

ASC New Farm Standards

Summary of Public Comments Received During the First Public Consultation Period ASC Sea Bass, Sea Bream, and Meagre Standard – ASC Tropical Marine Finfish Standard – ASC Flatfish Standard

Table of Contents

Introduction	1
Sea Bass, Sea Bream, Meagre.....	1
Tropical Marine Finfish	9
Flatfish	14
General Comments.....	16

Introduction

This document contains all the comments received and the corresponding ASC responses for the first consultation period for the draft ASC Sea Bass, Sea Bream, and Meagre, ASC Tropical Marine Finfish, and ASC Flatfish standards. The public consultation period was held from June 1, 2017 until July 31, 2017. Comments were submitted by NGOs from Europe, North America, and Asia, independent aquaculture consultants, industry representatives and stakeholder groups comprised of academics and industry technicians. The comments focused on the whole suite of indicators found within the new standards; some seeking further clarification, others requesting specific changes within the standards documents. Several stakeholders commented that the ASC should also consider animal welfare within the new farm standards.

The document is organized according to the three new draft standards and is broken down according to the indicator or criteria which is being commented on. There is also an additional section for general comments.

Sea Bass, Sea Bream, Meagre

1.1 Compliance with all applicable local and national legal requirements and regulations

Comment: Compliance with all applicable local and national legal requirements and regulations should include a specific reference to compliance with animal health and welfare regulations. Even though these can be understood as included in Criterion 1.1, the potential impact of excessive veterinary treatments on the environment and on workers safety, and on food safety, recommend this specific mention. (Apromar)

ASC Response: Veterinary treatments are dealt with explicitly under Principle 5 of the draft standard. Worker health and safety is dealt with explicitly under Principle 6, this includes mandating safe work environments and practices to protect worker health and safety. Animal health and welfare is addressed implicitly throughout the draft standards by requiring responsible husbandry practices and proactive

environmental stewardship. Standards to explicitly address animal welfare are currently not included in any of the ASC farm standards, but ASC may develop such standards in the future.

2.1 Rationale

Comment: The AZE model and definition should be clarified, which model and how is validated. More details on the definition of the AZE model should be clarified as particles size deposition etc. The definition of summer including October can introduce some variability as, temperatures and maximum consumption of feed can be low in some areas of the Mediterranean. (Independent Aquaculture Consultant)

ASC Response: The definition of the AZE has been clarified with additional information on acceptable modelling. The range of June to October is on the longer side since areas with the highest levels of production (Greece, Turkey) temperatures are still quite high through October.

2.1.4 Evidence that copper levels are < 34 mg Cu/kg dry sediment weight OR In instances where the Cu in the sediment exceeds 34 mg Cu/kg dry sediment weight, demonstration that the Cu concentration falls within the range of background concentrations as measured at three reference sites in the water body

Comment: The standard sets a limit of copper level < 34 gr Cu /Kg of dry sediment weight (Indicator 2.1.4). According to I. Kalantzi et al (Aquaculture 465, 2016, 209-222) there are values of 46-60 µg/g dW in the reference stations. In the same paper, an average unpolluted marine sediment is referred as 45 µg/g dW (Taylor and McLennan, 1985). (Nireus Aquaculture SA)

ASC Response: In areas with high natural background levels of copper in sediments farmers can compare levels under their farms to reference sites and will not be penalized if they are farming in areas with already high copper levels.

Comment: ICA's main suggestion is that the Indicator(s) for copper (Indicator 2.1.4) should base any definitive assessment of unacceptable risk to the benthic community on the bioavailable fraction, rather than the total concentration (e.g., relative to ASC's proposed 34 mg/kg total copper Benchmark in this Indicator of the Sea Bass, Sea Bream, and Meagre Standard), of copper in the sediments.

ICA suggests that Indicator 2.1.4 in the Sea Bass, Sea Bream, and Meagre Standard for assessing the potential risks of copper in sediments allow the farmer to make a "second-tier" demonstration that, if the 34 mg/kg total copper Benchmark is exceeded, the bioavailable fraction of copper is low enough that copper is unlikely to pose a risk to sediment biota.

ICA suggests that this Indicator also require that a should farmer collect, and archive (by freezing) an additional sediment sample at each location. If the initial analyses show exceedances of the 34 mg/kg total copper benchmark, then the farmer should be allowed the option of analyzing these archived samples for grain size distribution, and total organic carbon concentration (both inexpensive analyses) for comparison to the ANZECC Sediment Quality Guideline Values, used as second-tier threshold values.

Further, ICA recommends that the farmer be allowed the option of making further science-based demonstrations of acceptable bioavailable concentrations of copper (and other metals) in the sediments, using techniques such as the AVS-SEM analyses. (These methods for assessing the risks of metals in sediments are continually advancing; thus, the Sea Bass, Sea Bream, and Meagre Standard

should allow the farmer, with appropriate ASC consultation, to make a demonstration of acceptable bioavailability levels of copper in site sediments, using the latest accepted, peer-reviewed science. (International Copper Association)

ASC Response: Additional rationale has been added under the benthic indicators explaining the threshold for copper. The ASC Sea Bass, Sea Bream, and Meagre standard incorporates content from the ASC Salmon standard and seeks to maintain consistency with the existing ASC requirements regarding copper monitoring in benthic sediments. However, the ICA's recommendations are well noted and indeed may be more broadly applicable across different benthic ecologies. ASC is currently conducting an alignment process of all its farm standards and may consider new thresholds under the various areas of impact common to certain aquaculture grow out systems.

