



# ASC Farm Standard – Benthic Impacts

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## Public Consultation Summary Report

September – October 2022

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*This report refers to ongoing policy development  
and does not reflect final policy or position of the  
Aquaculture Stewardship Council.*

# 1. Background

The objective of the ASC Farm Standard alignment process is to develop a single best-practice global aquaculture standard applicable to all farmed seafood species currently within scope of the ASC standards. The ASC Farm Standard will have production-system specific criteria and species-specific metrics where necessary. The Farm Standard comprises three core principles setting requirements to assess farms' environmental and social performance. The public consultation that took place from September to October 2022 covered Principle 2: Criterion 2.6 - Benthic Impacts and Criterion 2.14 Fish Health and Welfare. Further topic-specific consultations will take place in March and April 2023 and a final consultation on the complete Farm Standard is scheduled for September 2023. On-farm pilots and impact testing will also take place ahead of the final consultation. The final decision on the adoption of the ASC Farm Standard will be made in March 2024.

## Alignment Process – ASC Farm Standard



Figure 1: ASC Farm Standard timeline

During the development stage of the consulted two criteria of the ASC Farm Standard, topic-specific Technical Working Groups (TWG) were formed. The TWGs comprise experts from different stakeholder sectors but with specific expertise in the subject matter. Recommendations from these TWGs were incorporated into the draft of the criterion released for public consultation for 60 days in September 2022. This report covers consultation objectives and outcomes relevant for the Benthic Impacts criterion. For consultation outcomes and insights on Criterion 2.14a-c – Fish Health and Welfare please see ASC Farm Standard PC – Fish Health and Welfare summary report.

## 1.1 Objectives

The objectives of this public consultation were to:

- Build consensus that the proposed ASC Farm Standard addresses aquaculture's key sustainability issues in line with stakeholders' expectations
  - Create awareness of the alignment process, which merges the previous 11 species standards and that it will replace those
  - Seek agreement on proposed indicators / criteria language
- Understand the impacts of proposals on specific stakeholder groups
- Gain insights from Conformity Assessment Bodies (CABs) on whether the ASC Farm Standard is auditable
- Gain insights on whether the ASC Farm Standard is applicable across all production systems, regions, species and farm sizes
- Ensure that previous stakeholder feedback on Criterion 2.6 - Benthic Impacts was considered.

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

## 1.2 Approach

ASC is committed to transparency to ensure stakeholders can understand the rationale for decisions on standards' content. Chapter 3 contains a summary of feedback including responses from ASC on key themes raised by stakeholders. ASC has also published [all comments received](#). To ensure stakeholders provide full and open feedback, ASC does not attribute published responses. Names and organisations of those providing feedback are published separately and annexed to this document. ASC does not accept anonymous submissions.

### **ASC collected feedback in four ways:**

- Online survey in English;
- Online public workshops and targeted workshops with regional and international partners;
- Direct 1:1 meetings and phone calls;
- Emails with written feedback.

### **ASC employed several methods to engage stakeholders and increase accessibility, including:**

- Translation of consultation questions into English, Bahasa Indonesia, Chinese (simplified), Japanese, Spanish, and Vietnamese;
- Direct engagement via targeted Mailchimp campaign (email sent out to 4,474 recipients) and ASC newsletter (956 subscribers);
- Social media communication with links to ASC webpage (LinkedIn and Twitter);
- Criterion Draft 2.6 - Benthic Impacts in English, Bahasa Indonesia, Chinese (simplified), Japanese, Spanish, and Vietnamese;
- Slide decks on the criteria in English, Brazilian Portuguese, French, German, Japanese, Spanish, Turkish, and Vietnamese;

- A short video explaining the alignment project as well as the proposals at criteria level;
- Release of accompanying documents such as the FAQs and a TWG Whitepaper;
- Release updated version of the [ASC Farm Standards Comparison Tool](#).

## 2. Participation

The focus of this public consultation was to engage those whose viewpoints are crucial to the credibility of the ASC Farm Standard. These include hard-to-reach stakeholders and those critical of the Farm Standard's content, and/or standards in general as a tool to transform aquaculture towards sustainability. For consulting on the ASC Farm Standard, ASC identified 13 stakeholder categories. Within these three priority stakeholder groups were identified:

1. CAB/Auditor
2. Environmental and social NGO
3. Farm (producer) or association thereof

In total, there were 56 unique respondents (some respondents were individuals, others larger international organisations and associations) participating in the consultation activities. Some of these respondents provided feedback via multiple methods (e.g., written feedback and contributing to an online feedback workshop) and therefore this number differs from the total of 67 responses. ASC aims to balance feedback across stakeholder groups. Policy decisions are not taken on quantity of feedback or level of support alone.

