



## **Aquaculture Stewardship Council Salmon Standard Surveillance Assessment Report**

Tassal Operations Pty Ltd: Channel Zone (Previously Bruny Island MF110 & North West Bay MF 94).

Onsite Dates: 21-23 November 2016

Report release Dates: 24 Jan 2017

## ASC Audit Report - Opening

### 1 Title Page

1.1 Name of Applicant	Tassal Operations Pty Ltd
1.2 Report Title [e.g. Public Certification Report]	Surveillance Audit Report
1.3 CAB name	SCS Global Services
1.4 Name of Lead Auditor	Dr Christine Crawford
1.5 Names and positions of report authors and reviewers	Dr Christine Crawford - Lead Auditor Dr Stephen Leporati - Technical Expert
1.6 Client's Contact person: Name and Title	Heidi Hansen - Environmental Certification and Sustainability Officer
1.7 Date	November 21 - 23 2016.

### 2 Table of Contents

Section 1: Audit Report Opening
Section 2: Non-conformity Report
Section 3: Audit Report Checklist
Section 4: Audit Report Summary

### 3 Glossary

Terms and abbreviations that are specific to this audit report and that are not otherwise defined in the ASC glossary

ABM = Area Based Management
ADD = Acoustic Deterrent Device
AHD = Acoustic Harassment Device
AMBI = AZTI Marine Biotic Index
ASC = Aquaculture Stewardship Council
AZE = Allowable Zone of Effect
BOD = Biochemical Oxygen Demand
BQI = Benthic Quality Index
CAB = Conformity Assessment Body
CBD = Convention on Biological Diversity
DO = Dissolved Oxygen
eFCR = Economic Feed Conversion Ratio
EUL = Estimated Unexplained Loss
FFDRm = Fishmeal Forage Dependency Ratio
FFDRo = Fishoil Forage Dependency Ratio
GHG = Greenhouse gas
GWP = Global Warming Potential
HCVA = High Conservation Value Area
HFCs = hydrofluorocarbons
ILO = International Labour Organisation
ITI = Infaunal Trophic Index
IUCN = International Union for the Conservation of Nature
IUU = Illegal, Unregulated and Unreported
mV = millivolts
OHS = Occupational Health and Safety
PPE = Personal Protective Equipment
PSIA = Participatory Social Impact Assessment

### 4 Summary

A concise summary of the report and findings. The summary shall be written to be readable to the stakeholders and other interested parties.

4.1 A brief description of the scope of the audit	The scope of this surveillance audit against the ASC Salmon Standard v1.0 includes the following sites from Tassal's Channel Zone: MF110 Soldiers Point & MF94 Sheppards.
---	---

4.2	A brief description of the applicant's operations	Tassal Group Ltd, founded in 1986, is an ASX 300 public company listed on the Australian Securities Exchange. Tassal is the largest salmon aquaculture company in Australia, employing over 1,200 people. A vertically integrated company, Tassal operates two salmon hatcheries, four processing facilities, two retail outlets and marine farms in four zones throughout the state of Tasmania. Tassal is producing salmon predominately for the Australian market, and has a retail presence in over 3,357 outlets around Australia. Tassal farms Atlantic Salmon ( <i>Salmo salar</i> ) in open net cage farming systems that are polar circles with 120 m circumference, and maximum stocking densities of 15 kg/m <sup>3</sup> .
4.3	A summary of the major findings	Overall three minor non-conformities and three observations were identified during this surveillance audit. The minor NCs were related to bird mortalities, unexplained fish mortalities and the instigation of area based management. There were no outstanding non-conformities from the previous surveillance audit.
4.4	The Audit determination	It is SCS's view that Tassal Operations Pty Ltd's (Tassal) salmon farm in the Channel Zone has continued to meet the salmon standard of the ASC (V. 1.0) and complies with the 'Requirements for Continued Certification,' with the exception of three open minor non conformities.

#### 5 CAB Contact Information

5.1	CAB Name	SCS Global Services
5.2	CAB Mailing Address	7/252 St Georges Rd, North Fitzroy, Victoria 3068 Australia
5.3	Email Address	<a href="mailto:sleporati@scsglobalservices.com">sleporati@scsglobalservices.com</a>
5.4	Other Contact Information	

#### 6 Background on the Applicant

6.1	Information on the Public Disclosure Form (Form 3) except 1.2-1.3 All information updated as necessary to reflect the audit as conducted.	N/A - Surveillance Audit
6.2	A description of the operation being evaluated	Tassal operates two grow-out and two smolt sites in the Channel Zone of Tasmania. The company's head office is located in Hobart, Tasmania.
6.3	Other certifications held by the applicant	The sites have the following certifications: AS 4801, OHS AS 18001:2007. At the related processing facilities, Tassal also has other certifications such as ISO 9001:2008, HACCP, Halal and Kosher.
6.4	Estimated annual production volumes of the unit of certification	Commercially sensitive information submitted to ASC separately.

#### 7 Scope

7.1	The Standard(s) against which the audit was conducted.	ASC Salmon Standard v1.0 ASC Salmon Audit Manual v1.0
7.2	The species produced at the applicant farm	The scope of this audit includes the two Tassal Salmon farms in the Channel Zone, Tasmania.
7.3	A description of the scope of the audit including a description of whether the unit of certification covers all production or harvest areas (i.e. ponds) managed by the operation or located at the included sites, or whether only a sub-set of these are included in the unit of certification. If only a sub-set of production or harvest areas are included in the unit of certification these shall be clearly named.	None exist.

- 7.4 The names and addresses of any storage, processing, or distribution sites included in the operation (including subcontracted operations) that will potentially be handling certified products, up until the point where product enters further chain of custody.
 

The scope of this audit includes the two Tassal Salmon farms in the Channel Zone, Tasmania.
- 7.5 Description of the receiving water body(ies).
 

The farm-sites are located within the D'Entrecasteaux Channel in southern Tasmania. The channel is a narrow body of water located between mainland Tasmania and Bruny Island, incorporating several small bays. Maximum depth of the Channel is 55 m, it is protected from prevailing westerly winds and oceanic swell. Located at the mouths of both the Derwent and Huon rivers, the Channel is connected to the Tasman Sea which is part of the Pacific Ocean.

## 8 Audit Plan

- 8.1 The names of the auditors and the dates when each of the following were undertaken or completed: conducting the audit, writing of the report, reviewing the report, and taking the certification decision.
 

Dr. Christine Crawford - Lead Auditor  
 Dr Stephen Leporati - Technical Expert  
 Audit completed: 23 January 2017  
 Report writing: 24 November 2016 - 16 January 2016  
 Report Review: N/A  
 Certification Decision: N/A
- 8.2 Previous Audits (if applicable):
- 8.3 Summary of previous ASC certification audit(s) and conclusion(s), with recommendations or conditions.
 

Continued certification recommended for the Channel Zone.
- 8.4 Audit plan as implemented including:
- 8.5 Desk reviews and other activities undertaken before or after any site visits.
 

Reviewed previous audit reports prior to the audit.
- 8.6 Site visits with date(s) and location(s).
 

Office - 23 November 2016  
 Farm leases - 21 - 22 November 2016  
 Harvest witnessed on: 22 November 2016
- 8.7 Names and affiliations of individuals consulted or otherwise involved in the audit including: representatives of the client, employees, contractors, stakeholders and any observers that participated in the audit.
 

Head of Sustainability and Fish Health  
 Environmental Certification and Sustainability Officer  
 Community Engagement Officer  
 HR Manager  
 Systems Team Leader  
 Wildlife Management Officer  
 Senior Manager - Environment  
 Workshop Manager  
 Workshop Mechanic  
 Feeder 1  
 Feeder 2  
 Feeder 3  
 Harvest Vessel Skipper  
 Net Cleaner/Operator  
 Works Crew 1  
 Works Crew 2  
 Works Crew 3  
 Works Crew 4  
 Works Crew 5  
 Works Crew 6  
 General Manager - Aquenal  
 Union Official 1  
 Union Official 2
- 8.8 Stakeholder submissions, including written or other documented information and CAB written responses to each submission.

Name of stakeholder (if permission given to make name public)	Relevance to be contacted	Date of contact	CAB responded Yes/No	Brief summary of points Raised	Use of comment by CAB	Response sent to stakeholder
Australian Workers Union	Trade Union	22-Nov-16	Yes in person	Concerns over access to members.	Used to confirm the Client's compliance with Principle 6.	The CAB discussed issues with the stakeholder for confirmation.

## Nonconformity Report Form

### Definitions:

**Minor Non-conformity:** Any non-conformity in which the client does not comply with the standard and those non-conformities do not jeopardize the integrity of the certified product. This includes: 1.) Where failure to comply with a requirement which is not likely to result in the breakdown of a system to meet an ASC requirement; 2.) Where the failure is a single observed lapse or isolated incident; 3.) Where there is no systemic failure to conform to ASC requirements; 4.) Where the impacts are limited in their temporal and spatial scale; 5.) Where there is minimal risk of the shipment of a product that does not conform to ASC requirements; 6.) Where the failure does not meet the definition of a Major Non-conformity; 7.) Where the failure will not produce a non-conforming product.

**Major Non-conformity:** Any non-conformity that has one or more of the following: 1.) The absence or total breakdown of a system that is likely to result in a failure to achieve the objective of the relevant ASC Criteria or another applicable certification requirement; 2.) Would result in the probable shipment of product that does not conform to ASC requirements; 3.) Is likely to result in a failure of the system or materially reduce the ability of the client to assure the integrity of the certified product; 4.) Is shown to continue over a long period of time; 5.) Is repeated; 6.) Is systematic or is the result of the absence or a total breakdown of a system; 7.) Affects a wide area and/or causes significant damage; 8.) Is not corrected or adequately responded to by the client once identified; 9.) Where two (2) or more minor non-conformities may together meet any of the above criteria.

A copy of this form shall be completed and included in the audit report for each nonconformity raised.

Text to be provided by:

NCF 1	CAB	NC Reference	CZ2016-1	
	CAB	NC Detected by	Stephen Loporati	
	CAB	Date Detected	14-Dec-16	
	CAB	Audit Reference	TAS CZ 2016	
	CAB	Status of NC	Open	Open
	CAB		Closed	
	CAB	Grade of NC	Critical	
	CAB		Major	
	CAB		Minor	Minor
	CAB		Observation	
	CAB	Deadline for closing the nonconformity		12 months from receipt of draft report
	CAB	Requirement Reference	Source Document	Salmon Standard V1.0 June 2012
	CAB		Clause Number	2.5.6b
	CAB		Text of Requirement	Maximum number of lethal incidents on the farm over the prior two years. < 9 lethal incidents [36], with no more than two of the incidents being marine mammals.
	CAB	Description of the nonconformity.		Over the past two years there have been 16 lethal incidents at the Bruny Island farm-site all of which were birds. Over the equivalent period at the North West Bay farm-site 16 birds and one marine mammal were reported as dead. These figures are well above the trigger points for the standard. For the Bruny Island farm 11 of the bird mortalities occurred in April 2016 as well as a further 9 birds being released alive. For the North West Bay farm 12 birds died in April 2016 and 14 were released alive. Neither farm has had any bird interactions since April 2016. The one seal that died was a result of the humane destruction.
	CAB	Statement of evidence detected		Lethal incidents exceed the Standard at both farm-sites.
	Client	Statement of any errors of fact in the nonconformity (include the name of the author and date submitted)		No errors of fact in the nonconformity. Heidi Hansen (04/01/2017)
	CAB	Response (include the name of the author and date submitted)		Ok (Stephen Loporati 12 January 2017)
	Client	Statement of the root cause of the nonconformity (include the name of the author and date submitted)		Failing and deteriorating bird nets. Heidi Hansen (04/01/2017)
	CAB	Response (include the name of the author and date submitted)		Ok (Stephen Loporati 12 January 2017)
	Client	Statement of the corrective actions proposed and taken (include the name of the author and date submitted)		30 new and improved bird nets were ordered and fitted. There were also 16 new bird stands ordered to replace deteriorating stands to ensure the bird nets stay clear of the water. Heidi Hansen (04/01/2017)
	CAB	Evaluation by CAB (include the name of the author and date submitted)		Ok (Stephen Loporati 12 January 2017)
	Client	Statement of the preventive actions proposed and taken (include the name of the author and date submitted)		Upgraded infrastructure. Nightwatch now also assess farm pens to ensure we are bird free. Heidi Hansen (04/01/2017)
	CAB	Evaluation by CAB (include the name of the author and date submitted)		Ok (Stephen Loporati 12 January 2017)
	CAB	Date on which the nonconformity was closed.		

NCF 2	CAB	NC Reference	CZ2016-2	
	CAB	NC Detected by	Christine Crawford	
	CAB	Date Detected	14-Dec-16	
	CAB	Audit Reference	TAS CZ 2016	
	CAB	Status of NC	Open	Open
	CAB		Closed	
	CAB	Grade of NC	Critical	
	CAB		Major	
	CAB		Minor	Minor
	CAB		Observation	
	CAB	Deadline for closing the nonconformity		12 months from receipt of draft report
	CAB	Requirement Reference	Source Document	Salmon Standard Vol.1 2012
	CAB		Clause Number	3.1.1
	CAB		Text of Requirement	Participation in an Area-Based Management (ABM) scheme for managing disease and resistance to treatments that includes coordination of stocking, fallowing, therapeutic treatments and information-sharing.
	CAB	Description of the nonconformity.		In the SE Tasmania region there are currently two salmon companies and they are developing an industry biosecurity plan that could inform an AMA in the future. Although the two companies participate in numerous activities that support area based management, a specific AMA has not been developed and signed off by the two companies operating in this region.
	CAB	Statement of evidence detected		Documents provided by Tassal that support an AMA include: D'Entrecasteaux and Huon Collaboration Report Card 2015; Tasmanian Salmon Growers Association Biosecurity Program September 2014 (103 page document providing a comprehensive coverage of biosecurity and diseases related to salmon farming in Tasmania); Tasmanian Salmonid Health Surveillance Program project agreement 2016-17; TSGA Technical Committee with representatives from each salmon company, meeting minutes 1/6/16. Although these activities support area based management, a specific AMA has not been developed and signed off by the two companies operating in this region.
	Client	Statement of any errors of fact in the nonconformity (include the name of the author and date submitted)		No errors of fact in the nonconformity. Heidi Hansen (04/01/2017)
	CAB	Response (include the name of the author and date submitted)		NA
	Client	Statement of the root cause of the nonconformity (include the name of the author and date submitted)		Although information sharing and collaboration do occur, no formal AMA is in place. Incidence of viral and endemic disease is very low and sea lice are not present. Companies are collaborating on vaccine development. An Industry ratified Biosecurity Plan is also in place state-wide. Heidi Hansen (04/01/2017)
	CAB	Response (include the name of the author and date submitted)		OK. C.Crawford (23/1/2017)
	Client	Statement of the corrective actions proposed and taken (include the name of the author and date submitted)		The AMA for Macquarie Harbour has now been in operation since December 2012 and continues to guide the three participating companies in regard to production targets, environmental management and cooperative research and development. In October 2014, the AMA Database (online) was launched and has proven to be an invaluable tool for all of industry. The success of the AMA for Macquarie Harbour is driving the development of a similar policy document and support tools for the south east region. In the south east industry members work collaboratively on a number of fish health & welfare and environmental projects. The following is a list of the most significant projects that will influence and integrate with a future AMA for the south east: <ul style="list-style-type: none"> <li>• TSGA Biosecurity Program- ratified December 2014</li> <li>• Broad scale Environmental Program- delivered by Aquenal, ratified 2008</li> <li>• Centre of Excellence, Biosecure Fish Facility- partnership with DPIPW</li> <li>• Tasmanian Salmonid Fish Health Surveillance Program – joint collaborative research</li> </ul> In addition, Industry members have a regulatory requirement to submit quarterly licence reports to the Marine Farming branch of DPIPW. These reports include information on feed inputs, antibiotic and therapeutant use, net cleaning frequency and biofouling scores and production information. Industry also collaborate on the following: <ul style="list-style-type: none"> <li>• D'Entrecasteaux and Huon Collaboration – refer report card (industry members report on TDN, wildlife interactions etc.)</li> <li>• FRDC 2014/042 Understanding broad scale impacts of salmonid farming on rocky reef communities</li> <li>• FRDC 024/2015 Managing ecosystem interactions across differing environments: building flexibility and risk assurance into environmental management strategies</li> <li>• INFORMD Stage 2 Heidi Hansen (04/01/2017)</li> </ul>
	CAB	Evaluation by CAB (include the name of the author and date submitted)		Corrective action proposed is sufficient to lead to the development of an ABA for the region. C.Crawford 24/1/2017
	Client	Statement of the preventive actions proposed and taken (include the name of the author and date submitted)		Tassal have approached other industry members and will progress the conversation for implementing an Area Management Agreement in the south east. Heidi Hansen (04/01/2017)
	CAB	Evaluation by CAB (include the name of the author and date submitted)		Preventative actions proposed are adequate; see above. C.Crawford 24/1/2017
	CAB	Date on which the nonconformity was closed.		