2.2 Rationale

Comment: Upwelling is associated with low DO, which it's not always the case. I don't think that mention upwelling is adding any value here, and can cause some confusion. (Independent Aquaculture Consultant)

ASC Response: While upwelling doesn't always result in low DO, it certainly has been documented in many instances. This passage may not add value as is claimed, but can still be considered as useful background information and the ASC sees no reason to remove it at this time.

2.4.1 Submerged acoustic deterrent devices

Comment: Only including submerging is not consistent with other ASC standards. ADD have been used in some land aquaculture which may affect birds and protected species. This is a risk that needs to be controlled and mitigated. (Independent Aquaculture Consultant)

ASC Response: Submerged ADD's have been shown to damage the hearing of marine mammals, that is why this requirement was included in the original salmon standard. ADD's being used above the water serve as a non-lethal deterrent to birds while posing no risk to marine mammal health. As long as there are no complaints from nearby communities (see Principle 7) they can be seen as way to reduce predation and accidental mortality.

3.1.1 Culture of a non-native species

Comment: Non-native species can become a problem and harm native ecosystems. This always should be considered and not dismissed just because of commercial farming of the species already occurred in the region at time of the first publication of the ASC Sea Bass, Sea Bream, and Meagre Standard. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: ASC agrees and accepts the fact that introductions through aquaculture have caused harm to native ecosystems. However, once a non-native species is established, prohibiting that farming activity will have no conservation outcomes. The requirement has thus been amended to read "None - unless the farmed species already occurs in the region . . .". Most commercial aquaculture is based on non-native species farming. The ASC requirements seek to be in line with FAO best practices and the precautionary approach.

3.3.3 Allowance for more than two (2) escape events of 30% or more (cumulative total fish not recovered) within 2 years

Comment: It's needs to be clarified if the 30% is at unit (cage) level or at farm level. (Independent Aquaculture Consultant)

ASC Response: The draft has been amended to make clear that this is at the farm level.

3.3.4 Number of known escapes is documented and made publically available upon request

Comment: Just to require upon request it's not consistent with other standards, and it's not adding value to the standard. In my opinion it should be public available through the company web other formats. (Independent Aquaculture Consultant)

ASC Response: Not all farms have access to or use web based communication formats or operate in areas where regulatory agencies address this issue. The standard requires farmers to record and document all escape events. If they operate in areas where regulatory agencies monitor this and have the resources to follow up than they are most likely already reporting their escapes (or they would be in violation of Principle 1). Otherwise the standard requires farmers to have this information on hand and available to whomever seeks it.

3.4.1 Evidence that purchased or collected wild fingerlings are harvested from a source fishery with a public fishery assessment, for example FishSource or is in a credible fishery improvement process (FIP) moving towards an ISEAL compliant fisheries sustainability certification scheme

Comment: Wild caught fish should never be used to start breeding. It can not be sustainable to catch wild fish for breeding in aquaculture and does not minimise the environmental footprint. A closed cycle (breeding, hatching, rearing) should be achieved rather than remove fish from the wild, even though it is documented where wild fingerlings come from. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: While most broodstock for aquaculture does in fact come from hatchery/farmed stock, there is no reason broodstock cannot be harvested from the wild if the stocks of the fishery in question are at sustainable levels or if the fishery is moving towards sustainability through a credible fisheries improvement project. Keep in mind that the number of fish harvested for broodstock in aquaculture would be negligible compared to any commercial fishing pressure.

Comment: There should be a mention to FishSource minimum scores (not just assessment) as well as to credible or robust FIP (WWF Europe Network)

ASC Response: A minimum FishSource score of 6 has been added to this requirement.

4.1.1 Evidence of traceability, demonstrated by the feed producer, for all fishmeal and fish oil ingredients

Comment: Even though it is documented where fish, being processed for fishmeal and fish oil come from, it is still not given that those fish come from a sustainable source. It should be ensured, that the source of fish oil and fishmeal is sustainable. Fishmeal and fish oil should not be made from wild fish being caught for this purpose. If fish species cannot be fed with sustainable food, they should not be

farmed. As long as there is no sustainable source of feed for carnivorous species only herbivorous species should be farmed. It should be prohibited to adapt fish to a non-species-specific diet (carnivorous to herbivorous) until it can be proven that such modified diets do not harm fish. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: The criteria under 4.3 specify that the source of all marine raw materials must be sustainable within certain strict timelines. There are sustainable sources of forage fish and a number of these fisheries have already been certified by the Marine Stewardship Council. Sea bass, sea bream, and meagre are carnivores and require fish meal and fish oil in their diets to be healthy.

4.2 Efficient and Optimized Diets

Comment: Is it possible to use MP in this standard as *Seriola/Cobia* standard? (Skretting Japan)

ASC Response: Yes, it is possible to use moist pellets, but the feed efficiency and sustainable sourcing requirements still need to be met in order for a farm to be certified.

Comment: We recommend to consider temperature profiles for calculation of FFDR MF and FO. As it is known, fish is a cold blood animal that depend largely of temperature profile. Rearing on lowest temperatures requires a longer period of growth and consequently increase the FCR. This factor can not be ignored because it is simply natural growth setting.

