

# ASC Aligned Farm Standard Development Principle 2 (Environmental Impacts) Public Consultation Summary Report

March-May 2021

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## Background

In March 2021, as part of the development of the aligned ASC Farm Standard ([see terms of reference](#)), ASC opened a 60-day public consultation. Engaging stakeholders in standards development is a core element of operating a credible certification programme and crucial to ensure the quality and uptake of new and revised standards. ASC is a code compliant member of [ISEAL](#), demonstrating its commitment to best practices in stakeholder engagement.

ASC sought feedback from stakeholders on proposals for some criteria of Principle 2 of their aligned Farm Standard, currently in development. This Principle covers the environmental impacts of farms.

Objectives of this consultation were to:

- Ensure all key issues relating to the topics presented were covered
- Ensure applicability across farms
- Identify unintended consequences
- Ensure requirements were measurable and auditable

Consultations are also important ways to raise awareness of changes that are likely to affect stakeholders in coming years and provide an opportunity to engage more with programme users and build understanding about the ASC Programme and its impact.

ASC is committed to transparency, aiming to ensure stakeholders can understand the rationale for decisions on standards content. To ensure stakeholders were able to provide open feedback, ASC presented a detailed survey, allowing respondents to confirm whether they wished their name/organisation to be published along with their comments. ASC does not accept anonymous submissions.

Despite challenges with COVID-19 restrictions, ASC provided several additional ways for stakeholders to provide feedback to the consultation:

- Online Stakeholder Workshops in local languages/time zones (Bahasa, Vietnamese, English language Asian producers)
- Stakeholder meetings with technical staff for large/engaged stakeholders
- Direct local engagement through network of ASC regional staff
- Online Q and A sessions to facilitate understanding of proposals
- Translation of key consultation documents into local languages (e.g. Japanese)
- Newsletters and email notifications
- Offline surveys

The list below shows proposed criteria for Principle 2 of the aligned ASC Farm Standard. Those in bold were part of the March consultation, the results of which are provided in this report.

- 2.1: The UoC is in compliance with applicable environmental regulations (*not yet consulted*)
- **2.2: Ecologically Important Habitats**
- **2.3: The UoC minimises wildlife interactions**

- **2.4: The UoC avoids the culture of new non-native species**
- **2.5: The UoC minimises escapes**
- **2.6: The UoC maintains benthic ecosystem structure and function**
- 2.7: Water Quality (*not yet consulted*)
- **2.8: The UoC minimises salinisation of soil and groundwater**
- **2.9: The UoC disposes biosolids responsibly**
- **2.10: The UoC uses water responsibly and efficiently**
- **2.11: The UoC uses energy efficiently**
- 2.12: Waste and Pollution Control (*not yet consulted*)
- 2.13: Feed (*not yet consulted*)
- 2.14: Animal Welfare (*not yet consulted*)
- 2.15: Parasite and Pathogen control (*not yet consulted*)
- **2.16: The UoC applies antibiotics and other veterinary drugs responsibly**
- 2.17: Hatchery, fingerlings, broodstock and seed (*not yet consulted*)
- 2.18: Area-based Management (ABM) (*not yet consulted*)

A number of Annexes are also in development covering species specific metric performance levels, a Risk Management Framework and data submission requirements.

Further information on the aligned ASC Farm Standard development can be found [here](#).

## Summary of Feedback

Overall, 110 written responses were received. Of the identified broad target groups listed below some groups were better represented than others. Some production sectors were well represented (salmon/shrimp) while others were absent. Efforts made to engage smaller scale producers in online workshops with translation did not yield significant feedback and an improved engagement plan is in development to yield better response rates and balance across affected stakeholder groups.

Key stakeholder groups identified were:

- Producers (varying scale/operating region/species production and production type)
- CABs accredited to audit against the ASC Standard
- Governments/regulators
- Environmental NGOs (eNGOs)
- Affected communities
- Scientists/academics
- Retailers
- Laboratories/Companies producing farm technological solutions

The following tables summarise responses received.

Stakeholder Group	Number of responses	Share
Producers (farmers)	36	33%
NGOs	23	21%

Stakeholder Group	Number of responses	Share
Academia	10	9%
Processors	9	8%
Retailers	8	7%
Others <i>(suppliers, consultants, tech companies, genetic companies, consumers)</i>	24	22%
<b>TOTAL</b>	<b>110</b>	<b>100%</b>

### Breakdown of feedback from producers

Species	TOTAL	Country	Subtotal
Salmon	14	Chile	4
		Norway	3
		USA	1
		Faroe	1
		Canada	1
		Japan	1
		UK	1
		Switzerland	1
		Australia	1
Shrimp	13	Vietnam	3
		India	2
		Ecuador	2
		Indonesia	2
		Honduras	1
		Saudi Arabia	1
		Madagascar	1
		Thailand	1
Sturgeon	1	Switzerland	1

Species	TOTAL	Country	Subtotal
Tilapia	1	Indonesia	1
Trout	1	Denmark	1
Seabass/bream	1	Croatia	1
Barramundi	1	Malaysia	1
Oysters	1	China	1

### Breakdown of feedback from NGOs

Country	TOTAL
UK	11
USA	5
Canada	2
Sweden	1
Denmark	1
Vietnam	1
Indonesia	1
Unknown	1

### Breakdown of feedback from academics

Country	TOTAL
Norway	1
New Zealand	1
Japan	1
UK	1
Germany	1
Sweden	1
Chile	1
Global	1
Unknown	1

### Breakdown of feedback from processors

Country	TOTAL
France	2
NL	2
Indonesia	2
Chile	1
Spain	1
Germany	1

### Breakdown of feedback from retailers

Country	TOTAL
France	4
Spain	1
Sweden	1
Korea	1
Unknown	1

## Criteria Feedback Summaries

### Criterion 2.2: Ecologically Important Habitats

**Intent statement:** Farm sites maintain coastal and riparian habitats adjacent to or within farm perimeters to preserve essential ecosystem functions and respect the management objectives of Protected Areas and ecologically important habitats on which threatened and/or protected species and other wildlife depend.

