environmental risk assessment)-- it is expected that the standard or the risk-assessment will define any necessary additional requirements to minimize the impacts (e.g., EQS limits for copper residues in the benthic environment).

Proposed Guidance:

It is expected that the standard will require all chemicals used by the aquaculture facility and that will enter the environment are at least used according to the manufacturer's guidance (such as on label requirements or Safety Data Sheets (SDS) or, in the case of veterinary drugs, the guidance of the aquatic animal health professional [to prevent adverse impacts upon the environment](#). Chemicals that pose a high risk of adverse impacts to environmental quality [which should be specifically defined by the standard](#) (e.g., copper-based [anti-foulant treatments in marine cage aquaculture or anti-parasite or anti-microbe bath treatments](#)) or identified through a risk based self-assessment by the farmer (e.g., an environmental risk assessment)-- it is expected that the standard or the risk-assessment will define any necessary additional requirements to minimize the impacts (e.g., EQS limits for copper residues in the benthic environment).

FAO reference:

Paragraph 52 states that chemicals should be used responsibly to minimize their adverse impacts on the environment and to promote economic viability. Flexibility is required as a wide variety of chemicals are used in aquaculture.

Essential Components C.2.03, C.7.03 and C.8.01 will be replaced by C.9.01, to streamline the framework and make it easier to use.

<p>Current component (C.2.03): The standard requires that the aquaculture facility operates in compliance with relevant national and local laws with regard to the application of chemicals and veterinary drugs.</p> <p>Current component (C.7.03): The standard requires that all species are farmed in compliance with relevant laws and regulations.</p> <p>Current Component (C.8.01): The standard requires compliance with all relevant laws regarding water use, water quality, and waste discharge.</p>	<p>New component (C.9.01): The standard requires (evidence of) compliance with all local and national laws and regulations relevant to aquaculture, especially concerning:</p> <ul style="list-style-type: none"> - application of chemicals and veterinary drugs - feed, feed ingredients and fertilizers - habitat and biodiversity (including Environmental Impact Assessment (EIA) where required) - seed sourcing at both source and destination - Escapes and releases - water use, water quality and waste discharge
<p>Current Guidance (C.2.03): Verification is expected to include a review evidence to support compliance with relevant laws.</p> <p>Current Guidance (C.7.03): Verification is expected to include review evidence provided by the aquaculture facility to support compliance with relevant laws.</p> <p>Current Guidance (C.8.01): Verification is expected to include review evidence provided by the aquaculture facility to support compliance with relevant laws.</p>	<p>New Guidance (C.9.01): Verification is expected to include a review of evidence provided by the aquaculture facility to support compliance with relevant laws. For feed, its ingredients & fertilizers, verification is expected to include a review of evidence (e.g., documentation, self-declaration by the feed manufacturer). For seed sourcing this could include international laws (e.g., CITES, OIE and ICES import guidelines) and laws governing introductions and transfers of live aquatic animals.</p>

Supplementary Component C.3.01 has a changed component text to make sure the component exhibits sufficient rigor and specificity.

<p>Current component: The standard requires that the aquaculture facility and its daily operations ensure that good culture and hygienic conditions are maintained.</p>	<p>New component: The standard requires that the aquaculture facility and its daily operations ensure that good culture and hygienic conditions are maintained. Relevant aspects include proper management of all chemicals, fuels and feeds including their safe storage.</p>
<p>Current Guidance: This is a general Essential Component that covers a range of potential issues depending on the type of production system, species being cultured, and the local environment, and as such there is a need for flexibility in how consistency is achieved. It is expected that the following issues would be addressed and the systems verified to be operational:</p> <ul style="list-style-type: none"> - Appropriate storage of chemicals and fuel (e.g., stored in a lockable, labeled facility, limited access by personnel, leakage prevention - all based on Safety Data Sheets (SDS) (see figure 4.14 of the A 	<p>New Guidance: Unchanged</p>

Guide to The Globally Harmonized System of Classification and Labeling of Chemicals (GHS), available at:

www.osha.gov/dsg/hazcom/ghsguideoct05.pdf

- Appropriate storage of feed (e.g., stored separately from sources of contamination, accurately labeled, keeping medicated and nonmedicated feed separated.)
- Appropriate pest control (e.g., prevent contamination of feed, chemicals by rodents or insects etc.)
- Domestic sewage control/disposal to avoid local contamination
- General farm waste (e.g., empty feed bags, household rubbish, food containers etc.).