NCF 3	CAB	NC Reference	CZ2016-3	
	CAB	NC Detected by	Christine Crawford	
	CAB	Date Detected	14-Dec-16	
	CAB	Audit Reference	TAS CZ 2016	
	CAB	Status of NC	Open	Open
	CAB		Closed	
	CAB	Grade of NC	Critical	
	CAB		Major	
	CAB		Minor	Minor
	CAB		Observation	
	CAB	Deadline for closing the nonconformity		12 months from receipt of draft report
	CAB	Requirement Reference	Source Document	Salmon Standard Vol.1 2012
	CAB		Clause Number	5.1.6
CAB		Text of Requirement	Maximum unexplained mortality rate from each of the previous two production cycles, for farms with total mortality > 6%. Requirement: ≤ 40% of total mortalities.	
CAB	Description of the nonconformity.		Unexplained mortalities from YC 13 at both Sheppards and Soldiers Point was >40% of total mortalities. For YC14 many of these unexplained mortalities were classed as 'Environmental' and so unexplained mortality was <40% at both Sheppards and Soldiers Point. Additional justification of causes of mortalities as 'environmental' rather than 'unexplained' is desirable.	
CAB	Statement of evidence detected		as above	
Client	Statement of any errors of fact in the nonconformity (include the name of the author and date submitted)		No errors of fact in the nonconformity. Heidi Hansen (04/01/2017)	
CAB	Response (include the name of the author and date submitted)		N.A	
Client	Statement of the root cause of the nonconformity (include the name of the author and date submitted)		Classification statement provided to auditors at time of assessment. The Environmental category is being used to count mortalities that do not fit into any of the other categories. This encompasses an almost endless list of sub-categories (bathing handling, weight check handling, strep, AGD, low DO, algae, jellyfish, etc.). These are categories that may not be day-to-day, are difficult to diagnose, have many sub-categories of their own (i.e. handling) or only get used at one site. It's important to note there could also be multiple factors involved in the cause of death. Sites will need to further understand this 'environmental' section into their respective categories (depending on the diagnosed cause of death). This is entirely up to each site's discretion as each site has its own issues on any given year. Some sites keep a log of sub-categories they find interesting or useful on an excel spreadsheet, we have disease investigation reports, diver's comments and other methods of recording/diagnosing mortality. Heidi Hansen (04/01/2017)	
CAB	Response (include the name of the author and date submitted)		OK. C.Crawford 24/1/2017	
Client	Statement of the corrective actions proposed and taken (include the name of the author and date submitted)		For future audits, sites will provide further documentation to auditors to show this breakdown of information and demonstrate that the site understands at least 60% of the cause of death. Heidi Hansen (04/01/2017)	
CAB	Evaluation by CAB (include the name of the author and date submitted)		Corrective actions proposed are adequate; however, farms will need to be able to adequately show that mortalities caused by 'Environmental' issues are not unknown mortalities. C.Crawford 24/1/2017	
Client	Statement of the preventive actions proposed and taken (include the name of the author and date submitted)		Expecting anyone to diagnose the cause of death of a fish from gross pathology alone is unreasonable in most instances. The cause of mortality, particularly heightened mortality, often requires a reflective process of considering a range of factors and data. Often there are multiple factors involved. Expecting divers to diagnose the cause of death beyond simple or obvious causes without all necessary knowledge and training is unreasonable. Our classification procedure aims to move away from the divers diagnosing cause of death and to concentrate simply on observing the mortality instead. If mortalities are remarkable or at a high level then the Technical Officer or site management will investigate further and either diagnose or collaborate with the health team to understand root cause. Heidi Hansen (04/01/2017)	
CAB	Evaluation by CAB (include the name of the author and date submitted)		OK. C.Crawford 24/1/2017	
CAB	Date on which the nonconformity was closed.			

<b>NCF 4</b>	CAB	NC Reference	CZ2016-4	
	CAB	NC Detected by	Stephen Loporati	
	CAB	Date Detected	14-Dec-16	
	CAB	Audit Reference	TAS CZ 2016	
	CAB	Status of NC	Open	Open
	CAB		Closed	
	CAB	Grade of NC	Critical	
	CAB		Major	
	CAB		Minor	
	CAB		Observation	Observation
	CAB	Deadline for closing the nonconformity		N/A
	CAB	Requirement Reference	Source Document	Salmon Standard V1.0 June 2012
	CAB		Clause Number	6.1.1
	CAB		Text of Requirement	Evidence that workers have access to trade unions (if they exist) and union representative(s) chosen by themselves without managerial interference. c. Trade union representatives (or worker representatives) have access to their members in the workplace at reasonable times on the premises.
CAB	Description of the nonconformity.		In recent times there has been disagreement between the Client and the AWU regarding access to employees at the farm-sites in question. This issue primarily revolved around the Union wanting to visit employees on site and the Client not wanting to use company resources to ferry Union Officials around on the water. The current compromise is for the Union to have access during pre-work meetings. The Auditor witnessed such a meeting and spoke with Union Officials afterwards, whom stated that they are prepared to see if the new arrangements brings improvements.	
CAB	Statement of evidence detected		Union and Client attempting a new approach for employee access.	
Client	Statement of any errors of fact in the nonconformity		N/A	
CAB	Response (include the name of the author and date submitted)		N/A	
Client	Statement of the root cause of the nonconformity		N/A	
CAB	Response (include the name of the author and date submitted)		N/A	
Client	Statement of the corrective actions proposed and taken		N/A	
CAB	Evaluation by CAB (include the name of the author and date submitted)		N/A	
Client	Statement of the preventive actions proposed and taken		N/A	
CAB	Evaluation by CAB (include the name of the author and date submitted)		N/A	
CAB	Date on which the nonconformity was closed.		N/A	
<b>NCF 5</b>	CAB	NC Reference	CZ2016-5	
	CAB	NC Detected by	Stephen Loporati	
	CAB	Date Detected	14-Dec-16	
	CAB	Audit Reference	TAS CZ 2016	
	CAB	Status of NC	Open	Open
	CAB		Closed	
	CAB	Grade of NC	Critical	
	CAB		Major	
	CAB		Minor	
	CAB		Observation	Observation
	CAB	Deadline for closing the nonconformity		N/A
	CAB	Requirement Reference	Source Document	Salmon Standard V1.0 June 2012
	CAB		Clause Number	6.8.1
	CAB		Text of Requirement	Evidence of worker access to effective, fair and confidential grievance procedures.
CAB	Description of the nonconformity.		Discussions with workers confirmed that they are familiar with the Client's labour conflict policies and procedures. Workers provided general examples of incidents where grievances have been identified, expressed and mitigated. However, on one occasion it was expressed to the Auditors that employee complaints about birds entering nets and other employees littering the waterways have been largely ignored.	
CAB	Statement of evidence detected		Indication that some employees feel as though not all grievances are met with due concern.	
Client	Statement of any errors of fact in the nonconformity		N/A	
CAB	Response (include the name of the author and date submitted)		N/A	
Client	Statement of the root cause of the nonconformity		N/A	
CAB	Response (include the name of the author and date submitted)		N/A	
Client	Statement of the corrective actions proposed and taken		N/A	
CAB	Evaluation by CAB (include the name of the author and date submitted)		N/A	
Client	Statement of the preventive actions proposed and taken		N/A	
CAB	Evaluation by CAB (include the name of the author and date submitted)		N/A	
CAB	Date on which the nonconformity was closed.		N/A	

<b>NCF 6</b>	CAB	NC Reference	CZ2016-6	
	CAB	NC Detected by	Stephen Loporati	
	CAB	Date Detected	14-Dec-16	
	CAB	Audit Reference	TAS CZ 2016	
	CAB	Status of NC	Open	Open
	CAB		Closed	
	CAB	Grade of NC	Critical	
	CAB		Major	
	CAB		Minor	
	CAB		Observation	Observation
	CAB	Deadline for closing the nonconformity		N/A
	CAB	Requirement Reference	Source Document	Salmon Standard V1.0 June 2012
	CAB		Clause Number	7.1.3
	CAB		Text of Requirement	Evidence that the farm has posted visible notice at the farm during times of therapeutic treatments and has, as part of consultation with communities under 7.1.1, communicated about potential health risks from treatments.
	CAB	Description of the nonconformity.		Notices of antibiotic usage are posted on the relevant pens, photographic evidence has been provided to the Auditor. During the onsite audit a "medicated feed" sign was observed on the feed barge at the Bruny Island farm-site. This grow-out sign is not meant to have medicated feed. This issue was brought up with the Client who explained that the sign was left on the barge after it was recently moved from the Roberts smolt site. The Client has provided the Auditor with a copy of the Government approved alteration to their licence to re-locate the feed barge to the Bruny Island site.
	CAB	Statement of evidence detected		Incorrectly labelled therapeutic treatment signage.
	Client	Statement of any errors of fact in the nonconformity		N/A
	CAB	Response (include the name of the author and date submitted)		N/A
	Client	Statement of the root cause of the nonconformity		N/A
	CAB	Response (include the name of the author and date submitted)		N/A
	Client	Statement of the corrective actions proposed and taken		N/A
	CAB	Evaluation by CAB (include the name of the author and date submitted)		N/A
	Client	Statement of the preventive actions proposed and taken		N/A
	CAB	Evaluation by CAB (include the name of the author and date submitted)		N/A
	CAB	Date on which the nonconformity was closed.		N/A

## EVALUATION RESULTS ASC SALMON v1.0

### PRINCIPLE 1: COMPLY WITH ALL APPLICABLE NATIONAL LAWS AND LOCAL REGULATIONS

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

	Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation	
1.1.1	<p><b>Indicator:</b> Presence of documents demonstrating compliance with local and national regulations and requirements on land and water use</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain digital or hard copies of applicable land and water use laws.</p> <p>b. Maintain original (or legalised copies of) lease agreements, land titles, or concession permit on file as applicable.</p> <p>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).</p> <p>d. Obtain permits and maps showing that the farm does not conflict with national preservation areas.</p>	<p>A. Review compliance with applicable land and water use laws.</p> <p>B. Confirm client holds original (or legalised copies of) lease agreements or land titles.</p> <p>C. Review inspection records for compliance with national and local laws and regulations (as applicable).</p> <p>D. Verify facility does not conflict with national preservation areas and has required operational permits if sited in such an area (see 2.4.2).</p>	Principle 1 was not assessed during this surveillance audit.	
1.1.2	<p><b>Indicator:</b> Presence of documents demonstrating compliance with all tax laws</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>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.</p> <p>b. Maintain copies of tax laws for jurisdiction(s) where company operates.</p> <p>c. Register with national or local authorities as an "aquaculture activity".</p>	<p>A. Verify client has records of tax payments to appropriate authorities. Do not disclose client tax information which is confidential. An independently audited company annual report may be used to confirm tax status.</p> <p>B. Confirm client has a basic knowledge of tax requirements for farm.</p> <p>C. Verify client is registered with local or national authorities.</p>		
1.1.3	<p><b>Indicator:</b> Presence of documents demonstrating compliance with all relevant national and local labour laws and regulations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain copies of national labour codes and laws applicable to farm (scope is restricted to the farm sites within the unit certification.)</p> <p>b. Keep records of farm inspections for compliance with national labour laws and codes (only if such inspections are legally required in the country of operation).</p>	<p>A. Confirm client has specified documentation.</p> <p>B. Review inspection records for compliance with national labour laws and codes (as applicable).</p>		
1.1.4	<p><b>Indicator:</b> Presence of documents demonstrating compliance with regulations and permits concerning water quality impacts</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Obtain permits for water quality impacts where applicable.</p> <p>b. Compile list of and comply with all discharge laws or regulations.</p> <p>c. Maintain records of monitoring and compliance with discharge laws and regulations as required.</p>	<p>A. Verify that client obtains permits as applicable.</p> <p>B. Review evidence of compliance with discharge laws or regulations.</p> <p>C. Verify that records show compliance with discharge laws and regulations.</p>		

### PRINCIPLE 2: CONSERVE NATURAL HABITAT, LOCAL BIODIVERSITY AND ECOSYSTEM FUNCTION

#### Criterion 2.1 Benthic biodiversity and benthic effects [1]

	Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
--	--	--	----------	------------

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.

#### Instruction to Clients and CABs on Criterion 2.1 - Modification of the Benthic Sampling Methodology

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.

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.

**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.

2.1.1	<p><b>Indicator:</b> Redox potential or [2] sulphide levels in sediment outside of the Allowable Zone of Effect (AZE) [3], following the sampling methodology outlined in Appendix I-1</p> <p><b>Requirement:</b> Redox potential &gt; 0 millivolts (mV) or Sulphide <math>\leq</math> 1.500 microMoles / l</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Prepare 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.</p> <p>b. If benthos throughout the full AZE is hard bottom, provide evidence to the CAB and request an exemption from 2.1.1c-f, 2.1.2 and 2.1.3.</p> <p>c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.</p> <p>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).</p> <p>e. For option #1, measure and record redox potential (mV) in sediment samples using an appropriate, nationally or internationally recognized testing method.</p>	<p>A. Review map to verify appropriate siting of sampling stations (Appendix I-1) and evidence (if applicable) to justify use of a site specific AZE.</p> <p>B. Review evidence of benthic type and confirm whether to proceed to 2.1.1c.</p> <p>C. Record which option the client chose.</p> <p>D. Review documentary evidence (notes, GPS coordinates) showing sampling time, stations, and frequency. Cross-check against farm maps and harvest records.</p> <p>E. Review results to verify that redox potential of sediments complies with the requirement at each sampling station outside the AZE. Confirm that the testing method used by the farm is appropriate.</p>	<p>The Client uses sampling points 35 m from the cage boundary as specified in their licence conditions. The rationale for this approach is based on research undertaken by the Institute for Marine and Antarctic Studies (IMAS) and comparative research conducted overseas. A letter of assessment from the Environmental Protection Agency (EPA) confirming compliance for each site during the annual survey have been provided to the Auditor. In addition, discussions with an independent environmental consultant Aqueal demonstrated the broader environmental monitoring conducted on the behalf of the client to determine any potential impacts beyond the AZE.</p> <p>Habitat information provided by independent environmental consultants Aqueal identifies the benthos in the general areas of the farm-sites to be silt or sandy-silt.</p> <p>A variance request No (24)_20140320 for the Client's operations in Tasmania has been granted by the ASC, which states: "To address this criteria (2.1.1), Tassal propose to continue using the researched and approved visual assessment methodology under Schedule 3V of the Marine Farming Licence to replace chemical proxies such as redox and sulphide, which presents itself as spontaneous outgassing of sediments without or upon disturbance."</p> <p>N/A</p> <p>N/A</p>	Conforming
-------	---	--	---	---	------------