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not granted</i>	Survey
Concerned citizen	Not specified	Survey
Consumer	Not specified	Survey
eNGO	Monterey Bay Aquarium Seafood Watch	Survey

Stakeholder group	Organisation	Feedback Mechanism
eNGO	<i>Name redacted; consent not granted</i>	Survey
eNGO	<i>Name redacted; consent not granted</i>	Survey
eNGO	SeaChoice	Survey
eNGO	Seafood Legacy Co., Ltd.	Survey
eNGO	The Aquatic Life Institute	Survey
eNGO	WWF	Offline survey in Excel received via email
Importer/Distributor	<i>Name redacted; consent not granted</i>	Survey
Processor	Labeyrie Fine Foods	Survey
Producer	<i>Name redacted; consent not granted</i>	Survey
Producer	<i>Name redacted; consent not granted</i>	Survey
Producer	Not specified	Survey
Producer (salmon)	AquaBounty	Letter received via email (additional feedback)
Producer (salmon)	AquaBounty	Survey
Producer (salmon)	Cermaq Norway AS	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (salmon)	Nova Sea AS	Survey
Producer (salmon)	Swiss Alpine Fish AG	Survey
Producer (shrimp)	Granjas Marinas	Letter received via email (additional feedback)
Producer (shrimp)	Granjas Marinas San Bernardo S.A. de C.V, Finca CRIMASA, Finca CADELPA, Finca AQH, Finca Las Arenas	Survey
Producer (shrimp)	JASS Ventures Pvt Ltd	Survey
Producer (shrimp)	PT SURYA WINDU KARTIKA	Survey
Producer association (shrimp)	<i>Name redacted; consent not granted</i>	Survey
Retail	Edeka	Offline survey in Excel received via email
Retail	IKEA (food)	Survey
Retail	<i>Name redacted; consent not granted</i>	Survey
Various (producer, NGO, processor, academic, consultant)	Various	Participants in Stakeholder Meeting – Bahasa Session

Stakeholder group	Organisation	Feedback Mechanism
Various (producer, NGO, processor, academic, consultant)	Various	Participants in Stakeholder Meeting – English Session
Various (producer, NGO, processor, academic, consultant)	Various	Participants in Stakeholder Meeting – Vietnamese Session

Feedback received from producers and environmental NGOs was adequate to inform next steps. ASC will additionally target future consultations to reach governmental agencies and management bodies that set the regulations related to permissible activities and conservation management in protected areas and other protected habitats. ASC also aims to increase the breadth of feedback coverage for producers.

## Summary of Feedback

### Key Themes

The majority of respondents found each indicator was generally clear and evidence would be available to demonstrate compliance and assess it. The most common feedback was around difficulty in assessing proposals without the corresponding environment assessment requirements (planned for inclusion in the Risk Management Framework (RMF) presented for consultation in March 2022) and associated lack of specific metrics. A few indicators would benefit from revisions to clarify the requirements or enhanced definitions or examples.

The following key points were raised and have been incorporated in subsequent review:

- Draft indicators will deviate from specific metric limits for buffer zones in some current ASC standards to requirements for a site-specific assessment to determine appropriate buffers for ecosystem functions;
- Any lack of clear definitions of protected areas and the use of “other effective means” may leave requirements open for interpretation;
- IUCN Guidelines and/or Protected Area management plan objectives may contradict ASC requirements; for example, where national regulations permit activities that ASC has not. There is the need for clear guidance and examples;
- Continued challenges with understanding what constitutes successful mangrove rehabilitation at the individual farm level and whether 50% area to restore is adequate; a value accepted by a technical working group.

### Other notable comments

- Stakeholders noted the challenges of reviewing criterion in isolation where related criteria were not yet available for review;
- Biofloc was not listed as an applicable production system;
- Clarity needed around whether artificial buffer zones could be used to comply with requirements;
- Suggestion that the criterion should place exceptions regarding changes in cover of induced mangrove vegetation along riverbanks and channels that may be perceived as a result of farm construction on ASC GIS portal;

- Review of this criterion appeared to be very limited by the absence of the Risk Management Framework requirements, which complicated the reviews for many;
- In relation to the Risk Management Framework assessment requirements that are still to be developed, some raised comments around the quality of data and time since last assessment noting this could be a factor; to respect instances where national regulations require strict environmental assessments; and that farmer/CAB/Auditor training in how to conduct the assessments will be critical;
- The criterion relies on the need to protect ecosystem services and functions, additional guidance on this may be necessary.

### Next Steps

ASC has convened an advisory panel of experts to develop further guidance around protected areas (PAs), wetlands and areas with High Conservation Values (HCVs). Special consideration for this criterion is included in the development of the Risk Management Framework.

### Criterion 2.3: The UoC minimises wildlife interactions

**Intent Statement:** The farm deters and mitigates interactions with wildlife, particularly threatened and protected species.

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not granted</i>	Survey
Concerned citizen	Not specified	Survey
Consumer	Not specified	Survey
eNGO	Monterey Bay Aquarium Seafood Watch	Survey
eNGO	<i>Name redacted; consent not granted</i>	Survey
eNGO	SeaChoice	Survey
eNGO	The Aquatic Life Institute	Survey
eNGO	WWF	Offline survey in Excel received via email
Importer/Distributor	<i>Name redacted; consent not granted</i>	Survey
Producer	<i>Name redacted; consent not granted</i>	Survey
Producer	<i>Name redacted; consent not granted</i>	Survey
Producer	Not specified	Survey

Stakeholder group	Organisation	Feedback Mechanism
Producer	Not specified	Survey
Producer	Not specified	Survey
Producer (salmon)	AquaBounty	Letter received via email (additional feedback)
Producer (salmon)	AquaBounty	Survey
Producer (salmon)	Cermaq Norway AS	Survey
Producer (salmon)	core høring maj	Letter received via email
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (salmon)	Nova Sea AS	Survey
Producer (shrimp)	Granjas Marinas	Letter received via email (additional feedback)
Producer (shrimp)	JASS Ventures Pvt Ltd	Survey
Producer association (shrimp)	<i>Name redacted; consent not granted</i>	Survey
Retail	IKEA (food)	Survey
Retail	Picard	Letter received via email
Retail	Picard Surgeles	Survey
Retail, Farmers' organisation	Dansk Akvakultur	Survey
Supplier of acoustic deterrents to fish farms	<i>Name redacted; consent not granted</i>	Survey
Various (producer, NGO, processor, academic, consultant)	Various	Participants in Stakeholder Meeting – Bahasa Session
Various (producer, NGO, processor, academic, consultant)	Various	Participants in Stakeholder Meeting – English Session
Various (producer, NGO, processor, academic, consultant)	Various	Participants in Stakeholder Meeting – Vietnamese Session

Feedback received from producers and environmental NGOs was adequate to inform next steps. ASC will target future consultations to reach governmental agencies and management bodies that set the regulations related to protected species, wildlife interactions and animal welfare laws. ASC also aims to increase the breadth of feedback coverage for producers.

### Summary of feedback

*Additional feedback available in Annex 1.*

## Key Themes

No major issues were identified in the feedback received. There were some concerns over: changes to existing criteria, removal of specified metric limits and the need for further definitions and guidance. Stakeholders noted the need to clarify:

- Indicators on lethal limits for threatened and protected and other wildlife species;
- The deviations from current ASC standards to the proposed Farm Standard;
- How ASC will address allowances for welfare of injured predators;
- The use of acoustic deterrent devices.