Essential Component 3.02 has a changed component text. The reason for this is because some terminology is too specific, when looking at the objective of the component. First, the term pollution was too specific and is therefore replaced with broader, more encompassing terminology. Second, “damaged gear” is replaced with the more generic term “derelict equipment and materials” to make sure the component covers all relevant aquaculture equipment in current and possible future use.

Current component:

The standard requires that aquaculture facility infrastructure is appropriately maintained in order to prevent pollution, whether from construction, operation or decommissioning (e.g., including the following requirement:

A requirement for derelict or damaged gear to be collected and disposed of responsibly.)

Proposed component:

The standard requires that aquaculture facility infrastructure is appropriately maintained in order to prevent **negative environmental impacts**, whether from construction, operation or decommissioning (e.g., including

- A requirement for **derelict equipment and materials** to be collected and disposed of responsibly.)

Current guidance:

Given the wide variety of production systems in aquaculture specific guidance cannot be provided and flexibility by the evaluator is required using a risk-based approach. Examples could include the requirement for derelict or damaged gear in shellfish or cage aquaculture to be collected and disposed of responsibly, or for that waste from pond construction is not placed in mangrove forests in shrimp farming. It is expected that specific requirements or risk-based management systems would be required where appropriate, along with suitable verification. These requirements may also be included in other Standards, such as sensitive habitat protection or escape prevention.

Proposed guidance:

Unchanged

FAO reference:

Paragraph 51 of the Technical Guidelines on Aquaculture Certification states that "Infrastructure construction and waste disposal should be conducted responsibly".

Essential Component C.4.02 has a changed component text. The current component text distinguishes between the feed manufacturer and the feed itself. This has been reason for confusion. The component relates to the fish farm, not the feed supplier (in case feed milling is not part of a vertically integrated operation). The responsibility is that of the farm to source from a feed supplier who does not use products from endangered species. The onus is on the farm and not the feed supplier. It only has

implications for the feed supplier in that they can only supply to a certified farm if they comply with this requirement. The revised component makes clear the fish farm is responsible.

<p>Current component: The standard requires the aquaculture facility to source feed from a manufacturer that prohibits fishmeal and fish oil from endangered species.</p>	<p>Proposed component: The standard requires the aquaculture facility to source feed from a manufacturer who produces feed that excludes fishmeal and fish oil from endangered species and is validated as such.</p>
<p>Current Guidance: Verification is expected to include a review of evidence (e.g., documentation, self-declaration by the feed manufacturer). The standard is expected to apply to other relevant marine feed ingredients (e.g., algae, krill, and squid) and to whole fish and fishery byproducts.</p> <p>Endangered species are expected to be defined in the Standard, with reference to relevant national listings (e.g., Vietnam's Red Data Book) and/or global listing organizations such as CITES (Appendix 1), IUCN Red List (Categories Critically Endangered (CR), Endangered (EN), Vulnerable (VU)). See www.iucnredlist.org and www.cities.org for more information.</p>	<p>Proposed guidance: Unchanged</p>
<p>FAO reference: Paragraph 52 of the Technical Guidelines on Aquaculture Certification requires the responsible use of feed and Paragraph 17g. states that "<i>Aquaculture schemes should promote responsible aquaculture during production as outlined in the FAO Code of Conduct for Responsible Fisheries, in particular Article 9, Aquaculture Development</i>". Based on FAO's Aquaculture Development 5. Use of Wild Fish as Feed in Aquaculture (FAO, 2011).</p>	

Supplementary Component C.4.04.01 & C.4.04.02 have a revised guidance text. For clarity, the IFFO RS is included in the guidance as an indicative certification.