		f. For option #2, measure and record sulphide concentration (uM) using an appropriate, nationally or internationally recognized testing method.	F. Review results to verify that sulphide concentration in sediments complies with the Standard at each sampling station outside the AZE. Confirm that the testing method used by the farm is appropriate.	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.	G. Confirm that client has submitted test results to ASC (Appendix VI).	N/A	
Footnote	[2] Farm sites can choose whether to use redox or sulphide. Farms do not have to demonstrate that they meet both.				
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 modelling system such as the SEPA AUTODEPOMOD and verified through monitoring, the site-specific AZE shall be used.				
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.					
2.1.2	<p><b>Indicator:</b> Faunal index score indicating good [4] to high ecological quality in sediment outside the AZE, following the sampling methodology outlined in Appendix I-1</p> <p><b>Requirement:</b> AZTI Marine Biotic Index (AMBI [5]) score <math>\leq 3.3</math>, or Shannon-Wiener Index score <math>&gt; 3</math>, or Benthic Quality Index (BQI) score <math>\geq 15</math>, or Infaunal Trophic Index (ITI) score <math>\geq 25</math></p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Prepare a map showing the AZE (30 m or site specific) and sediment collections stations (see 2.1.1).</p> <p>b. Inform the CAB whether the farm chose option #1, #2, #3, or #4 to demonstrate compliance with the requirement.</p> <p>c. Collect sediment samples in accordance with Appendix I-1 (see 2.1.1).</p> <p>d. For option #1, measure, calculate and record AZTI Marine Biotic Index [5] score of sediment samples using the required method.</p> <p>e. For option #2, measure, calculate and record Shannon-Wiener Index score of sediment samples using the required method.</p> <p>f. For option #3, measure, calculate and record Benthic Quality Index (BQI) score of sediment samples using the required method.</p> <p>g. For option #4, measure, calculate and record Infaunal Trophic Index (ITI) score of sediment samples using the required method.</p> <p>h. Retain documentary evidence to show how scores were obtained. If samples were analysed and index calculated by an independent laboratory, obtain copies of results.</p> <p>i. Submit faunal index scores to ASC (Appendix VI) at least once for each production cycle.</p>	<p>A. Review map to verify appropriate siting of sampling stations (see 2.1.1).</p> <p>B. Record which option the client chose for scoring faunal index.</p> <p>C. Confirm sample collection followed Appendix I-1 (see 2.1.1).</p> <p>D. Review results (as applicable) to verify that AMBI score of sediments is <math>\leq 3.3</math> at each sampling station outside the AZE.</p> <p>E. Review results (as applicable) to verify that Shannon Wiener score of sediments is <math>&gt; 3</math> at each sampling station outside the AZE.</p> <p>F. Review results (as applicable) to verify that BQI score of sediments is <math>\geq 15</math> at each sampling station outside the AZE.</p> <p>G. Review results (as applicable) to verify that ITI score of sediments is <math>\geq 25</math> at each sampling station outside the AZE.</p> <p>H. Confirm that an approved method was used or that a qualified independent laboratory performed the sampling and calculation of faunal index.</p> <p>I. Confirm that client submitted faunal index scores to ASC (Appendix VI).</p>	<p>A variance request No (24)_20140320 for the Client's operations in Tasmania has been granted by the ASC, which states: "The indices referred to by the ASC are fairly commonplace in benthic faunal evaluations, and are a core component of sediment quality assessments in Europe and the Americas; however Australia and Tasmania specifically are not a complete fit. The similarities and differences in the local Tasmanian ecology compared with overseas systems, are well recognised, as are the differences between Northern and Southern Hemisphere systems. As a result it has been highlighted that many of the biotic indices metrics derived in northern context do not readily translate to Australian context." As a result of this variance visual survey's have been used as a substitute for infaunal sampling on the farm site.</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	Conforming
Footnote	[4] "Good" Ecological Quality Classification: The level of diversity and abundance of invertebrate taxa is slightly outside the range associated with the type-specific conditions. Most of the sensitive taxa of the type-specific communities are present.				
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> .				
2.1.3	<p><b>Indicator:</b> Number of macrofaunal taxa in the sediment within the AZE, following the sampling methodology outlined in Appendix I-1</p> <p><b>Requirement:</b> <math>\geq 2</math> highly abundant [6] taxa that are not pollution indicator species</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Document appropriate sediment sample collection as for 2.1.1a and 2.1.1c, or exemption as per 2.1.1b.</p> <p>b. For sediment samples taken within the AZE, determine abundance and taxonomic composition of macrofauna using an appropriate testing method.</p> <p>c. Identify all highly abundant taxa [6] and specify which ones (if any) are pollution indicator species.</p> <p>d. Retain documentary evidence to show how taxa were identified and how counts were obtained. If samples were analysed by an independent lab, obtain copies of results.</p> <p>e. Submit counts of macrofaunal taxa to ASC (Appendix VI) at least once for each production cycle.</p>	<p>A. Confirm appropriate sediment sample collection as for 2.1.1a and 2.1.1c or exemption as per 2.1.1b.</p> <p>B. Confirm that an appropriate method was used or that a suitably qualified independent laboratory performed the analysis.</p> <p>C. Confirm that all samples from within the AZE have <math>\geq 2</math> highly abundant [6] taxa (exclusive of pollution indicator species).</p> <p>D. Confirm that a suitable method was used or that a suitability qualified independent laboratory performed the scoring of faunal index.</p> <p>E. Confirm that client has submitted scores to ASC (Appendix VI).</p>	<p>A variance request No (24)_20140320 for the Client's operations in Tasmania has been granted by the ASC, which states: "Tassal's farms in the SE region of Tasmania in the Huon River and D'Entrecasteaux Channel Marine Farm Development Plan Areas have been well studied as per Tasmanian (Southern Hemisphere) systems. Tassal propose the possibility of ASC recognising that there is enough infauna data from previous studies (the majority of them conducted in this specific region) to assess benthic impacts using visual means rather than faunal indices. Under Schedule 3B of the Marine Farming Licence Tassal is required by law to investigate benthic infauna (see 2.1.2).</p> <p>N/A</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	Conforming
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).				
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.					

2.1.4	<p><b>Indicator:</b> Definition of a site-specific AZE based on a robust and credible [7] modelling system</p> <p><b>Requirement:</b> Yes, within three years of the publication [8] of the SAD standard (i.e. full compliance by June 13, 2015)</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	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.	A. Review documentation to confirm that the farm has undertaken an analysis before the required date.	A variance request No (24)_20140320 for the Client's operations in Tasmania has been granted by the ASC, which states: "The AZE is 35 metres and this distance was defined by the regulators (Marine Farming Branch) based on multiple lines of evidence from the international and local research. This 35 m AZE has been in place for over 15 years as a part of the licence conditions. Monitoring since then by research bodies and farms has provided the government with evidence that a 35 m AZE is a suitable distance for this particular farming environment.	Conforming
		b. Maintain records to show how the analysis (in 2.1.4a) is robust and credible based on modelling using a multi-parameter approach [7].	B. Confirm that the farm used a robust and credible modelling system to define the site-specific AZE.	N/A	
		c. Maintain records to show that modelling results for the site-specific AZE have been verified with > 6 months of monitoring data.	C. Confirm that farms have validated the general applicability of the site-specific AZE using monitoring data (i.e. 'ground truthing').	N/A	
Footnote	[7] Robust and credible: The SEPA AUTODEPOMOD modelling 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.				
Footnote	[8] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.				
<b>Criterion 2.2 Water quality in and near the site of operation [12]</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
Footnote	[12] See Appendix VI for transparency requirements for 2.2.1, 2.2.2, 2.2.3 and 2.2.5.				
<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><b>Exception [see footnote 15]</b> 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>					
2.2.1	<p><b>Indicator:</b> Weekly average percent saturation [13] of dissolved oxygen (DO) [14] on farm, calculated following methodology in Appendix I-4</p> <p><b>Requirement:</b> ≥ 70% [15]</p> <p><b>Applicability:</b> All farms except as noted in [15]</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.	A. Do not schedule audit until client provides a minimum of 6 months of DO data.	Greater than six months of DO data has been provided to the Auditor.	Conforming
		b. Provide a written justification for any missed samples or deviations in sampling time.	B. Review records for completeness and conformity with methodology in Appendix I-4.	Dissolved oxygen records are complete and conforming with the methodology described in the Standard.	
		c. Calculate weekly average percent saturation based on data.	C. Review calculation and confirm all weekly averages ≥ 70%.	All weekly average DO values are >80% at both Bruny Island and North West Bay.	
		d. If any weekly average DO values are < 70%, or approaching that level, monitor and record DO at a reference site and compare to on-farm levels (see Instructions).	D. As needed, review DO data from reference site and document in the audit report (see instruction).	N/A	
		e. Arrange for auditor to witness DO monitoring and calibration while on site.	E. Witness DO monitoring and verify calibration while on site. On-site values should fall within range of farm data for DO. If an out of range measurement is observed, raise a nonconformity.	Dissolved Oxygen is measured constantly in the pens. Records of DO are made in each pen before and after every feed at 5 m. Recording of DO is increased during summer. The oxygen probes and checked and calibrated consistently and frequently. All DO data needs to be viewed and approved by management through the "fishtalk" data management system.	
		f. Submit results from monitoring of average weekly DO as per Appendix VI to ASC at least once per year.	F. Confirm that client has submitted DO results to ASC (Appendix VI).	The Client has submitted their DO data to the ASC.	
Footnote	[13] Percent saturation: Percent saturation 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.				
Footnote	[14] Averaged weekly from two daily measurements (proposed at 6 am and 3 pm).				
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.				
2.2.2	<p><b>Indicator:</b> Maximum percentage of weekly samples from 2.2.1 that fall under 2 mg/litter DO</p> <p><b>Requirement:</b> 5%</p> <p><b>Applicability:</b> All</p>	a. Calculate the percentage of on-farm samples taken for 2.2.1a that fall under 2 mg/l DO.	A. Review the farm's calculation and confirm that ≤ 5% of weekly samples fall under 2 mg/l DO.	None of the weekly DO samples fell below 2 mg/l.	Conforming
		b. Submit results from 2.2.2a as per Appendix VI to ASC at least once per year.	B. Confirm that client has submitted results to ASC (Appendix VI).	The Client has submitted their DO data to the ASC.	
2.2.3	<p><b>Indicator:</b> For jurisdictions that have national or regional coastal water quality targets [16], demonstration through third-party analysis that the farm is in an area recently [17] classified as having "good" or "very good" water quality [18]</p> <p><b>Requirement:</b> Yes [19]</p> <p><b>Applicability:</b> All farms except as noted in [19]</p>	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	A. Record whether indicator is applicable.	A variance request No (24)_20140320 for the Client's operations in Tasmania has been granted by the ASC, which states: "The Tasmanian Salmon farming industry have had a SE (South East of Tasmania) Broadscale Environmental Monitoring Program (BEMP) which was implemented in 2009 in association with a State regulated Nitrogen Cap. The BEMP has undergone a third party scientific review by the Institute of Marine and Antarctic Sciences (IMAS). The review has shown that at current levels of industry production, which are capped under regulation, the ecosystem has the capacity to assimilate the inputs from salmon farms. The BEMP was developed from an ecological model which generated water quality triggers and compliance against these triggers and is government-mandated within Tassal's jurisdiction".	Conforming
		b. Compile a summary of relevant national or regional water quality targets and classifications, identifying the third-party responsible for the analysis and classification.	B. Confirm that there has been a recent third-party analysis (within two years prior to the audit) to classify areas according to national or regional water quality targets.	N/A	
		c. Identify the most recent classification of water quality for the area in which the farm operates.	C. Confirm that the analysis and classification shows the farm is located in an area where the water quality complies with the requirement.	N/A	

Footnote	[16] Related to nutrients (e.g., N, P, chlorophyll A).				
Footnote	[17] Within the two years prior to the audit.				
Footnote	[18] Classifications of "good" and "very good" are used in the EU Water Framework Directive. Equivalent classification from other water quality monitoring systems in other jurisdictions are acceptable.				
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.				
2.2.4	<b>Indicator:</b> For jurisdictions without national or regional coastal water quality targets, evidence of weekly monitoring of nitrogen and phosphorous [20] levels on farm and at a reference site, following methodology in Appendix I-5 <b>Requirement:</b> Yes <b>Applicability:</b> All farms except as noted in [19]	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.	A. Review the farm's monitoring plan and verify that the farm has collected monitoring data for N and P following the methodology in Appendix I-5.	The approved variance detailed in 2.2.3 addresses this compliance criteria.	N/A
		b. Calibrate all equipment according to the manufacturer's recommendations.	B. Verify that client calibrates equipment as needed.	N/A	
		c. Submit data on N and P to ASC as per Appendix VI at least once per year.	C. Confirm that client has submitted N and P data to ASC (Appendix VI).	N/A	
Footnote	[20] Farms shall monitor total N, NH <sub>4</sub> , NO <sub>3</sub> , total P and Ortho-P in the water column. Results shall be submitted to the ASC database. Methods such as a Hach kit are acceptable.				
<b>Instruction to Clients for Indicator 2.2.5 - Calculating Biochemical Oxygen Demand</b> 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. $BOD = ((total\ N\ in\ feed - total\ N\ in\ fish) * 4.57) + ((total\ C\ in\ feed - total\ C\ in\ fish) * 2.67)$ . • 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 & C captured/filtered/absorbed to ASC along with method used to estimate nutrient reduction. • 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> . 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. 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 analysed by an accredited laboratory, and the farm can show that BOD monitoring results do not deviate significantly from calculated annual BOD load.					
2.2.5	<b>Indicator:</b> Demonstration of calculation of biochemical oxygen demand (BOD [21]) of the farm on a production cycle basis <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Collect data throughout the course of the production cycle and calculate BOD according to formula in the instruction box.	A. Review calculation, cross-check data used with feed and harvest records.	The BOD has been calculated in accordance with the equation in footnote 22 of the ASC Salmon Standard.	Conforming
		b. Submit calculated BOD as per Appendix VI to ASC for each production cycle.	B. Confirm that client has submitted calculated BOD to ASC (Appendix VI).	The BOD results have been submitted to the ASC.	
Footnote	[21] BOD calculated as: $((total\ N\ in\ feed - total\ N\ in\ fish) * 4.57) + ((total\ C\ in\ feed - total\ C\ in\ fish) * 2.67)$ . 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. 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> .				
<b>Criterion 2.3 Nutrient release from production</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
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.					
2.3.1	<b>Indicator:</b> Percentage of fines [22] in the feed at point of entry to the farm [23] (calculated following methodology in Appendix I- 2) <b>Requirement:</b> < 1% by weight of the feed <b>Applicability:</b> All farms except as noted in [23]	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.	A. Review timing and location of testing. If testing off-site, verify rationale and ensure consistent with [23].	The Client is currently testing percentage fines at the spinner alone and not at the feed store. The rationale for measuring at the spinner is so the feed technicians can work back from the spinner to identify where breakage is occurring. The auditor has also been provided with a declaration from the feed provider detailing the policy and procedure in place to identify and act on percentage fines before dispatch.	Conforming
		b. If using a sieving machine, calibrate equipment according to manufacturer's recommendations.	B. Verify that client has appropriate testing technology on site and that, if applicable, it is calibrated as required.	Discussions with the feed manager indicated that percentage of fines testing equipment is aligned with the standard.	
		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.	C. Review testing results and confirm that the pooled sample for each quarter has a percent fines of <1%.	Percentage fines for each quarter were <1%, except during the March quarter, where a single spinner measured 1.04% fines. This was followed up with further testing in April, which showed the percentage fines to be compliant at 0.72%.	
Footnote	[22] Fines: Dust and fragments in the feed. Particles that separate from feed with a diameter of 5 mm or less when sieved through a 1 mm sieve, or particles that separate from feed with a diameter greater than 5 mm when sieved through a 2.36 mm sieve. To be measured at farm gate (e.g., from feed bags after they are delivered to farm).				
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.				