Therefore, our suggestion is that FFDR FM and FO has to be rate in relation to the temperature profile:

degree days	FFDR-FM	FFDR-FO
6000-6600	<1,95	<6,5
6600-7000	< 1,85	<5,5
7000-7600	<1,75	<3
7600-8000	<1,65	<2

We also suggest a significantly increase of FFDR due to the possibility of fish production as high value foods rich in PUFA-s, especially omega 3.

The use of farmed fish in human consumption can be seen from 2 aspects

1. Fish as a source of energy and protein
2. Fish as source of PUFA

ASC's aquaculture certification program has a goal to promote responsible aquaculture and the best environmental and social aquaculture performance. FFDR-FO proposition does not encourage aspects 2. The proposed FFDR-FO in farmed fish will create a product with a low share of PUFA- s. As we know, PUFA -s have a positive impact on human's health, especially in the prevention of arteriosclerosis, therefore for satisfying health needs of consumers it is necessary to increase fish intake, which is reflected in higher fish production and therefore higher consumption of forage fish, so we can produced fish with higher share of PUFA-s then for same effect consumers will need smaller amount of fish, consequently less exploration of forage fish.

We are thinking in a way that, apart from environmental aspects, we cannot ignore product quality.
(Cromaris)

ASC Response: ASC understands the need of farmers to produce healthy fish and has looked to set feed efficiency limits that are strict but still allow farmers to produce a high-quality product. The degree days methodology is an interesting approach, but it diverges from the other ASC standards that address feeding efficiency for marine finfish. The FFDRm number will be raised to 1.85 to accommodate farms in colder regions of the Mediterranean, but we feel the FFDRo limits set around 3 is fair and in line with what is required for ASC Salmon which have similar grow out periods and much colder temperature profiles.

Comment: FFDRm for European sea bass and Gilthead sea bream; in the indicator 4.2.1.a. the FFDRm is set to $\leq 1,75$. This is a logical value for the normal harvesting size of around 400g of fish. In case that the harvesting size is increased to 800g or 1000g the e FCR is increased, leading to an increase of FFDRm.
(Nireus Aquaculture SA)

ASC Response: FFDRm value has been increased to 1.85

Comment: Include both Red Sea Bream and Red porgy. In the criterion 4.2 there is reference on Red Sea Bream. The Mediterranean species of genus Pagrus that are cultured are generally called "Red Porgy" or "Common sea bream". As both Pagrus pagrus and Pagrus major are farmed in Med farms, it is suggested to add both species in new ASC Med standard. (Nireus Aquacultur SA)

ASC Response: All species of *Pagrus* are considered within scope of the standard.

4.3.1 Timeframe for at least 90% fishmeal or fish oil used in feed to come from fisheries certified under an ISEAL member's accredited certification whose primary goal is to promote ecological sustainability

Comment: It might be too early to discuss, but it does not seem possible at this point that 90% of Fish Oil and Fish Meal would be certified by an ISEAL compliant scheme. (Skretting Japan)

ASC Response: This requirement will be superseded by the ASC feed standard which is due to be finalized by the end of 2017. The requirements within the feed standard allow feed companies to gradual increase their levels of sustainable sourcing over a longer timeframe.

4.4.2 Documentation of the use of transgenic plant raw materials, or raw materials derived from genetically modified plants, in the feed

Comment: Under the current supply of vegetable raw ingredient, it is very difficult to get detailed information on genetically modified products (Skretting Japan)

ASC Response: This requirement will also be superseded by the ASC feed standard in 2018, but there will still be a component that deals with GMOs in feed ingredients.

4.4.3 Percent of non-marine ingredients from sources certified by an ISEAL Member's certification scheme that addresses environmental and social sustainability. Requirement : 80% for soy and palm oil within 5 years following the date of the publication

Comment: Should be 100% as in the salmon standard (WWF Europe Network)

ASC Response: This requirement will be superseded by the ASC feed standard which is due to be finalized by the end of 2017.

4.6 Energy consumption and greenhouse gas emissions on farms

Comment: These indicators cannot be found in the Seriola/Cobia Standard. Is there any producers who own such information? It might be difficult to delete it completely but it could be appreciated if you could set a 5 year transition period. (Skretting Japan)

ASC Response: The Seriola/Cobia standard is the only ASC standard that does not require some sort of energy use/GHG assessment. This will change with the ASC's current standards alignment work. Farmers have been given a grace period of 2 years after certification in order to meet this requirement. The ASC feels that reducing energy and GHG emissions is an important pillar of sustainability

5.2 Chemicals and Treatments

Comment: The salmon standard provision 5.2.3 of "100% Percentage of medication events that are prescribed by a veterinarian" should be included. Furthermore, salmon standard provision 5.1.2 "Site visits by a designated veterinarian at least four times a year, and by a fish health manager at least once a month" should also be included. (WWF Europe Network)

ASC Response: The ASC Sea Bass, Sea Bream, and Meagre standard requires a farm to submit samples to a veterinarian when unexplained mortalities exceed .5% per day and limits the number of anti-microbial treatments to 3. The diseases encountered by sea bass, sea bream, and meagre farmers in the Mediterranean are generally well know and farms receive veterinary permission to treat fish with certain drugs when these known diseases occur. A requirement mandating site visits by a veterinarian does not serve a justifiable purpose in the contest of bass/bream.