## Other Notable Comments

- Need for clarity that the criterion is intended to focus on mitigation through management plan and individual wildlife assessments and enhancing actions taken to avoid mortality events – with removal of allowable mortality limits;
- Stakeholders noted need to review Environmental Impact Assessment requirements as part of Annex 3 (Risk Management Framework) in order to provide more detailed feedback;
- Concern raised that the proposed management plan approach is not ‘tied to practices’;
- Consideration should be given to defining a maximum pest limit;
- Clearer guidance around species designations will be needed;
- Clarify allowable actions when human safety is in danger;
- Ensure the removal of manager approval (as currently required in ASC standards) before lethal action can take place; this is in conflict with Norwegian animal welfare laws;
- ASC received some different views regarding the proposed removal of mortality limits, some applauded the approach to encouraging accurate reporting and towards improving the UoC’s relationship with nearby animals; others felt it weakens the standard without concrete limits;
- There is a need to clarify across indicators which should pertain to protected and threatened species versus all wildlife (excluding vermin).

## Next Steps

ASC is engaging in directed consultations with protected species, wildlife and Acoustic Deterrent Devices (ADD) experts in government and research agencies to further understand considerations around regulating interactions.

## Criterion 2.4: The UoC avoids the culture of new non-native species

**Intent Statement:** The intent of the Criteria is to avoid the culture of non-native species that could be able to become newly established in the established culture area.

## Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
eNGO	Monterey Bay Aquarium Seafood Watch	Survey
eNGO	Seachoice	Survey
eNGO	SFP	Survey
eNGO	WWF	Offline survey in Excel received via email
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (shrimp)	Granjas Marinas	Letter received via email (additional feedback)
Producer (shrimp)	JASS Ventures	Survey
Producer (shrimp)	<i>Name redacted; consent not given</i>	Survey
Producer (tilapia)	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	AquaBounty	Survey/Letter
Retail	Edeka	Letter received via email
Retail	IKEA	Survey
Retail	<i>Name redacted; consent not given</i>	Offline survey in Excel received via email

Main stakeholder categories are represented in responses although producers are mainly salmon and shrimp. Broader producer input will be sought at next consultation and later through piloting.

### Summary of feedback

*Additional feedback available in Annex 1.*

### Key Themes

The concept of grandfathering where existing non-native culturing is permitted but new non-native culturing is not permitted, exists in current ASC Standards. On this basis, it is also proposed in the aligned ASC Farm Standard. Changes to this approach would have consequences for current certified farms as some simply will not be able to continue to be certified.

On the proposed conditional allowance of genetically modified (GM) species related concerns raised were:

- The conditional allowance is a deviation from all current Standards;
- It presents a reputational risk from markets perspective;
- Reputational risk exists if not allowed in full as the Standard thus appears to shy away from addressing the actual impact on this issue;
- Impact of transgenic species in farms *beyond* ASC scope should be considered.

## Next Steps

The issue of whether to proceed with proposals for conditional allowance of GM species will be raised with ASC governance bodies prior to any continued development due to the reputational risks and impacts identified.

## Criterion 2.5: The UoC minimises escapes

**Intent Statement:** Farms shall minimise escapes

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
Consumer	Not specified	Survey
Consumer	Not specified	Survey
eNGO	Monterey Bay Aquarium Seafood Watch	Survey
eNGO	Seachoice	Survey
eNGO	The Aquatic Life Institute	Survey
eNGO	WWF	Offline survey in Excel received via email
Producer (salmon)	Aquabounty	Survey
Producer (salmon)	Cermaq Norway AS	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (salmon)	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	Nova Seas AS	Survey
Producer (shrimp)	JASS Ventures	Survey
Producer (tilapia)	<i>Name redacted; consent not given</i>	Survey
Producer association (shrimp)	<i>Name redacted; consent not given</i>	Survey
Producer association (various)	Dansk Akvakultur	Survey
Retail	Edeka	Letter received via email
Retail	IKEA	Survey
Retail	<i>Name redacted; consent not given</i>	Survey

Participation of producers was almost exclusively from salmon sector. Participation will need to be broader in the next consultation on this area to ensure those impacted by changes to this criterion are heard.

### Summary of feedback

*Additional feedback available in Annex 1.*

### Key Themes

Most respondents supported the overall direction however two key concerns were raised:

- Deviation from current Standards;
- Reputational risk associated with perceived reduction in rigour around minimisation of escapes.

### Next Steps

The issue of whether to proceed with proposals to remove metric limits will be raised with ASC governance bodies prior to any continued development due to the risks and impacts identified.

### Criterion 2.6: The UoC maintains benthic ecosystem structure and function

For this consultation topic, no indicator language was presented for this Criterion. Instead, key considerations of a recommended approach for a revised indicator of benthic impacts for marine cages systems was presented. The recommendations were developed by an external Technical Working Group (TWG) formed for this purpose by ASC. Further details about this group can be found [here](#).

**Intent Statement:** To maintain the ecosystem structure and function of the area surrounding farm through the regular monitoring of the chemical properties and biodiversity of the benthic sediment.

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
eNGO	Manomet	Survey
eNGO	Monterey Bay Aquarium - Seafood Watch	Survey
eNGO	SeaChoice	Survey
eNGO	Seafood Legacy Co., Ltd.	Survey
eNGO	Sustainable Fisheries Partnership	Survey
eNGO	WWF	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	Yuta-Yuta	Letter received via email
Producer (salmon)	Cermaq Norway AS	Survey

Stakeholder group	Organisation	Feedback Mechanism
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (salmon)	Nova Sea AS	Survey
Producer (salmon)	Salmones Camanchaca	Survey
Producer association (various)	Dansk Akvakultur	Survey
Research	Ehime University	Survey
Research	NORCE Norwegian Research Centre	Survey
Producer Service Provider	Åkerblå AS	Survey
Producer Service Provider	ID-Gene ecodiagnosics	Survey
Producer Service Provider	<i>Name redacted; consent not given</i>	Survey

Most feedback was received from industry producers representing different geographic areas and from NGOs. Additional feedback from Academia and Governments would be beneficial to better understand potential areas of concern for these stakeholders' groups. Provisions will be taken to ensure their participation in future consultation efforts.