<b>Criterion 2.4 Interaction with critical or sensitive habitats and species</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
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.					
2.4.1	<p><b>Indicator:</b> Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains at a minimum the components outlined in Appendix I-3</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>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.</p> <p>b. If the assessment (2.4.1a) identifies potential impact(s) of the farm on biodiversity or nearby critical, sensitive or protected habitats or species, prepare plan to address those potential impacts.</p> <p>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.</p>	<p>A. Review the assessment to confirm that it complies with all components outlined in Appendix I-3.</p> <p>B. Verify the farm has a plan to address all potential impacts identified in the assessment.</p> <p>C. Verify that the farm implements the plan(s).</p>	<p>An independent biodiversity focused impact assessment has been conducted on the behalf of the Client by Aqual. All components of the assessment comply with the components outlined in the Standard.</p> <p>The report did not identify new potential impacts of the farm on biodiversity that were unknown to the Client and policies are in place for. Hence, a further action plan has not been developed based on this information.</p> <p>There currently any plans in place to implement.</p>	Conforming
<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><b>Protected area:</b> "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><b>High Conservation Value Areas (HCVA):</b> 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>					
2.4.2	<p><b>Indicator:</b> Allowance for the farm to be sited in a protected area [24] or High Conservation Value Areas [25] (HCVA's)</p> <p><b>Requirement:</b> None [26]</p> <p><b>Applicability:</b> All farms except as noted in [26]</p>	<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).</p> <p>b. If the farm is <u>not</u> sited in a protected area or High Conservation Value Area as defined above, prepare a declaration attesting to this fact. In this case, the requirements of 2.4.2c-d do not apply.</p> <p>c. If the farm is <u>sited</u> in a protected area or HCVA, review the scope of applicability of Indicator 2.4.2 (see Instructions above) to determine if your farm is allowed an exception to the requirements. If yes, inform the CAB which exception (#1, #2, or #3) is allowed and provide supporting evidence.</p> <p>d. If the farm is sited in a protected area or HCVA and the exceptions provided for Indicator 2.4.2 do not apply, then the farm does not comply with the requirement and is ineligible for ASC certification.</p>	<p>A. Review map and cross-check against independent information sources (e.g. 1.1.1d) to determine if the farm is sited in a protected area or HCVA.</p> <p>B. Obtain a copy of the farm's declaration stating that the farm is not sited in a protected area or HCVA (as applicable).</p> <p>C. Review the applicability of the exception requested by the farm together with the supporting evidence to determine if the farm is eligible. If yes, Indicator 2.4.2 is not applicable.</p> <p>D. Review evidence to determine whether the farm is allowed to be sited in a protected area or HCVA and hence eligible for ASC certification.</p>	<p>Independent environmental consultants Aqual provided confirmation to the Auditor that the Client's operations are not within protected areas or HCVA. This information was reinforced with mapping and habitat descriptions.</p> <p>The Client has provided a declaration stating that their operations do not occur in protected areas or HCVA.</p> <p>N/A</p> <p>N/A</p>	Conforming
Footnote	[24] Protected area: "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." Source: Dudley, N. (Editor) (2008), Guidelines for Applying Protected Area Management Categories, Gland, Switzerland: IUCN. x + 86pp.				
Footnote	[25] High Conservation Value Areas (HCVA): 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				
Footnote	[26] The following exceptions shall be made for Standard 2.4.2:				
	<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>				
<b>Criterion 2.5 Interaction with wildlife, including predators [27]</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
Footnote	[27] See Appendix VI for transparency requirements for 2.5.2, 2.5.5 and 2.5.6.				
2.5.1	<p><b>Indicator:</b> Number of days in the production cycle when acoustic deterrent devices (ADDs) or acoustic harassment devices (AHDs) were used</p> <p><b>Requirement:</b> 0, within three years of the date of publication [28] of the SAD standard (i.e. full compliance by June 13, 2015)</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare 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.</p> <p>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).</p>	<p>A. Confirm that farm management has prepared a written statement of commitment.</p> <p>B. Review documentary evidence (e.g. predator management policies, records of predator incidents) and cross-check against interviews with farm staff and local community members (applicable only after the date specified in 2.5.1a).</p> <p>C. During the on-site audit, inspect the farm to confirm that no ADDs or AHDs are present at the facilities (applicable only after June 13, 2015).</p>	<p>The Client has provided a written statement declaring that they don't use and are committed to not using ADDs and AHDs.</p> <p>A "Wildlife Interaction Recording and Reporting Procedure" (Document: ES - 113) has been developed, which is aligned with the Standard.</p> <p>No ADD or AHDs were observed during the site visit.</p>	Conforming
Footnote	[28] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.				

Instruction to Clients for Indicator 2.5.2 - Percentage of Days that ADDs or AHDs were used					
<p>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:</p> <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). Indicator 2.5.2 is applicable until June 13, 2015, after which the use of ADDs and AHDs is not allowed under the standard.</li> </ul>					
2.5.2	<p><b>Indicator:</b> Prior to the achievement of 2.5.1, if ADDs or AHDs are used, maximum percentage of days [29] in the production cycle that the devices are operational</p> <p><b>Requirement:</b> ≤ 40%</p> <p><b>Applicability:</b> All, until June 13, 2015</p>	<p>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.</p> <p>b. Calculate the percentage of days in the production cycle that the devices were operational in the most recent complete production cycle.</p> <p>-</p> <p>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).</p>	<p>A. Review log and cross-check with records of predator incidents.</p> <p>B. Verify calculations and cross-check against records for the duration of the production cycle.</p> <p>C. Confirm devices were operational ≤ 40% of the days of the production cycle.</p> <p>D. Confirm that client has submitted data on ADDs/AHDs to ASC (Appendix VI).</p>	<p>This compliance criteria has not been scored due to the lack of use of ADD or AHDs on the farm site.</p> <p>N/A</p> <p>N/A</p> <p>N/A</p>	N/A
Footnote	[29] Day: 24-hour cycle.				
2.5.3	<p><b>Indicator:</b> Number of mortalities [30] of endangered or red-listed [31] marine mammals or birds on the farm</p> <p><b>Requirement:</b> 0 (zero)</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a list of all predator control devices and their locations.</p> <p>b. Maintain a record of all predator incidents.</p> <p>c. Maintain a record of all mortalities of marine mammals and birds on the farm identifying the species, date, and apparent cause of death.</p> <p>d. Maintain an up-to-date list of endangered or red-listed marine mammals and birds in the area (see 2.4.1)</p> <p>-</p>	<p>A. Review list.</p> <p>B. Review farm records of predator incidents and cross-check against relevant records (e.g. escapes).</p> <p>C. Review records for completeness. Cross-check mortality records against interviews with farm staff and community representatives.</p> <p>D. Review list for consistency with 2.4.1</p> <p>E. Compare results from (a) through (d) above to confirm that there were no mortalities of endangered or red-listed marine mammals or birds on farm.</p>	<p>A list of all predator control devices and their locations have been provided.</p> <p>The Client has provided a list of bird and seal interactions including: birds released alive, birds accidentally killed, seals accidentally killed and seals humanely destroyed.</p> <p>Discussions with workers and management confirm the accuracy of the records.</p> <p>An updated list of IUCN species has been provided to the Auditor, it is consistent with the EIS provided in 2.4.1.</p> <p>There were no mortalities of red-listed marine mammals or birds on the farm-site.</p>	Conforming
Footnote	[30] Mortalities: Includes animals intentionally killed through lethal action as well as accidental deaths through entanglement or other means.				
Footnote	[31] Species listed as endangered or critically endangered by the IUCN or on a national endangered species list.				
2.5.4	<p><b>Indicator:</b> Evidence that the following steps were taken prior to lethal action [32] against a predator:</p> <ol style="list-style-type: none"> <li>1. All other avenues were pursued prior to using lethal action</li> <li>2. Approval was given from a senior manager above the farm manager</li> <li>3. Explicit permission was granted to take lethal action against the specific animal from the relevant regulatory authority</li> </ol> <p><b>Requirement:</b> Yes [33]</p> <p><b>Applicability:</b> All except cases where human safety is endangered as noted in [33]</p>	<p>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.</p> <p>b. For each lethal action identified in 2.5.4a, keep record of the following:</p> <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> <p>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].</p>	<p>A. Review list of lethal actions taken by the farm and cross-check against 2.5.3b.</p> <p>B. Review documentation to confirm that the farm shows evidence of compliance with requirements in steps 1-3.</p> <p>C. Review documentary evidence to verify actions, permissions, and approvals were taken prior to taking lethal action. If client requests exemption due to human safety, review evidence to verify [33].</p>	<p>A list of lethal actions taken by the farm has been provided and cross-checked against 2.5.3b. The only lethal action to have taken place in the last 12 months was the destruction of an Australian Fur Seal (<i>Arctocepalus pusillus</i>) on the 10th of May 2016.</p> <p>Rationale for the destruction of the seal was provided by the Client, which included the aggressive behaviour of the seal, the five previous re-locations of the same micro-chipped tagged seal, its lack of fear of humans and the dangerous working conditions the 200kg seal was causing. The application forms submitted to the Government and subsequent approval were provided to the Auditor.</p> <p>Appropriate documentary evidence and justification has been provided to the Auditor in the form of incidents reports, statutory declarations, permit applications and permit approvals.</p>	Conforming
Footnote	[32] Lethal action: Action taken to deliberately kill an animal, including marine mammals and birds.				
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.				
<p><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></p> <p>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> <p>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> <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 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> <p>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>					
2.5.5	<p><b>Indicator:</b> Evidence that information about any lethal incidents [35] on the farm has been made easily publicly available [34]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. For all lethal actions (see 2.5.4), keep records showing that the farm made the information available within 30 days of occurrence.</p> <p>b. Ensure that information about all lethal actions listed in 2.5.5a are made easily publicly available (e.g. on a website).</p>	<p>A. Check farm records for publicizing lethal actions against the actions listed in 2.5.4a to confirm that the farm made information available within 30 days.</p> <p>B. Verify that required information is easily publicly available.</p>	<p>The Client has a wildlife interaction recording and reporting procedure (ES - 113), which has a focus on making such information publicly available.</p> <p>Lethal action reporting is available to the public via the Client's ASC sustainability dashboard on their webpage. The information provided on the dashboard details: occurrences of seal and bird mortalities, seal relocations, number of individuals, species and a reason for the interaction, if available. All interactions are reported within 30 days of the occurrence, historical information is provided in annual sustainability reports, also freely available on the Client's web page.</p>	Conforming
Footnote	[34] Posting results on a public website is an example of "easily publicly available." Shall be made available within 30 days of the incident and see Appendix VI for transparency requirements.				

2.5.6	<p><b>Indicator:</b> Maximum number of lethal incidents [35] on the farm over the prior two years</p> <p><b>Requirement:</b> &lt; 9 lethal incidents [36], with no more than two of the incidents being marine mammals</p> <p><b>Applicability:</b> All</p>	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.	A. Review log.	The Client has provided two years of lethal incident data to the Auditor.	Minor Non-conformity
		b. Calculate the total number of lethal incidents and the number of incidents involving marine mammals during the previous two year period.	B. Verify that over the previous two years there were < 9 lethal incidents in total and that ≤ 2 of those incidents were marine mammal deaths.	Over the past two years there have been 16 lethal incidents at the Bruny Island farm-site all of which were birds. Over the equivalent period at the North West Bay farm-site 16 birds and one marine mammal were reported as dead. These figures are well above the trigger points for the standard. For the Bruny Island farm 11 of the bird mortalities occurred in April 2016 as well as a further 9 birds being released alive. For the North West Bay farm 12 birds died in April 2016 and 14 were released alive. Neither farm has had any bird interactions since April 2016. The one seal that died was a result of the human destruction as described in 2.5.4. The Client's explanation for this is an alteration in the spread of the feed from the spinners. Minor non-conformity.	
		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).	C. Confirm that data on all lethal incidents has been submitted to ASC (Appendix VI).	Lethal incident data has been provided to the ASC.	
Footnote	[35] Lethal incident: Includes all lethal actions as well as entanglements or other accidental mortalities of non-salmonids.				
Footnote	[36] Standard 2.5.6 applicable to incidents related to non-endangered and non-red-listed species. This standard complements, and does not contradict, 2.5.3.				
2.5.7	<p><b>Indicator:</b> In the event of a lethal incident, evidence that an assessment of the risk of lethal incident(s) has been undertaken and demonstration of concrete steps taken by the farm to reduce the risk of future incidences</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	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.	A. Review farm records to confirm that all the farm performs an appropriate risk assessment following all lethal incidents (see list 2.5.4a).	The Client has provided detailed reports for the lethal action described in 2.5.4. As a singular case over a two year period for two farm-sites it can be construed that their approach is generally working.	Conforming
		b. Provide documentary evidence that the farm implements those steps identified in 2.5.7a to reduce the risk of future lethal incidents.	B. Verify that the farm implements steps to reduce risk of lethal incidents.	The Client has altered the spread of the feed from the spinners, which minimises the access birds can have to pellets. Talking to several staff independently has confirmed that this course of action has drastically reduced the quantity of birds around the pens. The Client is also planning on putting their staff through additional animal sedation training with an external provider (ecotone wildlife pty ltd) in response to the lethal incident described in 2.5.3e.	
<b>PRINCIPLE 3: PROTECT THE HEALTH AND GENETIC INTEGRITY OF WILD POPULATIONS</b>					
<b>Criterion 3.1 Introduced or amplified parasites and pathogens [38,39]</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
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.				
Footnote	[39] See Appendix VI for transparency requirements for 3.1.1, 3.1.3, 3.1.4, 3.1.6 and 3.1.7.				
<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.					
3.1.1	<p><b>Indicator:</b> Participation in an Area-Based Management (ABM) scheme for managing disease and resistance to treatments that includes coordination of stocking, following, therapeutic treatments and information-sharing. Detailed requirements are in Appendix II-1.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except farms that release no water as noted in [38]</p>	a. Keep record of farm's participation in an ABM scheme.	A. Review records of farm participation in ABM scheme. Contact other ABM participants as necessary to confirm the accuracy of client records.	<p><b>Note:</b> Area Management Agreement is equivalent to Area Based Management (ABM). In Tasmania AMAs are in place only for Macquarie Harbour which involves all three Salmon Farming Companies (i.e. HAC, Tassal, and Petuna). Collaboration between the three salmonid companies with harbour-wide plans has been developed through the Tasmanian Salmonid Growers Association (TSGA). The TSGA provides a number of forums for participation with the other companies. All salmon companies understand and adhere to the requirements of the OIE Aquatic Animal Health Code (2012) and the Australian and New Zealand Standard Diagnostic Procedures and the Aquatic Animal Health requirements from the Department of Agriculture, Fisheries and Forestry. In the SE Tasmania region there are currently two salmon companies and they are developing an industry biosecurity plan that could inform an AMA in the future. Documents provided that support an AMA include: D'Entrecasteaux and Huon Collaboration Report Card 2015; Tasmanian Salmon Growers Association Biosecurity Program September 2014 (103 page document providing a comprehensive coverage of biosecurity and diseases related to salmon farming in Tasmania); Tasmanian Salmonid Health Surveillance Program project agreement 2016-17 (a signed joint venture agreement between the TSGA and the Tasmanian Government Biosecurity Tasmania to provide important surveillance information on endemic pathogens of farmed salmonids and evidence of freedom from exotic pathogens. This program is based around reliable and robust communications between government and company veterinarians. A quota system of samples required from each salmon farming zone is provided and for the D'Entrecasteaux Channel 25% of yearly submissions or 150 fish is recommended); TSGA Technical Committee with representatives from each salmon company, meeting minutes 1/6/16 (largely related to research on site location, monitoring and vaccine development). Although these activities support area based management, a specific AMA has not been developed and signed off by the two companies operating in this region. The AMA region that these documents relate to contains more than one year class as this has been the standard practice in Tasmania since the commencement of salmon farming in the 1980's. A Variance request has been approved for Tassal to have more than one year class on its lease. However, Tassal aims to minimise year class overlap where possible.</p>	Minor Non-conformity