5.2.4 Number of anti-parasiticide treatments not including freshwater, formaldehyde or hydrogen peroxide allowed per life-cycle

Comment: It is not demonstrated and obvious why it should be allowed to treat seabass, seabream and Meagre once per life-cycle with an Antiparasitic. For tropical marine finfish and flatfish it is not allowed. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: Sea bass and bream farms in the Mediterranean sometimes have outbreaks of gill parasites which must be treated with anti-parasitides or the fish will die.

Comment: It's needs to be clarified if we are talking about farm level or cage level. (Independent Aquaculture Consultant)

ASC Response: 5.2.4 specifies the treatments as being per life cycle i.e. a fish can only be treated with anti-parasitide once from hatchery to harvest.

5.2.5 Number of treatments of antibiotics over the most recent production cycle

Comment: Antibiotics should be prohibited. (Deutscher Tierschutzbund, German Animal Welfare

Federation)

ASC Response: The ASC standards do not strive to be organic or bio. The standard forbids the prophylactic use of antibiotics. The standards limit the number of anti-bacterial treatments and do not allow the use of any anti-microbials that are considered critically important to human health by the WHO. Most antibiotics treatments in sea bass and sea bream farming occur in hatcheries when juvenile fingerlings are especially susceptible to disease. Antibiotics are rarely used during the grow-out phase of sea bass and bream farming, but in some instances, treatment with antibiotics is unavoidable. If administered responsibly these treatments can improve fish health and welfare.

5.3.1 Removal and disposal of dead fish

Comment: It's recommendable to include a number in the requirement to help the auditor. How many days are ok for the mortality to be removed? (Independent Aquaculture Consultant)

ASC Response: There will be auditor guidance included in the audit manual, but it is difficult to specify a certain number days since it will vary depending on local conditions.

6.11.2 Existence of separate sanitary and toilet facilities for men and women; with the exception of work sites with fewer than 10 employees or where married couples are working and accommodated together.

Comment: Separate sanitary and toilet facilities for men and women should be required without exceptions (unless it is just 1 married couple) (WWF Europe Network)

ASC Response: Draft standard has been amended to address this comment.

8.6 (Requirements for fingerling and egg suppliers) Allowance for the use of therapeutic treatments, including antibiotics or other treatments, that are banned under European Union (EU) law or listed as critically important for human medicine by the World Health Organization

Comment: In the indicators 5.2.1 and 8.6 is referred that it is not permitted the use of therapeutic treatment listed as critically important for human medicine by WHO. As many of the currently farmed batches of fish could be treated already with listed therapeutants, a 3 years adjustment period is recommended for the specific clause. (Nireus Aqauculture SA)

ASC Response: A two-year adjustment period has been added to the requirement in 8.6 on WHO critically important anti-microbials in the hatchery setting.

Appendix 1

Comment: FFDR FO Formula should be % fish oil, not fishmeal (WWF Europe Network)

ASC Response: Change made

Comment: Point 5, Looks like there is a mistake here 200 gr it's almost harvest size for bass and bream. (Independent Aquaculture Consultant)

ASC Response: Changed to 10 grams

Tropical Marine Finfish

Principle 1 Comply with all applicable national laws and local regulations

Comment: These 3 indicators for Principle 1 are all talking the same thing. Can these be combine and in the guidance sheet provide the list of all applicable laws and regulations (Sustainable Fisheries Partnership)

ASC Response: The Tropical Marine Finfish standard is based on existing ASC farm standards. The stakeholders involved in developing these standards decided that it was important to separate the different aspects of this criteria (compliance with all nation laws and regulations) into their respective categories. No changes will be made to this approach in the standard.

2.1.1 Redox potential or total 'free' sulphide levels in sediment immediately outside of the Allowable Zone of Effect (AZE) attributed to farm operations

Comment: Redox potential or total free sulphide levels measurement TO BE conducted once year (WWF Indonesia Stakeholder Group)

ASC Response: A farm must complete the benthic sampling in order to receive certification and then again upon recertification 3 years later.

Comment: Please give clarification on sampling frequency (2.1.2 as well) (WWF Coral Triangle Stakeholder Group)

ASC Response: A farm must complete the benthic sampling in order to receive certification and then again upon recertification 3 years later.

Comment: How this will account for the contributions of other activities that potentially affecting the level of sulphides in the sediments (i.e. industrial, agriculture, etc) (Sustainable Fisheries Partnership)

ASC Response: ASC farm audits only consider impacts from the farming activity. If a farm is in an area that has already been degraded from industry/agricultural production this should be apparent when the samples taken at the edge of the AZE are compared to control sites outside of the farm's zone of influence. Therefore, a farm should not be penalized by negative impacts from other sectors.

2.3.1 Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems undertaken by an independent 3rd party that contains at a minimum: a) identification of proximity to critical, sensitive or protected habitats and species, b) description of the potential impacts the farm might have on biodiversity, with a focus on affected habitats or species, and c) a description of strategies and current and future programs underway to eliminate or minimize any identified impacts the farm might have

Comment: CLARITY on third party criteria to avoid improper third party designation. For example: farm scale Vs category of third party (WWF Indonesia Stakeholder Group)

ASC Response: An independent third party would simply be an individual or group that isn't in direct employment of the farm or the farm company.