<p>Current component: The standard requires independent verification that the feed manufacturer that sources, for whole fish ingredients greater than 1% content; - fishmeal and fish oil that are traceable back to the species, fishery and country of origin, and - fishmeal and fish oil with less risk of detrimental environmental impacts, such as those certified to a standard benchmarked at minimum consistent with relevant FAO's ecolabelling guidelines and that uncertified sources must be identified as low risk by independent risk assessment or must come from sources that are part of an effective Fishery Improvement Project (FIP) towards a suitable certification or that have been assessed to show limited impacts on stock status and ecosystem impacts as defined in Principle 3 of the FAO (2011). Aquaculture Development. 5. Use of Wild Fish as Feed in Aquaculture.</p>	<p>Proposed component: The standard requires independent verification that the feed manufacturer sources, in cases where- whole fish ingredients are greater than 1% of content; - fishmeal and fish oil that are traceable back to the species, fishery and country of origin, and - fishmeal and fish oil with less risk of detrimental environmental impacts, such as those certified to a standard benchmarked at minimum consistent with relevant FAO's ecolabelling guidelines and that uncertified sources must be identified as low risk by independent risk assessment or must come from sources that are part of an effective Fishery Improvement Project (FIP) towards a suitable certification or that have been assessed to show limited impacts on stock status and ecosystem impacts as defined in Principle 3 of the FAO (2011). Aquaculture Development. 5. Use of Wild Fish as Feed in Aquaculture.</p>
<p>Current guidance: Verification is expected to include a 3rd party</p>	<p>Proposed guidance: Verification is expected to include a 3rd party</p>

certification or audit of the feed manufacturer. The standard is expected to apply to other relevant marine feed ingredients (e.g., algae, krill, and squid) and to whole fish.

Effective FIPs could be those consistent with the Conservation Alliance for Seafood Solutions (2015). Guidelines for Supporting Fishery Improvement Projects.
www.solutionsforseafood.org/wpcontent/uploads/2015/03/Alliance-FIP-Guidelines-3.7.15.pdf

Aligned standards will also be considered in alignment with C.4.01, C.4.02, C.4.03, and C.4.04

certification or audit of the feed manufacturer. The standard is expected to apply to other relevant marine feed ingredients (e.g., algae, krill, and squid) and to whole fish.

Effective FIPs could be those consistent with the Conservation Alliance for Seafood Solutions (2015). Guidelines for Supporting Fishery Improvement Projects.
www.solutionsforseafood.org/wpcontent/uploads/2015/03/Alliance-FIP-Guidelines-3.7.15.pdf

The IFFO Responsible Supply (IFFO RS) standard is expected to become a relevant standard when it has been benchmarked.

Aligned standards will also be considered in alignment with C.4.01, C.4.02, C.4.03, and C.4.04

FAO Reference:

Paragraph 52 of the Technical Guidelines on Aquaculture Certification requires the responsible use of feed. Also based on the environmentally relevant criteria in Aquaculture Development 5. Use of Wild Fish as Feed in Aquaculture (FAO, 2011) Principles 1-3 which specifically details the promotion of fish from certified fisheries and Principle 7.5 which details that "*Feed manufacturers and suppliers should be held responsible to declare the source and type of all raw materials used in feed manufacture and the final nutritional composition.*"

Essential Component C.4.05 component text will remain the same, the guidance text will be changed. This component has been problematic during benchmarking according to our Independent Experts (IE). The reason for this is that if a standard does not explicitly prohibit the use of whole fish, the standard is not in alignment on this point. Many standard however do not have such a requirement because there is no use of whole fish in feed in the industry concerned, e.g. salmon farming. The new guidance text will provide a clear response to this concern.

Current Component:

The standard prohibits the use of whole fish as a direct feed source in grow-out.

New component:

Unchanged

Current Guidance:

Verification is expected to include a suitable review of evidence, such as feed use records, visual observation, and financial records in aquaculture industries where this is common practice

Proposed Guidance:

0% of feed at any time during production (under the scope of certification) may contain "whole fish" or "wet fish", which includes any form of uncooked wet fish (whole or chopped or frozen etc.), which includes direct feed, supplemental feeding, or on-farm made applications. Alternatives would be to require 100% use of commercial dry pelleted feeds.

Verification is expected to include a suitable review of evidence, such as feed use records, visual observation, and financial records in aquaculture industries where this is common practice.