		<p>b. Submit to the CAB a description of how the ABM (3.1.1a) coordinates management of disease and resistance to treatments, including:</p> <ul style="list-style-type: none"> <li>- coordination of stocking;</li> <li>- fallowing;</li> <li>- therapeutic treatments; and</li> <li>- information sharing.</li> </ul>	<p>B. Review description of ABM to verify that the management activities address each of the four element from Indicator 3.1.1.</p>	<p>As a requirement of Schedule 3 &amp; Marine Farm Licences, the following records, unless otherwise determined by the Director, must be kept by the licence holder for a period of five years and reported to the Department using electronic reporting templates specified by the Director – feed inputs, av. &amp; historical biological FCRs, smolt inputs (all single year class) &amp; fallowing regimes (Based on the outcome of Annual Compliance Surveys the Senior Environmental Officer will advise on fallowing). These activities support area based management, but an overarching management agreement has not been developed and signed off by the two companies operating in this region which addresses all the elements outlined in Appendix II.</p>	
	<p>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.</p>	<p>C. Evaluate documents to confirm the ABM complies with Appendix II-1.</p>	<p>See above</p>		
	<p>d. Submit dates of fallowing period(s) as per Appendix VI to ASC at least once per year.</p>	<p>D. Confirm that client has submitted dates of fallowing periods to ASC (Appendix VI).</p>	<p>The Client has submitted fallowing information to the ASC.</p>		
<p>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.</p>					
3.1.2	<p><b>Indicator:</b> A demonstrated commitment [40] to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks <b>Requirement:</b> Yes <b>Applicability:</b> All except farms that release no water as noted in [38]</p>	<p>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.</p>	<p>A. Review evidence that the farm and/or its operating company has communicated with external groups to agree on areas of research about possible impacts on wild stocks and is tracking and responding to research requests.</p>	<p>The following reports and publications involve collaboration between salmon growers and researchers at CSIRO and TAFI/IMAS on possible impacts on wild stocks: Do exotic salmonids feed on native fauna after escaping from aquaculture cages in Tasmania, Australia? Kátya Gisela Abrantes, Jeremy Martin Lyle, Peter D. Nichols, and Jayson Mark Semmens, Can. J. Fish. Aquat. Sci. 68: 1539–1551 (2011) · Can Biochemical Methods Determine If Salmonids Feed And Thrive After Escaping from Aquaculture Cages? A Pilot Study, Kátya G. Abrantes, Jayson M. Semmens, Jeremy M. Lyle &amp; Peter D. Nichols, August 2010, NRM Cradle Coast Project · Evaluation of practices on salmon farms to mitigate escapes and ecological impacts. J.M. Lyle and S. Frijlink, November 2013 · Monitoring Escapees in Macquarie Harbour: a collaborative study between the salmon industry (TSGA) and the Tasmanian Aquaculture and Fisheries Institute (TAFI) By M. Steer and J. Lyle, TAFI Internal Report (draft only, presumably 2003), 9p.</p>	Conforming
	<p>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.</p>	<p>B. Review how the farm and/or its operating company has provided non-financial support for research activities.</p>	<p>Above listed projects include both financial and non-financial support for research. Non-financial support includes giving researchers access to farm sites and to farm-level data.</p>		
	<p>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.</p>	<p>C. As applicable, review the provided record of rejecting proposals to confirm that denials were justified and there is no consistent pattern to indicate that the farm and/or its operating company lacks a demonstrated commitment to collaborate on research activities.</p>	<p>No rejections of collaboration on research projects.</p>		
	<p>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.</p>	<p>D. Verify that the farm's communications with researchers demonstrate a commitment to collaborate on relevant areas of research.</p>	<p>Records from research collaborations confirm that Tassal supports research activities.</p>		
Footnote	<p>[40] Commitment: At a minimum, a farm and/or its operating company must demonstrate this commitment through providing farm-level data to researchers, granting researchers access to sites, or other similar non-financial support for research activities.</p>				
3.1.3	<p><b>Indicator:</b> Establishment and annual review of a maximum sea lice load for the entire ABM and for the individual farm as outlined in Appendix II-2 <b>Requirement:</b> Yes <b>Applicability:</b> All except farms that release no water as noted in [38]</p>	<p>a. Keep records to show that a maximum sea lice load has been set for: - the entire ABM; and - the individual farm.</p>	<p>A. Review records to confirm compliance.</p>	<p>N/A as sea lice are not found on salmon in Tasmania.</p>	N/A
	<p>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).</p>	<p>B. Confirm that sea lice load is reviewed annually and, if applicable, the review incorporates information from monitoring of wild salmon.</p>			
	<p>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.</p>	<p>C. Evaluate documents to confirm the ABM complies with requirements of Appendix II-2 for establishing and reviewing maximum sea lice loads.</p>			
	<p>d. Submit the maximum sea lice load for the ABM to ASC as per Appendix VI at least once per year.</p>	<p>D. Confirm that client has submitted the ABM maximum lice load to ASC (Appendix VI).</p>			

3.1.4	<p><b>Indicator:</b> Frequent [41] on-farm testing for sea lice, with test results made easily publicly available [42] within seven days of testing</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except farms that release no water as noted in [38]</p>	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).	A. Review sea lice testing schedule to confirm that weekly testing coincides with known sensitive periods for wild salmon (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.	B. Review records to confirm that testing follows the farm's annual schedule. Review the rationale for any deviations from the schedule.		
		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.	C. Review the farm's methodology for testing sea lice. If practicable, observe testing while on-site. If farm is a closed system using an alternate testing method, document the distinction and review evidence of efficacy of the method.	N/A as sea lice are not found on salmon in Tasmania.	
		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.	D. Test access from an offsite computer to confirm that results are easily publicly available. If applicable, confirm that the farm made hardcopies of test results easily available to stakeholders.		
		e. Keep records of when and where test results were made public.	E. Review records for the past year to confirm the farm posted test results within 7 days of each test. Cross-check against testing schedule (see 3.1.4a).		
		f. Submit test results to ASC (Appendix VI) at least once per year.	F. Confirm that client has submitted test results to ASC (Appendix VI).		
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.				
Footnote	[42] Posting results on a public website is an example of "easily publicly available."				
<p><b>Instruction to Clients for Indicator 3.1.5 - Evidence for Wild Salmonid Health and Migration</b></p> <p>In writing this indicator, the SAD Steering Committee concluded that relevant data sets on wild salmonid health and migration are publicly available in the vast majority of, if not all, jurisdictions with wild salmonids. The information is likely to come from government sources or from research institutions. Therefore farms are not responsible for conducting this research themselves. However farms must demonstrate that they are aware of this basic information in their region, as such information is needed to make management decisions related to minimizing potential impact on those wild stocks.</p> <p>This Indicator requires collection and understanding of general data for the major watersheds within approximately 50 km of the farm. A farm does not need to demonstrate that there is data for every small river or tributary or subpopulation. Information should relate to the wild fish stock level, which implies that the population is more or less isolated from other stocks of the same species and hence self-sustaining. A "conservation unit" under the Canadian Wild Salmon Policy is an example of an appropriate fish stock-level definition. However, it must be recognized that each jurisdiction may have slight differences in how a wild salmonid stock is defined in the region.</p> <p>For purposes of these standards, "areas with wild salmonids" are defined as areas within 75 kilometres of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere [43]. Potentially affected species in these areas are salmonids (i.e. including all trout species). Where a species is not natural to a region (e.g. Atlantic or Pacific Salmon in Chile) the areas are not considered as "areas with wild salmonids" even if salmon have escaped from farms and established themselves as a reproducing species in "the wild".</p>					
3.1.5	<p><b>Indicator:</b> In areas with wild salmonids [43], evidence of data [44] and the farm's understanding of that data, around salmonid migration routes, migration timing and stock productivity in major waterways within 50 kilometres of the farm</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms operating in areas with wild salmonids except farms that release no water as noted in [38]</p>	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.	A. Review salmonid species list for accuracy and cross-check source references. Confirm whether 3.1.5 b and c are applicable.	N/A as salmonids are not native to Tasmania.	N/A
		b. For species listed in 3.1.5a, 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.	B. Review the accuracy of the farm's information on local salmonid migratory patterns and stock productivity. Cross-check source references as necessary.		
		c. From data in 3.1.5b, identify any sensitive periods for wild salmonids (e.g. periods of outmigration of juveniles) within 50 km of the farm.	C. Confirm accuracy of farm's understanding. Cross-check against 'sensitive periods' listed in the farm's annual schedule for testing for sea lice.		
		-	D. Confirm the farm's understanding of this information through interviews.		
Footnote	[43] For purposes of these standards, "areas with wild salmonids" are defined as areas within 75 kilometres of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere.				
Footnote	[44] Farms do not need to conduct research on migration routes, timing and the health of wild stocks under this standard if general information is already available. Farms must demonstrate an understanding of this information at the general level for salmonid populations in their region, as such information is needed to make management decisions related to minimizing potential impact on those stocks.				
3.1.6	<p><b>Indicator:</b> In areas of wild salmonids, monitoring of sea lice levels on wild out-migrating salmon juveniles or on coastal sea trout or Arctic char, with results made publicly available. See requirements in Appendix III-1.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms operating in areas with wild salmonids except farms that release no water as noted in [38]</p>	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.6 does not apply.	A. Confirm whether the farm operates in an area of wild salmonids based on results from 3.1.5a (above). If not, then Indicator 3.1.6 does not apply.	N/A as salmonids are not native to Tasmania.	N/A
		b. Keep records to show the farm participates in monitoring of sea lice on wild salmonids.	B. Review evidence to confirm farm's participation in monitoring.		
		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.	C. Evaluate documents to confirm methodology used for monitoring of sea lice on wild salmonids complies with requirements of Appendix III-1.		
		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.	D. Confirm that results are easily publicly available and that they were posted within the required timeframe.		
		e. Submit to ASC the results from monitoring of sea lice levels on wild salmonids as per Appendix VI.	E. Confirm that client has submitted monitoring results to ASC (Appendix VI).		

3.1.6	<p><b>Indicator:</b> In areas of wild salmonids, maximum on-farm lice levels during sensitive periods for wild fish [45]. See detailed requirements in Appendix II, subsection 2.</p> <p><b>Requirement:</b> 0.1 mature female lice per farmed fish</p> <p><b>Applicability:</b> All farms operating in areas with wild salmonids except farms that release no water as noted in [38]</p>	a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.7 does not apply.	A. Confirm whether the farm operates in an area of wild salmonids based on results from 3.1.5a (above). If not, then Indicator 3.1.7 does not apply.	N/A as salmonids are not native to Tasmania and sealice do not occur on salmon in Tasmania.	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.	B. Review farm's designation of sensitive periods and cross-check against datasets presented in 3.1.4 and 3.1.5.		
		c. Maintain detailed records of monitoring on-farm lice levels (see 3.1.4) during sensitive periods as per Appendix II-2.	C. Review records from the farm's sea lice monitoring program to confirm that lice levels are in compliance with the requirement based on farm-wide average lice levels per farmed fish (not values from individual net-pens).		
		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).	D. Confirm that monitoring data for lice levels are used in a feedback loop as required by Appendix II-2.		

Footnote [45] Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.

**Criterion 3.2 Introduction of non-native species**

Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
--	--	----------	------------

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.

3.2.1	<p><b>Indicator:</b> If a non-native species is being produced, demonstration that the species was widely commercially produced in the area by the date of publication of the SAD standard</p> <p><b>Requirement:</b> Yes [47]</p> <p><b>Applicability:</b> All farms except as noted in [47]</p>	a. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.1 does not apply.	A. Confirm the farm does not produce a non-native species by comparing local species (results from 3.1.5a) to the species produced. Cross-check against record from smolt suppliers (e.g. 3.3.1b). If the farm only produces a native species, then Indicator 3.2.1 does not apply.	Salmonid farming has been underway for more than 30 years in Tasmania ( <a href="http://www.tsga.com.au/history/">http://www.tsga.com.au/history/</a> ), and Tassalhas been farming Atlantic salmon since the mid 1980's. Government documentation including MF Licences and Marine Farming Development Plan for the D'Entrecasteaux Channel February 2002 provide evidence that this non-native species was commercially produced in the Channel Zone before the publication of the SAD Standard.	Conforming
		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).	B. Review evidence to confirm when the non-native species was first brought into wide commercial production in the area of the farm.	See above	
		c. If the farm cannot provide evidence for 3.2.1b, provide documentary evidence that the farm uses only 100% sterile fish that includes details on accuracy of sterility effectiveness.	C. Review evidence to confirm that the farm uses only 100% sterile fish (N.B. at the time of this writing, the SAD Steering Committee was uncertain that any existing technology could reliably deliver 100% sterile fish). Cross-check against smolt purchase records (e.g. invoices).	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).	D. Review evidence that the farm complies with each point raised in 3.2.1d and confirm by inspection during on-site audit. Cross check against related farm records for escapes (3.4.1), unexplained loss (3.4.2), and escape prevention (3.4.4).	N/A	
		-	E. Verify compliance.		

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.

**Instruction to Clients for Indicator 3.2.2 - Exceptions to Allow Production of Non-Native Species**

Farms have five years to demonstrate compliance with this standard from the time of publication of the ASC Salmon Standard (i.e. full compliance by June 13, 2017).

Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining.

Note: For the purposes of Indicator 3.2.2, "jurisdiction" is defined the same as "area" in 3.2.1.

3.2.2	<p><b>Indicator:</b> If a non-native species is being produced, evidence of scientific research [48] completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction and these results submitted to ASC for review [49]</p> <p><b>Requirement:</b> Yes, within five years of publication of the SAD standard [50,51]</p> <p><b>Applicability:</b> All</p>	a. Inform the ASC of the species in production (Appendix VI).	A. Confirm the farm has informed ASC which species is in production (Appendix VI).	The farm has informed ASC that the species being produced is Atlantic salmon. The MF Licences (refer 1.1.1) specify Atlantic salmon as the approved species for farming and state net specifications etc. relating to fish containment and environmental monitoring.	Conforming
		b. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.2 does not apply.	B. Confirm the farm does not produce a non-native species as for 3.2.1. If the farm only produces a native species, then Indicator 3.2.2 does not apply.	Documentation confirmed that only Atlantic salmon is produced in Tassal's Channel Zone .	
		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).	C. Confirm that the scientific research included: multi-year monitoring for non-native farmed species; used credible methodologies & analyses; and underwent peer review. If the farm requests an exemption then enter "NA" and proceed to 3.2.2d.	To date no naturally recruiting populations of Atlantic salmon have been reported in Tasmania. Recent scientific research investigating the risk of establishment of the species from Tasmanian marine farms includes: M. Steer and J. Lyle (2003). Monitoring Escapes in Macquarie Harbour: a collaborative study between the salmon industry (TSGA) and the Tasmanian Aquaculture and Fisheries Institute (TAFI); Kátya Abrantes, Jeremy Lyle, P. Nichols, and J. Semmens, (2011) Do exotic salmonids feed on native fauna after escaping from aquaculture cages in Tasmania, Australia? Can. J. Fish. Aquat. Sci. 68: 1539–1551; K. Abrantes, J Semmens, J Lyle & P Nichols. (2010). Can Biochemical Methods Determine If Salmonids Feed And Thrive After Escaping from Aquaculture Cages? Final Report for NRM Cradle Coast Project CCCPR24006, 55p.	
		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.	D. As applicable, review the farm's request for exemption. Verify that the evidence shows how the farm meets all three conditions specified above.	N/A	
		e. Submit evidence from 3.2.2c to ASC for review.	E. Confirm the farm submits required evidence to ASC.	N/A	