Comment: Evidence of assessment of the potential impact of the farm... can addressing the identified issues and following the recommendations to minimize impact be included in the indicator? (Sustainable Fisheries Partnership)

ASC Response: The comment is somewhat unclear, but the language “a description of strategies and current and future programs underway to eliminate or minimize any identified impacts the farm might have” seeks to address the issues raised in the assessment.

2.3.3 Allowance for siting in mangrove ecosystems and other natural wetlands

Comment: Farms should only be built in areas where industry already takes place – e.g. no deforestation of mangroves. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: The standard does in fact forbid farms to be located in mangrove ecosystems and natural wetlands. An exception is only made for farms that were established before 1999 when the RAMSAR convention came into place.

2.4.2 Number of mortalities of endangered or red-listed animals in the farm lease area and adjacent areas due to farm operations, personnel or associates over the previous 2 years

Comment: Contradicts with 2.4.5 (Sustainable Fisheries Partnership)

ASC Response: 2.4.2 deals specifically with endangered or threatened species whereas 2.4.5 deals with any incidences of wildlife mortalities on farm sites. They are not contradictory.

2.5 Pond Effluents

Comment: BOD, TSS and TAN are measured every month or per two months. Rational: as long as no change on the product volume, no significant changing on the effluent as well (WWF Indonesia Stakeholder Group)

ASC Response: Production volume is not the only controlling factor in limiting wastes and nutrients in effluents. These can change due to feeding levels and or temperature/seasonality as well. Effluent monitoring will remain in place every month in order to be sufficiently precautionary. This is not an overly burdensome requirement for producers.

2.6.4 Water-specific conductance or chloride concentration in freshwater wells used by the farm or located on adjacent properties.

Comment: PLEASE ELABORATE more on specific sampling location (available in old version document, but it is not mentioned in the new doc) (WWF Indonesia Stakeholder Group)

ASC Response: 2.6.4 has been amended to be more specific and in line with the requirements found in the ASC farmed shrimp standard.

3.1.1 Culture of Non-native Species (excluding hybrids)

Comment: The requirements is confusing - suggest to add: new introduction of non native species (as most species has been introduced even before the standard was developed so this will cover additional

introduction) (Sustainable Fisheries Partnership)

ASC Response: New non-native species can be farmed as long as the farm can prove that there is a *de minimis* risk of escapes (RAS/flow-through systems).

3.3.4 Number of known escapes is documented and made publically available upon request

Comment: The number of known escapes is documented....suggest to add : AND reported to concern authorities for proper action (Sustainable Fisheries Partnership)

ASC Response: The standard requires farmers to record and document all escape events. If they operate in areas where regulatory agencies monitor this and have the resources to follow up than they are most likely already reporting their escapes (or they would be in violation of Principle 1). Otherwise the standard requires farmers to have this information on hand and available to whomever seeks it.

3.4.5 All trans-national imported seed must be accompanied by documentation required by importing countries (e.g. health certificate)

Comment: All trans-national imported seed must be QUARANTINE and accompanied by documentation from importing countries (Sustainable Fisheries Partnership)

ASC Response: This is covered in 3.4.4 “The receiving facility has a documented bio-security protocol, including quarantining, with respect to purchased or collected fry/fingerlings”

3.4.6 Responsible disposal of deformities (e.g. scoliosis, lordosis, dropjaw)

Comment: PUT CLARITY on responsible disposal. How to treat deformities fish in the responsible way. Suggestion: the fish are not disposed to open water/sea. Allowance to grow the fish into economic size/sell to small scale farmers (WWF Indonesia Stakeholder Group)

ASC Response: The Tropical Marine Finfish technical working group felt that it was important that fish with debilitating deformities are disposed of and not reintroduced into the ecosystem/wild gene pool. This issue will be put back to the TWG before the standard is finalized.

3.4.2 Documented procedures are in place to limit non- controlled spawning of broodstock and evidence that these procedures are being followed

Comment: What is the rational ? (because to do this farmers have to separate male and female which is not good for the broodstock quality) CLARITY of 'non-controlled spawning'. So far, natural and induced spawning are common practices. (WWF Indonesia Stakeholder Group)

ASC Response: Again, the Tropical Marine Finfish TWG felt that it was important to limit spawning of farmed broodstock in order to protect the genetic integrity of wild populations. This issue will also be put back to the TWG before the standard is finalized.

3.1.1 Culture of a non-native species (excluding hybrids)

Comment: Non-native species can become a problem and harm native ecosystems. This always should be considered and not dismissed just because of commercial farming of the species already occurred in

the region at time of the first publication of the ASC Tropical Marine Finfish Standard. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: Many tropical marine finfish species that are farmed throughout the world are non-native to the region that they are being farmed in. However, they must be farmed in aquaculture systems that ensure farmed animals cannot escape and become established in the wild.