Feedback Method	Responses*	Respondents*
Online survey	33 responses	32 organisations / independent individuals
Webinars/workshops	29 responses	24 organisations / independent individuals
1:1 meetings and phone calls	10 responses	8 organisations / independent individuals
Emailed feedback	4 responses	4 organisations / independent individuals
<b>TOTAL</b>	<b>67 responses</b>	<b>56 organisations / independent individuals</b>

*Table 1: Overall participation in the public consultation on the criteria Benthic Impacts of the ASC Farm Standard.*

*\*Responses refers to actual number of feedback submissions received. \*Respondents refers to the organisation or individual that submitted feedback. This amount might differ between columns in cases in which multiple people from an organisation have provided feedback, as these have been grouped together.*

***Bold*** total number of respondents counts number of respondents only once, even if feedback was provided through multiple channels.

ASC organised two online public workshops on Benthic Impacts with stakeholders from different sectors and regions. These identical workshops were held over two days to accommodate different time zones. One workshop was well attended with about 20 participants from different sectors.

In addition to the online public workshops, ASC organised targeted feedback workshops with selected regions and stakeholders identified as particularly relevant for this consultation. The targeted workshops were well attended with over 60 participants in total.

Direct engagement, particularly personal emails proved to be the most effective method to generate feedback for most stakeholder groups.

## 2.1 Progress against targets

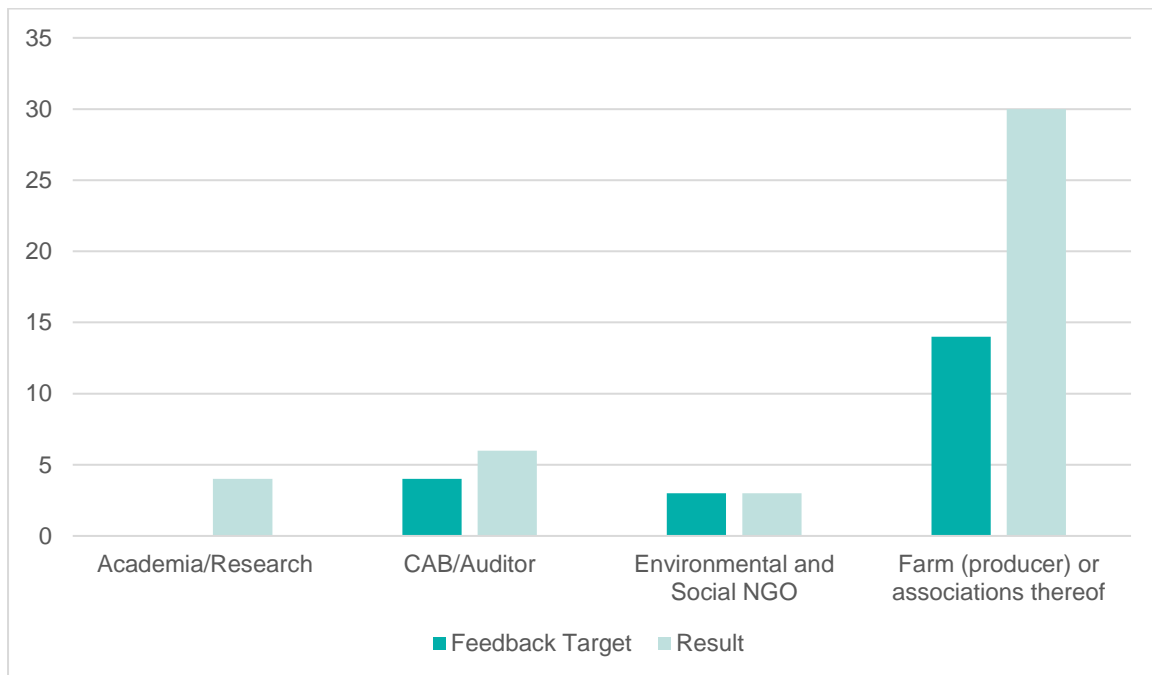
The level of feedback received from priority stakeholders was good, reflecting the resources committed to providing a range of engagement and feedback methods. The table below shows number of respondents per priority stakeholder group:

Stakeholder Group	Feedback Targets	Respondents
Academia/Research	-	4
CABs/Auditors	4	6
Environmental and Social NGOs	3	3
Farms (producers) or associations thereof*	14	30
Other ( <i>Consultants, Feed mills, Primary processors or associations thereof, Retailers/Brands or associations thereof, Secondary processors (traders) or associations thereof, and other</i> )	-	13
<b>TOTAL</b>	-	<b>56</b>

*Table 2: Number of respondents per priority stakeholder group.*

*\* Feedback was received from two farm associations and 28 farms of which 22 are certified.*

The table below shows the feedback target and actual respondent numbers. Feedback targets across the different activities were reached in all key stakeholder groups. Within these categories some specific subgroups were underrepresented. These will be more carefully targeted in the coming pilots and the last consultation activities.



*Figure 2: Sectoral representation, feedback target vs results*

*NB: Targets for environmental and social NGOs were only defined for internationally active NGOs. Out of the three NGOs that provided feedback, one is internationally active. Targets for farms were defined only for certified farms. Feedback was received from two farm associations and 28 farms of which 22 are certified. Although there was a target to engage academia/research no feedback targets were set.*



### 3. Summary of feedback

Overall, feedback received on Criterion 2.6 supported the proposed changes, highlighting the value of a tiered approach to alleviate unnecessary burden on producers that are not having a significant impact. Some stakeholders expressed concern around the use of novel technology (UV spectrometry), both around the understanding of impacts across various regions and the ability to obtain the technology necessary to conduct this sampling. Feedback clearly identified the need for further detail to be developed, either within the Farm Standard or in the accessory material to clarify details of the monitoring. Sampling specifications and further detail on the user-defined monitoring programme are needed. Three key areas where questions were raised which may need further work by the TWG are: defining sampling where overlap of farms may occur (as well as assessing cumulative impact), situations in which farms are located across soft and hard bottom, and methods for monitoring freshwater environments.

Development of benthic indicators is highly technical. Several stakeholders expressed concern that they did not have the expertise required to fully understand the questions or implications of the work, and therefore were not able to provide valuable feedback. For the last consultation, planned for September to October 2023, ASC will develop materials to support the clear understanding of the requirements and associated annexes.

#### 3.1 Summary of feedback

Key Theme	Summary of Consultation Feedback	ASC Response/Next steps
<b>Scope, rationale and intent of the Criterion</b>	<ul style="list-style-type: none"> <li>- Stakeholder feedback showed general agreement on the Criterion's proposed scope, rationale and intent.</li> <li>- One stakeholder requested more clarity on the scope when defining the Unit of Certification (UoC) and, concerning the intent, suggested that it should also account for biodiversity net gain.</li> </ul>	The feedback received during the September-October 2022 consultation will be assessed by the Technical Working Group (TWG) supporting ASC in developing revised benthic impact requirements. The outcome of this assessment (i.e., revised proposed requirements) will be presented for a final
<b>Monitoring programme - Marine systems</b>	<ul style="list-style-type: none"> <li>- Concerns were expressed by some stakeholders about whether using fixed distances and an environmental quality approach accurately capture the potential impact of diverse farm conditions (e.g., currents, topography, depth, etc.)</li> </ul>	

Key Theme	Summary of Consultation Feedback	ASC Response/Next steps
	<ul style="list-style-type: none"> <li>- Some stakeholders suggested that the approach should consider the cumulative impacts of multiple farms in an area. Likewise, one NGO suggested that the approach should consider the carrying capacity of the areas where farms are located.</li> <li>- Some producers and CABs suggested an approach in which the requirements focus on the statistical difference between sampling points outside an Allowable Zone of Effect (AZE) and a reference site and to continue requesting a modelled AZE.</li> <li>- Feedback from some producers and consultants showed concerns about the number of samples required in Tiers 2 and 3 and the time and cost associated with that number. Similarly, stakeholders from some regions (e.g., Canada and Greece) expressed concerns about the limited availability of laboratories for analysing the number of samples required in Tier 3 and the time it will take to conduct such analysis.</li> <li>- Some producers requested clarity concerning scenarios in which farms are close together and how the sampling should be performed in those scenarios. Equally, clarity was requested in cases where farms are constituted by two or more pen modules or cage arrays.</li> <li>- Further clarity was requested by producers regarding situations in which farms are located partially in soft and in hard bottom. In the same context, one NGO suggested the proposal should require benthic monitoring of hard bottom.</li> <li>- Stakeholders agreed with the proposed requirements around the sampling timing; however, further clarity for some specific production scenarios/cycles was requested (e.g., cases where there are multiple peaks in biomass or feed during a year).</li> </ul>	<p>round of public consultation in September-October 2023.</p> <p>Work on assessing cumulative impact and carrying capacity has been highlighted as an area consideration by ASC; future revisions of the Farm Standard plan to cover these.</p> <p>In addition to the Farm Standard requirements, the ASC is developing an interpretation manual which will include specific details on how to apply requirements in specific situations. This manual will be part of the consultation materials presented in September 2023.</p>