A non-applicable (N/A) designation is only acceptable where 100% of production under the scope of the standard (including species, production intensity and production systems covered) uses entirely commercial dry pelleted feeds (e.g., Atlantic salmon).

FAO reference:

Paragraph 52 of the Technical Guidelines on Aquaculture Certification requires the responsible use of feed. Also based on the guidance in FAO (2011) Aquaculture Development. 5. Use of Wild Fish as Feed in Aquaculture for a preference to avoid trash fish. Wet fish is a highly inefficient method of feed compared to dry feeds; increasing pollution potential.

Secondary, wet fish may transmit diseases to the farmed stocks. This is also supported in Aquaculture Development. 5.

Use of Wild Fish as Feed in Aquaculture, Principle 7, to reduce the use of wet fish in aquaculture feed. FAO (2011). Aquaculture Development. 5. Use of Wild Fish as Feed in Aquaculture.

Essential Component C4.07 component text will remain the same, the guidance text will be changed.

The component concerns Feed Conversion Ratio (FCR), a measure typically used by farmers as a practical yardstick of efficiency of feed usage. As a critical measure of efficiency, it has a direct relationship with profitability and is thus closely monitored on-farm. FIFO is a measure widely recognized by the environmentalist community. These terms are therefore specifically mentioned in the guidance text.

Current component:

Where applicable, the standard requires that the aquaculture facility has suitable measures in place to ensure that feed is used efficiently at the individual production unit level.

New component:

Unchanged

Current guidance:

Suitable measures are expected to be part of a wider feed management system, such as the use of feed trays, cameras, pellet sensors, documented records of visual feed response, staff training. Verification that the measures are operational and fit for purpose is also expected.

New guidance:

Suitable measures are expected to be part of a wider feed management system, such as the [measurement of FCR \(Feed Conversion Ratio\) and FIFO \(Fish-In vs Fish Out\) as well as](#) documented records of visual feed response [and](#) staff training. Verification that the measures are operational and fit for purpose is also expected.

FAO reference:

Paragraph 52 of the Technical Guidelines on Aquaculture Certification requires the responsible use of feed. Record keeping is a specific requirement of Paragraph 33.

Essential Component C.4.09 has a revised component and guidance text. Part of the guidance text is integrated into the component text, to guarantee the component is applied properly.

Current component:

The standard requires that appropriate records are kept on all feed use.

Proposed component:

The standard requires that appropriate records are kept on all feed use. [At a minimum this must include: feed source, feed Batch/Lot/ID number, date of purchase, and feed conversion ratio \(FCR\) MT](#)

Current Guidance:

Appropriate records are expected to include feed source, feed Batch/Lot/ID number, date of purchase, feed conversion ratio (FCR), and, where appropriate, feed inclusion percentages of fishmeal and fish oil or a fish in: fish out ratio. Appropriate records are expected to be kept for each individual production unit. Verification of appropriate record keeping and suitable documentation from feed manufacturers is also

Proposed Guidance:

Appropriate records are expected to include [those stated in the component](#)-and, where appropriate, feed inclusion percentages of fishmeal and fish oil or a fish in: fish out ratio. Appropriate records are expected to be kept for each individual production unit. Verification of appropriate record keeping and suitable documentation from feed manufacturers is also expected.

expected.

FAO Reference:

Paragraph 52 of the Technical Guidelines on Aquaculture Certification requires the responsible use of feed. Record keeping is a specific requirement of Paragraph 33.

Essential Component C.5.01 has a revised component and guidance text to add more rigor and specificity. The specificity relates to the GSSI's approach in deliberately employing the term "measures" rather than "systems" to demonstrate that solidly defined standards rather than mere plans are required to achieve alignment. The revised language aims to ensure that this approach is maintained during the benchmarking process to make sure the credibility of the benchmark process is maintained.

Current component:

For cage production systems, the standard requires appropriate management measures for preventing excessive impacts of aquaculture facility waste on benthic environments.

