

**Audit Preparation Checklist (for ASC Salmon Standard):**
**Purpose:**

This document has been developed to serve farms to prepare for their **first** (initial) on-farm ASC audit. *This document is not applicable for surveillance and/or re-audits (!).*

If a farm does not have the needed documents/preparations available at the day(s) of the audit, this *may* lead to delays in the audit process & *may* lead to higher costs (e.g. auditors may need more time to process documents).

**Reference:**

Information in this document has been taken from the ASC Salmon Audit Manual (AM). All Appendixes in this document are referring to the ASC Salmon Standard Appendixes.

*This document **does not** replace the Audit Manual! In case text in the checklists differs from Audit Manual, the Audit Manual is leading.*

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	1.1.1	a. Maintain digital or hard copies of applicable land and water use laws.	N/A		
		b. Maintain original (or legalised copies of) lease agreements, land titles, or concession permit on file as applicable.	N/A		
		c. Keep records of inspections for compliance with national and local laws and regulations (if such inspections are legally required in the country of operation).	N/A		
		d. Obtain permits and maps showing that the farm does not conflict with national preservation areas.	N/A		
	1.1.2	a. Maintain records of tax payments to appropriate authorities (e.g. land use tax, water use tax, revenue tax). Note that CABs will not disclose confidential tax information unless client is required to or chooses to make it public.	N/A		
		b. Maintain copies of tax laws for jurisdiction(s) where company operates.	N/A		
		c. Register with national or local authorities as an "aquaculture activity".	N/A		
	1.1.3	a. Maintain copies of national labor codes and laws applicable to farm (scope is restricted to the farm sites within the unit certification).	N/A		
		b. Keep records of farm inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation).	N/A		
	1.1.4	a. Obtain permits for water quality impacts where applicable.	N/A		
		b. Compile list of and comply with all discharge laws or regulations.	N/A		
		c. Maintain records of monitoring and compliance with discharge laws and regulations as required.	N/A		
All farms except as noted in [1]		<p><b>Instruction to Clients and CABs on Criterion 2.1 - Modification of the Benthic Sampling Methodology</b></p> <p>For farms located in a jurisdiction where specific benthic sampling locations are required under law, clients may request to modify the benthic sampling methodology prescribed in Appendix I-1 to allow for sampling at different locations and/or changes in the total number of samples. Where modifications are sought, farms shall provide a full justification to the CAB for review. Requests for modification shall be supported by mapping of differences in sampling locations. In any event, the sampling locations must at a minimum include samples from the cage edge and samples taken from inside and outside of a defined AZE.</p> <p>CABs shall evaluate client requests to modify benthic methodology based on whether there is a risk that such changes would jeopardize the intent and rigor of the ASC Salmon Standard. If the CAB determines that proposed modifications are low risk, the CAB shall ensure that details of the modified benthic sampling methodology are fully described and justified in the audit report.</p>			
		<p>Note: Under Indicator 2.1.1, farms can choose to measure redox potential (Option #1) or sulphide concentration (Option #2). Farms do not have to demonstrate that they meet both threshold values.</p>			
	2.1.1	a. Provide a map of the farm showing boundary of AZE (30 m) and GPS locations of all sediment collections stations. If the farm uses a site-specific AZE, provide justification [3] to the CAB.	N/A		
		b. Provide evidence to the CAB and request an exemption from 2.1.1c-f, 2.1.2 and 2.1.3, if benthos throughout the full AZE is hard bottom.	N/A		
		c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.	N/A		
d. Collect sediment samples in accordance with the methodology in Appendix I-1 (i.e. at the time of peak cage biomass and at all required stations).		N/A			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms except as noted in [1]	2.1.1	e. For option #1, measure and record redox potential (mV) in sediment samples using an appropriate, nationally or internationally recognized testing method.	N/A		
		f. For option #2, measure and record sulphide concentration (uM) using an appropriate, nationally or internationally recognized testing method.	N/A		
		g. Submit test results to ASC as per Appendix VI at least once for each production cycle. If site has hard bottom and cannot complete tests, report this to ASC.	N/A		
Footnote [1]		Closed production systems that can demonstrate that they collect and responsibly dispose of > 75% of solid nutrients from the production system are exempt from standards under Criterion 2.1. See Appendix VI for requirements on transparency for 2.1.1, 2.1.2 and 2.1.3.			
Footnote [3]		Allowable Zone of Effect (AZE) is defined under this standard as 30 meters. For farm sites where a site-specific AZE has been defined using a robust and credible modeling system such as the SEPA AUTODEPOMOD and verified through monitoring, the site-specific AZE shall be used.			
All farms except as noted in [1]	2.1.2	Notes: - Under Indicator 2.1.2, farms can choose one of four measurements to show compliance with the faunal index Requirement: AMBI (Option #1); Shannon-Wiener Index (Option #2); BQI (Option #3); or ITI (Option #4). Farms do not have to demonstrate that they meet all four threshold values. - If a farm is exempt due to hard bottom benthos (see 2.1.1b), then 2.1.2 does not apply and this shall be noted in the audit report.			
		a. Provide a map showing the AZE (30 m or site specific) and sediment collections stations (see 2.1.1).	N/A		
		b. Inform the CAB whether the farm chose option #1, #2, #3, or #4 to demonstrate compliance with the requirement.	N/A		
		c. Collect sediment samples in accordance with Appendix I-1 (see 2.1.1).	N/A		
		d. For option #1, measure, calculate and record AZTI Marine Biotic Index [5] score of sediment samples using the required method.	N/A		
		e. For option #2, measure, calculate and record Shannon-Wiener Index score of sediment samples using the required method.	N/A		
		f. For option #3, measure, calculate and record Benthic Quality Index (BQI) score of sediment samples using the required method.	N/A		
		g. For option #4, measure, calculate and record Infaunal Trophic Index (ITI) score of sediment samples using the required method.	N/A		
		h. Retain documentary evidence to show how scores were obtained. If samples were analyzed and index calculated by an independent laboratory, obtain copies of results.	N/A		
Footnote [5]		<a href="http://www.azti.es/en/ambi-azti-marine-biotic-index.html">http://www.azti.es/en/ambi-azti-marine-biotic-index.html</a> .			
All farms except as noted in [1]	2.1.3	a. Document appropriate sediment sample collection as for 2.1.1a and 2.1.1c, or exemption as per 2.1.1b.	N/A		
		b. For sediment samples taken within the AZE, determine abundance and taxonomic composition of macrofauna using an appropriate testing method.	N/A		
		c. Identify all highly abundant taxa [6] and specify which ones (if any) are pollution indicator species.	N/A		
		d. Retain documentary evidence to show how taxa were identified and how counts were obtained. If samples were analyzed by an independent lab, obtain copies of results.	N/A		
		e. Submit counts of macrofaunal taxa to ASC (Appendix VI) at least once for each production cycle.	N/A		
Footnote [6]		Highly abundant: Greater than 100 organisms per square meter (or equally high to reference site(s) if natural abundance is lower than this level).			
All farms except as noted in [1]	2.1.4	Note: Farms may define a site-specific AZE at any time before this date as long as they demonstrate full compliance by June 13, 2015.			
		a. Undertake an analysis to determine the site-specific AZE and depositional pattern before 3 years have passed since publication of the Standard on June 13, 2012.	within 3 years after release		
All farms except as noted in [1]	2.1.4	b. Maintain records to show how the analysis (in 2.1.4a) is robust and credible based on modeling using a multi-parameter approach [7].	N/A		
		c. Maintain records to show that modeling results for the site-specific AZE have been verified with > 6 months of monitoring data.	≥ 6 months before first audit		
Footnote [7]		Robust and credible: The SEPA AUTODEPOMOD modeling system is considered to be an example of a credible and robust system. The model must include a multi-parameter approach. Monitoring must be used to ground-truth the AZE proposed through the model.			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms except as noted in [15]	2.2.1	<p><b>Instruction to Clients for Indicator 2.2.1 - Monitoring Average Weekly Percent Saturation of Dissolved Oxygen</b></p> <p>Appendix I-4 presents the required methodology that farms must follow for sampling the average weekly percent saturation of dissolved oxygen (DO). Key points of the method are as follows:</p> <ul style="list-style-type: none"> <li>- measurements may be taken with a handheld oxygen meter or equivalent chemical method;</li> <li>- equipment is calibrated according to manufacturer's recommendations;</li> <li>- measurements are taken at least twice daily: once in the morning (6 -9 am) and once in the afternoon (3-6 pm ) as appropriate for the location and season;</li> <li>- salinity and temperature must also be measured when DO is sampled;</li> <li>- sampling should be done at 5 meters depth in water conditions that would be experienced by fish (e.g. at the downstream edge of a net pen array);</li> <li>- each week, all DO measurements are used in the calculation of a weekly average percent saturation.</li> </ul> <p>If monitoring deviates from prescribed sampling methodology, the farm shall provide the auditor with a written justification (e.g. when samples are missed due to bad weather). In limited and well-justified situations, farms may request that the CAB approve reduction of DO monitoring frequency to one sample per day.</p> <p><u>Exception [see footnote 15]</u> If a farm does not meet the minimum 70 percent weekly average saturation requirement, the farm must demonstrate the consistency of percent saturation with a reference site. The reference site shall be at least 500 meters from the edge of the net pen array, in a location that is understood to follow similar patterns in upwelling to the farm site and is not influenced by nutrient inputs from anthropogenic causes including aquaculture, agricultural runoff or nutrient releases from coastal communities. For any such exceptions, the auditor shall fully document in the audit report how the farm has demonstrated consistency with the reference site.</p> <p>Note 1: <i>Percent saturation</i> is the amount of oxygen dissolved in the water sample compared to the maximum amount that could be present at the same temperature and salinity.</p>			
		a. Monitor and record on-farm percent saturation of DO at a minimum of twice daily using a calibrated oxygen meter or equivalent method. For first audits, farm records must cover ≥ 6 months.	≥ 6 months before first audit		
		b. Provide a written justification for any missed samples or deviations in sampling time.	N/A		
		c. Calculate weekly average percent saturation based on data.	N/A		
		d. Monitor and record DO at a reference site and compare to on-farm levels (see Instruction box above), if any weekly average DO values are < 70%, or approaching that level.	N/A		
		e. Arrange for auditor to witness DO monitoring and calibration while on site.	N/A		
		f. Submit results from monitoring of average weekly DO as per Appendix VI to ASC at least once per year.	N/A		
Footnote [15]		An exception to this standard shall be made for farms that can demonstrate consistency with a reference site in the same water body.			
All farms	2.2.2	a. Calculate the percentage of on-farm samples taken for 2.2.1a that fall under 2 mg/l DO.	N/A		
		b. Submit results from 2.2.2a as per Appendix VI to ASC at least once per year.	N/A		
All farms except as noted in [19]	2.2.3	a. Inform the CAB whether relevant targets and classification systems are applicable in the jurisdiction. If applicable, proceed to "2.2.3.b". If not applicable, take action as required under 2.2.4	N/A		
		b. Compile a summary of relevant national or regional water quality targets and classifications, identifying the third-party responsible for the analysis and classification.	N/A		
		c. Identify the most recent classification of water quality for the area in which the farm operates.	N/A		
	2.2.4	a. Develop, implement, and document a weekly monitoring plan for N, NH <sub>4</sub> , NO <sub>3</sub> , total P, and ortho-P in compliance with Appendix I-5, testing a minimum of once weekly in both locations. For first audits, farm records must cover ≥ 6 months.	≥ 6 months before first audit		
		b. Calibrate all equipment according to the manufacturer's recommendations.	N/A		
		c. Submit data on N and P to ASC as per Appendix VI at least once per year.	N/A		
Footnote [19]		Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients as well as > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt from standards 2.2.3 and 2.2.4.			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	2.2.5	<p><b>Instruction to Clients for Indicator 2.2.5 - Calculating Biochemical Oxygen Demand</b></p> <p>Biochemical Oxygen Demand (BOD) can be calculated based on cumulative inputs of N and C to the environment over the course of the production cycle.  <math>BOD = ((total\ N\ in\ feed - total\ N\ in\ fish) * 4.57) + ((total\ C\ in\ feed - total\ C\ in\ fish) * 2.67)</math>.</p> <ul style="list-style-type: none"> <li>A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, "fish" refers to harvested fish. In this case, farm must submit breakdown of N &amp; C captured/filtered/absorbed to ASC along with method used to estimate nutrient reduction.</li> <li>Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the oxygen demand of feed. In: Proceedings of the World Aquaculture Society Meeting; Sept 25-29, 2009; VeraCruz, Mexico. And: Global Aquaculture Performance Index BOD calculation methodology available at <a href="http://web.uvic.ca/~gapi/explore-gapi/bod.html">http://web.uvic.ca/~gapi/explore-gapi/bod.html</a>.</li> </ul> <p>Note 1: Calculation requires a full production cycle of data and is required beginning with the production cycle first undergoing certification. If it is the first audit for the farm, the client is required to demonstrate to the CAB that data is being collected and an understanding of the calculations.</p> <p>Note 2: Farms may seek an exemption to Indicator 2.2.5 if: the farm collects BOD samples at least once every two weeks, samples are independently analyzed by an accredited laboratory, and the farm can show that BOD monitoring results do not deviate significantly from calculated annual BOD load.</p>			
		a. Collect data throughout the course of the production cycle and calculate BOD according to formula in instruction box 2.2.5.	N/A		
		b. Submit calculated BOD as per Appendix VI to ASC for each production cycle.	N/A		
All farms except as noted in [23]	2.3.1	Note: The methodology given in Appendix I-2 is used to determine the fines (dust and small fragments) in finished product of fish feed which has a diameter of 3 mm or more.			
		a. Determine and document a schedule and location for quarterly testing of feed. If testing prior to delivery to farm site, document rationale behind not testing on site.	N/A		
		b. Calibrate equipment according to manufacturer's recommendations, if using a sieving machine.	N/A		
		c. Conduct test according to detailed methodology in Appendix I-2 and record results for the pooled sample for each quarter. For first audits, farms must have test results from the last 3 months.	≥ 3 months before first audit		
Footnote [23]		To be measured every quarter or every three months. Samples that are measured shall be chosen randomly. Feed may be sampled immediately prior to delivery to farm for sites with no feed storage where it is not possible to sample on farm. Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients and > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt.			