Key Theme	Summary of Consultation Feedback	ASC Response/Next steps
<b>Abiotic and biotic indicators and thresholds - Marine systems</b>	<ul style="list-style-type: none"> <li>- Stakeholders generally agreed with the proposed abiotic and biotic indicators and thresholds.</li> <li>- Stakeholders from Scotland argued that the Infaunal Quality Index (IQI) should be added to the list of proposed biotic indicators since it is used for regulatory purposes in their jurisdiction.</li> </ul>	
<b>UV methodology for measuring sulphide - Marine systems</b>	<ul style="list-style-type: none"> <li>- Stakeholders expressed concerns regarding the practical application of the UV methodology. Those concerns revolved around the cost implications, the viability of boats, duplication of efforts (since, in some jurisdictions, other methods are required for measuring sulphide), the methodology not being widely used/verified yet and the fact that the equipment is not available in some countries.</li> <li>- One stakeholder suggested the UV methodology should not be put into absolute effect from a specific date but gradually be introduced over time.</li> </ul>	<p>ASC is developing a pilot plan for testing the UV methodology across a range of conditions. The results of this work will further inform final indicator development.</p>
<b>Monitoring programme - Lakes and reservoirs</b>	<ul style="list-style-type: none"> <li>- Feedback from stakeholders showed general agreement that the information collected by the requirement application would be useful to confirm or revise the proposal; however, two stakeholders challenged the science behind the proposal of using Total Ammonia Nitrogen (TAN) as one of the abiotic indicators to assess the benthic impacts in lakes and reservoirs.</li> <li>- Some producers and consultants expressed concerns around the practicality of measuring TAN. Those concerns are related to cost and the complexity of the sampling and analysis method.</li> <li>- One lake producer expressed concerns in relation to the applicability of the proposal in systems with depths higher than 30m.</li> </ul>	<p>This feedback will be considered by the TWG.</p>

Key Theme	Summary of Consultation Feedback	ASC Response/Next steps
	<ul style="list-style-type: none"> <li>- Clarity was requested by some stakeholders on the specific date when the three-year moratorium would apply and on how the collected data will be used to confirm or revise the proposal.</li> </ul>	
<b>User-defined specific benthic monitoring programme</b>	<ul style="list-style-type: none"> <li>- General feedback showed support for the proposal related to the user-defined specific benthic monitoring programme.</li> <li>- More clarity was requested by some stakeholders around the timing when a user-defined specific benthic monitoring programme should be presented to ASC.</li> </ul>	This feedback will be considered by the TWG.

## 3.2 Full feedback

Dashboards and full feedback are published [here](#).

## 3.3 Next steps

ASC will conduct further stakeholder consultation on Fish Health and Welfare, Water Quality, and an extension of the species within scope of ASC certification to include pike perch in March and April 2023. Many topics will be tested during on-farm pilot audits commencing in January 2023. A final, full 30-day consultation on the resulting ASC Farm Standard will be conducted in September 2023 before the final product is presented to the ASC Technical Advisory Group (TAG). The TAG will provide a formal recommendation to the ASC Board to adopt the ASC Farm Standard in March 2024.