## Summary of feedback

### Key Themes

The feedback received from the consultation on the recommendations for a revised indicator for marine cage systems revolved around the following key themes:

- Setting fixed indicator limits v/s comparative/relative indicators:
  - Setting fixed limits might not be appropriate considering the different environmental/benthic conditions around the world;
  - The natural background of benthic environments has to be considered;
- Equivalencies between acceptable limits:
  - There is no clear equivalency between the limits of the different parameters;
- Sulphide methodology:
  - The recommended methodology for measuring sulphide (using UV spectroscopy technique, S<sub>2</sub>-UV) is new and not currently used by any regulator;
  - It might be challenging to implement the recommendation on a global scale. Changing what farms currently measure (sulphide using an ion-specific electrode, S<sub>2</sub>-ISE) makes the previous data not relevant and/or not useful as a baseline;
- Deferring to local regulators:
  - The requirement should defer to current local regulations which address local circumstances based on local expertise;
- Sampling points:
  - There tends to be one main axis of deposition around the farm but by giving equal weighting to the four transects around the farm (as proposed by the recommendation),

- the average sulphide level is diluted masking the high level in the axis of maximum deposition;
- The 10-meter station: having a sampling site near the centre created difficulties since the site can shift with environmental conditions;
- Additional costs:
  - The recommendations will create significant new cost and burden for farms in some jurisdictions.

## Next Steps

After assessing the feedback received, the TWG agreed on a pathway to arrive at a final proposal for an aligned benthic impact indicator for marine cages. The pathway consists of:

- a) The development of a “narrative” regarding the aim of ASC in proposing the recommended approach. Moreover, the narrative will make clear that the onus is on the farms to make a convincing case to ASC if they would like to use a different monitoring approach (from the one recommended by the TWG) that still speaks to ASC’s narrative and the equivalency with it.
- b) The development of a specific sampling methodology and a set of “must-have” indicators and acceptable limits (a mix of relative and absolute), given as an example of a monitoring approach that is acceptable and meets the narrative in a).
- c) Flexibility explicitly offered for farms and jurisdictions that are innovating or have a robust monitoring approach that also meets the narrative in a).
- d) A whitepaper produced to develop and support the narrative as per a). The whitepaper will outline:
  - The benthic impacts of concern for ASC, its intent on addressing them and the expected outcome of the revised indicator;
  - The current scientific knowledge associated with those benthic impacts, highlight the areas where there is global consensus amongst the scientific community and areas where differs;
  - A review of national regulations and other certification schemes;
  - The rationale for taking the recommended approach.

It is expected that the final proposal for a revised indicator of benthic impacts for marine cage systems will be presented for TAG endorsement in January 2022 for public consultation in March 2022.

## Criterion 2.8: The UoC minimises salinisation of soil and groundwater

**Intent Statement:** To minimise salinisation of soil and freshwater resources as a result of the farms’ activities

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
eNGO	Monterey Bay Aquarium Seafood Watch	Survey

Stakeholder group	Organisation	Feedback Mechanism
eNGO	<i>Name redacted; consent not given</i>	Survey
eNGO	WWF	Offline survey in Excel received via email
Producer (salmon)	AquaBounty	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (shrimp)	Granjas Marinas	Letter received via email (additional feedback)
Producer (shrimp)	JASS Ventures	Survey
Producer (shrimp)	<i>Name redacted; consent not given</i>	Survey
Producer (shrimp)	<i>Name redacted; consent not given</i>	Survey
Producer (shrimp)	Productos del Mar Ventisqueros S.A	Survey
Producer (shrimp)	Thai Hoa Foods Joint Stock Company	Survey
Research	Aquatic Research Institute	Survey
Retail	IKEA	Survey

Feedback received was adequate to inform next steps. Main stakeholder categories are represented in responses although feedback from producers were mainly those farming salmon and shrimp. Broader producer input will be sought at next consultation and later through piloting.

### Summary of feedback

*Additional feedback available in Annex 1.*

### Key Themes

Generally, draft indicators were well received, except for Indicator 2.8.2:

- Further discussion is needed on whether to retain this new Indicator (2.8.2) or to convert to an Indicator that asks to assess environmental indicators to determine if salinisation occurs.
- Regarding culture system scope to which this indicator applies: only land-based culture brackish/salt water, or also to include freshwater land-based systems.

### Next Steps

The issue of whether to proceed with proposals to retain this indicator will be raised with ASC governance bodies prior to any continued development due to the risks and impacts identified.

### Criterion 2.9: The UoC disposes biosolids responsibly

**Intent Statement:** The farm regulates the disposal of biosolids and ensures recycling of nutrients where possible.

## Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
Concerned citizen	Not specified	Survey
eNGO	SeaChoice	Survey
eNGO	WWF	Offline survey in Excel received via email
Producer	Organisation not specified	Survey
Producer (salmon)	AquaBounty	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (shrimp)	Granjas Marinas	Letter received via email (additional feedback)
Producer (shrimp)	JASS Ventures Pvt Ltd	Survey
Producer (shrimp)	THAI HOA FOODS JOINT STOCK COMPANY	Survey

Limited responses were received from land-based systems that actually need to manage biosolids, and academic, government and retail stakeholder groups.

## Summary of feedback

### Key Themes

No major issues were identified in the feedback received, however there were several indicators that would benefit from revisions to clarify the requirements:

- On the Scope: Many comments were received about the applicability of this criterion to cage culture. The rationale and scope must be clarified.
- Questions for further consideration:
  - How will smolt systems be covered in the interim? Currently covered in greater detail in the Trout Standard than the Salmon Standard;
  - Is there sufficient information available to designate requirements around pathogens and potential biosecurity threats?
  - We believe there is a need to clarify the scope to those systems that generate biosolids, can we define?

### Next Steps

The issue about the applicability of criterion 2.9 to cage culture will be raised with ASC governance bodies prior to any continued development.

## Criterion 2.10: The UoC uses water responsibly and efficiently

**Intent Statement:** The farm is aware of its water use for production and other activities and utilises water efficiently to maintain critical ecosystem services of the water source.

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
eNGO	<i>Name redacted; consent not given</i>	Survey
eNGO	SeaChoice	Survey
Multiple (producer, feed, ENGO, academia, etc.)	Various	Participants in Stakeholder Meeting - no direct comments on 2.10
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (shrimp)	JASS Ventures Pvt Ltd	Survey
Retail	IKEA	Survey

All relevant stakeholder categories provided input on this criterion. The vast majority of comments received were from producers (primarily those farming salmon and shrimp), which may suggest underrepresentation by other groups or reflect that this indicator is of lower concern to eNGOs, retail, etc.

Comments from government or academia would be beneficial to better understand the practicability and utility of some indicators (e.g. in some regions, there may be sufficient government oversight in permitting/monitoring water usage). These stakeholders, as well as a broader scope of producers, will be sought during the next round of consultation.

### Summary of feedback

#### Key Themes

Many responses identified the need for a clearer scope in the rationale/intent. The current wording does not specify whether cage-based systems are excluded, or the extent to which secondary uses of water shall be included (e.g. household water use, treatment vessels, etc.).