All farms	2.4.1	Note: If a farm has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may use such documents as evidence to demonstrate compliance with Indicator 2.4.1 as long as all components in Appendix I-3 are explicitly covered.			
		a. Perform (or contract to have performed) a documented assessment of the farm's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3.	N/A		
		b. Provide plan to address those potential impacts, if the assessment (2.4.1a) identifies potential impact(s) of the farm on biodiversity or nearby critical, sensitive or protected habitats or species.	N/A		
		c. Keep records to show how the farm implements plan(s) from 2.4.1b to minimize potential impacts to critical or sensitive habitats and species.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms except as noted in [26]	2.4.2	<p><b>Instruction to Clients for Indicator 2.4.2 - Exceptions to Requirements that Farms are not sited within Protected Areas or HCVA's</b></p> <p>The following exceptions shall be made for Indicator 2.4.2:</p> <p>Exception #1: For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management).</p> <p>Exception #2: For HCVA's if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA.</p> <p>Exception #3: For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been protected.</p> <p><b>Definitions</b></p> <p><u>Protected area</u>: "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."</p> <p><u>High Conservation Value Areas (HCVA)</u>: Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure that these high conservation values are maintained or enhanced</p>			
		a. Provide a map showing the location of the farm relative to nearby protected areas or High Conservation Value Areas (HCVA's) as defined above (see also 1.1.1a).	N/A		
		b. Provide a declaration attesting to this fact. In this case, the requirements of 2.4.2c-d do not apply, if the farm is not sited in a protected area or High Conservation Value Area as defined above.	N/A		
		c. Review the scope of applicability of Indicator 2.4.2 (see Instruction box above) to determine if your farm is allowed an exception to the requirements, if the farm is sited in a protected area or HCVA. If yes, inform the CAB which exception (#1, #2, or #3) is allowed and provide supporting evidence.	N/A		
		d. If the farm is sited in a protected area or HCVA and the exceptions provided for Indicator 2.4.2 <u>do not apply</u> , then the farm does not comply with the requirement and is ineligible for ASC certification.	N/A		
Footnote [26]		<p>The following exceptions shall be made for Standard 2.4.2:</p> <ul style="list-style-type: none"> <li>For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management).</li> <li>For HCVA's if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA.</li> <li>For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been protected.</li> </ul>			
All farms	2.5.1	a. Provide a written statement affirming that the farm's management is committed to eliminate all usage of acoustic deterrent devices (ADDs) or acoustic harassment devices (AHDs) by June 13, 2015.	N/A		
		b. Compile documentary evidence to show that no ADDs or AHDs were used by the farm after June 13, 2015 (applicable only after the specified date).	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All, until June 13, 2015	2.5.2	<b>Instruction to Clients for Indicator 2.5.2 - Percentage of Days that ADDs or AHDs were used</b> Farms must calculate the percentage of days in the production cycle that ADDs or AHDs were operated using data from the most recent complete production cycle. For first audits, farms may be exempted from compliance with Indicator 2.5.2 for the most recent complete production cycle if the farm can satisfactorily demonstrate to the auditor that: <ul style="list-style-type: none"> <li>- the client understands how to accurately calculate percentage of days the devices were operational;</li> <li>- the client maintains all information needed to accurately calculate the percentage of operational days based on &gt; 6 months of data for the current production cycle; and</li> <li>- the client can show how plans for the current production cycle will ensure that the farm will meet requirements at harvest (i.e. devices in operation &lt;40% of days).</li> </ul> Indicator 2.5.2 is applicable until June 13, 2015, after which the use of ADDs and AHDs is not allowed under the standard.			
		a. Maintain a log for the use of any ADDs or AHDs on farm that includes recording the number of days (24-hour cycles) during which the devices were used.	N/A		
		b. Calculate the percentage of days in the production cycle that the devices were operational in the most recent complete production cycle.	most recent production cycle before first audit		
		d. Submit data on number of days that ADDs/AHDs were used to the ASC as per Appendix VI. Data must be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A		
All farms	2.5.3	a. Provide a list of all predator control devices and their locations.	N/A		
		b. Maintain a record of all predator incidents.	N/A		
		c. Maintain a record of all mortalities of marine mammals and birds on the farm identifying the species, date, and apparent cause of death.	N/A		
		d. Maintain an up-to-date list of endangered or red-listed marine mammals and birds in the area (see 2.4.1).	N/A		
All except cases where human safety is endangered as noted in [33]	2.5.4	a. Provide a list of all lethal actions that the farm took against predators during the previous 12-month period. Note: "lethal action" is an action taken to deliberately kill an animal, including marine mammals and birds.	≥ 12 months before first audit		
		b. For each lethal action identified in 2.5.4a, keep record of the following: <ol style="list-style-type: none"> <li>1) a rationale showing how the farm pursued all other reasonable avenues prior to using lethal action;</li> <li>2) approval from a senior manager above the farm manager of the lethal action;</li> <li>3) where applicable, explicit permission was granted by the relevant regulatory authority to take lethal action against the animal.</li> </ol>	N/A		
		c. Provide documentary evidence that steps 1-3 above (in 2.5.4b) were taken prior to killing the animal. If human safety was endangered and urgent action necessary, provide documentary evidence as outlined in [33].	N/A		
Footnote [33]		Exception to these conditions may be made for a rare situation where human safety is endangered. Should this be required, post-incident approval from a senior manager should be made and relevant authorities must be informed.			
All farms	2.5.5	<b>Instruction to Clients and CABs on Indicators 2.5.5, 2.5.6, and 2.5.7 - Clarification about the ASC Definition of "Lethal Incident"</b> The ASC Salmon Standard has defined "Lethal incident" to include all lethal actions as well as entanglements or other accidental mortalities of non-salmonids [footnote 35]. For the purpose of assisting farms and auditors with understanding how to evaluate compliance with Indicators 2.5.5, 2.5.6, and 2.5.7, ASC has clarified this definition further: <p style="margin-left: 40px;">Total number of lethal incidents = sum of all non-salmonid deaths arising from all lethal actions taken by the farm during a given time period</p> There should be a 1:1 relationship between the number of animal deaths and the number of lethal incidents reported by the farm. For example, if a farm has taken one (1) lethal action in past last two years and that single lethal action resulted in killing three (3) birds, it is considered three (3) lethal incidents within a two year period. <p style="margin-left: 40px;">The term "non-salmonid" was intended to cover any predatory animals which are likely to try to feed upon farmed salmon. In practice these animals will usually be seals or birds.</p>			
		a. Keep records showing that the farm made the information available within 30 days of occurrence, for all lethal actions (see 2.5.4).	N/A		
		a. Keep records showing that the farm made the information available within 30 days of occurrence, for all lethal actions (see 2.5.4).	N/A		
		b. Ensure that information about all lethal actions listed in 2.5.5a are made easily publicly available (e.g. on a website).	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	2.5.6	a. Maintain log of lethal incidents (see 2.5.4a) for a minimum of two years. For first audit, > 6 months of data are required.	≥ 6 months before first audit		
		b. Calculate the total number of lethal incidents and the number of incidents involving marine mammals during the previous two year period.	previous 2 years before first audit		
		c. Send ASC the farm's data for all lethal incidents [35] of any species other than the salmon being farmed (e.g. lethal incidents involving predators such as birds or marine mammals). Data must be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A		
Footnote [35]		Lethal incident: Includes all lethal actions as well as entanglements or other accidental mortalities of non-salmonids.			
All farms	2.5.7	a. Keep records showing that the farm undertakes an assessment of risk following each lethal incident and how those risk assessments are used to identify concrete steps the farm takes to reduce the risk of future incidents.	N/A		
		b. Provide documentary evidence that the farm implements those steps identified in 2.5.7a to reduce the risk of future lethal incidents.	N/A		
All except farms that release no water as noted in [38]	3.1.1	<b>Instruction to Clients and CABs on Exemptions to Criterion 3.1</b> According to footnote [38], farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the requirements under Criterion 3.1. More specifically, farms are only eligible for exemption from Criterion 3.1 if it can be shown that either of the following holds: 1) the farm does not release any water to the natural environment; or 2) any effluent released by the farm to the natural environment has been effectively treated to kill pathogens (e.g. UV and/or chemical treatment of water with testing demonstrating efficacy).  Auditors shall fully document the rationale for any such exemptions in the audit report.			
		a. Keep record of farm's participation in an ABM scheme.	N/A		
		b. Submit to the CAB a description of how the ABM (3.1.1a) coordinates management of disease and resistance to treatments, including: - coordination of stocking; - fallowing; - therapeutic treatments; and - information sharing.	N/A		
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate the ABM's compliance with all requirements in Appendix II-1, including definition of area, minimum % participation in the scheme, components, and coordination requirements.	N/A		
		d. Submit dates of fallowing period(s) as per Appendix VI to ASC at least once per year.	N/A		
Footnote [38]		Farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the standards under Criterion 3.1.			
All except farms that release no water as noted in [38]	3.1.2	Note: Indicator 3.1.2 requires that farms demonstrate a commitment to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks. If the farm does not receive any requests to collaborate on such research projects, the farm may demonstrate compliance by showing evidence of commitment through other proactive means such as published policy statements or directed outreach to relevant organizations.			
		a. Retain records to show how the farm and/or its operating company has communicated with external groups (NGOs, academics, governments) to agree on and collaborate towards areas of research to measure impacts on wild stocks, including records of requests for research support and collaboration and responses to those requests.	N/A		
		b. Provide non-financial support to research activities in 3.1.2a by either: - providing researchers with access to farm-level data; - granting researchers direct access to farm sites; or - facilitating research activities in some equivalent way.	N/A		
		c. When the farm and/or its operating company denies a request to collaborate on a research project, ensure that there is a written justification for rejecting the proposal.	N/A		
		d. Maintain records from research collaborations (e.g. communications with researchers) to show that the farm has supported the research activities identified in 3.1.2a.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All except farms that release no water as noted in [38]	3.1.3	a. Keep records to show that a maximum sea lice load has been set for: - the entire ABM; and - the individual farm.	N/A		
		b. Maintain evidence that the established maximum sea lice load (3.1.3a) is reviewed annually as outlined in Appendix II-2, incorporating feedback from the monitoring of wild salmon where applicable (See 3.1.6).	N/A		
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the ABM has set (3.1.3a) and annually reviewed (3.1.3.b) maximum sea lice load in compliance with requirements in Appendix II-2.	N/A		
		d. Submit the maximum sea lice load for the ABM to ASC as per Appendix VI at least once per year.	N/A		
	3.1.4	a. Prepare an annual schedule for testing sea lice that identifies timeframes of routine testing frequency (at a minimum, monthly) and for high-frequency testing (weekly) due to sensitive periods for wild salmonids (e.g. during and immediately prior to outmigration of juveniles).	N/A		
		b. Maintain records of results of on-farm testing for sea lice. If farm deviates from schedule due to weather [41] maintain documentation of event and rationale.	N/A		
		c. Document the methodology used for testing sea lice ('testing' includes both counting and identifying sea lice). The method must follow national or international norms, follows accepted minimum sample size, use random sampling, and record the species and life-stage of the sea lice. If farm uses a closed production system and would like to use an alternate method (i.e. video), farm shall provide the CAB with details on the method and efficacy of the method.	N/A		
		d. Make the testing results from 3.1.4b easily publicly available (e.g. posted to the company's website) within seven days of testing. If requested, provide stakeholders access to hardcopies of test results.	N/A		
		e. Keep records of when and where test results were made public.	N/A		
		f. Submit test results to ASC (Appendix VI) at least once per year.	N/A		
Footnote [41]		Testing must be weekly during and immediately prior to sensitive periods for wild salmonids, such as outmigration of wild juvenile salmon. Testing must be at least monthly during the rest of the year, unless water temperature is so cold that it would jeopardize farmed fish health to test for lice (below 4 degrees C). Within closed production systems, alternative methods for monitoring sea lice, such as video monitoring, may be used.			
All farms operating in areas with wild salmonids except farms that release no water as noted in [38]	3.1.5	a. Identify all salmonid species that naturally occur within 75 km of the farm through literature search or by consulting with a reputable authority. If the farm is not in an area with wild salmonids, then 3.1.5b and c do not apply.	N/A		
		b. Compile best available information on migration routes, migration timing (range of months for juvenile outmigration and returning salmon), life history timing for coastal resident salmonids, and stock productivity over time in major waterways within 50 km of the farm, for species listed in 3.1.5a.	N/A		
		c. Identify any sensitive periods for wild salmonids (e.g. periods of outmigration of juveniles) within 50 km of the farm, from data in 3.1.5b.	N/A		
	3.1.6	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.6 does not apply.	N/A		
		b. Keep records to show the farm participates in monitoring of sea lice on wild salmonids.	N/A		
		c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the methodology used for monitoring of sea lice on wild salmonids is in compliance with the requirements in Appendix III-1.	N/A		
		d. Make the results from 3.1.6b easily publicly available (e.g. posted to the company's website) within eight weeks of completion of monitoring.	N/A		
		e. Submit to ASC the results from monitoring of sea lice levels on wild salmonids as per Appendix VI.	N/A		
	3.1.7	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.7 does not apply.	N/A		
		b. Establish the sensitive periods [45] of wild salmonids in the area where the farm operates. Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.	N/A		
		c. Maintain detailed records of monitoring on-farm lice levels (see 3.1.4) during sensitive periods as per Appendix II-2.	N/A		
		d. Provide the CAB with evidence there is a 'feedback loop' between the targets for on-farm lice levels and the results of monitoring of lice levels on wild salmonids (Appendix II-2).	N/A		



Applicability	Reference in AM	Description	Timeframe	Check	Remarks
Footnote [45]		Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.			