Footnote	[48] The research must at a minimum include multi-year monitoring for non-native farmed species, use credible methodologies and analysis, and undergo peer review.			
Footnote	[49] If the review demonstrates there is increased risk, the ASC will consider prohibiting the certification of farming of non-native salmon in that jurisdiction. In the event that the risk tools demonstrate "high" risks, the SAD expects that the ASC will prohibit the certification of farming of non-native salmon in that jurisdiction.			
Footnote	[50] Farms have five years to demonstrate compliance with this standard from the time of publication of the final SAD standards and accompanying auditing guidelines.			
Footnote	[51] Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining.			
3.2.3	<p><b>Indicator:</b> Use of non-native species for sea lice control for on-farm management purposes  <b>Requirement:</b> None  <b>Applicability:</b> All</p>	<p>a. Inform the CAB if the farm uses fish (e.g. cleaner fish or wrasse) for the control of sea lice.</p> <p>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.</p> <p>c. Collect documentary evidence or first hand accounts as evidence that the species used is not non-native to the region.</p>	<p>A. Confirm whether the farms uses fish for sea lice control. If no, auditor response to 3.2.3A-C is "not applicable" (NA).</p> <p>B. Review purchase records to confirm the origin and identity of all species that are used for sea lice control on farm.</p> <p>C. Review evidence for compliance with the requirement. Acceptable documentary evidence: peer-reviewed literature, government documentation confirming species is not non-native to the region. Acceptable first hand accounts: community testimonials and direct evidence for historical presence of the species in the water body captured with cast nets, trapping devices, or fishing.</p>	<p>N/A as sea lice are not found on salmon in Tasmania.</p> <p>N/A</p>
<b>Criterion 3.3 Introduction of transgenic species</b>				
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>
3.3.1	<p><b>Indicator:</b> Use of transgenic [53] salmon by the farm  <b>Requirement:</b> None  <b>Applicability:</b> All</p>	<p>a. Prepare a declaration stating that the farm does not use transgenic salmon.</p> <p>b. Maintain records for the origin of all cultured stocks including the supplier name, address and contact person(s) for stock purchases.</p> <p>c. Ensure purchase documents confirm that the culture stock is not transgenic.</p>	<p>A. Verify declaration of no use of transgenic salmon.</p> <p>B. Review records to confirm compliance with the requirement.</p> <p>C. If the auditor suspects that transgenic fish are being cultured, test stock identity by collecting 3 fish and sending to an ISO 17025 certified laboratory for genetic analysis.</p>	<p>Declaration provided by Tassal's Senior Manager - Fish Health that Tassal does not use transgenic fish, June 2016.</p> <p>Records are maintained on origin of cultured stock.</p> <p>Transgenic fish not suspected.</p>
Footnote [53] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring ( <a href="http://www.csrees.usda.gov/nea/biotech/res/biotechnology_res_glossary.html">http://www.csrees.usda.gov/nea/biotech/res/biotechnology_res_glossary.html</a> ).				
<b>Criterion 3.4 Escapes [55]</b>				
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>
Footnote	[55] See Appendix VI for transparency requirements for 3.4.1, 3.4.2 and 3.4.3.			
3.4.1	<p><b>Indicator:</b> Maximum number of escapees [56] in the most recent production cycle  <b>Requirement:</b> 300 [57]  <b>Applicability:</b> All farms except as noted in [57]</p>	<p>a. Maintain monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.</p> <p>b. Aggregate cumulative escapes in the most recent production cycle.</p> <p>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]).</p> <p>d. If an escape episode occurs (i.e. an incident where &gt; 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.</p> <p>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).</p>	<p>A. Review client submission for completeness and accuracy of information. Cross-check with the estimate of unexplained loss, maintenance records for small tears in net, predator attacks, etc.</p> <p>B. Review the calculation and confirm compliance with the requirement.</p> <p>C. Confirm that farm documents show continuous monitoring of escapes.</p> <p>D. Review the farm's request for a rare exception to the Standard for an escape event. Confirm no prior exceptional events were documented during the previous 10 years, or since the date of the start of the production cycle during which the farm first applied for certification. An example of an exceptional event is vandalism of the farm. Events that are not considered exceptional include failures in moorings due to bad weather, boat traffic incidents due to poor marking of the farm, human error, and predation.</p> <p>E. Confirm that client has submitted escape monitoring data to ASC (Appendix VI).</p>	<p>All records relating to fish escapes confirmed that no escapes had occurred. This included information on number, size and location of holes in nets, seal predator assessments, and estimate of EUL.</p> <p>No escapes occurred in the recent production cycles YC 15 at Soldiers Point and YC 14 at Sheppards.</p> <p>Farm documents showed continuous records of no escapes and relevant information on pens, net maintenance etc.</p> <p>N/A</p> <p>The Client has submitted their escape monitoring data to the ASC.</p>
Footnote [56] Farms shall report all escapes; the total aggregate number of escapees per production cycle must be less than 300 fish. Data on date of escape episode(s), number of fish escaped and cause of escape episode shall be reported as outlined in Appendix VI.				
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.				
3.4.2	<p><b>Indicator:</b> Accuracy [58] of the counting technology or counting method used for calculating stocking and harvest numbers  <b>Requirement:</b> ≥ 98%  <b>Applicability:</b> All</p>	<p>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.</p> <p>b. If counting takes place off site (e.g. pre-smolt vaccination count), obtain and maintain documents from the supplier showing the accuracy of the counting method used (as above).</p> <p>c. During audits, arrange for the auditor to witness calibration of counting machines (if used by the farm).</p> <p>d. -</p> <p>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).</p>	<p>A. Confirm that the farm keeps records of counting accuracy for the counting technology or method used on site at stocking and harvest.</p> <p>B. Verify the client obtains information from smolt suppliers (if applicable).</p> <p>C. Verify that the farm calibrates counting equipment as recommended by the manufacturer.</p> <p>D. Confirm the stated accuracy of the farm's counting technology or counting method is ≥ 98% at both stocking and harvest. Stated accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.</p> <p>E. Confirm that client has submitted counting technology accuracy to ASC (Appendix VI).</p>	<p>Records of counting accuracy for AquaScan CSE3150 used during bathing and splitting, and operation of Seafood innovations auto counter on Tassal 1 (harvest vessel) were observed.</p> <p>N/A</p> <p>Auditor witnessed calibration of Aquascan counting machine, including manual measurements of fish.</p> <p>Specification sheet for Aquascan counter is 98-100% accuracy. Also use Vaki counters which have had a software upgrade. Calibration score target and cross check with hand counts and weighing ±3% variance. Use moderate speed so greater accuracy. Harvest counts also compared with counts in processing factory for accuracy.</p> <p>The Client has submitted their data and information on their counting technology accuracy to the ASC.</p>
Footnote [58] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.				

Instruction to Clients for Indicator 3.4.3 - Calculation of Estimated Unexplained Loss					
The Estimated Unexplained Loss (EUL) of fish is calculated at the end of each production cycle as follows: $EUL = (\text{stocking count}) - (\text{harvest count}) - (\text{mortalities}) - (\text{recorded escapes})$ .					
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.					
3.4.3	<p><b>Indicator:</b> Estimated unexplained loss [59] of farmed salmon is made publicly available</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	a. Maintain detailed records for mortalities, stocking count, harvest count, and escapes (as per 3.4.1).	A. Review records for completeness.	Records were observed for mortalities and stocking and harvest counts and confirmed as being complete. counts	Conforming
		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.	B. Verify accuracy of farm calculations for estimated unexplained loss.	Farm calculations for EUL were verified as accurate. EUL for Soldiers Point = 3% and for Sheperds 0%	
		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.	C. Verify that the farm makes the information available to the public.	EULs for each farm's most recent production cycle are made available to the public on Tassal's Sustainability Dashboard on its website.	
		d. Submit estimated unexplained loss to ASC as per Appendix VI for each production cycle.	D. Confirm that client has submitted estimated unexplained loss to ASC (Appendix VI).	The Client has submitted estimated unexplained loss data to the ASC.	
		-	E. Compare EUL values (3.4.3a) and counting accuracy (3.4.2a) to recorded escapes to check whether farm reporting is plausible. If EUL is greater than the combined margin of error related to fish counts, investigate potential sources of error as it could indicate the farm under reported mortalities or escapes.	No recorded escapes.	
Footnote	[59] Calculated at the end of the production cycle as: $\text{Unexplained loss} = \text{Stocking count} - \text{harvest count} - \text{mortalities} - \text{other known escapes}$ . Where possible, use of the pre-smolt vaccination count as the stocking count is preferred.				
3.4.4	<p><b>Indicator:</b> Evidence of escape prevention planning and related employee training, including: net strength testing; appropriate net mesh size; net traceability; system robustness; predator management; record keeping and reporting of risk events (e.g., holes, infrastructure issues, handling errors); and worker training on escape prevention and counting technologies</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	a. Prepare 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.	A. Obtain and review the farm's escape prevention plan prior to scheduling the first audit.	Reviewed Tassal's Escape Prevention and Response Protocol, Escape Prevention Checklist Procedure and Fish Escape Emergency Response Procedure.	Conforming
		b. If the farm operates an open (net pen) system, ensure the plan (3.4.4a) covers the following areas: <ul style="list-style-type: none"> <li>- net strength testing;</li> <li>- appropriate net mesh size;</li> <li>- net traceability;</li> <li>- system robustness;</li> <li>- predator management;</li> <li>- record keeping;</li> <li>- reporting risk events (e.g. holes, infrastructure issues, handling errors);</li> <li>- planning of staff training to cover all of the above areas; and</li> <li>- planning of staff training on escape prevention and counting technologies.</li> </ul>	B. Confirm the farm's Escape Prevention Plan contains all required elements for open (net pen) systems as applicable.	Not conducted for surveillance audit.	
		c. If the farm operates a closed system, ensure the plan (3.4.4a) covers the following areas: <ul style="list-style-type: none"> <li>- system robustness;</li> <li>- predator management;</li> <li>- record keeping;</li> <li>- reporting risk events (e.g. holes, infrastructure issues, handling errors);</li> <li>- planning of staff training to cover all of the above areas; and</li> <li>- planning of staff training on escape prevention and counting technologies.</li> </ul>	C. Confirm the farm's Escape Prevention Plan contains all required elements for closed systems as applicable.	N/A	
		d. Maintain records as specified in the plan.	D. Review documentary evidence showing implementation of the plan.	Not conducted for surveillance audit.	
		e. Train staff on escape prevention planning as per the farm's plan.	E. Review records (i.e. attendance records, meeting notes) to confirm that farm staff attend training on escape prevention planning.	Not conducted for surveillance audit.	
		-	F. Interview farm workers to confirm that the plan is implemented.	Not conducted for surveillance audit.	

**PRINCIPLE 4: USE RESOURCES IN AN ENVIRONMENTALLY EFFICIENT AND RESPONSIBLE MANNER**

**Criterion 4.1 Traceability of raw materials in feed**

Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
--	--	----------	------------

**Instruction to Clients for Indicators 4.1.1 through 4.4.2 - Sourcing of Responsibly Produced Salmon Feeds**  
 Farms must show that all feeds used by the farm are produced in compliance with the requirements of Indicators 4.1.1 through 4.4.2. 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 4.1.1.c 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).

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:

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.

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.

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.

4.1.1	<b>Indicator:</b> Evidence of traceability, demonstrated by the feed producer, of feed ingredients that make up more than 1% of the feed [62]. <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Maintain detailed records of all feed suppliers and purchases including contact information and purchase and delivery records.	A. Review feed records for completeness and confirm the number of feed suppliers to the client.	Skretting is the only feed supplier to Tassal.	Conforming
		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.	B. Review farm records to verify that the farm has informed all of its feed suppliers of relevant ASC requirements for feed production.	Records verified that Tassal informed Skretting of ASC requirements.	
		c. For each feed producer used by the farm, confirm that an audit of the producer was recently done by an audit firm or CAB against an ASC-acknowledged certification scheme. Obtain a copy of the most recent audit report for each feed producer.	C. Verify that the farm obtains current audit reports from all relevant feed producers, that these audits were performed by an audit firm or CAB against an ASC-acknowledged certification scheme, and that audit results demonstrate compliance with requirements.	SGS audit showed that Skretting met ASC standards for principle 4 Feed requirements 1/6/2016 - 30/5/2017.	
		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.	D. Review which method the farm will use and confirm that independent audit results (4.1.1c) show compliance of feed producers.	Tassal uses Method #2	
		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].	E. Review declaration from each feed supplier to confirm the company assures traceability to the level of detail required by Standard.	Skretting provided a Quality Assurance statement which assures traceability of feed.	
		F. Cross-check the declarations against results from audits of feed suppliers (4.1.1c) to verify evidence of required levels of traceability.	Audits of feed suppliers showed conformity with traceability requirements.		

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.

**Criterion 4.2 Use of wild fish for feed [63]**

Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
--	--	----------	------------

Footnote [63] See Appendix VI for transparency requirements for 4.2.1 and 4.2.2.

**Instruction to Clients for Indicator 4.2.1 - Calculation of FFDRm**  
 Farms must calculate the Fishmeal Forage Fish Dependency Ratio (FFDRm) according to formula presented in Appendix IV-1 using data from the most recent complete production cycle. Farms must also show that they have maintained sufficient information in order to make an accurate calculation of FFDRm as outlined below. For first audits, farms may be exempted from compliance with Indicator 4.2.1 for the most recent complete production cycle (i.e. if the FFDRm of the most recent crop was > 1.35) if the farm can satisfactorily demonstrate to the auditor that:

- the client understands how to accurately calculate FFDRm;
- the client maintains all information needed to accurately calculate FFDRm (i.e. all feed specs for > 6 months) for the current production cycle; and
- the client can show how feed used for the current production cycle will ensure that the farm will meet requirements at harvest (i.e. FFDRm < 1.35).

4.2.1	<b>Indicator:</b> Fishmeal Forage Fish Dependency Ratio (FFDRm) for grow-out (calculated using formulas in Appendix IV-1) <b>Requirement:</b> < 1.35 <b>Applicability:</b> All	a. Maintain a detailed inventory of the feed used including: - Quantities used of each formulation (kg); - Percentage of fishmeal in each formulation used; - Source (fishery) of fishmeal in each formulation used; - Percentage of fishmeal in each formulation derived from trimmings; and - Supporting documentation and signed declaration from feed supplier.	A. Verify completeness of records and that values are stated in a declaration from the feed manufacturer.	Records were considered complete. Declaration has been provided from Skretting, the feed manufacturer.	Conforming
		b. For FFDRm calculation, exclude fishmeal derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery).	B. Verify that the client excludes from the FFDRm calculation any fishmeal rendered from seafood by-products.	Tuna fishmeal trimmings were not included in the calculation.	
		c. Calculate eFCR using formula in Appendix IV-1 (use this calculation also in 4.2.2 option #1).	C. Verify that eFCR calculation was done correctly.	Calculation of eFCR was complicated because of movement of fish from one lease to another. This was discussed with the client and an acceptable method of calculating eFCR was developed.	
		d. Calculate FFDRm using formulas in Appendix IV-1.	D. Verify that FFDRm calculations were done correctly and confirm the value complies with the requirement.	Calculations are correct. Soldiers Point FFDRm = 0.31, Sheppards FFDRm = 0.35, which comply with requirement that FFDRm < 1.35	
		e. Submit FFDRm to ASC as per Appendix VI for each production cycle.	E. Confirm that client has submitted FFDRm to ASC (Appendix VI).	The Client has submitted FFDRm data to the ASC.	

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.