A number of respondents foresee challenges in monitoring well depth and question the value of this in areas where water stress is low and/or where regulators set limits on water use. These issues were also identified to a lesser degree for use of surface water.

**Key considerations:**

- The scope of the Criterion needs clarification: Is the intent that this applies only to systems drawing freshwater for production (i.e. RAS, raceway systems, ponds) and not for net pens, etc.? Clarification needed for requirements for domestic use and treatment vessels.
- Measuring indicators (especially wells) may pose a challenge in some areas, and in low water stress regions there is questions around the value of this work. As TAG discussed previously, minimum vital flow may not be available or easy to determine in some regions.
- The relevance/ability of indicator 2.10.8 was discussed previously by TAG and it was determined that feedback would help determine next steps. A producer and an auditor both expressed concern about meeting this indicator.

**Next Steps**

Ad hoc advisory group will be assembled to review the proposed indicators and ensure indicators are globally relevant and measure environmentally significant metrics.

**Criterion 2.11: The UoC uses energy efficiently**

**Intent Statement:** The farm makes efforts towards energy efficient and sustainable energy use to reduce their GHG emissions, both on-farm and in the feed they use.

**Stakeholder representation**

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
eNGO	Aquatic Life Institute	Survey
eNGO	SeaChoice	Survey
eNGO	WWF	Offline survey in Excel received via email
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (feed)	Nutreco	Survey
Producer (salmon)	Nova Sea AS	Survey
Multiple (producer, feed, eNGO, academia, etc.)	Various	Participants in Stakeholder Meeting – no direct comment on 2.11
Other	<i>Name redacted; consent not given</i>	Survey

Most comments received were from producers (and these primarily Canadian salmon farmers, though some representation from Norway and for other species). Limited, but helpful, feedback received from eNGOs (notably WWF). Academia and research communities did not provide feedback. Feedback was also lacking from supply chain/logistics stakeholders; feedback will be sought from these groups through future consultation to demarcate farm emissions.

## Summary of feedback

### Key Themes

Several respondents feel that metric targets for reduction should be set. Smaller producers show concern about their ability to properly calculate values. Several producers suggest that energy use targets should be set at a company level, rather than a site level, where there may be very few alternatives (e.g. for off-grid sites relying on generators). Further deliberations on these comments will be made by the TWG.

- Many stakeholders see more value in an Energy Efficiency Management Plan (EEMP) set at a company or area level, rather than site level, as this allows for broader changes to production to be rewarded, especially in instances where commercially viable alternatives are not available for site-level equipment.
- Clear guidelines around which processes are included/excluded in this indicator remain (e.g. transport of seed/smolt to the site, feed deliveries, movement of animals during growout).

### Next Steps

Revision of the indicators has been undertaken to ensure consistency and relevance of indicators. An indicator requiring adherence to emissions thresholds on per tonne energy consumption has been added, with specific values under review. Values will be included in further consultation.

### Criterion 2.16: The UoC applies antibiotics and other veterinary drugs responsibly

**Intent Statement:** To minimise the risk that antibiotics, other veterinary drugs and non-therapeutants used in farm activities negatively impact human health, the environment and wildlife, including farmed aquatic animals.

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Bureau Veritas Certification Denmark	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
Consumer	Not specified	Survey
Consumer	Not specified	Survey
eNGO	Monterey Bay Aquarium Seafood Watch	Survey

Stakeholder group	Organisation	Feedback Mechanism
eNGO	Seachoice	Survey
eNGO	The Aquatic Life Institute	Survey
eNGO	WWF	Offline survey in Excel received via email
Producer (salmon)	Aquabounty	Survey
Producer (salmon)	Cermaq Norway AS	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	MOWI	Offline survey in Excel received via email
Producer (salmon)	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	Nova Seas AS	Survey
Producer (shrimp)	JASS Ventures	Survey
Producer (tilapia)	<i>Name redacted; consent not given</i>	Survey
Producer association (shrimp)	<i>Name redacted; consent not given</i>	Survey
Producer association (various)	Dansk Akvakultur	Survey
Retail	Edeka	Letter received via email
Retail	IKEA	Survey
Retail	Picard	Survey

This Criterion received feedback from the main stakeholder groups. Producers were mainly represented by the salmon industry and producers of other species will be targeted specifically in the next consultation.

One category of stakeholders missing are the veterinarians/fish health experts, and global animal/human disease organisations (WHO/OIE). Specific input will also be requested from them at the next consultation round.

In addition, more input will be solicited from retailers as a key informant on consumer market trends in this area, especially on antibiotics.

### Summary of feedback

*Additional feedback available in Annex 1*

### Key Themes

Conditional allowance for the use of Critically Important antibiotics:

- Most respondents in agreement on overall direction.
- Perceived reduction in rigour when compared to ASC standards that do not allow any use of Critically Important antibiotics.

- Reputational risk identified for ASC due to importance of these antibiotics for human health.

Proposal to remove treatment limit and focus on overall reduction of antibiotic load:

- Broad range of view: no consensus;
- Perceived reduction in rigour for current (relevant) Standards if no limit is set;
- No incentive offered to reduce use;
- Not strict enough - no antibiotics should be given to ASC certified Shrimp.

### Next Steps

The issue of whether to proceed with proposals to allow conditional use of Critically Important antibiotics and the proposal to remove the treatment limits will be raised with ASC governance bodies prior to any continued development due to the risks and impacts identified.

### Criterion 3.1.7 – Sea Lice

For this consultation, no indicator language was presented. Instead, recommendations for a revised indicator for some aspects included in the scope of the revision (A, B and C below), or core elements of a recommended approach (D below). The recommendations were developed by an external Technical Working Group (TWG) formed for this purpose by ASC.