All farms except as noted in [47]	3.2.1	Note: For the purposes of Indicator 3.2.1, "area" is defined as a contiguous body of water with the bio-chemical and temperature profile required to support the farmed species' life and reproduction (e.g. the Northern Atlantic Coast of the U.S. and Canada). Appendix II-1A elaborates further on this definition: "The boundaries of an area should be defined, taking into account the zone in which key cumulative impacts on wild populations may occur, water movement and other relevant aspects of ecosystem structure and function." The intent is that the area relates to the spatial extent that is likely to be put at risk from the non-native salmon. Areas will only rarely coincide with the boundaries of countries.			
		a. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.1 does not apply.	N/A		
		b. Provide documentary evidence that the non-native species was widely commercially produced in the area before publication of the SAD Standard (i.e. before June 13, 2012).	N/A		
		c. Provide documentary evidence that the farm uses only 100% sterile fish that includes details on accuracy of sterility effectiveness, if the farm cannot provide evidence for 3.2.1b.	N/A		
		d. If the farm cannot provide evidence for 3.2.1b or 3.2.1c, provide documented evidence that the production system is closed to the natural environment and for each of the following: 1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained; 2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce [47]; and 3) barriers ensure there are no escapes of biological material [47] that might survive and subsequently reproduce (e.g. UV or other effective treatment of any effluent water exiting the system to the natural environment).	N/A		
Footnote [47]		Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.			
All farms	3.2.2	a. Inform the ASC of the species in production (Appendix VI).	N/A		
		b. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.2 does not apply.	N/A		
		c. If yes to 3.2.2b, provide evidence of scientific research completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction. Alternatively, the farm may request an exemption to 3.2.2c (see below).	past 5 years		
		d. If applicable, submit to the CAB a request for exemption that shows how the farm meets all three conditions specified in instruction box above.	N/A		
	e. Submit evidence from 3.2.2c to ASC for review.	N/A			
	3.2.3	a. Inform the CAB if the farm uses fish (e.g. cleaner fish or wrasse) for the control of sea lice.	N/A		
		b. Maintain records (e.g. invoices) to show the species name and origin of all fish used by the farm for purposes of sea lice control.	N/A		
		c. Collect documentary evidence or first hand accounts as evidence that the species used is not non-native to the region.	N/A		
All farms	3.3.1	a. Prepare a declaration stating that the farm does not use transgenic salmon.	N/A		
		b. Maintain records for the origin of all cultured stocks including the supplier name, address and contact person(s) for stock purchases.	N/A		
		c. Ensure purchase documents confirm that the culture stock is not transgenic.	N/A		
All farms except as noted in [57]	3.4.1	a. Maintain monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.	N/A		
		b. Aggregate cumulative escapes in the most recent production cycle.	N/A		
		c. Maintain the monitoring records described in 3.4.1a for at least 10 years beginning with the production cycle for which farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [57]).	N/A		
		d. If an escape episode occurs (i.e. an incident where > 300 fish escaped), the farm may request a rare exception to the Standard [57]. Requests must provide a full account of the episode and must document how the farm could not have predicted the events that caused the escape episode.	N/A		
		e. Submit escape monitoring dataset to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks	
	Footnote [57]	A rare exception to this standard may be made for an escape event that is clearly documented as being outside the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predict the events that caused the episode. See auditing guidance for additional details.				
All farms	3.4.2	a. Maintain records of accuracy of the counting technology used by the farm at times of stocking and harvest. Records include copies of spec sheets for counting machines and common estimates of error for hand-counts.	N/A			
		b. Obtain and maintain documents from the supplier showing the accuracy of the counting method used (as above), if counting takes place off site (e.g. pre-smolt vaccination count).	N/A			
		c. Arrange for the auditor to witness calibration of counting machines (if used by the farm), during audits.	N/A			
		e. Submit counting technology accuracy to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A			
	3.4.3	<b>Instruction to Clients for Indicator 3.4.3 - Calculation of Estimated Unexplained Loss</b> The Estimated Unexplained Loss (EUL) of fish is calculated at the end of each production cycle as follows:  $\text{EUL} = (\text{stocking count}) - (\text{harvest count}) - (\text{mortalities}) - (\text{recorded escapes})$ Units for input variables are number of fish (i.e. counts) per production cycle. Where possible, farms should use the pre-smolt vaccination count as the stocking count. This formula is adapted from footnote 59 of the ASC Salmon Standard.				
		a. Maintain detailed records for mortalities, stocking count, harvest count, and escapes (as per 3.4.1).	N/A			
		b. Calculate the estimated unexplained loss as described in the instructions (above) for the most recent full production cycle. For first audit, farm must demonstrate understanding of calculation and the requirement to disclose EUL after harvest of the current cycle.	N/A			
		c. Make the results from 3.4.3b available publicly. Keep records of when and where results were made public (e.g. date posted to a company website) for all production cycles.	N/A			
		d. Submit estimated unexplained loss to ASC as per Appendix VI for each production cycle.	N/A			
	3.4.4	a. Provide an Escape Prevention Plan and submit it to the CAB before the first audit. This plan may be part of a more comprehensive farm planning document as long as it addresses all required elements of Indicator 3.4.4.	N/A			
		b. If the farm operates an open (net pen) system, ensure the plan (3.4.4a) covers the following areas: - net strength testing; - appropriate net mesh size; - net traceability; - system robustness; - predator management; - record keeping; - reporting risk events (e.g. holes, infrastructure issues, handling errors); - planning of staff training to cover all of the above areas; and - planning of staff training on escape prevention and counting technologies.	N/A			
		c. If the farm operates a closed system, ensure the plan (3.4.4a) covers the following areas: - system robustness; - predator management; - record keeping; - reporting risk events (e.g. holes, infrastructure issues, handling errors); - planning of staff training to cover all of the above areas; and - planning of staff training on escape prevention and counting technologies.	N/A			
		d. Maintain records as specified in the plan.	N/A			
e. Train staff on escape prevention planning as per the farm's plan.		N/A				

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	4.1.1	<p><b>Instruction to Clients for Indicators 4.1.1 through 4.4.2 - Sourcing of Responsibly Produced Salmon Feeds</b></p> <p>Farms must show that all feeds used by the farm are produced in compliance with the requirements of Indicators 4.1.1 through 4.4.4. To do so, farms must obtain documentary evidence that the feed producers (see note 1) are audited at regular intervals by an independent auditing firm or a conformity assessment body against a recognized standard which substantially incorporate requirements for traceability. Acceptable certification schemes include GlobalGAP or other schemes that have been acknowledged by the ASC (see 4.1.1c below). Results from these audits shall demonstrate that feed producers have robust information systems and information handling processes to allow the feed producers to be able to bring forward accurate information about their production and supply chains. Declarations from the feed producer that are provided to the farm to demonstrate compliance with these indicators must be supported by the audits. Farms must also show that all of their feed producers are duly informed of the requirements of the ASC Salmon Standard relating to sourcing of responsibly produced salmon feed (see 4.1.1b below).</p> <p>In addition to the above, farms must also show that their feed suppliers comply with the more detailed requirements for traceability and ingredient sourcing that are specified under indicators 4.1.1 through 4.4.2. The ASC Salmon Standard allows farms to use one of two different methods to demonstrate compliance of feed producers:</p> <p>Method #1: Farms may choose to source feed from feed producers who used only those ingredients allowed under the ASC Salmon Standards during the production of a given batch of feed. For example, the farm may request its feed supplier to produce a batch of feed according to farm specifications. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements.</p> <p>Method #2: Farms may choose to source feed from feed producers who demonstrate compliance using a "mass-balance" method. In this method, feed producers show that the balance of all ingredients (both amount and type) used during a given feed production period meets ASC requirements. However, mixing of ingredients into the general silos and production lines is allowed during manufacturing. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements. The mass balance method can be applied, for example, to integrated feed production companies that handle all steps of feed manufacturing (purchasing of raw materials, processing to finished feed, and sales) under the management of a single legal entity.</p> <p>Note 1: The term "feed producer" is used here to identify the organization that produces the fish feed (i.e. it is the "feed manufacturer"). In most cases, the organization supplying feed to a farm (i.e. the feed supplier) will be the same organization that produced the feed, but there may be instances where feed suppliers are not directly responsible for feed production. Regardless of whether the farm sources feeds directly from a feed producer or indirectly through an intermediary organization, it remains the farm's obligation to show evidence that all feeds used are in compliance with requirements.</p>			
		a. Maintain detailed records of all feed suppliers and purchases including contact information and purchase and delivery records.	N/A		
		b. Inform each feed supplier in writing of ASC requirements pertaining to production of salmon feeds and send them a copy of the ASC Salmon Standard.	N/A		
		c. Confirm that an audit of the producer was recently done by an audit firm or CAB against an ASC-acknowledged certification scheme, for each feed producer used by the farm. Obtain a copy of the most recent audit report for each feed producer.	N/A		
		d. For each feed producer, determine whether the farm will use method #1 or method #2 (see Instructions above) to show compliance of feed producers. Inform the CAB in writing.	N/A		
		e. Obtain declaration from feed supplier(s) stating that the company can assure traceability of all feed ingredients that make up more than 1% of the feed to a level of detail required by the ASC Salmon Standard [62].	N/A		
Footnote [62]		Traceability shall be at a level of detail that permits the feed producer to demonstrate compliance with the standards in this document (i.e., marine raw ingredients must be traced back to the fishery, soy to the region grown, etc.). Feed manufacturers will need to supply the farm with third-party documentation of the ingredients covered under this standard.			
All farms	4.2.1	<p>a. Maintain a detailed inventory of the feed used including:</p> <ul style="list-style-type: none"> <li>- Quantities used of each formulation (kg);</li> <li>- Percentage of fishmeal in each formulation used;</li> <li>- Source (fishery) of fishmeal in each formulation used;</li> <li>- Percentage of fishmeal in each formulation derived from trimmings; and</li> <li>- Supporting documentation and signed declaration from feed supplier.</li> </ul>	N/A		
		b. For FFDRm calculation, exclude fishmeal derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery).	N/A		
		c. Calculate eFCR using formula in Appendix IV-1 (use this calculation also in 4.2.2 option #1).	N/A		
		d. Calculate FFDRm using formulas in Appendix IV-1.	N/A		
		e. Submit FFDRm to ASC as per Appendix VI for each production cycle.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	4.2.2	Note: Under Indicator 4.2.2, farms can choose to calculate FFDRo (Option #1) or EPA & DHA (Option #2). Farms do not have to demonstrate that they meet both threshold values. Client shall inform the CAB which option they will use.			
		a. Maintain a detailed inventory of the feed used as specified in 4.2.1a.	N/A		
		b. For FFDRo and EPA+DHA calculations (either option #1 or option #2), exclude fish oil derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery).	N/A		
		c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.	N/A		
		d. For option #1, calculate FFDRo using formulas in Appendix IV-1 and using the eFCR calculated under 4.2.1c.	N/A		
		e. For option #2, calculate amount of EPA + DHA using formulas in Appendix IV-2.	N/A		
		f. Submit FFDRo or EPA & DHA to ASC as per Appendix VI for each production cycle.	N/A		
All farms	4.3.1	Note: Indicator 4.3.1 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.			
		a. Provide a policy stating the company's support of efforts to shift feed manufacturers purchases of fishmeal and fish oil to fisheries certified under a scheme that is an ISEAL member and has guidelines that specifically promote responsible environmental management of small pelagic fisheries.	N/A		
		b. Provide a letter stating the farm's intent to source feed containing fishmeal and fish oil originating from fisheries certified under the type of certification scheme noted in 4.3.1a.	N/A		
		c. Develop a list of the origin of all fish products used as feed ingredients, starting on or before June 13, 2017, using feed inventory and feed supplier declarations in 4.2.1a.	N/A		
		d. Provide evidence that fishmeal and fish oil used in feed come from fisheries [65] certified under a scheme that is an ISEAL member [66] and has guidelines that specifically promote responsible environmental management of small pelagic fisheries, starting on or before June 13, 2017.	N/A		
Footnote [65]		This standard and standard 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.			
Footnote [66]		Meets ISEAL guidelines as demonstrated through full membership in the ISEAL Alliance, or equivalent as determined by the Technical Advisory Group of the ASC.			