## Acronyms

Acronym	Definition
ASC	Aquaculture Stewardship Council
AZE	Allowable Zone of Effect
CAB	Conformity Assessment Body
IQI	Infaunal Quality Index
NGO	Non-Governmental Organisation
PC	Public Consultation
TAG	Technical Advisory Group
TAN	Total Ammonia Nitrogen
TG	Technical Group
TMFF	Tropical Marine Finfish
TWG	Technical Working Group
UoC	Unit of Certification

## Annex: List of respondents

Organisation (Stakeholder)	Contact Person
Acoura Marine t/a LRQA	Paul Macintyre
Agroittica Toscana	Jacopo Anchisi
Agroittica Toscana	Piergiorgio Stipa
Åkerblå AS	Dagfinn Breivik Skomsø
Åkerblå AS	Christine Østensvig
Akvaplan-niva AS	Kristine Steffensen
AMITA Corporation	Wataru Koketsu
Aquabaia - Sociedade de Aquacultura das Ilhas, Lda	Rui Gonçalves
Aquascot	Andrew Davie
Aquascot	Joel Ellis
Australis Aquaculture	Josh Goldman
Australis Mar S.A.	Roxanna Peña
Autonomus University of Barcelona	Francesc Padros
AVRAMAR IBÉRICA	Eduardo Soler Torres
Bakkfrost Scotland Ltd	Penny Hawdon
Cermaq Norway	Ingunn Johnsen
Cooke Aquaculture Scotland	Michelle Johnson
Cromaris	Julija Smoljan
Dainichi	Mr Yuta
Danish Aquaculture	Lisbeth Less Plessner
Denner AG	Lisa Züger
DNV Business Assurance Italy S.r.l.	Kjell Bekkevold
ekolibrium	Urs Baumgartner
Fidra	Clare Cavers
Foods Connected	Charlotte Maddocks
Global Ocean Works (GOW)	Toshiaki Yonemori
Global Trust Certification Limited	Spyros Nikolakakis
Grand Frais	Maxime Engler

<b>Organisation (Stakeholder)</b>	<b>Contact Person</b>
<b>Grieg Seafood BC Ltd.</b>	Kristin Storry
<b>Grieg Seafood BC Ltd.</b>	Luke Pletsch
<b>Grupo Culmarex</b>	Carmen Marin
<b>Grupo Culmarex</b>	Marina Gomariz
<b>Ilknak Su Urunleri San Tic AS</b>	Zeynep Akin
<b>Independent Auditor</b>	Paul Casburn
<b>JASS Ventures Pvt Ltd</b>	Jo Anotony
<b>Kamakura Suisan Cooperative</b>	Akiyuki Kanabo
<b>KH Select</b>	Olga Jersova
<b>Kingfish Zeeland</b>	Cees-Jan Bastiaansen
<b>Linguist Aquatic Consulting</b>	Alexander Bowman
<b>Maruha Nichiro</b>	Yuta Hamasaki
<b>Maruha Nichiro</b>	Takashi Kouyama
<b>Maruha Nichiro</b>	Toshihiko Yamaguchi
<b>Marukin</b>	Shingo Suzuki
<b>Monterey Bay Aquarium Seafood Watch</b>	Tyler Isaac
<b>Multi X</b>	Geysi Urrutia
<b>New England Seafood Ltd (Sealaska group)</b>	Duncan Lucas
<b>Ocean University of China</b>	Prof Liu Xiaoshou
<b>Open Blue Sea Farms Panama, S.A.</b>	Aaron Welch
<b>Productos del Mar Ventisqueros</b>	Carlos García Zurita
<b>Ramalab Laboratory</b>	Jose Luis Blanco
<b>Regal Springs</b>	Emily McGregor
<b>Salmon Scotland</b>	Richard Beckett
<b>Salmon Scotland</b>	Iain Berrill
<b>Salmones Camanchaca S.A.</b>	Roxana Echague
<b>Salmones Camanchaca S.A.</b>	Karen Muñoz
<b>Salmones Camanchaca S.A.</b>	Duncan Schulz
<b>Santa Sofia and Ria Austral</b>	Paula Leon Ayala
<b>Scottish Association for Marine Science</b>	Dr Clive Fox



<b>Organisation (Stakeholder)</b>	<b>Contact Person</b>
<b>SeaChoice/Living Oceans Society</b>	Kelly Roebuck
<b>SGS Nederland BV</b>	Nikki den Boon
<b>Skretting Japan</b>	Yoshiaki Ina
<b>Springhills Fish</b>	RJ Taylor
<b>University of Patras</b>	Sarah Faulwetter
<b>University of Patras</b>	Alexis Ramfos
<b>UrataSuisan</b>	Masaki Urata
<b>Woolworths</b>	Anna Playfair-Hannay
<b>Yumigahama Fisheries Co.</b>	Ryouji Kuranaga