### Stakeholder representation

Stakeholder group	Organisation	Feedback Mechanism
Academia	<i>Name redacted; consent not given</i>	Survey
CAB/auditor	bio.inspecta	Survey
CAB/auditor	Control Union	Survey
CAB/auditor	Lloyd's Register	Survey
CAB/auditor	<i>Name redacted; consent not given</i>	Survey
eNGO	Argyll Fisheries Trust	Survey
eNGO	Atlantic Salmon Trust	Survey
eNGO	Fidra	Survey
eNGO	Fisheries Management Scotland	Survey
eNGO	Friends of the Sound of Jura	Survey
eNGO	<i>Name redacted; consent not given</i>	Survey
eNGO	<i>Name redacted; consent not given</i>	Survey
eNGO	SeaChoice	Survey
eNGO	The Aquatic Life Institute	Survey
eNGO	The Game & Wildlife Conservation Trust	Survey
Fisherman	<i>Name redacted; consent not given</i>	Survey
Government	Crown Estate Scotland	Survey
Individual	Ewan Kennedy	Letter received via email

Stakeholder group	Organisation	Feedback Mechanism
Processor	Labeyrie Fine Foods	Survey
Processor	<i>Name redacted; consent not given</i>	Survey
Processor	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer	<i>Name redacted; consent not given</i>	Survey
Producer (salmon)	Cermaq Norway AS	Survey
Producer (salmon)	Grieg Seafood	Letter received via email
Producer (salmon)	Invermar	Survey
Producer (salmon)	Nova Sea AS	Survey
Retail	IKEA KOREA	Survey

Most feedback was received from industry (producers, processors, and retailers) and from NGOs. Additional feedback from academia and governments would be beneficial to better understand potential areas of concern for these stakeholder groups. Provisions will be taken to ensure their participation in future consultation efforts.

### Summary of feedback

*Full feedback available on request.*

### Key Themes

The feedback received from the consultation on the recommendations for the aspects consulted revolves around the following key themes (table below):

Aspect	Recommendations	Key Feedback Themes
<b>A. Lice species/life stage/gender for which to set a metric</b>	1) To include a requirement to publicly report <i>Caligus</i> on farms in British Columbia, BC, Canada within 7 days of sampling.	<ul style="list-style-type: none"> <li>• Data on <i>Caligus</i> in BC is already available. ASC should use it to determine a meaningful threshold for that species.</li> </ul>
<b>B. Requirements for non-sensitive periods</b>	1) To maintain the indicator's focus on sensitive periods.	<ul style="list-style-type: none"> <li>• A precautionary approach should be taken.</li> <li>• Limits should be implemented during non-sensitive periods in jurisdictions where vulnerable juvenile fish are present in nearshore areas (e.g. chinook in the West Coast of Vancouver Island, sea trout in Norway and Scotland, etc.).</li> </ul>

Aspect	Recommendations	Key Feedback Themes
<b>C. Requirements on sampling protocols</b>	<p>1) <u>Frequency</u>:  a. Maintain the current weekly sampling requirement during the sensitive period.  b. Remove reference to having to conduct weekly sampling immediately prior to sensitive periods (footnote 43 of the Salmon Standard<sup>1</sup>) and further revise to read: “Farms shall ensure that the lice levels are below the maximum sea lice limit at the time of the first sampling event within the sensitive period.”</p> <p>2) <u>Number of cages</u>: At least 50% of cages should be sampled over a 2-week period.</p> <p>3) <u>Number of fish per cage</u>: A minimum of 10 fish per cage should be sampled.</p> <p>4) <u>Fish welfare (exemption from sampling)</u>: The veterinarian or fish health professional can exempt fish from being sampled during a certain period of time within the sensitive period, if local regulations permit. The reason for the exemption shall be documented.</p>	<ul style="list-style-type: none"> <li>• There does not appear to be a scientific justification for the sampling details around the number of cages and fish sampled.</li> <li>• Sampling such a low number of fish in a low proportion of cages seems to be a lower bar than the legal requirements in many jurisdictions.</li> <li>• The approach would be a burden at sites with many cages.</li> </ul>
<b>D. Regional approaches to the indicator (during the sensitive period)</b>	<p>On setting a regionally relevant lice level:</p> <p>The TG is recommending a revision that includes the following elements:</p> <p>1) Rely on local regulators to define trigger levels and sensitive periods.</p> <ul style="list-style-type: none"> <li>• In situations where there are no jurisdictional regulations to enforce, ASC will require the use of regulatory triggers and sensitive periods of the most similar jurisdiction based on the environment and species present.</li> <li>• In situations where significant concerns are raised about the fitness of local regulations to address wild salmonids, and more than one trigger level exist, ASC should use the lowest trigger level available in the jurisdiction’s sensitive period (i.e. Scotland)</li> <li>• ASC should annually review trigger levels in the different jurisdictions and update its guidance to producers and auditors accordingly.</li> </ul> <p>2) Be more protective than local regulators by having a farm become non-conforming with ASC if it surpasses that</p>	<ul style="list-style-type: none"> <li>• A revised indicator should not refer to local regulation</li> <li>• The current level of 0.1 mature female lice should be maintained.</li> <li>• The approach leaves behind any effort for a global standard on sea lice exposure and makes permanent all the variance Requests.</li> <li>• Revised sensitive periods should be set. Currents periods in BC, Canada, and Scotland are insufficiently protective.</li> <li>• Trout’s vulnerabilities need to be recognised. Current regulation on trout in certain countries (e.g. Scotland and Norway) is insufficient.</li> <li>• CABs should decide the grade of a non-conformity.</li> <li>• In jurisdiction without regulations to enforce, a maximum level that offers the</li> </ul>

Aspect	Recommendations	Key Feedback Themes
	<p>trigger level. Local regulators would typically require some kind of management response at the trigger (notification, treatment, or other management action).</p> <p>3) The non-conformity described above would be “major”, and certain conditions could constitute a “critical” non-conformity, that will result in immediate suspension of the farm’s ASC certificate.</p>	<p>necessary protection for wild salmon and could be considered top performance should be set in order to gain and maintain certification</p>

**Next Steps**

To reconvene the TWG and continue the assessment of the feedback received aiming at developing a draft of revised set of recommendations for a second round of public consultation in March 2022.

## Annex 1: Additional Narrative Responses

### Criterion 2.3 The UoC minimises wildlife interactions

2.3.7 The UoC shall not intentionally kill birds, mammals, reptiles or elasmobranchs unless all other avenues were pursued prior to using lethal action.		
	<b>Clarity of Indicator (number of stakeholders)</b>	<b>Addressing impact (number of stakeholders)</b>
Agreement	18 (85.71%)	17 (85)
No opinion	1 (4.76%)	1 (5)
Not in agreement	2 (9.52%)	2 (10)

Additional comments received:

- “No. The indicator should clearly indicate what is considered to be appropriate non-lethal methods. Lethal predator control techniques should not be used on any species, regardless of their endangerment status. Harmful or lethal measures to control predators should be banned, and the use of preventative measures e.g. double netting to ensure wild animals cannot get into farms should be promoted.”
- “Define "non-lethal methods". There are concerns that such methods do contribute to harm (e.g., darts, bean bag explosives and extended length of entrapment).”
- “The indicator attempts to address the impact predators could have on aquaculture production, however, places no emphasis on welfare for all animals involved.”
- “Should require that all other avenues were pursued prior to any lethal action against a predator; that explicit permission was granted by regulatory authority.”