All, until June 13, 2017	4.3.2	<b>Instruction to Clients for Indicator 4.3.2 - FishSource Score of Fish Used in Feed</b> To determine FishSource scores of the fish species used as feed ingredients, do the following: -go to <a href="http://www.fishsource.org/">http://www.fishsource.org/</a> -select "Species" drop down tab to the left and select the relevant species -confirm that the search identifies the correct species, then select the top tab that reads "Scores"  <b>For first audits, farms must have scoring records that cover all feeds purchased during the previous 6-month period.</b>  Note: Indicator 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.			
		a. Record FishSource score for each species from which fishmeal or fish oil was derived and used as a feed ingredient (all species listed in 4.2.1a).	N/A		
		b. Confirm that each individual score $\geq 6$ and the biomass score is $\geq 8$ .	N/A		
		c. If the species is not on the website it means that a FishSource assessment is not available. Client can then take one or both of the following actions: 1. Contact FishSource via Sustainable Fisheries Partnerships to identify the species as a priority for assessment. 2. Contract a qualified independent third party to conduct the assessment using the FishSource methodology and provide the assessment and details on the third party qualifications to the CAB for review.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All, until June 13, 2017	4.3.3	<b>Instruction to Clients for Indicator 4.3.3 - Third-Party Verification of Traceability</b> Indicator 4.3.3 requires that farms show that their feed producers can demonstrate chain of custody and traceability as verified through third-party audits. Farms may submit reports from audits of feed producers (see 4.1.1c) as evidence that traceability systems are in compliance. Alternatively, farms may show that their feed producers comply with traceability requirements of Indicator 4.3.3 by submitting evidence that suppliers, and the batches of fishmeal and oil, are certified to the International Fishmeal and Fish Oil Organization's Global Standard for Responsible Supply or to the Marine Stewardship Council Chain of Custody Standard.  <b>For the first audit, a minimum of 6 months of data on feed is required and evidence shall relate to species used in said dataset.</b>			
		a. Obtain from the feed supplier documentary evidence that the origin of all fishmeal and fish oil used in the feed is traceable via a third-party verified chain of custody or traceability program.	N/A		
		b. Ensure evidence covers all the species used (as consistent with 4.3.2a, 4.2.1a, and 4.2.2a).	N/A		
All except as noted in [72]	4.3.4	a. Compile and maintain, consistent with 4.2.1a and 4.2.2a, a list of the fishery of origin for all fishmeal and fish oil originating from by-products and trimmings.	N/A		
		b. Obtain a declaration from the feed supplier stating that no fishmeal or fish oil originating from IUU catch was used to produce the feed.	N/A		
		c. Obtain from the feed supplier declaration that the meal or oil did not originate from a species categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [71] and explaining how they are able to demonstrate this (i.e. through other certification scheme or through their independent audit).	N/A		
		d. Obtain documentary evidence to support the exception as outlined in [72], if meal or oil originated from a species listed as "vulnerable" by IUCN.	N/A		
Footnote [71]		The International Union for the Conservation of Nature reference can be found at <a href="http://www.iucnredlist.org/static/introduction">http://www.iucnredlist.org/static/introduction</a> .			
Footnote [72]		For species listed as "vulnerable" by IUCN, an exception is made if a regional population of the species has been assessed to be not vulnerable in a National Red List process that is managed explicitly in the same science-based way as IUCN. In cases where a National Red List doesn't exist or isn't managed in accordance with IUCN guidelines, an exception is allowed when an assessment is conducted using IUCN's methodology and demonstrates that the population is not vulnerable.			
All farms	4.4.1	a. Compile and maintain a list of all feed suppliers with contact information (See also 4.1.1a).	N/A		
		b. Obtain from each feed manufacturer a copy of the manufacturer's responsible sourcing policy for feed ingredients showing how the company complies with recognized crop moratoriums and local laws.	N/A		
		c. Confirm that third party audits of feed suppliers (4.1.1c) show evidence that supplier's responsible sourcing policies are implemented.	N/A		
All, after June 13, 2017	4.4.2	a. Provide a policy stating the company's support of efforts to shift feed manufacturers' purchases of soya to soya certified under the Roundtable for Responsible Soy (RTRS) or equivalent.	N/A		
		b. Provide a letter stating the farm's intent to source feed containing soya certified under the RTRS (or equivalent).	N/A		
		c. Notify feed suppliers of the farm's intent (4.4.2b).	N/A		
		d. Obtain and maintain declaration from feed supplier(s) detailing the origin of soya in the feed.	N/A		
		e. Provide evidence that soya used in feed is certified by the Roundtable for Responsible Soy (RTRS) or equivalent [77], starting on or before June 13, 2017.	N/A		
All farms	4.4.3	a. Obtain from feed supplier(s) a declaration detailing the content of soya and other plant raw materials in feed and whether it is transgenic.	N/A		
		b. Disclose to the buyer(s) a list of any transgenic plant raw material in the feed and maintain documentary evidence of this disclosure. For first audits, farm records of disclosures must cover > 6 months.	≥ 6 months before first audit		
		c. Inform ASC whether feed contains transgenic ingredients (yes or no) as per Appendix VI for each production cycle.	N/A		
All farms	4.5.1	a. Provide a policy stating the farm's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the farm's policy is consistent with best practice in the area of operation.	N/A		
		b. Provide a declaration that the farm does not dump non-biological waste into the ocean.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	4.5.1	c. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of.	N/A		
		d. Provide a description of the types of waste materials that are recycled by the farm.	N/A		
All farms	4.5.2	a. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of. (see also 4.5.1c)	N/A		
		b. Provide a description of the types of waste materials that are recycled by the farm. (See also 4.5.1d)	N/A		
		c. Inform the CAB of any infractions or fines for improper waste disposal received during the previous 12 months and corrective actions taken.	≥ 12 months before first audit		
		d. Maintain records of disposal of waste materials including old nets and cage equipment.	N/A		
All farms	4.6.1	<p><b>Instruction to Clients for Indicator 4.6.1 - Energy Use Assessment</b></p> <p>Indicator 4.6.1 requires that farms must have an assessment to verify energy consumption. The scope of this requirement is restricted to operational energy use for the farm site(s) that is applying for certification. Boundaries for operational energy use should correspond to the sources of Scope 1 and Scope 2 emissions (see Appendix V-1). Energy use corresponding to Scope 3 emissions (i.e. the energy used to fabricate materials that are purchased by the farm) is not required. However the SAD Steering Committee encourages companies to integrate energy use assessments across the board in the company.</p> <p>For the purposes of calculating energy consumption, the duration of the production cycle is the entire life cycle "at sea" - it does not include freshwater smolt production stages. Farms that have integrated smolt rearing should break out the grow-out stage portion of energy consumption if possible. Quantities of energy (fuel and electricity) are converted to kilojoules. Verification is done by internal or external assessment following either the GHG Protocol Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details).</p>			
		a. Maintain records for energy consumption by source (fuel, electricity) on the farm throughout each production cycle.	each production cycle before first audit		
		b. Calculate the farm's total energy consumption in kilojoules (kj) during the last production cycle.	N/A		
		c. Calculate the total weight of fish in metric tons (mt) produced during the last production cycle.	N/A		
		d. Calculate energy consumption on the farm as required, reported as kilojoule/mt fish/production cycle, using results from 4.6.1b and 4.6.1c.	N/A		
		e. Submit results of energy use calculations (4.6.1d) to ASC as per Appendix VI for each production cycle.	N/A		
		f. Ensure that the farm has undergone an energy use assessment that was done in compliance with requirements of Appendix V-1.	N/A		
	4.6.2	<p><b>Instruction to Clients for Indicator 4.6.2 - Annual GHG Assessment</b></p> <p>Indicator 4.6.2 requires that farms must have an annual Greenhouse Gas (GHG) assessment. Detailed instructions are presented in Appendix V-1 and references therein. The scope of this requirement is restricted to operational boundaries for the farm site(s) that is applying for certification. However the SAD Steering Committee encourages companies to integrate GHG accounting practices across the board in the company. Verification may be done by internal or external assessment following either the GHG Protocol Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details).</p> <p>Note: For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>).</p>			
		a. Maintain records of greenhouse gas emissions on the farm.	N/A		
		b. Calculate at least annually, all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.	N/A		
		c. For GHG calculations, select the emission factors which are best suited to the farm's operation. Document the source of those emissions factors.	N/A		
		d. For GHG calculations involving conversion of non-CO <sub>2</sub> gases to CO <sub>2</sub> equivalents, specify the Global Warming Potential (GWP) used and its source.	N/A		
		e. Submit results of GHG calculations (4.6.2d) to ASC as per Appendix VI at least once per year.	N/A		
		f. Ensure that the farm undergoes a GHG assessment as outlined in Appendix V-1 at least annually.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks	
All, after June 13, 2015	4.6.3	<b>Instruction to Clients for Indicator 4.6.3 - GHG Emissions of Feed</b> Indicator 4.6.3 requires that farms document the greenhouse gas emissions (GHG) associated with any feeds used during salmon production. Farms will need to obtain this information from their feed supplier(s) and thereafter maintain a continuous record of Feed GHG emissions throughout all production cycles. This requirement takes effect on June 13, 2015 and it will apply across the entire previous production cycle. Therefore the SAD Steering Committee advises farms to inform their feed supplier(s) about this requirement long before the effective date. Specifically, the SC recommends that... - the farm provides its feed suppliers with detailed information about the requirements including a copy of the methodology outlined in Appendix V, subsection 2; - the farm explain what analyses must be done by feed suppliers; and - the farm explains to feed suppliers what documentary evidence will be required by the farm to demonstrate compliance.  Note1: Farms may calculate GHG emissions of feed using the average raw material composition used to produce the salmon (by weight) rather than using feed composition on a lot-by-lot basis.  Note2: Feed supplier's calculations must include Scope 1, Scope 2, and Scope 3 GHG emissions as specified in Appendix V, subsection 2.				
		a. Obtain from feed supplier(s) a declaration detailing the GHG emissions of the feed (per kg feed).	N/A			
		b. Multiply the GHG emissions per unit feed by the total amount of feed from each supplier used in the most recent completed production cycle.	N/A			
		c. If client has more than one feed supplier, calculate the total sum of emissions from feed by summing the GHG emissions of feed from each supplier.	N/A			
		d. Submit GHG emissions of feed to ASC as per Appendix VI for each production cycle.	N/A			
All farms except as noted in [89]	4.7.1	a. Provide a farm procedure for net cleaning and treatment that describes techniques, technologies, use of off-site facilities, and record keeping.	N/A			
		b. Maintain records of antifoulants and other chemical treatments used on nets.	N/A			
		c. Declare to the CAB whether copper-based treatments are used on nets.	N/A			
		d. If copper-based treatments are used, maintain documentary evidence (see 4.7.1b) that farm policy and practice does not allow for heavy cleaning of copper-treated nets in situ.	N/A			
		e. Inform ASC whether copper antifoulants are used on farm (yes or no) as per Appendix VI for each production cycle.	N/A			
Footnote [89]		Closed production systems that do not use nets and do not use antifoulants shall be considered exempt from standards under Criterion 4.7.				
All farms except as noted in [89]	4.7.2	a. Declare to the CAB whether nets are cleaned on-land.	N/A			
		b. Obtain documentary evidence from each net-cleaning facility that effluent treatment is in place, if nets are cleaned on-land.	N/A			
		c. If yes to 4.7.2b, obtain evidence that effluent treatment used at the cleaning site is an appropriate technology to capture of copper in effluents.	N/A			
	4.7.3	Note: If the benthos throughout and immediately outside the full AZE is hard bottom, provide evidence to the CAB and request an exemption from Indicator 4.7.3 (see 2.1.1c).				
		a. Declare to the CAB whether the farm uses copper nets or copper-treated nets. (See also 4.7.1c). If "no", Indicator 4.7.3 does not apply.	N/A			
		b. Measure and record copper in sediment samples from the reference stations specified in 2.1.1d and 2.1.2c which lie outside the AZE, if "yes" in 4.7.3a.	N/A			
		c. Maintain records of testing methods, equipment, and laboratories used to test copper level in sediments from 4.7.3b, if "yes" in 4.7.3a.	N/A			
All farms except as noted in [89] and excluding those farms shown to be exempt from Indicator 4.7.3	4.7.4	a. Inform the CAB whether: 1) farm is exempt from Indicator 4.7.4 (as per 4.7.3a), or 2) Farm has conducted testing of copper levels in sediment.	N/A			
		b. Provide evidence from measurements taken in 4.7.3b that copper levels are < 34 mg Cu/kg dry sediment weight.	N/A			
		c. Provide evidence the farm tested copper levels in sediments from reference sites as described in Appendix I-1 (also see Indicators 2.1.1 and 2.1.2), if copper levels in 4.7.4b are ≥ 34 mg Cu/kg dry sediment weight.	N/A			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms except as noted in [89] and excluding those farms shown to be exempt from Indicator 4.7.3	4.7.4	d. Analyze results from 4.7.4c to show the background copper concentrations as measured at three reference sites in the water body.	N/A		
		e. Submit data on copper levels in sediments to ASC as per Appendix VI for each production cycle.	N/A		
All farms except as noted in [89]	4.7.5	a. Identify all biocides used by the farm in net antifouling.	N/A		
		b. Compile documentary evidence to show that each chemical used in 4.7.5a is approved according to legislation in one or more of the following jurisdictions: the European Union, the United States, or Australia.	N/A		
All farms	5.1.1	a. Provide a fish health management plan that incorporates components related to identification and monitoring of fish disease and parasites. This plan may be part of a more comprehensive farm planning document.	N/A		
		b. Ensure that the farm's current fish health management plan was reviewed and approved by the farm's designated veterinarian [96].	N/A		
Footnote [96]		A designated veterinarian is the professional responsible for health management on the farm who has the legal authority to diagnose disease and prescribe medication. In some countries such as Norway, a fish health biologist or other professional has equivalent professional qualifications and is equivalent to a veterinarian for purposes of these standards. This definition applies to all references to a veterinarian throughout the standards document.			
All farms	5.1.2	a. Maintain records of visits by the designated veterinarian [96] and fish health managers [97]. If schedule cannot be met, a risk assessment must be provided.	N/A		
		b. Maintain a current list of personnel who are employed as the farm's designated veterinarian(s) [96] and fish health manager(s) [97].	N/A		
		c. Maintain records of the qualifications of persons identified in 5.1.2b.	N/A		
Footnote [97]		A fish health manager is someone with professional expertise in managing fish health, who may work for a farming company or for a veterinarian, but who does not necessarily have the authority to prescribe medicine.			