4.2.2	<b>Indicator:</b> Fish Oil Forage Fish Dependency Ratio (FFDRo) for grow-out (calculated using formulas in Appendix IV- 1), OR Maximum amount of EPA and DHA from direct marine sources [64] (calculated according to Appendix IV-2) <b>Requirement:</b> FFDRo < 2.95 or (EPA + DHA) < 30 g/kg feed <b>Applicability:</b> All	a. Maintain a detailed inventory of the feed used as specified in 4.2.1a.	A. Verify completeness of feed records as in 4.2.1A.	Records were considered complete. Declaration has been provided from Skretting, the feed manufacturer.	Conforming
		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.	B. Verify client excludes fish oil rendered from byproducts from the FFDRo or (EPA + DHA) calculation.	No byproducts were included in fish oil.	
		c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.	C. Record which option the client chose.	Option #1 was used to demonstrate compliance.	
		d. For option #1, calculate FFDRo using formulas in Appendix IV-1 and using the eFCR calculated under 4.2.1c.	D. Verify that FFDRo calculations were done correctly and confirm the value complies with the standard.	Calculations are correct. Soldiers Point FFDRo =1.98, Sheppards FFDRo = 2.04, which comply with requirement that FFDRo < 2.95	
		e. For option #2, calculate amount of EPA + DHA using formulas in Appendix IV-2.	E. Verify that (EPA+DHA) calculations were done correctly and confirm the value complies with the standard.	N/A	
		f. Submit FFDRo or EPA & DHA to ASC as per Appendix VI for each production cycle.	F. Confirm that client has submitted FFDRo or EPA & DHA to ASC (Appendix VI)	The Client has submitted FFDRo data to the ASC	
Footnote	[64] Calculation excludes DHA and EPA derived from fisheries by-products and trimmings. Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption. Fishmeal and fish oil that are produced from trimmings can be excluded from the calculation as long as the origin of the trimmings is not any species that are classified as critically endangered, endangered or vulnerable in the IUCN Red List of Threatened Species ( <a href="http://www.iucnredlist.org">http://www.iucnredlist.org</a> ).				
<b>Criterion 4.3 Source of marine raw materials</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
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.					
4.3.1	<b>Indicator:</b> Timeframe for all fishmeal and fish oil used in feed to 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 <b>Requirement:</b> < 5 years after the date of publication [67] of the SAD standards (i.e. full compliance by June 13, 2017) <b>Applicability:</b> All	a. Prepare 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.	A. Verify that the client's policy supports responsible feed sourcing (e.g. programs at <a href="http://www.isealalliance.org/portrait/full%20member">http://www.isealalliance.org/portrait/full%20member</a> ).	Tassal's policy supports responsible feed sourcing.	Conforming
		b. Prepare 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	B. Obtain a copy of the client's letter of intent.	Letter of intent provided by Tassal.	
		c. Starting on or before June 13, 2017, use feed inventory and feed supplier declarations in 4.2.1a to develop a list of the origin of all fish products used as feed ingredients.	C. As of June 13, 2017, confirm that the farm has sufficient evidence for the origin of all fish products in feed to demonstrate compliance with indicator 4.3.1. Prior to June 13, 2017, 4.3.1c does not apply.	N/A	
		d. Starting on or before June 13, 2017, 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.	D. As of June 13, 2017, review evidence and confirm compliance. Prior to June 13, 2017, 4.3.1d does not apply.	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.				
Footnote	[67] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.				

Instruction to Clients for Indicator 4.3.2 - FishSource Score of Fish Used in Feed					
<p>To determine FishSource scores of the fish species used as feed ingredients, do the following:</p> <ul style="list-style-type: none"> <li>-go to <a href="http://www.fishsource.org/">http://www.fishsource.org/</a></li> <li>-select "Species" drop down tab to the left and select the relevant species</li> <li>-confirm that the search identifies the correct species, then select the top tab that reads "Scores"</li> </ul> <p>For first audits, farms must have scoring records that cover all feeds purchased during the previous 6-month period.</p> <p>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.</p>					
4.3.2	<p><b>Indicator:</b> Prior to achieving 4.3.1, the FishSource score [68] for the fishery(ies) from which all marine raw material in feed is derived</p> <p><b>Requirement:</b> All individual scores <math>\geq 6</math>, and biomass score <math>\geq 8</math></p> <p><b>Applicability:</b> All, until June 13, 2017</p>	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).	A. Cross-check against 4.2.1a to confirm that client recorded a score for each species used in feed.	Not assessed for surveillance audit.	
		b. Confirm that each individual score $\geq 6$ and the biomass score is $\geq 8$ .	B. Cross-check a sample of the farm's scores against the FishSource website to verify that no individual score is $< 6$ and no biomass score is $< 8$ .		
		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.	C. If the client provides an independent assessment, review the assessment and the qualifications of the independent third party to verify that the assessment was done with the FishSource methodology.		
		-	D. If the species does not have a FishSource score then the fish feed does not comply with the requirement.		
Footnote	[68] Or equivalent score using the same methodology. See Appendix IV-3 for explanation of FishSource scoring.				
<p><b>Instruction to Clients for Indicator 4.3.3 - Third-Party Verification of Traceability</b></p> <p>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.</p> <p>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.</p>					
4.3.3	<p><b>Indicator:</b> Prior to achieving 4.3.1, demonstration of third-party verified chain of custody and traceability for the batches of fishmeal and fish oil which are in compliance with 4.3.2.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All, until June 13, 2017</p>	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.	A. Review evidence and confirm that a third party verified chain of custody or traceability program was used for the fishmeal and fish oil.	Not assessed for surveillance audit.	
		b. Ensure evidence covers all the species used (as consistent with 4.3.2a, 4.2.1a, and 4.2.2a).	B. Verify that demonstration of third-party verified chain-of-custody is in place for all species used.		
4.3.4	<p><b>Indicator:</b> Feed containing fishmeal and/or fish oil originating from by-products [69] or trimmings from IUU [70] catch or from fish species that are categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [71]</p> <p><b>Requirement:</b> None [72]</p> <p><b>Applicability:</b> All except as noted in [72]</p>	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.	A. Review list and confirm consistent with 4.2.1a, 4.2.2a, 4.3.3b.		
		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.	B. Verify that the farm obtains declarations from feed suppliers.		
		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).	C. Review declaration to confirm compliance. The International Fishmeal and Fish Oil Organization's Global Standard for Responsible Supply and the Marine Stewardship Council standards are two options for demonstrating compliance with Indicator 4.3.4c		
		d. If meal or oil originated from a species listed as "vulnerable" by IUCN, obtain documentary evidence to support the exception as outlined in [72].	D. Review evidence to support exception (if applicable).		
Footnote	[69] Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption.				
Footnote	[70] IUU: Illegal, Unregulated and Unreported.				
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.				
<b>Criterion 4.4 Source of non-marine raw materials in feed</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
4.4.1	<p><b>Indicator:</b> Presence and evidence of a responsible sourcing policy for the feed manufacturer for feed ingredients that comply with recognized crop moratoriums [75] and local laws [76]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	a. Compile and maintain a list of all feed suppliers with contact information. (See also 4.1.1a)	A. Review feed supplier list and cross-check against feed purchases. (See also 4.1.1a)	Not assessed for surveillance audit.	
		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.	B. Review policies from each feed supplier to confirm required sourcing policy is in place.		
		c. Confirm that third party audits of feed suppliers (4.1.1c) show evidence that supplier's responsible sourcing policies are implemented.	C. Verify that the scope of third-party audits of feed suppliers includes review of policies and evidence of implementation.		

Footnote	[75] Moratorium: A period of time in which there is a suspension of a specific activity until future events warrant a removal of the suspension or issues regarding the activity have been resolved. In this context, moratoriums may refer to suspension of the growth of defined agricultural crops in defined geographical regions.				
Footnote	[76] Specifically, the policy shall include that vegetable ingredients, or products derived from vegetable ingredients, must not come from areas of the Amazon Biome that were deforested after July 24, 2006, as geographically defined by the Brazilian Soy Moratorium. Should the Brazilian Soy Moratorium be lifted, this specific requirement shall be reconsidered.				
4.4.2	<b>Indicator:</b> Percentage of soya or soya-derived ingredients in the feed that are certified by the Roundtable for Responsible Soy (RTRS) or equivalent [77] <b>Requirement:</b> 100%, within five years of the publication [78] of the SAD standards <b>Applicability:</b> All, after June 13, 2017	a. Prepare 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.	A. Verify that the client's policy supports responsible sourcing of soya or soya-derived feed ingredients.	Not assessed for surveillance audit.	
		b. Prepare a letter stating the farm's intent to source feed containing soya certified under the RTRS (or equivalent)	B. Obtain a copy of the client's letter of intent.		
		c. Notify feed suppliers of the farm's intent (4.4.2b).	C. Verify that farm notifies feed suppliers.		
		d. Obtain and maintain declaration from feed supplier(s) detailing the origin of soya in the feed.	D. Confirm that the farm has sufficient and supportive evidence for the origin of soya products in feed to demonstrate compliance with indicator 4.4.2		
		e. Starting on or before June 13, 2017, provide evidence that soya used in feed is certified by the Roundtable for Responsible Soy (RTRS) or equivalent [77]	E. As of June 13, 2017, review evidence and confirm compliance. Prior to June 13, 2017, 4.4.2e does not apply.		
Footnote	[77] Any alternate certification scheme would have to be approved as equivalent by the Technical Advisory Group of the ASC.				
Footnote	[78] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.				
4.4.3	<b>Indicator:</b> Evidence of disclosure to the buyer [79] of the salmon of inclusion of transgenic [80] plant raw material, or raw materials derived from transgenic plants, in the feed <b>Requirement:</b> Yes, for each individual raw material containing > 1% transgenic content [81] <b>Applicability:</b> All	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.	A. Review feed supplier declaration and ensure declarations from all suppliers are present (see also 4.4.1A).	Not assessed for surveillance audit.	
		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.	B. Verify evidence of disclosure to all buyers, cross-checking with plant material list (4.4.3a) to see that all transgenic plant ingredients were disclosed		
		c. Inform ASC whether feed contains transgenic ingredients (yes or no) as per Appendix VI for each production cycle.	C. Confirm that the farm has informed ASC whether feeds containing transgenic ingredients are used on farm (Appendix VI).		
Footnote	[79] The company or entity to which the farm or the producing company is directly selling its product. This standard requires disclosure by the feed company to the farm and by the farm to the buyer of their salmon.				
Footnote	[80] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring.				
Footnote	[81] See Appendix VI for transparency requirement for 4.4.3.				
<b>Criterion 4.5 Non-biological waste from production</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
4.5.1	<b>Indicator:</b> Presence and evidence of a functioning policy for proper and responsible [83] treatment of non-biological waste from production (e.g., disposal and recycling) <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Prepare 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.	A. Review policy to verify the farm's commitment to proper and responsible treatment of non-biological waste from production in a manner consistent with best practice in the area.	Policy was reviewed and confirmed Tassal's commitment to responsible treatment on non-biological waste.	Conforming
		b. Prepare a declaration that the farm does not dump non-biological waste into the ocean.	B. Verify the client makes a declaration.	An old declaration (2013) was viewed. This needs to be updated. However, receipts of 2016 non biological waste collection were provided. Also, a recently developed flow chart for the Channel Zone for non-biological waste disposal and recycling was also provided.	
		c. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of.	C. During the on-site inspection look for evidence of proper waste disposal.	Evidence of responsible waste disposal was observed during on site inspection, e.g. storage of all feed bags and waste rope for collection and recycling.	
		d. Provide a description of the types of waste materials that are recycled by the farm.	D. During the on-site inspection look for evidence of recycling of waste materials as described by client.	See above	
Footnote	[83] Proper and responsible disposal will vary based on facilities available in the region and remoteness of farm sites. Disposal of non-biological waste shall be done in a manner consistent with best practice in the area. Dumping of non-biological waste into the ocean does not represent "proper and responsible" disposal.				

4.5.2	<b>Indicator:</b> Evidence that non-biological waste (including net pens) from grow-out site is either disposed of properly or recycled <b>Requirement:</b> Yes <b>Applicability:</b> All	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)	A. During the on-site inspection look for evidence of proper waste disposal. (See also 4.5.1C)	see 4.5.1C. Tassal has recently entered into a contracted with a recycling company, who are removing—much of their non-biological non-useable product, such as many types of nets and pipes, ropes, feed bags, plastic buoys etc. These products were observed stored away awaiting collection.	Conforming
		b. Provide a description of the types of waste materials that are recycled by the farm. (See also 4.5.1d)	B. During the on-site inspection look for evidence of recycling of waste materials as described by client. (See also 4.5.1D)	See above	
		c. Inform the CAB of any infractions or fines for improper waste disposal received during the previous 12 months and corrective actions taken.	C. Review infractions and corrective actions.	No infractions or fines for improper waste disposal.	
		d. Maintain records of disposal of waste materials including old nets and cage equipment.	D. Review records to verify waste disposal and/or recycling is consistent with client description and policy.	Records indicate proper waste disposal and recycling. Which is consistent with Tassal's policy.	
<b>Criterion 4.6 Energy consumption and greenhouse gas emissions on farms [84]</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
Footnote	[84] See Appendix VI for transparency requirements for 4.6.1, 4.6.2 and 4.6.3.				
<b>Instruction to Clients for Indicator 4.6.1 - Energy Use Assessment</b>					
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. 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).					
4.6.1	<b>Indicator:</b> Presence of an energy use assessment verifying the energy consumption on the farm and representing the whole life cycle at sea, as outlined in Appendix V-1 <b>Requirement:</b> Yes, measured in kilojoule/mt fish/production cycle <b>Applicability:</b> All	a. Maintain records for energy consumption by source (fuel, electricity) on the farm throughout each production cycle.	A. Verify that the farm maintains records for energy consumption.	Not assessed for surveillance audit.	
		b. Calculate the farm's total energy consumption in kilojoules (kJ) during the last production cycle.	B. Review the farm's calculations for completeness and accuracy.		
		c. Calculate the total weight of fish in metric tons (mt) produced during the last production cycle.	C. Confirm that the farm accurately reports total weight of fish harvested per production cycle. Cross-check against other farm datasets (e.g. harvest counts, escapes, and mortalities).		
		d. Using results from 4.6.1b and 4.6.1c, calculate energy consumption on the farm as required, reported as kilojoule/mt fish/production cycle.	D. Review the farm's calculations for completeness and accuracy.		
		e. Submit results of energy use calculations (4.6.1d) to ASC as per Appendix VI for each production cycle.	E. Confirm that client has submitted energy use calculations to ASC (Appendix VI).		
		f. Ensure that the farm has undergone an energy use assessment that was done in compliance with requirements of Appendix V-1.	F. Confirm that the farm has undergone an energy use assessment verifying the farm's energy consumption.		
<b>Instruction to Clients for Indicator 4.6.2 - Annual GHG Assessment</b>					
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). 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> ).					
4.6.2	<b>Indicator:</b> Records of greenhouse gas (GHG [85]) emissions [86] on farm and evidence of an annual GHG assessment, as outlined in Appendix V-1 <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Maintain records of greenhouse gas emissions on the farm.	A. Verify that the farm maintains records of GHG emissions.	Not assessed for surveillance audit.	
		b. At least annually, calculate all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.	B. Confirm that calculations are done annually and in compliance with Appendix V-1.		
		c. For GHG calculations, select the emission factors which are best suited to the farm's operation. Document the source of those emissions factors.	C. Verify that the farm records all emissions factors used and their sources.		
		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.	D. Verify that the farm records all GWPs used and their sources.		
		e. Submit results of GHG calculations (4.6.2d) to ASC as per Appendix VI at least once per year.	E. Confirm that the farm has submitted GHG calculations to ASC (Appendix VI).		
		f. Ensure that the farm undergoes a GHG assessment as outlined in Appendix V-1 at least annually.	F. Confirm that the farm undergoes a GHG assessments annually and that the methods used comply with requirements of Appendix V-1.		
Footnote	[85] 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> ).				
Footnote	[86] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.				
<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.					
4.6.3	<b>Indicator:</b> Documentation of GHG emissions of the feed [87] used during the previous production cycle, as outlined in Appendix V, subsection 2 <b>Requirement:</b> Yes, within three years of the publication [88] of the SAD standards (i.e. by June 13, 2015) <b>Applicability:</b> All, after June 13, 2015	a. Obtain from feed supplier(s) a declaration detailing the GHG emissions of the feed (per kg feed).	A. Verify declaration from feed supplier(s) and confirm client has declarations from all feed suppliers.	Not conducted for surveillance audit.	
		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.	B. Verify calculations cross-checking with feed purchase and use records.		
		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.	C. Verify calculations.		
		d. Submit GHG emissions of feed to ASC as per Appendix VI for each production cycle.	D. Confirm that the farm has submitted GHG calculations for feed to ASC (Appendix VI).		
Footnote	[87] GHG emissions from feed can be given based on the average raw material composition used to produce the salmon (by weight) and not as documentation linked to each single product used during the production cycle. Feed manufacturer is responsible for calculating GHG emissions per unit feed. Farm site then shall use that information to calculate GHG emissions for the volume of feed they used in the prior production cycle.				
Footnote	[88] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.				