### Criterion 2.4 The UoC avoids the culture of new non-native species

2.4.2 The UoC shall only culture transgenic species if kept in a system that prevents animals from escaping.		
	<b>Clarity of Indicator (number of stakeholders)</b>	<b>Addressing impact (number of stakeholders)</b>
Agreement	9 (75%)	8 (66.67%)
No opinion	1 (8.33%)	0
Not in agreement	2 (16.67%)	4 (33.33%)

Additional comments received:

- “No. This indicator does not specify any requirements that a system must have in order to prevent animals from escaping.”
- “We strongly object to the ASC allowing transgenic species for certification as this sets a dangerous precedent. GMO salmon are not 100% sterile (reportedly 98.9% triploid); pose a serious risk to wild salmon; human error on the handling and shipping of GMO/non-GMO

eggs remains a serious concern at PEI hatchery which cultures both GMO and non-GMO eggs; land-based systems are not foolproof e.g. the company's Panama "land-based closed system" lost all GMO fish during a storm; a US court recently found that the FDA did not meaningfully analyse what might happen to wild salmon in the event GMO salmon did survive and establish in the wild due to escapement."

- "While the indicator attempts to prevent deleterious effects on the cultured species, wildlife, and the surrounding environment, specifications are not clear enough to ensure effectiveness."
- "Some would argue there is always some escape risk and the interpretation of "zero escape system" might be interpreted more broadly than intended."
- "First defining transgenic (and hybrids) and linking that to the theme of non-natives needs to be made clear as that is a little lost here/ indirect. Second, WWF believes that reputational risks given public perceptions and unknowns around transgenics mean this is not worth adding to the standard."
- "We object - no system can be 100% guaranteed from human error or escape breach."
- "Requiring stricter criteria than just preventing escape. UoC shall only culture transgenic species in a system that does not present any risk of escape of animals to the environment, such as discharge of effluent water to a natural water body. Also, transgenic spp should be taken into consideration under animal welfare criteria."
- "Must be not allowed"
- "All other avenues is not clear. Approach is vague."
- "This is definitely an improvement."
- "Yes, more detailed definitions should be provided. An intervention summary is listed as follows: -Lethal predator controls are not permitted. -Use of acoustic deterrent devices is not permitted. -Passive predator protection, such as double-walled nets, are preferred above active methods. -Concern for the welfare of other animals in the local ecosystem must be considered. For example, overhead nets must be safe for piscivorous birds. -New farms must be sited in locations which minimise impact on wildlife, e.g. away from seal haul-outs, etc. -Consideration must be given to indigenous animals, such as demersal animals. Population levels of these animals must be monitored and maintained. If there is a substantial impact on the number or diversity of wild animals, the farming operation must be scaled back. -Place trapping devices in effluent/drainage canals or on water outlets to safeguard escapees; prevent water spillage during rainy seasons. -Ensure proper timely inspections, mitigation actions and repairs to the culture system, and proper recording of any actions."

**Criterion 2.5: The UoC minimises escapes**

Q1: Fish counting cannot be done with full accuracy. Understanding this limitation, how important is conducting fish counts nevertheless to you?	
	<b>Responses</b>
Very important	15 (76.47%)
Important	1 (17.65%)
No opinion	1 (5.88%)
Not valuable	0
Not valuable at all	0

Additional comments received:

- “Critical element to successful farm management”
- “Counting is still needed to recognise escape and productivity.”
- “It is better to have some knowledge, than no knowledge.”
- “Aquatic animals should be counted in heads of stock (number of individual animals), instead of by mass, due to the fact that when fish, for example, are referred to in tonnes.”
- “Its an important part of accountability and technology will improve. This is one of the most contentious and arguably impactful negative impacts of aquaculture.”
- “The limit is the percentage that accounts for counting technology and errors- relative.”
- “Fine but ASC standard should mean certain levels are achieved.”
- “Fine but questions about realites of even reporting any losses.”
- “It still represents a mechanism for defining otherwise undetectable escape (e.g. trickle loss).”
- “It is very important to fish producers to know how much fish there is in the cages, that's why it is inevitable to do the counting, even more than once per production cycle.”
- “Counts are the most effective way of identifying and qualifying escapes.”
- “On shrimp farming, it is important because this information allows to determine production efficiency.”
- “We can try to measure the input and output of fish with error range 2%-4%.”
- “Optimisation of harvesting to the demand is the key to improve sustainability and survival of the individual species.”
- “Also, we purchase smolt from smolt producers. It is extremely important for us from an economic standpoint to know that we are receiving the amount of smolt that we have purchased.”

Q2: Given the limitations in counting accurately, what is the value of a metric escape limit (either relative or absolute) to you?	
	Responses
Very important	5 (33.33%)
Important	5 (33.33%)
No opinion	0
Not valuable	3 (20%)
Not valuable at all	2 (13.33%)

Additional comments received:

- “Therefore, we suggest including an assessment of escape risk in the environmental assessment process to inform what a safe level of escapes might be. A potential outcome might include a determination of a maximum number of fish escapes allowed in a specified region to be allocated across ASC farms in that region. Escape "credits" could thus be traded amongst firms in a cap-and-trade type scheme.”
- “Relative limit is needed to prevent escape. This encourage farmers not to cause escape.”
- “It is very difficult to record low numbers of escapes, therefore it is more important to establish the root cause and work towards preventing future incidents. Training in response to escapes has more value.”

- “Metric escape limits are essential for analysing structural integrity, human errors, or other farm- based factors that result in escapes. Furthermore, metric escape limits need to be determined when noting “acceptable” limits versus mass escapes that require authority notification or possible recapture.”
- “It is imperative that the ASC define and instill a maximum metric escapes limit. Even with limitations in counting accuracy, it still represents a mechanism for defining otherwise undetectable escape (e.g. trickle loss). Large mass escape events would not be affected by counting accuracy given for obvious reasons (given the nature of such an event is highly detectable and obvious).”
- “The number of fish escaping doesn't provide any additional rigour to the audit. Limits like 300 fish are more likely to result in false reporting than attending to the issue at hand.”
- “On shrimp farming, ponds are designed in such way that shrimp escapes are negligible.”
- “It is not practical to impose an escape limit as escapes cannot be fully controlled or forecasted.”
- “To address the limitations, limit the harvest to the demand, thereby reducing the impact on the environment as a whole.”
- “While it is true that a metric escape limit loses value because of the difficulties of counting accuracy, we still believe that it is important to show that the standard takes escapes seriously while differentiating between minor events.”