All farms	5.1.3	a. Maintain records of mortality removals to show that dead fish are removed regularly and disposed of in a responsible manner.	N/A		
		b. Collect documentation to show that disposal methods are in line with practices recommended by fish health managers and/or relevant legal authorities.	N/A		
	Note: Farms are required to maintain mortality records from the current and two previous production cycles. For first audit, records for the current and prior production cycle are required. It is recommended that farms maintain a compiled set of records to demonstrate compliance with 5.1.3 - 5.1.6.				
	5.1.4	a. Maintain detailed records for all mortalities and post-mortem analyses including: - date of mortality and date of post-mortem analysis; - total number of mortalities and number receiving post-mortem analysis; - name of the person or lab conducting the post-mortem analyses; - qualifications of the individual (e.g. veterinarian [96], fish health manager [97]); - cause of mortality (specify disease or pathogen) where known; and - classification as 'unexplained' when cause of mortality is unknown (see 5.1.6).	N/A		
		b. For each mortality event, ensure that post-mortem analyses are done on a statistically relevant number of fish and keep a record of the results.	N/A		
		c. If on-site diagnosis is inconclusive and disease is suspected or results are inconclusive over a 1-2 week period, ensure that fish are sent to an off-site laboratory for diagnosis and keep a record of the results (5.1.4a).	N/A		
		d. Classify each mortality event and keep a record of those classifications, using results from 5.1.3a-c.	N/A		
		e. Provide additional evidence to show how farm records in 5.1.4a-d cover all mortalities from the current and previous two production cycles (as needed).	current and prior two production cycles before first audit		
f. Submit data on numbers and causes of mortalities to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A				
All farms	5.1.5	a. Calculate the total number of mortalities that were diagnosed (see 5.1.4) as being related to viral disease.	N/A		



Applicability	Reference in AM	Description	Timeframe	Check	Remarks	
All farms	5.1.5	b. Combine the results from 5.1.5a with the total number of unspecified and unexplained mortalities from the most recent complete production cycle. Divide this by the total number of fish produced in the production cycle (x100) to calculate percent maximum viral disease-related mortality.	N/A			
		c. Submit data on total mortality and viral disease-related mortality to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A			
All farms with > 6% total mortality in the most recent complete production cycle.	5.1.6	a. Calculate the unexplained mortality rate (%) for the most recent full production cycle, using the records in 5.1.4a. If rate was ≤ 6%, then the requirement of 5.1.6 does not apply. If total mortality rate was > 6%, proceed to 5.1.6b.	N/A			
		b. Calculate the unexplained mortality rate (%) for each of the two production cycles immediately prior to the current cycle. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	one full production cycle before first audit			
		c. Submit data on maximum unexplained mortality to ASC as per Appendix VI for each production cycle.	N/A			
All farms	5.1.7	<b>Note: Farms have the option to integrate their farm-specific mortality reduction program into the farm's fish health management plan (5.1.1).</b>				
		a. Assemble a time-series dataset on farm-specific mortalities rates and unexplained mortality rates, using the records in 5.1.4a.	N/A			
		b. Develop a mortalities-reduction program that defines annual targets for reductions in total mortality and unexplained mortality, using the data in 5.1.7a and advice from the veterinarian and/or fish health manager.	N/A			
		c. Ensure that farm management communicates with the veterinarian, fish health manager, and staff about annual targets and planned actions to meet targets.	N/A			
All farms	<b>Instruction to Clients and CABs for Criterion 5.2 - Records Related to Therapeutic Treatments</b>					
	Indicator 5.2.1 requires that farms maintain detailed record of all chemical and therapeutant use. Those records maintained for compliance with 5.2.1, if all consolidated into a single place, can be used to demonstrate performance against subsequent Indicators (5.2.1 through 5.2.10) under Criterion 5.2.					
	5.2.1	a. Maintain a detailed record of all chemical and therapeutant use that includes: - name of the veterinarian prescribing treatment; - product name and chemical name; - reason for use (specific disease) - date(s) of treatment; - amount (g) of product used; - dosage; - mt of fish treated; - the WHO classification of antibiotics (also see note under 5.2.8); and - the supplier of the chemical or therapeutant.	N/A			
		b. Assemble records of chemical and therapeutant use to address all points in 5.2.1a for the previous two production cycles, if not already available. For first audits, available records must cover one full production cycle immediately prior to the current cycle.	one full production cycle before first audit			
		c. Submit information on therapeutant use (data from 5.2.1a) to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A			
	5.2.2	a. Provide a list of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [104].	N/A			
b. Maintain records of voluntary and/or mandatory chemical residue testing conducted or commissioned by the farm from the prior and current production cycles.		prior and current production cycles before first audit				
Footnote [104]		For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.				
All farms	5.2.3	a. Obtain prescription for all therapeutant use in advance of application from the farm veterinarian (or equivalent, see [96] for definition of veterinarian).	N/A			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	5.2.3	b. Maintain copies of all prescriptions and records of veterinarian responsible for all medication events. Records can be kept in conjunction with those for 5.2.1 and should be kept for the current and two prior production cycles.	current and two prior production cycles before first audit		
All farms	5.2.4	a. Incorporate withholding periods into the farm's fish health management plan (see 5.1.1a).	N/A		
		b. Compile and maintain documentation on legally-required withholding periods for all treatments used on-farm. Withholding period is the time interval after the withdrawal of a drug from the treatment of the salmon before the salmon can be harvested for use as food.	N/A		
		c. Show compliance with all withholding periods by providing treatment records (see 5.2.1a) and harvest dates for the most recent production cycle.	one production cycle before first audit		
	5.2.5	a. Calculate the cumulative parasiticide treatment index (PTI) score for the most recent production cycle, using farm data for therapeutants usage (5.2.1a) and the formula presented in Appendix VII. Calculation should be made and updated on an ongoing basis throughout the cycle by farm manager, fish health manager, and/or veterinarian.	one production cycle before first audit		
		b. Provide the auditor with access to records showing how the farm calculated the PTI score.	N/A		
		c. Submit data on farm level cumulative PTI score to ASC as per Appendix VI for each production cycle.	one production cycle before first audit		
All farms with a cumulative PTI $\geq$ 6 in the most recent production cycle	5.2.6	Note: Indicator 5.2.6 does not take effect until June 13, 2017. Nonetheless farms should start collecting data on parasiticide load beforehand in case farms have to demonstrate compliance with Indicator 5.2.6 at some point in the future using data from the two previous production cycles.			
		a. Review PTI scores from 5.2.5a to determine if cumulative PTI $\geq$ 6 in the most recent production cycle. If yes, proceed to 5.2.6b; if no, Indicator 5.2.6 does not apply.	N/A		
		b. Calculate parasiticide load in the most recent production cycle [105], using results from 5.2.5 and the weight of fish treated (kg).	N/A		
		c. Calculate parasiticide load in the two previous production cycles as above (5.2.6b) and compute the average. Calculate the percent difference in parasiticide load between current cycle and average of two previous cycles. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	one production cycle before first audit		
		d. As applicable, submit data to ASC on parasiticide load for the most recent production cycle and the two previous production cycles (Appendix VI).	N/A		
Footnote [105]		Parasiticide load = Sum (kg of fish treated x PTI). Reduction in load required regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined parasiticide load of the consolidated sites.			
All farms	5.2.7	a. Maintain records for all purchases of antibiotics (invoices, prescriptions) for the current and prior production cycles.	N/A		
		b. Maintain a detailed log of all medication-related events (see also 5.2.1a and 5.2.3).	N/A		
		c. Calculate the total amount (g) and treatments (#) of antibiotics used during the current and prior production cycles (see also 5.2.9).	current and prior production cycles before first audit		
	5.2.8	Note 1: Farms have the option to certify only a portion of the fish or farm site when WHO-listed [107] antibiotics have been used at the production facility (see 5.2.8d). To pursue this option, farms must request an exemption from the CAB in advance of the audit and provide sufficient records giving details on which pens were treated and traceability of those treated fish.			
		Note 2: It is recommended that the farm veterinarian review the WHO list [see 107] in detail and be aware that the list is meant to show examples of members of each class of drugs, and is not inclusive of all drugs.			
		a. Maintain a current version of the WHO list of antimicrobials critically and highly important for human health [107].	N/A		
b. Inform the CAB and proceed to schedule the audit, if the farm has not used any antibiotics listed as critically important (5.2.8a) in the current production cycle.	current production cycle before first audit				

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	5.2.8	c. Inform the CAB prior to scheduling audit, if the farm has used antibiotics listed as critically important (5.2.8a) to treat any fish during the current production cycle.	current production cycle before first audit		
		d. Request an exemption from the CAB to certify only a portion of the farm, if yes to 5.2.8c. Prior to the audit, provide the CAB with records sufficient to establish details of treatment, which pens were treated, and how the farm will ensure full traceability and separation of treated fish through and post- harvest.	N/A		
Footnote [107]		The third edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: <a href="http://www.who.int/foodborne_disease/resistance/CIA_3.pdf">http://www.who.int/foodborne_disease/resistance/CIA_3.pdf</a> .			
All farms	5.2.9	Note: for the purposes of Indicator 5.2.9, "treatment" means a single course of medication given to address a specific disease issue and that may last a number of days and be applied in one or more pens (or cages).			
		a. Maintain records of all treatments of antibiotics (see 5.2.1a). For first audits, farm records must cover the current and immediately prior production cycles in a verifiable statement.	current and prior production cycles before first audit		
		b. Calculate the total number of treatments of antibiotics over the most recent production cycle and supply a verifiable statement of this calculation.	one production cycle before first audit		
All farms	5.2.10	Note: Indicator 5.2.10 requires that farms must demonstrate a reduction in load required, regardless of whether production increases on the site. Farms that consolidate production across multiple sites within an ABM can calculate reduction based on the combined antibiotic load of the consolidated sites.			
		Indicator 5.2.10 does not take effect until June 13, 2017. Nonetheless farms should start collecting data on antibiotic load beforehand in case farms have to demonstrate compliance with Indicator 5.2.10 at some point in the future using data from the two previous production cycles.			
		a. Show whether more than one antibiotic treatment was used in the most recent production cycle, using the results from 5.2.9b. If not, then the requirement of 5.2.10 does not apply. If yes, then proceed to 5.2.10b.	N/A		
		b. Calculate antibiotic load (antibiotic load = the sum of the total amount of active ingredient of antibiotic used in kg) for most recent production cycle and for the two previous production cycles. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.	one production cycle prior to current cycle before first audit		
		c. Provide the auditor with calculations showing that the antibiotic load of the most recent production cycle is at least 15% less than that of the average of the two previous production cycles.	two previous production cycles before first audit		
	d. Submit data on antibiotic load to ASC as per Appendix VI (if applicable) for each production cycle.	N/A			
	5.2.11	a. Provide a procedure which outlines how the farm provides buyers [112] of its salmon with a list of all therapeutants used in production (see 4.4.3b).	N/A		
	b. Maintain records showing the farm has informed all buyers of its salmon about all therapeutants used in production.	N/A			
Footnote [112]		Buyer: The company or entity to which the farm or the producing company is directly selling its product.			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	5.3.1	<p><b>Instruction to Clients for Indicator 5.3.1 - Identifying the 'Expected Effect' of Medicinal Treatment</b></p> <p>Indicator 5.3.1 requires that farms identify treatments that have not produced the expected effect. The SAD Steering Committee recognizes that the “expected effect” will vary with health condition and type of medicinal treatment. Therefore farms and auditors will need to review the pre- and post-treatment condition of fish in order to understand and evaluate the impact of treatment.</p> <p><u>Example: sea lice treatment with emamectin benzoate</u></p> <p>The SAD SC recommends that a typical baseline for effectiveness of emamectin benzoate is a minimum of 90 percent reduction in abundance of lice on the farmed fish. To determine whether treatment has produced the expected effect, farm and auditor must review pre- and post-treatment lice counts. If the calculated percent reduction in lice is &lt; 90% then the treatment did not produce the expected effect and a bio-assay should be performed to determine whether sea lice have developed resistance.</p> <p>Note: If field-based bio-assays for determining resistance are ineffective or unavailable, the farm shall have samples analyzed by an independent laboratory to determine resistance formation. The auditor shall record in the audit report why field-based bio-assays were deemed ineffective and shall include results from the laboratory analyses of resistance formation.</p>			
		a. In addition to recording all therapeutic treatments (5.2.1a), keep a record of all cases where the farm uses two successive medicinal treatments.	N/A		
All farms	5.3.1	b. Keep records showing how the farm evaluates the observed effect of treatment against the expected effect of treatment, whenever the farm uses two successive treatments.	N/A		
		c. Ensure that a bio-assay analysis of resistance is conducted, for any result of 5.3.1b that did not produce the expected effect.	N/A		
		d. Keep a record of all results arising from 5.3.1c.	N/A		
	5.3.2	a. Review results of bio-assay tests (5.3.1d) for evidence that resistance has formed. If yes, proceed to 5.3.2b. If no, then Indicator 5.3.2 is not applicable.	N/A		
b. When bio-assay tests show evidence that resistance has formed, keep records showing that the farm took one of two actions: - used an alternative treatment (if permitted in the area of operation); or - immediately harvested all fish on site.		N/A			
All farms except as noted in [115]	5.4.1	a. Keep records of the start and end dates of periods when the site is fully fallow after harvest.	N/A		
		b. Provide evidence of stocking dates (purchase receipts, delivery records) to show that there were no gaps > 6 months for smolt inputs for the current production cycle.	≥ 6 months for smolt inputs for the current production cycle before first audit		
Footnote [115]		<p>Exception is allowed for:</p> <p>1) farm sites that have closed, contained production units where there is complete separation of water between units and no sharing of filtration systems or other systems that could spread disease, or,</p> <p>2) farm sites that have ≥95% water recirculation, a pre-entry disease screening protocol, dedicated quarantine capability and biosecurity measures for waste to ensure there is no discharge of live biological material to the natural environment (e.g. UV or other effective treatment of effluent) .</p>			
All farms	5.4.2	a. Show evidence that the farm promptly evaluated each to determine whether it was a statistically significant increase over background mortality rate on a monthly basis [116], for mortality events logged in 5.1.4a. The accepted level of significance (for example, $p < 0.05$ ) should be agreed between farm and CAB.	N/A		
		b. For mortality events logged in 5.1.4a, record whether the farm did or did not suspect (yes or no) an unidentified transmissible agent.	N/A		
		c. Proceed to 5.4.2d if, during the most recent production cycle, either: - results from 5.4.2a showed a statistically significant increase in unexplained mortalities; or - the answer to 5.4.2b was 'yes'. Otherwise, Indicator 5.4.2 is not applicable.	most recent production cycle before first audit		
		d. If required, ensure that the farm takes and records the following steps: 1) Report the issue to the ABM and to the appropriate regulatory authority; 2) Increase monitoring and surveillance [117] on the farm and within the ABM; and 3) Promptly (within one month) make findings publicly available.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	5.4.2	e. As applicable, submit data to ASC as per Appendix VI about unidentified transmissible agents or unexplained increases in mortality. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A		
Footnote [116]		Increased mortality: A statistically significant increase over background rate on a monthly basis.			