3.4.1 Evidence that purchased or collected wild fingerlings are harvested from a source fishery with a public fishery assessment, for example FishSource or is in a credible fishery improvement process (FIP) moving towards an ISEAL compliant fisheries sustainability certification scheme

Comment: Wild caught fish should never be used to start breeding. It can not be sustainable to catch wild fish for breeding in aquaculture and does not minimise the environmental footprint. A closed cycle (breeding, hatching, rearing) should be achieved rather than remove fish from the wild, even though it is documented where wild fingerlings come from. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: While most broodstock for aquaculture does in fact come from hatchery/farmed stock, there is no reason broodstock cannot be harvested from the wild if the stocks of the fishery are at sustainable levels or if the fishery is moving towards sustainability through a credible fisheries improvement project. Keep in mind that the number of fish harvested for broodstock in aquaculture would be negligible compared to any commercial fishing pressure. The Tropical Marine Finfish standard has an additional requirement forbidding the harvest of IUCN red-listed species for broodstock purposes.

4.1.1 Evidence of traceability, demonstrated by the feed producer, for all fishmeal and fish oil ingredients

Comment: Even though it is documented where fish, being processed for fishmeal and fish oil come from, it is still not given that those fish come from a sustainable source. It should be ensured, that the source of fish oil and fishmeal is sustainable. Fishmeal and fish oil should not be made from wild fish being caught for this purpose. If fish species cannot be fed with sustainable food, they should not be farmed. As long as there is no sustainable source of feed for carnivorous species only herbivorous species should be farmed. It should be prohibited to adapt fish to a non-species-specific diet (carnivorous to herbivorous) until it can be proven that such modified diets do not harm fish. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: The criteria under 4.3 specify that the source of all marine raw materials must be sustainable within certain strict timelines. There are sustainable sources of forage fish and a number of these fisheries have already been certified by the Marine Stewardship Council. The species covered in the Tropical Marine Finfish standard are carnivores and require fish meal and fish oil in their diets in order to be healthy.

4.2 Efficient and Optimized Diets

Comment: The FFDR values required should be reviewed by Feed companies to see if they can be met within timeline. (WWF Indonesia Stakeholder Group)

ASC Response: Limiting the use of wild marine ingredients in feed is one of the most, if not the most, important pillars of the ASC farm standards. Responsible farmers should be able to source sustainable

ingredients or put pressure on their feed suppliers to do so.

4.2.3 Use of wet feed and moist pellets produced from unprocessed fish

Comment: Definition of wet feed (is it including trash fish?) (WWF Indonesia Stakeholder Group)

ASC Response: This does include trash fish, but it is important to keep in mind that fish used for feed still must meet the requirements for sustainable sourcing found in section 4.3.

Comment: How it can avoid the issue on feeding "same species" for wet feeds (Sustainable Fisheries Partnership)

ASC Response: Farmers are responsible for having complete traceability of any marine ingredients that are found in the feed that they use. Therefore, since they need to know what they are feeding their fish anyways, it would be straightforward to not feed their farmed fish the same species.

4.5 Waste Management/Pollution Control

Comment: These are all BMP type standard. I suggest to set a more measurable indicator (Sustainable Fisheries Partnership)

ASC Response: The ASC standards strive to use measurable indicators whenever possible, but in some instances the BMP approach is most relevant. It is unclear what the commenter means in terms of measurable indicators for proper waste management. Some suggestions may be helpful.

4.3.1 Timeframe for at least 90% fishmeal or fish oil used in feed to come from fisheries certified under an ISEAL member's accredited certification whose primary goal is to promote ecological sustainability

Comment: Review this indicator because it is highly depending on the feed company. Aquafarmers have low intervention on this, but the standard is required them to fulfill this concern. (WWF Indonesia Stakeholder Group)

ASC Response: This requirement will be superseded by the ASC feed standard which is due to be finalized by the end of 2017. The requirements within the feed standard allow feed companies to gradual increase their levels of sustainable sourcing over a longer timeframe.

4.4 Responsible Origin of non-marine raw materials in feed

Comment: PLEASE DELETE. Nothing to do with aquafarmers, it is totally depending on feed company and apart from it, fish feed uses few number of soya and palm oil compared to poultry feed. The other consideration, to record this data is difficult as well. (WWF Indonesia Stakeholder Group)

ASC Response: Sustainably sourced feed ingredients are an important element of responsible aquaculture. This section will not be removed from the standard. Aquaculture companies do have options in the marketplace and can pressure feed companies to source sustainable non-marine ingredients.

4.6.3 Documentation of GHG emissions of the feed used during the previous production cycle, as outlined in Appendix 2

Comment: GHG emission of the feed deals with the feed company. Less than 1 % feed company produces feed for grouper and seabass and feed company may not calculate GHG at all. So, it is required to review this indicator considering the existing conditions. (WWF Indonesia Stakeholder Group)

ASC response: The issue of GHG emissions in feed may be difficult for Tropical Marine Finfish producers to meet since they do represent such a small percentage of the volume sold. This issue will be put back to the Tropical Marine Finfish TWG before the standard is finalized.

5.1 Fish Health Management

Area based or zonal disease management plan is missing in this section. (Sustainable Fisheries Partnership)

ASC Response: Unlike salmon aquaculture, most Tropical Marine Finfish farms are not operating in areas or densities in which area based management is possible. Also, unlike salmon there are not persistent parasite/disease issues like sea lice that may impact wild populations.

5.2.5 Number of treatments of antibiotics over the most recent production cycle

Comment: Antibiotics should be prohibited. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: The ASC standards do not strive to be organic or bio. The standard forbids the prophylactic use of anti-biotics. The standards limit the number of anti-bacterial treatments and do not allow the use of any anti-microbials that are considered critically important to human health by the WHO. Anti-biotics can be administered responsibly and in most instances, when there are no other options, improve the welfare of the fish being farmed.