Q3: Would you support a proposal that has the following features: (a) Counting of input and output numbers and error range (b) Requiring root cause analysis and corrective action of known in-culture loss & escape events (c) Requiring site-specific reduction of in-culture (total) losses over time (expressed per production cycle)			
	<b>A</b>	<b>B</b>	<b>C</b>
Full support	10 (55.56%)	12 (70.59%)	7 (38.89%)
Partial support	5 (27.78%)	4 (23.53%)	5 (27.28%)
No support	1 (5.56%)	1 (5.86%)	5 (27.78%)
No opinion	2 (11.11%)	0	1 (5.56%)

Additional comments received:

- “Reduction plans may be difficult to evaluate in respect to conformance or nonconformance. Cycles can vary greatly in respects to environmental/external inputs.”
- “The reduction of in-culture losses over time should be further defined. Although per production cycle is specified, ASC should set clear time limits when corrective actions would be required. However, this system does not account for fish in the middle of the production cycle, meaning there could be a delayed discovery in regards to in-culture losses, undocumented predation, or unnoticed escapes.”
- “Full support for these, however, a maximum escape limit is still necessary. (a) will help determine whether undetected escapes have occurred; (b) should be a best practice for any facility; and (c) demonstrates improvement over time as per ISEAL and ASC theory of change.”
- “I like the idea of tracking input and output numbers. Rather than arbitrary escape limits.”
- “c) very difficult to document. small fish dies and dissolves or gets eaten.”

- “Given the challenges of counting and determining how fish have been lost we suggest reporting and setting limits to the number of events you describe (e.g., number of handling errors, number of small, large and catastrophic escape events).”
- “Support all except the last. Do not see why site-specific reduction totals are needed as long as a farmer can: -Avoid escape events -Have a final count that is within the margin of error of the counting machines that are used”

**Criterion 2.16: The UoC applies antibiotics and other veterinary drugs responsibly**

2.16.15 The UoC shall not use antimicrobials listed as Critically Important Antimicrobials for Human Medicine by the World Health Organisation (WHO), with the exception of specific bacterial pathologies affecting specific aquatic species where there is no other alternative treatment.		
	<b>Clarity of Indicator (number of stakeholders)</b>	<b>Addressing impact (number of stakeholders)</b>
Agreement	15 (88.24%)	11 (68.75%)
No opinion	1 (5.88%)	2 (12.50%)
Not in agreement	1 (5.88%)	3 (18.75%)

Additional comments received:

- “No exceptions should be allowed. WHO critically important antibiotics should not be allowed under the ASC”
- “The use of Critically Important Antimicrobials should be strictly limited. Who and how decide "where there is no other alternative treatment"? A system such as ASC permits use of them should be introduced.”
- “Antibiotics use on shrimp production should be banned.”
- “Allowing for the exception of specific pathologies with no alternative treatment should NOT be allowed. Critically Important for Human Health antibiotics to too critical to allow exclusionary loopholes to this potential AMR impact. In countries where no alternatives legally exists, there should be increased efforts to revise regulatory legislation and policy reform. There should be no exemptions to those antibiotics on the WHO Critically Important for Human Health.”
- “This will result in a Critical score under the current SFW Aquaculture Standard, due to the allowance of Critically Important antimicrobials in significant quantities (>1 treatment per cycle or year for longer cycles), and may affect benchmarking activities and outcomes.”
- “We strongly oppose the weakening of the standard by allowing WHO critically important antibiotic use via exceptions.”
- “2.16.15 Its important that oxolin acid can be used in sea cage and in freshwater farm under certain circumstances.”
- “Exceptions to the prohibition of the use of antimicrobials listed as Critically Important are welcomed, but efforts to reduce the use of these antimicrobials should be described.”
- “2.16 Antibiotics; proposed - removal of treatment limit. Intent to focus on overall reduction of antibiotic load (concept).”

Additional comments received:

- “WWF General Comments: We suggest that ASC continues to have a maximum antibiotic limit in addition to robust site-specific plans aligned with WHO. This may prove to be a strong incentive for the producers to really implement better practices if they want to achieve certification. ASC should align with farms achieving top performance, not everyone can meet it. There may also be consumer and buyer related perceptions of the "quality" of ASC certified seafood if there are no absolute limits on antibiotic use”
- “Limit of use of antibiotics was removed, I understand the intention, but one of the superior points of ASC has been limited use of antibiotics so far, so incentives to reduce antibiotics are needed.”
- “A primary indicator of sickness in the aquaculture setting is mortality. From an animal welfare perspective, metaphylactic treatment will usually come too late to be effective. Standards should require routine testing for diseases to thereby establish appropriate metaphylactic treatment protocols. Every effort should be made to identify and treat isolated cases before they spread to the population.”
- “Reporting of antibiotic use for other species present on the farm, such as cleaner fish.”
- “We disagree with the assertion that a maximum number of antibiotic treatments indicator " [does] not assist in minimising the use of antibiotics, nor promote transparency in the auditing process". The proposal offers no evidence to back up this assertion. The removal of a maximum MPL for antibiotic treatments from the standard represents a weakening of the salmon and shrimp standards. Major buyers are increasingly concerned with antibiotic use with many of them having antibiotic procurement policies for livestock, including fish. ASC is likely to lose preferential sourcing from such buyers. Furthermore, combined with the higher number of parasiticide treatments allowed by the salmon standard, having unlimited antibiotic use should change the Chemical Criterion and overall rank of the Seafood Watch benchmark to red. We disagree with the removal of maximum Metric Performance Levels (MPL) for this criterion and a shift instead to practice-based requirements only. One of the main drivers for initiating the Aquaculture Dialogues, and to what would become the ASC, was the need for a performance-based aquaculture standard. Other aquaculture standards in practice-based schemes already existed and there was concern that these were not driving improvements but rather certifying 'business as usual'. Removing MPLs moves away from the intent of the Aquaculture Dialogues and will no longer distinguish the ASC from its competitors. Further, researchers state outcome-based (aka performance-based) standards are more likely, than practice-based schemes, to modify practices that can lead to environmental improvements (Gulbrandsen 2005; Mori Junior et al. 2016). This is because outcome-based standards are more able to quantify and, thereby, evaluate and demonstrate impacts over time. Further, the Steering Committee of the State-of-Knowledge Assessment of Standards and Certification - a multi-stakeholder evaluation that included major retail and food vendors - found the assumption that practice-based standards lead to intended results remains undetermined as it is difficult to firmly attribute sustainability impacts to certain practices (Resolve 2012). The Steering Committee recommended certification standards should shift toward measuring performance (i.e., outcomes) rather than practices - focusing on the monitoring of performance outcomes associated with actual impacts relevant to sustainability. The ASC must include indicators for a) the maximum number of treatments per production cycle and b) a MPL reduction in the use of antibiotics per cycle.”

**Please note:** limited additional feedback is available on remaining criteria. Please contact [consultation@asc-aqua.org](mailto:consultation@asc-aqua.org) for more information.