Footnote [117]		Primary aim of monitoring and surveillance is to investigate whether a new or adapted disease is present in the area.			
All farms	5.4.3	<p><b>Instruction to Clients for Indicator 5.4.3 - Compliance with the OIE Aquatic Animal Health Code</b></p> <p>Indicator 5.4.3 requires that farms show evidence of compliance with the OIE Aquatic Animal Health Code (see <a href="http://www.oie.int/index.php?id=171">http://www.oie.int/index.php?id=171</a>). Compliance is defined as farm practices consistent with the intentions of the Code. For purposes of the ASC Salmon Standard, this means that the farm must have written procedures stating how the farm will initiate an aggressive response to detection of an exotic OIE-notifiable disease on the farm ['exotic' = not previously found in the area or had been fully eradicated (area declared free of the pathogen)]. An aggressive response will involve, at a minimum, the following actions:</p> <ul style="list-style-type: none"> <li>- depopulation of the infected site;</li> <li>- implementation of quarantine zones (see note below) in accordance with guidelines from OIE for the specific pathogen; and</li> <li>- additional actions as required under Indicator 5.4.4.</li> </ul> <p>To demonstrate compliance with Indicator 5.4.3, clients have the option to describe how farm practices are consistent with the intentions of the OIE Aquatic Animal Health Code by developing relevant policies and procedures and integrating them into the farm's fish health management plan.</p> <p>Note: The Steering Committee recognizes that establishment of quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM.</p>			
		a. Maintain a current version of the OIE Aquatic Animal Health Code on site or ensure staff have access to the most current version.	N/A		
	b. Develop policies and procedures as needed to ensure that farm practices remain consistent with the OIE Aquatic Animal Health Code (5.4.3a) and with actions required under indicator 5.4.4.	N/A			
	5.4.4	a. Ensure that farm policies and procedures in 5.4.3a describe the four actions required under Indicator 5.4.4 in response to an OIE-notifiable disease on the farm.	N/A		
		b. Inform the CAB if an OIE-notifiable disease has been confirmed on the farm during the current production cycle or the two previous production cycles. If yes, proceed to 5.4.4c. If no, then 5.4.4c and 5.4.4d do not apply.	current or two previous production cycle before first audit		
		c. If an OIE-notifiable disease was confirmed on the farm (see 5.4.4b), then retain documentary evidence to show that the farm: <ol style="list-style-type: none"> <li>1) immediately culled the pen(s) in which the disease was detected;</li> <li>2) immediately notified the other farms in the ABM [122]</li> <li>3) enhanced monitoring and conducted rigorous testing for the disease; and</li> <li>4) promptly (within one month) made findings publicly available.</li> </ol>	N/A		
		d. As applicable, submit data to ASC as per Appendix VI about any OIE-notifiable disease that was confirmed on the farm. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).	N/A		
Footnote [122]		This is in addition to any notifications to regulatory bodies required under law and the OIE Aquatic Animal Health Code.			
All farms	6.1.1	a. Workers have the freedom to join any trade union, free of any form of interference from employers or competing organizations set up or backed by the employer. Farms shall prepare documentation to demonstrate to the auditor that domestic regulation fully meets these criteria.	N/A		
	6.1.2	a. Maintain that employment contracts explicitly states the worker's right of freedom of association.	N/A		
		b. Communicate that workers are free to form organizations to advocate for and protect work rights (e.g. farm policies on Freedom of Association; see 6.12.1).	N/A		
	6.1.3	b. Explicitly communicate a commitment to ensure the collective bargaining rights of all workers.	N/A		
c. Provide documentary evidence that workers are free and able to bargain collectively (e.g. collective bargaining agreements, meeting minutes, or complaint resolutions).		N/A			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All except as noted in [125]	6.2.1	a. In most countries, the law states that minimum age for employment is 15 years. There are two possible exceptions: - in developing countries where the legal minimum age may be set to 14 years (see footnote 125); or - in countries where the legal minimum age is set higher than 15 years, in which case the legal minimum age of the country is followed. If the farm operates in a country where the legal minimum ages is not 15, then the employer shall maintain documentation attesting to this fact.	N/A		
		c. Maintain age records for employees that are sufficient to demonstrate compliance.	N/A		
Footnote [125]		Child: Any person under 15 years of age. A higher age would apply if the minimum age law of an area stipulates a higher age for work or mandatory schooling. Minimum age may be 14 if the country allows it under the developing country exceptions in ILO convention 138.			
All	6.2.2	a. Young workers are appropriately identified in company policies & training programs, and job descriptions are available for all young workers at the site.	N/A		
		b. All young workers (from age 15 to less than 18) are identified and their ages are confirmed with copies of IDs.	N/A		
		c. Daily records of working hours (i.e. timesheets) are available for all young workers.	N/A		
		d. For young workers, the combined daily transportation time and school time and work time does not exceed 10 hours.	N/A		
		e. Young workers are not exposed to hazards [129] and do not perform hazardous work [130]. Work on floating cages in poor weather conditions shall be considered hazardous.	N/A		
Footnote [129]		Hazard: The inherent potential to cause injury or damage to a person's health (e.g., unequipped to handle heavy machinery safely, and unprotected exposure to harmful chemicals).			
Footnote [130]		Hazardous work: Work that, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of workers (e.g., heavy lifting disproportionate to a person's body size, operating heavy machinery, exposure to toxic chemicals).			
All farms	6.3.1	f. Maintain payroll records.	N/A		
All farms	6.4.1	a. Provide written anti-discrimination policy in place, stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination.	N/A		
		b. Provide a clear and transparent company procedures that outline how to raise, file, and respond to discrimination complaints.	N/A		
		c. Maintain respect to the principle of equal pay for equal work and equal access to job opportunities, promotions and raises.	N/A		
		d. Provide all managers and supervisors training on diversity and non-discrimination. All personnel receive non-discrimination training. Internal or external training acceptable if proven effective.	N/A		
	6.4.2	a. Maintain a record of all discrimination complaints. These records do not show evidence for discrimination.	N/A		
All farms	6.5.1	a. Provide documented practices, procedures (including emergency response procedures) and policies to protect employees from workplace hazards and to minimize risk of accident or injury. The information shall be available to employees.	N/A		
		c. Conduct health and safety training for all employees on a regular basis (once a year and immediately for all new employees), including training on potential hazards and risk minimization, Occupational Safety and Health (OSH) and effective use of PPE.	N/A		
	6.5.2	a. Maintain a list of all health and safety hazards (e.g. chemicals).	N/A		
		b. Provide workers with PPE that is appropriate to known health and safety hazards.	N/A		
	6.5.3	a. Make regular assessments of hazards and risks in the workplace. Risk assessments are reviewed and updated at least annually (see also 6.5.1a).	N/A		
		c. Maintain that health and safety procedures are adapted based on results from risk assessments (above) and changes are implemented to help prevent accidents.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	6.5.4	a. Record all health- and safety-related accidents.	N/A		
		b. Maintain complete documentation for all occupational health and safety violations and investigations.	N/A		
		c. Implement corrective action plans in response to any accidents that occur. Plans are documented and they include an analysis of root cause, actions to address root cause, actions to remediate, and actions to prevent future accidents of similar nature.	N/A		
All farms	6.5.5	a. Maintain documentation to confirm that all personnel are provided sufficient insurance to cover costs related to occupational accidents or injuries (if not covered under national law). Equal insurance coverage must include temporary, migrant or foreign workers. Written contract of employer responsibility to cover accident costs is acceptable evidence in place of insurance.	N/A		
	6.5.6	Note: If the farm outsources its diving operations to an independent company, the farm shall ensure that auditors have access to specified information sufficient to demonstrate compliance with Indicator 6.5.6. It is the farm's responsibility to obtain copies of relevant documentation (e.g. certificates) from the dive company.			
		a. Keep records of farm diving operations and a list of all personnel involved. In case an external service provider was hired, a statement that provider conformed to all relevant criteria must be made available to the auditor by this provider.	N/A		
All farms	6.6.1	b. Maintain evidence of diver certification (e.g. copies of certificates) for each person involved in diving operations. Divers shall be certified through an accredited national or international organization for diver certification.	N/A		
		a. Keep documents to show the legal minimum wage in the country of operation. If there is no legal minimum wage in the country, the employer keeps documents to show the industry-standard minimum wage.	N/A		
		b. Provide records (e.g. payroll) confirm that worker's wages for a standard work week ( $\leq 48$ hours) always meet or exceed the legal minimum wage. If there is no legal minimum wage, the employer's records must show how the current wage meets or exceeds industry standard. If wages are based on piece-rate or pay-per-production, the employer's records must show how workers can reasonably attain (within regular working hours) wages that meet or exceed the legal minimum wage.	N/A		
All farms	6.6.2	c. Maintain documentary evidence (e.g. payroll, timesheets, punch cards, production records, and/or utility records) and be advised that workers will be interviewed to confirm the above.	N/A		
		a. Proof of employer engagement with workers and their representative organizations, and the use of cost of living assessments from credible sources to assess basic needs wages. Includes review of any national basic needs wage recommendations from credible sources such as national universities or government.	N/A		
		b. Provide calculation on the basic needs wage for farm workers and compared it to the basic (i.e. current) wage for their farm workers.	N/A		
All farms	6.6.3	c. Demonstrate how steps are taken toward paying a basic needs wage to their workers.	N/A		
	6.7.1	c. Maintain renders wages and benefits in a way that is convenient for the worker (e.g. cash, check, or electronic payment methods). Workers do not have to travel to collect benefits nor do they receive promissory notes, coupons or merchandise in lieu of payment.	N/A		
		a. Maintain a record of all employment contracts.	N/A		
All farms	6.7.2	a. Provide a farm policy to ensure that all companies contracted to provide supplies or services (e.g. divers, cleaning, maintenance) have socially responsible practices and policies.	N/A		
	All farms	6.8.1	a. Provide a clear labor conflict resolution policy for the presentation, treatment, and resolution of worker grievances in a confidential manner.	N/A	
6.8.2		c. Maintain documentary evidence (e.g. complaint or grievance filings, minutes from review meetings).	N/A		
		a. Maintain a record of all grievances, complaints and labor conflicts that are raised.	N/A		
	b. Keep a record of follow-up (i.e. corrective actions) and timeframe in which grievances are addressed.	N/A			
All farms	6.9.2	c. Maintain documentary evidence.	N/A		
		a. Provide a written policy for disciplinary action which explicitly states that its aim is to improve the worker [143].	N/A		
		b. Maintain documentary evidence (e.g. worker evaluation reports).	N/A		
Footnote [143]		If disciplinary action is required, progressive verbal and written warnings shall be engaged. The aim shall always be to improve the worker; dismissal shall be the last resort. Policies for bonuses, incentives, access to training and promotions are clearly stated and understood, and not used arbitrarily. Fines or basic wage deductions shall not be acceptable disciplinary practices.			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms	6.10.1	a. Provide documentation showing the legal requirements for working hours and overtime in the region where the farm operates. If local legislation allows workers to exceed internationally accepted recommendations (48 regular hours, 12 hours overtime) then requirements of the international standards apply.	N/A		
		b. Show records (e.g. time sheets and payroll) that farm workers do not exceed the number of working hours allowed under the law.	N/A		
All except as noted in [146]	6.10.2	a. Maintain payment records (e.g. payslips), show that workers are paid a premium rate for overtime hours.	N/A		
		b. Maintain that overtime is limited and occurs in exceptional circumstances as evidenced by farm records (e.g. production records, time sheets, and other records of working hours).	N/A		
Footnote [146]		Compulsory overtime is permitted if previously agreed to under a collective bargaining agreement.			