Proposed component:

For cage production systems, the standard requires appropriate management measures for preventing excessive impacts of aquaculture facility waste on benthic environments, **including impacts of a biological, chemical or physical nature. Where acceptable levels of impact are exceeded, there should be provision for sanctions.**

Current guidance:

Appropriate measures for marine cage production systems are expected to consider biological, chemical and physical impacts and additional chemical residues resulting from culture practices. Where relevant, they should conform to ISO 16665. The use of systems combining suitable allowable zones of effect and environmental quality standards of effect are expected. Verification that the measures are operational and fit for purpose is expected. Evidence of the prevention of adverse impacts could include comparisons with baseline conditions, reference locations, or standardized limits with a suitable justification for their use. Where adverse impacts are detected it is expected that appropriate mitigation measures/ remedial action for the identified adverse impacts on the surrounding natural ecosystem are applied.

While generally recognized as a marine cage issue, benthic impacts can also occur in freshwater cage systems. The degree of management measures should reflect the degree of potential impacts relative to the environment, production system, species, and size of production.

Proposed guidance:

Appropriate measures for marine cage production systems are expected to consider biological, chemical and physical impacts and additional chemical residues resulting from culture practices **and should use appropriate sampling methods.** Where relevant, they should conform to ISO 16665. The use of systems combining suitable allowable zones of effect and environmental quality standards (**EQS**) of effect are expected. Verification that the measures are operational and fit for purpose is expected. Evidence of the prevention of adverse impacts could include comparisons with baseline conditions, reference locations, or standardized limits with a suitable justification for their use. Where adverse impacts are detected it is expected that appropriate mitigation measures/ remedial action for the identified adverse impacts on the surrounding natural ecosystem are applied. **Sanctions that address situations where EQS' are exceeded and there is no effective remediation within a suitable timeframe could include withholding certification.** While generally recognized as a marine cage issue, benthic impacts can also occur in freshwater cage systems. The degree of management measures should reflect the degree of potential impacts relative to the environment, production system, species, and size of production.

FAO Reference:

Paragraph 45 of the Technical Guidelines on Aquaculture Certification state "*Regular monitoring of on-farm and off-farm environmental quality should be carried out, combined with good record-keeping and use of appropriate methodologies.*" Paragraph 46 states "*Evaluation and mitigation of the adverse impacts on surrounding natural ecosystems, including fauna, flora and habitats should be carried out.*" These Paragraphs are considered in the cage culture context.

Essential Component C.5.03 will be deleted because it is considered redundant because all legal requirement will be mentioned in Essential Component C.9.01.

Component C.5.03:

The standard requires compliance with national and local laws on habitat and biodiversity, including an Environmental Impact Assessment (EIA) where required.

Component C.9.01:

The standard requires the aquaculture facility to establish and implement procedures for the disposal of mortalities using appropriate methods that prevent the spread of disease.

Supplementary Component C.5.04.01-3 have minor language change for clarity and ease of understanding. No impact on the content of the component. The example of C.5.04.02 can be found below.

Current component C.5.04.02:

The standard ensures no loss of sensitive habitats as a result of aquaculture facility construction, conversion, expansion, and culture practices at the site. No grandfathering or offsetting is allowed.

New component C.5.04.02:

The standard ensures **that** no loss of sensitive habitats **has occurred** as a result of aquaculture facility construction, conversion, expansion, and culture practices at the site. No grandfathering or offsetting is allowed.

Current Guidance:

It is expected that the Standard will define (with supporting evidence) sensitive habitat in context with its scope, the basis for a “no loss” claim. Verification at the aquaculture facility is expected (evidence could include maps, aerial photos, satellite images, government certification etc.)

New Guidance:

Unchanged

Aligned standards will also be considered in alignment with C.5.04 and C.5.04.1.

FAO Guidance:

Paragraph 45 of the Technical Guidelines on Aquaculture Certification state "Regular monitoring of on-farm and off-farm environmental quality should be carried out, combined with good record-keeping and use of appropriate methodologies." Paragraph 46 states "Evaluation and mitigation of the adverse impacts on surrounding natural ecosystems, including fauna, flora and habitats should be carried out." Paragraph 38 states that "Aquaculture certification schemes should encourage restoration of habitats and sites damaged by previous uses in aquaculture." These paragraphs are considered jointly in the context of habitat and biodiversity management. Also based on FAO (2010) Aquaculture Development. 4. Ecosystem Approach to Aquaculture section 3.2.1.2 Management measures at the watershed scale to "Maintaining an “agreed” biodiversity" and "Providing and enhancing green infrastructure". They build on the Essential Components by verifying increasing the transparency of the impacts and mitigation measures. These Supplementary Components aim to increase the benefit and confidence in restoration activities through community engagement.