5.3.2 Classification of mortalities

Comment: This indicator could potentially encourage self medication/ treatment leading to misuse of chemicals. Need to clarify the level of classification required (Sustainable Fisheries Partnership)

ASC Response: In this sense classification of mortalities only means identifying the cause of death. It is unclear how this would lead to the misuse of chemicals?

6.7.2 Evidence of a policy to ensure social compliance of its suppliers and contractors

Comment: Changing term recommended. Not to ensure but to encourage supplier and contractor comply with social aspects. Since farmers/aquaculture company has no authority to control supplier/contractor, so farmers/aquaculture company only can encourage, not ensure. (WWF Indonesia Stakeholder Group)

ASC Response: Farmers do have some level of control over the social policies of sub-contractors and suppliers that they work with. These policies can be included in any contracts/agreements that farms have with these contractors.

Flatfish

3.1.1 Culture of a non-native species

Comment: Non-native species can become a problem and harm native ecosystems. This always should be considered and not dismissed just because of commercial farming of the species already occurred in the region at time of the first publication of the ASC Flatfish Standard. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: Many flatfish species that are farmed throughout the world are non-native to the region that they are being farmed in. However, they must be farmed in aquaculture systems that ensure farmed animals cannot escape and become established in the wild.

3.4.1 Evidence that purchased or collected wild fingerlings are harvested from a source fishery with a public fishery assessment, for example FishSource or is in a credible fishery improvement process (FIP) moving towards an ISEAL compliant fisheries sustainability certification scheme

Comment: Wild caught fish should never be used to start breeding. It can not be sustainable to catch wild fish for breeding in aquaculture and does not minimise the environmental footprint. A closed cycle (breeding, hatching, rearing) should be achieved rather than remove fish from the wild, even though it is documented where wild fingerlings come from. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: While most broodstock for aquaculture does in fact come from hatchery/farmed stock, there is no reason broodstock cannot be harvested from the wild if the stocks of the fishery are at sustainable levels or if the fishery is moving towards sustainability through a credible fisheries improvement project. Keep in mind that the number of fish harvested for broodstock in aquaculture would be negligible compared to any commercial fishing pressure.

4.1.1 Evidence of traceability, demonstrated by the feed producer, for all fishmeal and fish oil ingredients

Comment: Even though it is documented where fish, being processed for fishmeal and fish oil come from, it is still not given that those fish come from a sustainable source. It should be ensured, that the source of fish oil and fishmeal is sustainable. Fishmeal and fish oil should not be made from wild fish being caught for this purpose. If fish species cannot be fed with sustainable food, they should not be farmed. As long as there is no sustainable source of feed for carnivorous species only herbivorous species should be farmed. It should be prohibited to adapt fish to a non-species-specific diet (carnivorous to herbivorous) until it can be proven that such modified diets do not harm fish. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: The criteria under 4.3 specify that the source of all marine raw materials must be sustainable within certain strict timelines. There are sustainable sources of forage fish and a number of these fisheries have already been certified by the Marine Stewardship Council. Flatfish are carnivores and require fish meal and fish oil in their diets in order to be healthy.

5.2.5 Number of treatments of antibiotics over the most recent production cycle

Comment: Antibiotics should be prohibited. (Deutscher Tierschutzbund, German Animal Welfare Federation)

ASC Response: The ASC standards do not strive to be organic or bio. The standard forbids the

prophylactic use of anti-biotics. The standards limit the number of anti-bacterial treatments and do not allow the use of any anti-microbials that are considered critically important to human health by the WHO. Anti-biotics can be administered responsibly and in most instances, can improve the welfare of the fish being farmed when they are the only option.

General Comments

ASC's objectives are established as the certification of 'sustainable and responsibly produced' seafood products. The focus on 'responsible' aquaculture is well established early in the standards document and is then reduced to the traditional sustainability pillars throughout the document. 'Responsible' practice cannot be claimed without addressing welfare concerns.

I cite the upcoming publication by the Thünen Institute for Market Analysis which finds European consumers have identified the respect of fish welfare as the 4th most decisive element of sustainable fish farming, with those identified as more decisive being health and environmental concerns which are strongly welfare linked. I also cite the extensive research published on consumer attitudes to animal welfare.

Welfare is an indicator for consumers of many sustainability issues including the health of the animal, consumer and environment.

The scientific basis for establishing welfare metrics exists in a broad and growing scientific literature, has been widely adopted in organic standards schemes, and a 2nd welfare specific standard is under development with European retailers.

The standards document already addresses a number of welfare concerns implicitly, and the welfare gains should be explicitly recognised. This includes protection of non-endangered wildlife, fish health management, environmental protections, and social responsibility including being a conscientious coastal citizen.

Welfare concerns are likely to be an increased part of national laws and regulations, particularly with the publication this Autumn of the European Commission's report on transport and slaughter practices within European aquaculture. (Eurogroup for Animals)

ASC Response: As the commenter notes, many welfare concerns are addressed implicitly in the new ASC farm standard documents (e.g. protection of non-endangered wildlife, fish health management, environmental protections, and social responsibility including being a conscientious coastal citizen). However, since the ASC is currently focused on environmental and social responsibility these concerns are not addressed or scored in an explicit manner. The ASC may consider expanding our farm certification requirements to include a fish welfare module and would welcome your input in the future.