All farms	6.11.1	a. Provide that the company has written policies related to continuing education of workers. Company provides incentives (e.g. subsidies for tuition or textbooks, time off prior to exams, flexibility in work schedule) that encourage workers to participate in educational initiatives. Note that such offers may be contingent on workers committing to stay with the company for a pre-arranged time.	N/A		
		b. Maintain records of worker participation in educational opportunities as evidenced by course documentation (e.g. list of courses, curricula, certificates, degrees).	N/A		
All farms	6.12.1	a. Maintain that the company-level policies are in line with all social and labor requirements presented in 6.1 through 6.11.	N/A		
		b. Maintain that company-level policies (see 6.12.1a) are approved by the company headquarters in the region where the site applying for certification is located.	N/A		
		c. Maintain that the scope of corporate policies (see 6.12.1a) covers all company operations relating to salmonid production in the region (i.e. all smolt production facilities, grow-out facilities and processing plants).	N/A		
		d. Provides auditors with access to all company-level policies and procedures as are needed to verify compliance with 6.12.1a (above), for the site that is applying for certification.	N/A		
All farms	7.1.1	a. The farm pro-actively arranges for consultations with the local community at least twice every year (bi-annually).	At least one meeting before first audit		
		b. Consultations are meaningful. OPTIONAL: the farm may choose to use participatory Social Impact Assessment (pSIA) or an equivalent method for consultations.	N/A		
		c. Consultations include participation by representatives from the local community who were asked to contribute to the agenda.	N/A		
		d. Consultations include communication about, or discussion of, the potential health risks of therapeutic treatments (see Indicator 7.1.3).	N/A		
		e. Maintain records and documentary evidence (e.g. meeting agenda, minutes, report) to demonstrate that consultations comply with the above.	N/A		
	7.1.2	a. Farm policy provides a mechanism for presentation, treatment and resolution of complaints lodged by stakeholders, community members, and organizations.	N/A		
	7.1.3	a. Provide a farm system for posting notifications at the farm during periods of therapeutic treatment. (use of anaesthetic baths is not regarded a therapeutic).	N/A		
		b. Maintain that notices (above) are posted where they will be visible to affected stakeholders (e.g. posted on waterways for fishermen who pass by the farm).	N/A		
		c. Maintain that the farm communicates about the potential health risks from treatments during community consultations (see 7.1.1).	N/A		



Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]		<p><b>Instruction to Clients and CABs on Criterion 7.2 - Traditional Territories of Indigenous Groups</b></p> <p>The ASC Salmon Standard requires that farms must be respectful of the traditional territories of indigenous groups. The Indicators listed under Criterion 7.2 were designed to fulfill this purpose in a manner consistent with the United Nations Declaration on the Rights of Indigenous Peoples. In many locales, the territorial boundaries of indigenous groups have a defined legal status according to local or national law. In such cases, it is straightforward to know whether a farm is operating in close proximity to indigenous people. However, when boundaries of indigenous territories are undefined or unknown, there is no simple way to establish whether the farm is operating in close proximity to indigenous groups. Here ASC provides the following guidance.</p> <p>The intent behind the ASC Salmon Standard is that the farm will identify all neighboring groups who are potentially negatively impacted by the farm's activities. The actual physical distance between the farm and an indigenous group is less important than understanding whether the farm is having a detrimental impact upon its neighbors. Effective community consultations are one of the best ways to identify such impacts to neighbor groups. Through a transparent process of consultation, indigenous groups who are put under "stress" by the farm will identify themselves and voice their concerns about the nature of the farm's impacts. Continued consultations between farm and neighbors should create a forum where any key issue can be discussed and resolved.</p>			
	7.2.1	a. Documentary evidence establishes that the farm does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people [152]). If not then the requirements of 7.2.1 do not apply.	N/A		
		b. Demonstrate and understanding of relevant local and/or national laws and regulations that pertain to consultations with indigenous groups, by the farm management.	N/A		
		c. As required by law in the jurisdiction: - farm consults with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR - farm confirms that government-to-government consultation occurred and obtains documentary evidence.	N/A		
Footnote [152]		All standards related to indigenous rights only apply where relevant, based on proximity of indigenous territories.			
Footnote [153]		To demonstrate an active process, a farm must show ongoing efforts to communicate with indigenous communities, an understanding of key community concerns and responsiveness to key community concerns through adaptive farm management and other actions.			
All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]	7.2.2	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.2 apply to the farm.	N/A		
	7.2.3	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.3 apply to the farm.	N/A		
		b. Maintain evidence to show that the farm has either: 1) reached a protocol agreement with the indigenous community and this fact is documented; or 2) continued engagement in an active process [153] to reach a protocol agreement with the indigenous community.	N/A		
All farms	7.3.1	a. Document resources that are vital [155] to the community and are known by the farm (i.e. through the assessment process required under Indicator 7.3.2).	N/A		
		b. Obtains community approval before undertaking changes that restrict access to vital community resources. Approvals are documented.	N/A		
Footnote [155]		The SAD SC proposes this approach to addressing environmental and social performance during the smolt phase of production. In the medium term, the SC anticipates a system to audit smolt production facilities on site. In the meantime, farms will need to work with their smolt suppliers to generate the necessary documentation to demonstrate compliance with the standards. The documentation will be reviewed as part of the audit at the grow-out facility.			
All farms	7.3.2	a. There is a documented assessment of the farm's impact upon access to resources. Can be completed as part of community consultations under 7.1.1.	N/A		
All smolt producers	8.1	a. Identify all of the farm's smolt suppliers. For each supplier, identify the type of smolt production system used (e.g. open, semi or closed systems) and submit this information to ASC (Appendix VI).	N/A		
		b. Obtain copies of smolt suppliers' permits, where legal authorisation related to water quality are required.	N/A		
		c. Obtain records from smolt suppliers showing monitoring and compliance with discharge laws, regulations, and permit requirements as required.	N/A		
All smolt producers	8.2	a. Obtain declarations from smolt suppliers affirming compliance with labor laws and regulations.	N/A		
		b. Keep records of supplier inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation; see 1.1.3a).	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All smolt producers	8.3	Note: If the smolt facility has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may obtain and use such documents as evidence to demonstrate compliance with Indicator 8.3 as long as all components are covered.			
		a. Obtain from the smolt supplier(s) a documented assessment of the smolt site's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3.	N/A		
		b. Obtain from the smolt supplier(s) a declaration confirming they have developed and are implementing a plan to address potential impacts identified in the assessment.	N/A		
All smolt producers	8.4	<b>Instruction to Clients for Indicator 8.4 - Calculating Total Phosphorus Released per Ton of Fish Produced</b> Farms must confirm that each of their smolt suppliers complies with the requirement of indicator 8.4. This specifies the maximum amount of phosphorus that a smolt production facility can release into the environment per metric ton (mt) of fish produced over a 12-month period. The requirement is set at 5 kg/mt for the first three years from date of publication of the ASC Salmon Standard (i.e. from June 13, 2012 until June 12, 2015), dropping to 4 kg/mt thereafter. The calculation of total phosphorus released is made using a "mass balance" approach. Detailed instructions and formulas are given in Appendix VIII-1.  If applicable, farms may take account of any physical removals of phosphorus in the form of sludge provided there is evidence to show: - the smolt supplier has records showing the total quantity of sludge removed from site over the relevant time period; - the supplier determined phosphorus concentration (% P) in removed sludge by sampling and analyzing representative batches; and - the sludge was properly disposed off site and in accordance with the farm's biosolid management plan.			
		a. Obtain records from smolt suppliers showing amount and type of feeds used for smolt production during the past 12 months.	≥ 12 months before first audit		
		b. Keep records showing phosphorus content as determined by chemical analysis or based on feed supplier declaration (Appendix VIII-1), for all feeds used by the smolt suppliers (result from 8.4a).	N/A		
		c. Calculate the total amount of phosphorus added as feed during the last 12 months of smolt production, Using the equation from Appendix VIII-1 and results from 8.4a and b.	≥ 12 months before first audit		
		d. Obtain from smolt suppliers records for stocking, harvest and mortality which are sufficient to calculate the amount of biomass produced (formula in Appendix VIII-1) during the past 12 months.	≥ 12 months before first audit		
		e. Calculate the amount of phosphorus in fish biomass produced (result from 8.4d) using the formula in Appendix VIII-1.	N/A		
		f. Obtain records from smolt suppliers showing the total amount of P removed as sludge (formula in Appendix VIII-1) during the past 12 months, if applicable.	≥ 12 months before first audit		
		g. Calculate total phosphorus released per ton of smolt produced and verify that the smolt supplier is in compliance with requirements, using the formula in Appendix VIII-1 and results from 8.4a-f (above).	N/A		
All smolt producers except as noted in [157]	8.5	a. Obtain written evidence showing whether the smolt supplier produces a non-native species or not. If not, then Indicator 8.5 does not apply.	N/A		
		b. Provide the farm with documentary evidence that the non-native species was widely commercially produced in the area before publication of the SAD Standard. (See definition of area under 3.2.1 ).	N/A		
		c. Provide documentary evidence that the farm uses only 100% sterile fish, if the smolt supplier cannot provide the farm with evidence for 8.5b.	N/A		
		d. If the smolt supplier cannot provide the farm with evidence for 8.5b or 8.5c, provide documented evidence for each of the following: 1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained; 2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce; and 3) barriers ensure there are no escapes of biological material that might survive and subsequently reproduce.	N/A		
		e. Retain evidence as described in 8.5a-d necessary to show compliance of each facility supplying smolt to the farm.	N/A		
Footnote [157]		Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All smolt producers except as noted in [159]	8.6	a. Obtain documentary evidence to show that smolt suppliers maintained monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.	N/A		
		b. Determine the total number of fish that escaped. Verify that there were fewer than 300 escapees from the smolt production facility in the most recent production cycle, using smolt supplier records from 8.6a.	N/A		
		c. Inform smolt suppliers in writing that monitoring records described in 8.6a must be maintained for at least 10 years beginning with the production cycle for which the farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [159]).	N/A		
		d. Farm request for a rare exception in the Standard[159], if an escape episode occurs at the smolt production facility (i.e. an incident where > 300 fish escaped). Requests must provide a full account of the episode and must document how the smolt producer could not have predicted the events that caused the escape episode.	N/A		
Footnote [159]		A rare exception to this standard may be made for an escape event that is clearly documented as being outside of the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predict the events that caused the episode. Extreme weather (e.g., 100-year storms) or accidents caused by farms located near high-traffic waterways are not intended to be covered under this exception.			
All smolt producers	8.7	a. Obtain records showing the accuracy of the counting technology used by smolt suppliers. Records must include copies of spec sheets for counting machines and common estimates of error for hand-counts.	N/A		
		b. Review records to verify that accuracy of the smolt supplier's counting technology or counting method is $\geq 98\%$ .	N/A		
All smolt producers	8.8	a. Obtain a policy which states the supplier's commitment to proper and responsible treatment of non-biological waste from production, from each smolt supplier. It must explain how the supplier's policy is consistent with best practice in the area of operation.	N/A		
All smolt producers	8.9	Note: see instructions for Indicator 4.6.1.			
		a. Obtain records from the smolt supplier for energy consumption by source (fuel, electricity) at the supplier's facility throughout each year.	$\geq 12$ months before first audit		
		b. Confirm that the smolt supplier calculates total energy consumption in kilojoules (kj) during the last year.	$\geq 12$ months before first audit		
		c. Obtain records to show the smolt supplier calculated the total weight of fish in metric tons (mt) produced during the last year.	$\geq 12$ months before first audit		
		d. Confirm that the smolt supplier used results from 8.9b and 8.9c to calculate energy consumption on the supplier's facility as required and that the units are reported as kilojoule/mt fish/production cycle.	N/A		
e. Obtain evidence to show that smolt supplier has undergone an energy use assessment in compliance with requirements of Appendix V-1. Can take the form of a declaration detailing a-e.	N/A				
All smolt producers	8.10	Note: see instructions for Indicator 4.6.2.			
		a. Obtain records of greenhouse gas emissions from the smolt supplier's facility.	N/A		
		b. Confirm that, on at least an annual basis, the smolt supplier calculates all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.	N/A		
		c. Confirm that the smolt supplier selects the emission factors which are best suited to the supplier's operation, for GHG calculations. Confirm that the supplier documents the source of the emissions factors.	N/A		
		d. Confirm that the smolt suppliers specify the Global Warming Potential (GWP) used and its source, for GHG calculations involving conversion of non-CO2 gases to CO2 equivalents.	N/A		
e. Obtain evidence to show that the smolt supplier has undergone a GHG assessment in compliance with requirements Appendix V-1 at least annually.	N/A				
All smolt producers	8.11	a. Obtain a copy of the supplier's fish health management plan for the identification and monitoring of fish disease and parasites.	N/A		
		b. Keep documentary evidence to show that the smolt supplier's health plans were approved by the supplier's designated veterinarian.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All smolt producers	8.12	a. Maintain a list of diseases that are known to present a significant risk in the region, developed by farm veterinarian and supported by scientific evidence.	N/A		
		b. Maintain a list of diseases for which effective vaccines exist for the region, developed by the farm veterinarian and supported by scientific evidence.	N/A		
		c. Obtain from the smolt supplier(s) a declaration detailing the vaccines the fish received.	N/A		
		d. Demonstrate, using the lists from 8.12a-c above, that all salmon on the farm received vaccination against all selected diseases known to present a significant risk in the regions for which an effective vaccine exists.	N/A		
All smolt producers	8.13	<p><b>Instruction to Clients for Indicator 8.13-- Testing of Smolt for Select Diseases</b></p> <p>The farm is responsible for developing and maintaining a list of diseases of regional concern for which each smolt group should be tested. The list of diseases shall include diseases that originate in freshwater and are proven or suspected to occur in seawater (and for which seawater fish-to-fish transmission is a concern).</p> <p>The designated veterinarian <u>to the smolt supplier</u> is required to evaluate, based on scientific criteria and publicly available information, which diseases should be tested for. This analysis shall include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from being transferred. The analysis must be available to the CAB upon request.</p> <p>Note: A "smolt group" is defined as a population that shares disease risk, including environment, husbandry, and host factors that might contribute to sharing disease agents for each group.</p>			
		a. Obtain from the smolt supplier a list of diseases of regional concern for which smolt should be tested. List shall be supported by scientific analysis as described in the Instruction above.	N/A		
		b. Obtain from the smolt supplier(s) a declaration and records confirming that each smolt group received by the farm has been tested for the diseases in the list (8.13a).	N/A		
All smolt producers	8.14	<p>a. Obtain from the smolt supplier(s) a detailed record of all chemical and therapeutant use for the fish sold to the farm that is signed by their veterinarian and includes:</p> <ul style="list-style-type: none"> <li>- name of the veterinarian prescribing treatment;</li> <li>- product name and chemical name;</li> <li>- reason for use (specific disease)</li> <li>- date(s) of treatment;</li> <li>- amount (g) of product used;</li> <li>- dosage;</li> <li>- mt of fish treated;</li> <li>- the WHO classification of antibiotics (also see note under 5.2.8); and</li> <li>- the supplier of the chemical or therapeutant.</li> </ul>	N/A		
All smolt producers	8.15	a. Provide to the smolt supplier the list (see 5.2.2a) of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [166].	N/A		
		b. Inform smolt supplier that the treatments on the list cannot be used on fish sold to a farm with ASC certification.	N/A		
		c. Compare therapeutant records from smolt supplier (8.14) to the list (8.15a) and confirm that no therapeutants appearing on the list (8.15a) were used on the smolt purchased by the farm.	N/A		
Footnote [166]		For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.			