Essential Component C6.03 has a changed component and guidance text. The component concerns wild seed and is therefore linked to Section D of the Tool, Fisheries. The component and especially guidance text are therefore changed to harmonize the language between the relevant sections.

Current component text:

The standard requires that where the deliberate use of wild seed is justifiable, it is collected in a manner that:

- Ensures controls are in place so that the collection of seed is not detrimental to the status of the wild target and non-target populations, nor the wider ecosystem.
- Avoids the use of environmentally damaging collection practices
- Source fishery is regulated by an appropriate authority

New component text:

The standard requires that where the deliberate use of wild seed is justifiable, it is collected in a manner that:

- Ensures controls are in place so that the collection of seed is not detrimental to the status of the wild target and non-target populations, **nor that of the wider ecosystem. This requires a documented management approach that ensures those wild populations are not overfished and not subject to recruitment overfishing or other impacts that are likely to be irreversible or very slowly reversible, and avoids, minimizes or mitigates fishing impacts on essential habitats and on habitats that are highly vulnerable to damage by the fishing gear;**
- Avoids the use of environmentally damaging collection practices;

And ensures that the source fishery is regulated by an appropriate authority.

Current guidance text:

Expected examples of “justifiable use” include where there is a lack of commercially-available hatchery-raised seed, inability/lack of technology to hatchery-raised the farmed species, or passive collection of mollusks. Justification could be offered at the standard or aquaculture facility level.

i) Suitable controls are expected to include aspects such as a fishery management plan that limits take to maintain the wild populations (i.e., there is no measurable impact on recruitment levels or the stocks ability to increase (examples include stocks that are under or fully exploited) with appropriate safeguards against excessive bycatch, and prevention of damaging gear types.

ii) Examples of environmentally damaging collection practice are expected to include dynamite or poison fishing, habitat impacts.

Verification is expected to include the need to provide suitable evidence by the aquaculture facility (e.g., a summary report written by a credible 3rd party on the source fishery, a self-certification by the appropriate management authority, a 3rd party fishery certification that verifies suitable compliance).

New guidance text:

Expected examples of “justifiable use” include where there is a lack of commercially-available hatchery-raised seed, inability/lack of technology to hatchery-raised the farmed species, or passive collection of mollusks. Justification could be offered at the standard or aquaculture facility level. Verification is expected to include the need to provide suitable evidence by the aquaculture facility (e.g., a summary report written by a credible 3rd party on the source fishery, a self-certification by the appropriate management authority, a 3rd party fishery certification that verifies suitable compliance).

A documented management approach is expected to follow Component D.3.01 where the standard requires the existence of documented management approaches or other management framework covering the unit of certification and the stock under consideration, including management measures consistent with achieving management objectives for the stock under consideration. Expected outcomes of the management approach are described in the Guidance of D.6.01 Target Stock Status, D.6.05 Non-Target Catches, D.6.06 Endangered Species, and D.6.07 Habitat, respectively. Definitions of terms related to wild fisheries can be found in Section D terms of the Glossary.

Examples of environmentally damaging collection practices include blast, poison, and Muro-ami fishing practices.

FAO reference:

Paragraph 48 of the Technical Guidelines of Aquaculture Certification states “Where possible, hatchery

produced seed should be used for culture. When wild seeds are used, they should be collected using responsible practices”.

Essential Component C.7.01 has a revised component and guidance text. Escapes appear to be relatively common incidences with marine cage systems and it's critical that the auditors are instructed to verify the stated components in the guidance.

Current Component:

The standard requires that the aquaculture facility establishes, implements, and maintains an appropriate system to minimize the unintentional release or escape of cultured species.