Compassion in World Farming welcomes the opportunity to comment on the ASC standards for seabass and seabream, flatfish and marine fin fish.

Our key comments apply to all three documents in the consultation:

1. Fish welfare should be stated as a key component of sustainability. There should be a strong recommendation that producers should abide by the Guidelines of the OIE Aquatic Code in relation

to fish welfare. This provides guidelines for welfare during transport, slaughter and killing for disease control. Nearly all countries have signed up to these guidelines. Whilst developing fish welfare requirements would take time, in the meantime a recommendation to follow best practice should be straightforward to include.

2. For the future, the ASC should develop a strategy to incorporate fish welfare requirements into the standards including:
 - a. A requirement to follow OIE welfare guidelines on transport, slaughter and disease control
 - b. Species-specific standards for rearing, transport and slaughter including
 - i. A requirement that killing or stunning methods result in immediate unconsciousness
 - ii. Maximum stocking densities
 - iii. Water quality parameters
 - iv. Protocols for handling including maximum fasting periods before handling
 - v. Provision for ethological requirements
 - vi. Breeding that promotes good health and welfare
 - c. Measurement of and reporting on welfare outcomes/indicators for rearing, transport and slaughter
3. We support the standards on transgenic fish, fish survival, avoiding lethal predator control, water quality and social issues and urge that these are not watered down following consultation. The ban on transgenic fish should be extended to include other genetic modifications such as triploidy.
4. We support the requirement to limit fishmeal and fishoil in feed, provided that fish health and welfare can be maintained. We suggest you consider a requirement for the inclusion of a minimum percentage of algal oil (containing DHA/EPA), say 2% and rising over time, to encourage investment in the production of this alternative to fishoil. In the long run this could speed the replacement of fishmeal and oil by algal products.

We recommend adding an extra paragraph to the rationale for limiting fishmeal and fishoil use to discuss the major, though commonly unremarked, welfare issues associated with the capture of forage fish along the lines of:

Capture of wild, small pelagic fish also creates problems for animal welfare. There is currently no practical method for slaughtering them humanely, so they suffer very poor welfare during capture in very large numbers. One estimate suggests that between 500-1,000 billion fish are caught each year for reduction into fishmeal and oil. A humane and sustainable aquaculture must aim in time to eliminate dependence on purpose-caught fish.

(Compassion in World Farming)

ASC Response: As stated above, animal welfare concerns are not addressed explicitly within the ASC farm standards. However, animal welfare is improved to a large degree if the ASC standards are adhered to. The standards require comprehensive health management plans and limit the use of anti-biotics and harmful treatments. The standard also limit the use of marine ingredients for feed while still allowing farmers to raise healthy fish. The ASC may develop a specific fish welfare module in the future, but for the purpose of this consultation it will not be included with the new standards. Elements of part 2 of your comments are already included in the standard (i.e. water quality parameters, responsible breeding practices etc.) and as to part 3 of your comments, the standards will not become watered down due to consultation. If there is any documented evidence of triploidy impacting the health of farmed fish or wild populations (or human health for that matter) please feel free to share it with the ASC. The ASC intends to maintain technological neutrality and will not prescribe a certain amount of

algal oil in feed. Producers are free to substitute algal oil into the feed in the future, but they can also find alternative methods of reducing their dependence on wild capture fisheries for feed ingredients.

Some specific notes on ASC Standards on sea bass, sea bream and meagre.

1. The standards drawn up and submitted to a public assessment, take no account, or at least are not easily applicable to the realities: on-land sea bass and sea bream farms and hatcheries, extensive and semi-intensive farms. This makes these standards incomplete and above all do not take into account productive realities that are highly relevant in terms of environmental, social and economic sustainability and deeply rooted in the culture and traditions of many Mediterranean coastal areas. Italian sea bass and sea bream hatcheries also contribute to supply fish fry to many marine plants in the Mediterranean; we therefore consider appropriate to take due account of this breeding system.

2. New strategies for marketing and promotion of aquaculture products were born and Italian aquaculture became a relevant player in a large global marketplace. Actually Italy is the reference market for sea bream and sea bass; we therefore think it appropriate to have a supplement of inquiry, having not kept the italics at the evaluation stage certainly takes value for the definition of the parameters set out in the ASC Standards under evaluation.

3. The hydrodynamic characteristics, the currents and depths of the seas surrounding Italy (Adriatic, Ionian, Tyrrhenian) differ greatly between them and the same from other Mediterranean zones. This aspect greatly affects the self-purification characteristics and the interactions between fish biomass and the surrounding marine area. In the phase of ASC Standard processing we consider necessary a more detailed analysis of the hydrodynamic and climatic characteristics of the Italian coastal areas.

(Associazione Piscicoltori Italiani - Italian Fish Farmers Association)

ASC Response: The standards do address fingerling and hatchery production (see section 8). There isn't anything within the standards that would exclude extensive methods of producing fingerlings. We welcome input from all stakeholders and would certainly encourage engagement with the Italian bass and bream industry. The ASC farm standards aim to be global in scope and the requirements around water quality and benthic organic enrichment are universally applicable. For benthic impact parameters producers are given several options for proving compliance.