All smolt producers	8.16	a. Obtain from the smolt supplier records of all treatments of antibiotics (see 8.14a).	N/A		
		b. Calculate the total number of treatments of antibiotics from their most recent production cycle.	most recent production cycle before first audit		
All smolt producers	8.17	a. Provide to smolt supplier(s) a current version of the WHO list of antimicrobials critically and highly important for human health [167].	N/A		
		b. Inform smolt supplier that the antibiotics on the WHO list (8.17a) cannot be used on fish sold to a farm with ASC certification.	N/A		
		c. Compare smolt supplier's records for antibiotic usage (8.14, 8.15a) with the WHO list (8.17a) to confirm that no antibiotics listed as critically important for human medicine by the WHO were used on fish purchased by the farm.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
Footnote [167]		The 3rd edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: <a href="http://www.who.int/foodborne_disease/resistance/CIA_3.pdf">http://www.who.int/foodborne_disease/resistance/CIA_3.pdf</a> .			
All smolt producers	8.18	Note: see instructions for Indicator 5.4.3 regarding evidence of compliance with the OIE Aquatic Animal Health Code.			
		a. Provide the smolt supplier with a current version of the OIE Aquatic Animal Health Code (or inform the supplier how to access it from the internet).	N/A		
		b. Inform the supplier that an ASC certified farm can only source smolt from a facility with policies and procedures that ensure that its smolt production practices are compliant with the OIE Aquatic Animal Health Code.	N/A		
		c. Obtain a declaration from the supplier stating their intent to comply with the OIE code and copies of the smolt suppliers policies and procedures that are relevant to demonstrate compliance with the OIE Aquatic Animal Health Code.	N/A		
All smolt producers	8.19	a. Obtain copies of smolt supplier's company-level policies and procedures and a declaration of compliance with the labor standards under 6.1 to 6.11.	N/A		
		b. Review the documentation and declaration from 8.19a to verify that smolt supplier's policies and procedures are in compliance with the requirements of labor standards under 6.1 to 6.11.	N/A		
All smolt producers	8.20	<b>Instruction to Clients for Indicator 8.20 - Consultation and Engagement with Community Representatives</b> Farms must comply with Indicator 7.1.1 which requires that farms engage in regular consultation and engagement with community representatives and organizations. Under Indicator 8.20, farms must show how each of their smolt suppliers complies with an equivalent requirement. Farms are obligated to maintain evidence that is sufficient to show their suppliers remain in full compliance. Evidence shall be documentary (e.g. meeting agenda, minutes, report) and will substantiate the following: - the smolt supplier engaged in "regular" consultations with the local community at least twice every year (bi-annually); - the supplier's consultations were effective (e.g. using participatory Social Impact Assessment (pSIA) or similar methods); and - the supplier's consultations included participation by elected representatives from the local community who were asked to contribute to the agenda.			
		a. From each smolt supplier obtain documentary evidence of consultations and engagement with the community.	N/A		
		b. Review documentation from 8.20a to verify that the smolt supplier's consultations and community engagement complied with requirements.	N/A		
All smolt producers	8.21	a. Obtain a copy of the smolt supplier's policy for presentation, treatment and resolution of complaints by community stakeholders and organizations.	N/A		
All smolt producers	8.22	a. Obtain documentary evidence showing that the smolt supplier does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people (see Indicator 7.2.1). If not then the requirements of 8.22 do not apply.	N/A		
		b. Obtain documentation to demonstrate that, as required by law in the jurisdiction: smolt supplier consulted with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR smolt supplier confirms that government-to-government consultation occurred and obtains documentary evidence.	N/A		
All smolt producers	8.23	a. See results of 8.22a (above) to determine whether the requirements of 8.23 apply to the smolt supplier.	N/A		
		b. Obtain documentary evidence that smolt suppliers undertake proactive consultations with indigenous communities, where relevant.	N/A		
All smolt producers using open systems	8.24	<b>Instruction to Clients for Indicators 8.24 through 8.31 - Requirements for Smolt Produced in Open Systems</b> Client shall provide documentary evidence to the CAB about the production system(s) from which they source smolt. If smolt used by the farm are produced, for part or all of the growth phase from alevin to smolt, in open (net-pen) systems, indicators 8.24 - 8.31 are applicable.			
		<p><b>Scope of Exemption Allowed Under Indicator 8.24:</b> For the first audit, farms that were stocked prior to the publication of the standard on June 13, 2012 may request an exemption, applicable for that production cycle, to the requirement under 8.24. A farm that sourced smolt that were produced in an open system (net pen) in a water body with native salmonids may request this exemption if:</p> <ol style="list-style-type: none"> <li>the farm was stocked prior to June 13, 2012; and</li> <li>the farm demonstrates through supporting evidence (e.g. purchasing agreement) that they will source smolt from a semi-closed or closed production system for their next production cycle.</li> </ol> <p>If the CAB determines that the farm has fulfilled the above criteria, then an exemption may be granted and the farm may be awarded certification. However, no salmon products originating from a farm which utilizes this exemption shall be eligible to bear the ASC logo or otherwise claim to be an ASC-certified product until the farm can demonstrate that smolt were sourced in full compliance with Indicator 8.24. The CAB shall fully document the exemption in the audit report and explain how the farm has addressed any risks that may be associated with non-certified products entering into further certified chains of custody.</p> <p>Native: native to the area and with a history of naturally occurring and also if intentionally stocked for restorational purposes. Areas with a combination of wild native and enhanced native populations are included.</p>			

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All smolt producers using open systems	8.24	a. Obtain a declaration from the farm's smolt supplier stating whether the supplier operates in water bodies with native salmonids.	N/A		
		b. Request smolt suppliers to identify all water bodies in which they operate net pens for producing smolt and from which facilities they sell to the client.	N/A		
		c. Determine if native salmonids are present by doing a literature search or by consulting with a reputable authority, for any water body identified in 8.24b as a source of smolt for the farm. Retain evidence of search results.	N/A		
All smolt producers using open systems	8.25	a. Take steps to ensure that by June 13, 2017 the farm does not source smolt that was produced or held in net pens.	N/A		
All smolt producers using open systems	8.26	a. Obtain a copy of the most recent assessment of assimilative capacity, for the water body(s) where the supplier produces smolt for the client (see 8.24b).	N/A		
		b. Identify which entity was responsible for conducting the assessment (8.26a) and obtain evidence for their reliability.	N/A		
		c. Review the assessment (8.26a) to confirm that it establishes a carrying capacity for the water body, it is less than five years old, and it meets the minimum requirements presented in Appendix VIII-5.	N/A		
		d. Review information to confirm that the total biomass in the water body is within the limits established in the assessment (8.26a).	N/A		
		e. If the study in 8.26a is more than two years old and there has been a significant increase in nutrient input to the water body since completion, request evidence that an updated assessment study has been done.	N/A		
All smolt producers using open systems	8.27	<p><b>Instruction to Clients for Indicator 8.27 and 8.28 - Monitoring TP and DO in Receiving Water for Open Smolt Systems</b></p> <p>Farms must confirm that any smolt supplier using an open (net-pen) system is also engaged in monitoring of water quality of receiving waters. Requirements for the supplier's water quality monitoring program are presented in detail in Appendix VIII-6 and only re-stated briefly here. Monitoring shall sample total phosphorus (TP) and dissolved oxygen (DO). TP is measured in water samples taken from a representative composite sample through the water column to a depth of the bottom of the cages. Samples are submitted to an accredited laboratory for analysis of TP to a method detection limit of &lt; 0.002 mg/L. DO measurements will be taken at 50 centimeters from the bottom sediment.</p> <p>The required sampling regime is as follows:</p> <ul style="list-style-type: none"> <li>- all stations are identified with GPS coordinates on a map of the farm and/or available satellite imagery;</li> <li>- stations are at the limit of the farm management zone on each side of the farm, roughly 50 meters from the edge of enclosures;</li> <li>- the spatial arrangement of stations is shown in the table in Appendix VIII-6;</li> <li>- sampling is done at least quarterly (1X per 3 months) during periods without ice, including peak biomass; and</li> <li>- samples are also collected at two reference stations located ~ 1-2 km upcurrent and downcurrent from the farm.</li> </ul> <p>Note: Some flexibility on the exact location and method of sampling is allowed to avoid smolt suppliers needing to duplicate similar sampling for their local regulatory regime.</p>			
		a. Obtain documentary evidence to show that smolt suppliers conducted water quality monitoring in compliance with the requirements of Appendix VIII-6.	N/A		
		b. Obtain from smolt suppliers a map with GPS coordinates showing the sampling locations.	N/A		
		c. Obtain from smolt suppliers the TP monitoring results for the past 12 months and calculate the average value at each sampling station.	≥ 12 months before first audit		
		d. Compare results to the baseline TP concentration established below (see 8.29) or determined by a regulatory body.	N/A		
		e. Confirm that the average value for TP over the last 12 months did not exceed 20 ug/l at any of the sampling stations nor at the reference station.	N/A		
All smolt producers using open systems	8.28	Note: see instructions for Indicator 8.27.			
		a. Obtain evidence that smolt supplier conducted water quality monitoring in compliance with the requirements (see 8.27a).	N/A		
		b. Obtain from smolt suppliers the DO monitoring results from all monitoring stations for the past 12 months.	≥ 12 months before first audit		
		c. Review results (8.28b) to confirm that no values were below the minimum percent oxygen saturation.	N/A		

Applicability	Reference in AM	Description	Timeframe	Check	Remarks
All smolt producers using open systems	8.29	a. Obtain documentary evidence from the supplier stating the trophic status of water body if previously set by a regulator body (if applicable).	N/A		
		b. Obtain evidence from the supplier to show how the supplier determined trophic status based on the concentration of TP, if the trophic status of the waterbody has not been classified (see 8.29a).	N/A		
		c. Review results from 8.29b to verify that the supplier accurately assigned a trophic status to the water body in accordance with the table in Appendix VIII-7 and the observed concentration of TP over the past 12 months, as applicable.	≥ 12 months before first audit		
		d. Compare the above results (8.29c) to trophic status of the water body as reported for all previous time periods. Verify that there has been no change.	N/A		
All smolt producers using open systems	8.30	a. Determine the baseline value for TP concentration in the water body using results from either 8.29a or 8.29b as applicable.	N/A		
		b. Compare the baseline TP concentration (result from 8.30a) to the average observed TP concentration over the past 12 months (result from 8.27e).	≥ 12 months before first audit		
		c. Verify that the average observed TP concentration did not increase by more than 25% from baseline TP concentration.	N/A		
All smolt producers using open systems	8.31	a. Obtain a declaration from the farm's smolt supplier stating that the supplier does not use aeration systems or other technological means to increase oxygen levels in the water bodies where the supplier operates.	N/A		
All smolt producers using semi-closed or closed production systems	8.32	a. Obtain records from smolt suppliers showing that water quality monitoring was conducted at least quarterly (i.e. once every 3 months) over the last 12 months.	≥ 12 months before first audit		
		b. Obtain water quality monitoring matrix from smolt suppliers and review for completeness.	N/A		
		c. Submit the smolt supplier's water quality monitoring matrix to ASC as per Appendix VIII-2 and Appendix VI at least once per year.	N/A		
All smolt producers using semi-closed or closed production systems	8.33	a. Obtain the water quality monitoring matrix from each smolt supplier (see 8.32b).	N/A		
		b. Review the results (8.33a) for percentage dissolved oxygen saturation in the effluent to confirm that no measurements fell below 60% saturation.	N/A		
		c. If a single DO reading (as reported in 8.33a) fell below 60%, obtain evidence that the smolt supplier performed daily continuous monitoring with an electronic probe and recorder for a least a week demonstrating a minimum 60% saturation at all times (Appendix VIII-2).	N/A		
All smolt producers using semi-closed or closed production systems	8.34	a. Obtain documentation from smolt supplier(s) showing the results of macro-invertebrate surveys.	N/A		
		b. Review supplier documents (8.34a) to confirm that the surveys followed the prescribed methodology (Appendix VIII-3).	N/A		
		c. Review supplier documents (8.34a) to confirm the survey results show that benthic health is similar to or better than upstream of the supplier's discharge.	N/A		
All smolt producers using semi-closed or closed production systems	8.35	a. Maintain a copy of smolt supplier's biosolids (sludge) management plan and confirm that the plan addresses all requirements in Appendix VIII-2.	N/A		
		b. Obtain from smolt suppliers a process flow diagram (detailed in Appendix VIII-2) showing how the farm is dealing with biosolids responsibly.	N/A		
		c. Obtain a declaration from smolt supplier stating that no biosolids were discharged into natural water bodies in the past 12 months.	≥ 12 months before first audit		
		d. Obtain records from smolt suppliers showing monitoring of biosolid (sludge) cleaning maintenance, and disposal as described in Appendix VIII-2.	N/A		