New Component:

The standard requires that the aquaculture facility establishes, implements, and maintains an appropriate system to minimize the unintentional release or escape of cultured species. **This should include monitoring and management of the physical facilities and practices.**

Current Guidance:

An appropriate system is expected to be based on an evaluation of the likelihood of events and the magnitude of impacts on surrounding environment (where risk assessments are used they met use a suitable scientific method and taking into consideration, siting, culture practices, local environmental conditions, including extreme events, and other relevant uncertainties) according to the precautionary approach and possible impacts on surrounding natural ecosystems, including fauna, flora, and habitat. Specific requirements stated in the standard are acceptable.

Verification is expected to include a review of evidence of an operational and fit for purpose system.

The system is expected to address the following; relative to the species being farmed and the production system (individual elements can be “Not Applicable” with these considerations).

- i) Measures for escape detection
- ii) Monitoring for and record keeping of escapes events
- iii) Suitable training of employees
- iv) Incident management and infrastructure, including response or recapture measures.
- v) Regular monitoring and maintenance of the culture system
- vi) Regular review and failure analysis
- vii) containment infrastructure

New Guidance:

An appropriate system is expected to be based on an evaluation of the likelihood of events and the magnitude of impacts on surrounding environment (where risk assessments are used they met use a suitable scientific method and taking into consideration, siting, culture practices, local environmental conditions, including extreme events, and other relevant uncertainties) according to the precautionary approach and possible impacts on surrounding natural ecosystems, including fauna, flora, and habitat. Specific requirements stated in the standard are acceptable.

Verification is expected to include a review of evidence of an operational and fit for purpose system.

The monitoring of the management practices could include but are not limited to:

- i) Measures for escape detection
- ii) Monitoring for and record keeping of escapes events
- iii) Suitable training of employees
- iv) Incident management and infrastructure, including response or recapture measures.
- v) Regular monitoring and maintenance of the culture system
- vi) Regular review and failure analysis
- vii) containment infrastructure

Relative to the species being farmed and the production system individual elements can be “Not Applicable” with these considerations).

FAO Guidance: Supplementary Components on escape prevention are based on Paragraphs 39 and 46 of the Technical Guidelines on Aquaculture Certification which reference the minimizing unintentional release and escape of aquatic animals and that potential impacts and mitigation measures for impacts on biodiversity respectively.

Essential Component C.8.04 has a changed component text to make sure it exhibits enough rigor and specificity.

Current component:

The standard requires, where appropriate, management measures for effluents in order to reduce adverse impacts on the water quality of water bodies receiving effluents.

New component:

The standard requires, where appropriate, management measures for effluents in order to reduce adverse impacts on the water quality of water bodies receiving effluents. [Monitoring of the systems effluents against appropriate criteria is required, with sanctions applied where mitigation response is inadequate.](#)

Current Guidance:

Appropriate measures are expected to include.

1. Monitoring and recording of effluent or receiving water quality, and which may including key parameters that need to be addressed include, where applicable:
 - i) Nutrients – Nitrate/Nitrogen (impacts on seawater)
 - ii) Nutrients – Phosphate/Phosphorous (impacts on freshwater)
 - iii) Dissolved oxygen
 - iv) Salinity
 - v) Suspended Solids
 - vi) pH
2. Defined, aquaculture appropriate, maximum reference points (e.g., general concentration limits or aquaculture facility-specific limits) or mandatory systems (e.g., presence of a suitable filter) are defined to prevent pollution
3. Where reference points are exceeded, the scheme either refuses certification or that mitigation methods are employed and monitored to meet a time bound goal to come into compliance.

Verification is expected to include a review of evidence that the system is operational and fit for purpose, including visual inspection of the site. Where effluent concentration limits are used for compliance, independent verification of conformance is also expected.

“Where appropriate” is expected to include standards that cover production systems that release effluent that has the potential to impact water quality, e.g., fed/intensive aquaculture in ponds and raceways. An exception for marine cage aquaculture and on or off bottom shellfish culture is expected.

New Guidance:

Unchanged

FAO Reference:

Paragraph 47 of the Technical Guidelines on Aquaculture Certification state "Measures should be adopted to promote efficient water management and use, as well as proper management of effluents to reduce impacts on surrounding land, and water resources should be adopted." Measures are required to reduce aquaculture facility effluent impacts on surrounding land and water resources. Key criteria are based on common practice in aquaculture standards.