Criterion 4.7 Non-therapeutic chemical inputs [89,90]					
		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
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.				
Footnote	[90] See Appendix VI for transparency requirements for 4.7.1, 4.7.3 and 4.7.4.				
4.7.1	<p><b>Indicator:</b> For farms that use copper-treated nets [91], evidence that nets are not cleaned [92] or treated in situ in the marine environment</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [89]</p>	<p>a. Prepare a farm procedure for net cleaning and treatment that describes techniques, technologies, use of off-site facilities, and record keeping.</p> <p>b. Maintain records of antifoulants and other chemical treatments used on nets.</p> <p>c. Declare to the CAB whether copper-based treatments are used on nets.</p> <p>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.</p> <p>e. Inform ASC whether copper antifoulants are used on farm (yes or no) as per Appendix VI for each production cycle.</p>	<p>A. Review procedure for completeness.</p> <p>B. Review documentary evidence and records for completeness, including traceability records of the nets where available.</p> <p>C. Verify whether copper-based treatments are used. If no, Indicator 4.7.1d does not apply to the client. If yes, proceed to 4.7.1D.</p> <p>D. Review evidence and interview farm manager to confirm that farm does not do any heavy cleaning of copper-treated nets in situ.</p> <p>E. Confirm that the farm has informed ASC whether copper antifoulants are used on farm (Appendix VI).</p>	Copper based treatments of nets are not used by Tassal.	N/A
Footnote	[91] Under the SAD, "copper-treated net" is defined as a net that has been treated with any copper-containing substance (such as a copper-based antifoulant) during the previous 18 months, or has not undergone thorough cleaning at a land-based facility since the last treatment. Farms that use nets that have, at some point prior in their lifespan, been treated with copper may still consider nets as untreated so long as sufficient time and cleaning has elapsed as in this definition. This will allow farms to move away from use of copper without immediately having to purchase all new nets.				
Footnote	[92] Light cleaning of nets is allowed. Intent of the standard is that, for example, the high-pressure underwater washers could not be used on copper treated nets under this standard because of the risk of copper flaking off during this type of heavy or more thorough cleaning.				
4.7.2	<p><b>Indicator:</b> For any farm that cleans nets at on-land sites, evidence that net-cleaning sites have effluent treatment [93]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [89]</p>	<p>a. Declare to the CAB whether nets are cleaned on-land.</p> <p>b. If nets are cleaned on-land, obtain documentary evidence from each net-cleaning facility that effluent treatment is in place.</p> <p>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.</p>	<p>A. Review declaration and cross-check with records from 4.7.1b. If nets are not cleaned on land, Indicator 4.7.2 does not apply. If nets are cleaned on land, proceed to 4.7.2B.</p> <p>B. Review documentary evidence to confirm that each net-cleaning facility has effluent treatment in place.</p> <p>C. If applicable, review documentary evidence to confirm that land-based cleaning sites have appropriate technologies in place to capture copper in effluents and that they function as intended.</p>	Tassal does not clean nets on land.	N/A
Footnote	[93] Treatment must have appropriate technologies in place to capture copper if the farm uses copper-treated nets.				
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).					

4.7.3	<p><b>Indicator:</b> For farms that use copper nets or copper-treated nets, evidence of testing for copper level in the sediment outside of the AZE, following methodology in Appendix I-1</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [89]</p>	<p>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.</p> <p>b. If "yes" in 4.7.3a, 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.</p> <p>c. If "yes" in 4.7.3a, maintain records of testing methods, equipment, and laboratories used to test copper level in sediments from 4.7.3b.</p>	<p>A. Review declaration and cross-check against declaration from 4.7.1c. Record whether Indicator 4.7.3 is applicable to the client.</p> <p>B. As applicable, verify the farm tested sediment samples for copper from the reference stations specified in 2.1.1d and 2.1.2c which lie outside the AZE.</p> <p>C. Verify the measurements were taken using appropriate equipment and testing methods.</p>	Copper based treatments of nets are not used by Tassal.	N/A
4.7.4	<p><b>Indicator:</b> Evidence that copper levels [94] are &lt; 34 mg Cu/kg dry sediment weight</p> <p>OR</p> <p>in instances where the Cu in the sediment exceeds 34 mg Cu/kg dry sediment weight, demonstration that the Cu concentration falls within the range of background concentrations as measured at three reference sites in the water body</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [89] and excluding those farms shown to be exempt from Indicator 4.7.3</p>	<p>a. Inform the CAB whether:</p> <p>1) farm is exempt from Indicator 4.7.4 (as per 4.7.3a), or</p> <p>2) Farm has conducted testing of copper levels in sediment.</p> <p>b. Provide evidence from measurements taken in 4.7.3b that copper levels are &lt; 34 mg Cu/kg dry sediment weight.</p> <p>c. If copper levels in 4.7.4b are ≥ 34 mg Cu/kg dry sediment weight, 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).</p> <p>d. Analyse results from 4.7.4c to show the background copper concentrations as measured at three reference sites in the water body.</p> <p>e. Submit data on copper levels in sediments to ASC as per Appendix VI for each production cycle.</p>	<p>A. Document and verify applicability of 4.7.4 to client (see also 4.7.3A)</p> <p>B. Verify that copper levels are &lt; 34 mg Cu/kg sediment. If no, proceed to 4.7.4C.</p> <p>C. If applicable, review evidence to confirm that farm followed Appendix I-1 for testing copper levels at reference sites.</p> <p>D. As applicable, review data to confirm that copper levels fall within the range of background concentrations as measured at reference sites.</p> <p>E. Confirm that farm has submitted to ASC data on copper levels in sediment (Appendix VI).</p>		
Footnote	[94] According to testing required under 4.7.3. The standards related to testing of copper are only applicable to farms that use copper-based nets or copper-treated nets.				
4.7.5	<p><b>Indicator:</b> Evidence that the type of biocides used in net antifouling are approved according to legislation in the European Union, or the United States, or Australia</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [89]</p>	<p>a. Identify all biocides used by the farm in net antifouling.</p> <p>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.</p>	<p>A. Review list of biocides and cross-check against treatment records (see 4.7.2b) and purchase records.</p> <p>B. Review documentary evidence to confirm compliance.</p>	No biocides are used in net antifouling by Tassal.	N/A
<b>PRINCIPLE 5: MANAGE DISEASE AND PARASITES IN AN ENVIRONMENTALLY RESPONSIBLE MANNER</b>					
<b>Criterion 5.1 Survival and health of farmed fish [95]</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
Footnote	[95] See Appendix VI for transparency requirements for 5.1.4, 5.1.5 and 5.1.6.				
5.1.1	<p><b>Indicator:</b> Evidence of a fish health management plan for the identification and monitoring of fish diseases and parasites</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare 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.</p> <p>b. Ensure that the farm's current fish health management plan was reviewed and approved by the farm's designated veterinarian [96].</p>	<p>A. Obtain and review the farm's fish health management plan.</p> <p>B. Verify there is evidence to show that the farm's designated veterinarian [96] reviewed and approved the current version of the plan.</p>	<p>Fish health Management Plan obtained. It was noted that an update is planned.</p> <p>Tassal's veterinarian, confirmed that they had reviewed and approved the current plan.</p>	Conforming
5.1.2	<p><b>Indicator:</b> Site visits by a designated veterinarian [96] at least four times a year, and by a fish health manager [97] at least once a month</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>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.</p> <p>b. Maintain a current list of personnel who are employed as the farm's designated veterinarian(s) [96] and fish health manager(s) [97].</p> <p>c. Maintain records of the qualifications of persons identified in 5.1.2b.</p>	<p>A. Review documentary evidence of site visits to confirm a minimum number of visits as outlined in 5.1.2. Or review risk assessment.</p> <p>B. Confirm visits in 5.1.2a were performed by the farm's designated health professionals.</p> <p>C. Review evidence for qualifications of the farm's health professionals.</p>	<p>A list of site visits by Tassal's veterinarian confirmed more than four site visits in the previous year.</p> <p>A list was provided of current fish health professionals.</p> <p>Qualifications were provided of fish health professionals.</p>	Conforming
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.				
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.				
5.1.3	<p><b>Indicator:</b> Percentage of dead fish removed and disposed of in a responsible manner</p> <p><b>Requirement:</b> 100% [98]</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records of mortality removals to show that dead fish are removed regularly and disposed of in a responsible manner.</p> <p>b. Collect documentation to show that disposal methods are in line with practices recommended by fish health managers and/or relevant legal authorities.</p> <p>c. For any exceptional mortality event where dead fish were not collected for post-mortem analysis, keep a written justification.</p>	<p>A. Review records of mortality removals to confirm completeness and accuracy. Cross-check against 5.1.4 and calculations of escapes and unexplained loss.</p> <p>B. Review client submission. Inspect the farm's system for mortality removals and disposals during the on site audit.</p> <p>C. Review the farm's justification for any exceptional mortality event where dead fish were not collected for post-mortem analysis (this situation should be a rare occurrence).</p>	<p>Mortality records were reviewed on FishTalk and crosschecked with EUL.</p> <p>Tassal's policies related to mortality removals were reviewed and the on farm systems for mort removals and disposals were checked.</p> <p>No exceptional mortality events.</p>	Conforming
Footnote	[98] The SAD recognizes that not all mortality events will result in dead fish present for collection and removal. However, such situations are considered the exception rather than the norm.				

<p>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.</p>					
5.1.4	<p><b>Indicator:</b> Percentage of mortalities that are recorded, classified and receive a post-mortem analysis  <b>Requirement:</b> 100% [99]  <b>Applicability:</b> All</p>	<p>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).</p>	<p>A. Review records of mortalities to verify completeness and to confirm that post-mortem analyses were done by qualified individuals or labs.</p>	<p>Mortality records were reviewed for completeness. Post-mortem analysis is conducted by Tassal's fish health professionals with a proportion conducted by Tas. Government Fish Health Unit (FHU). Tassal is part of the Tasmanian Salmonid Fish Health Surveillance Program, where all companies provide samples to the FHU to look for new, emerging, and occurrence of disease in aquaculture.  As part of the surveillance program Tassal has a yearly quota (approximately 1000 fish) – they send sick fish which are subjected to a range of testing procedures to determine their disease status. Generally sick fish are located and sampled as part of diving operations (or maybe a pen is targeted due to abnormal behaviour, low feed rates, etc.) - and the samples are sent same day or the following day to the FHU in Launceston for processing. Reports come back to the Tassal fish health team and are distributed back to the sites. The FHU report back to Tassal includes updates quota allocation, quarterly updates and feedback on sample submissions.</p>	Conforming
		<p>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.</p>	<p>B. Review records to confirm the farm had post-mortem analysis done for each mortality event and that a statistically relevant number of fish were analysed from each mortality event.</p>	<p>Copies of Animal Health Laboratory Pathology reports were provided for routine monitoring of mortalities. No significant mortality events occurred.</p>	
		<p>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).</p>	<p>C. Review records to confirm that any inconclusive on-site diagnoses were sent to an off-site laboratory for further testing.</p>	<p>Records confirmed that inconclusive on-site diagnoses were sent to the Tasmanian Government Animal Health Lab for assessment.</p>	
		<p>d. Using results from 5.1.3a-c, classify each mortality event and keep a record of those classifications.</p>	<p>D. Review mortality events to confirm the farm's classification was consistent with results from post-mortem analyses. Where cause was not determined verify that classification was plausible given available info.</p>	<p>No significant mortality events occurred.</p>	
		<p>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).</p>	<p>E. Review evidence to confirm compliance with requirements.</p>	<p>Records of post mortem analyse were provided.</p>	
		<p>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).</p>	<p>F. Confirm that client has submitted data from post-mortem analyses and cause and number of mortalities to ASC (Appendix VI).</p>	<p>The Client has submitted data from post-mortem analyses, cause and number of mortalities to the ASC.</p>	
<p>Footnote [99] If on-site diagnosis is inconclusive, this standard requires off-site laboratory diagnosis. A qualified professional must conduct all diagnosis. One hundred percent of mortality events shall receive a post-mortem analysis, not necessarily every fish. A statistically relevant number of fish from the mortality event shall be analysed.</p>					
5.1.5	<p><b>Indicator:</b> Maximum viral disease-related mortality [100] on farm during the most recent production cycle  <b>Requirement:</b> ≤ 10%  <b>Applicability:</b> All</p>	<p>a. Calculate the total number of mortalities that were diagnosed (see 5.1.4) as being related to viral disease.</p>	<p>A. Review and confirm the calculated number of viral disease-related mortalities.</p>	<p>No viral disease was recorded in fish during the most recent production cycle.</p>	Conforming
		<p>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.</p>	<p>B. Verify that the sum of confirmed viral disease-related mortalities plus unspecified &amp; unexplained mortalities is ≤ 10% of the total number of fish produced during the most recent production cycle.</p>	<p>Unspecified and unexplained mortalities were &lt;10% of total number of fish produced in YC14 at both Sheppards and Soldiers Point.</p>	
		<p>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).</p>	<p>C. Confirm that client has submitted data on mortality to ASC (Appendix VI).</p>	<p>The Client has submitted mortality data to the ASC.</p>	
<p>Footnote [100] Viral disease-related mortality count shall include unspecified and unexplained mortality as it could be related to viral disease.</p>					
5.1.6	<p><b>Indicator:</b> Maximum unexplained mortality rate from each of the previous two production cycles, for farms with total mortality &gt; 6%  <b>Requirement:</b> ≤ 40% of total mortalities  <b>Applicability:</b> All farms with &gt; 6% total mortality in the most recent complete production cycle.</p>	<p>a. Use records in 5.1.4a to calculate the unexplained mortality rate (%) for the most recent full production cycle. If rate was ≤ 6%, then the requirement of 5.1.6 does not apply. If total mortality rate was &gt; 6%, proceed to 5.1.6b.</p>	<p>A. Review, confirm, and document whether 5.1.6 is applicable to the client. If applicable, proceed to 5.1.6B.</p>	<p>Unexplained mortality rate was &gt; 6% at both Sheppards and Soldiers Point.</p>	Minor Non-conformity
		<p>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.</p>	<p>B. Review and confirm that ≤ 40% of total mortalities were from unexplained causes for each of the two previous production cycles</p>	<p>Unexplained mortalities from YC13 at both Sheppards and Soldiers Point was &gt;40% of total mortalities. For YC14 many of these unexplained mortalities were classed as 'Environmental' and so unexplained mortality was &lt;40% at both Sheppards and Soldiers Point. Additional justification of causes of mortalities as 'environmental' rather than 'unexplained' is desirable.</p>	
		<p>c. Submit data on maximum unexplained mortality to ASC as per Appendix VI for each production cycle.</p>	<p>C. Confirm that client has submitted data on unexplained mortality to ASC (Appendix VI).</p>	<p>The Client has submitted unexplained mortality data to the ASC.</p>	
<p>Note: Farms have the option to integrate their farm-specific mortality reduction program into the farm's fish health management plan (5.1.1).</p>					
5.1.7	<p><b>Indicator:</b> A farm-specific mortalities reduction program that includes defined annual targets for reductions in mortalities and reductions in unexplained mortalities  <b>Requirement:</b> Yes  <b>Applicability:</b> All</p>	<p>a. Use records in 5.1.4a to assemble a time-series dataset on farm-specific mortalities rates and unexplained mortality rates.</p>	<p>A. Confirm that the farm used mortalities records to assemble a detailed dataset on mortality rates which covers the required timeframe (see 5.1.4).</p>	<p>Data on mortalities were confirmed as being regularly collated and assessed using FishTalk.</p>	Conforming
		<p>b. Use the data in 5.1.7a and advice from the veterinarian and/or fish health manager to develop a mortalities-reduction program that defines annual targets for reductions in total mortality and unexplained mortality.</p>	<p>B. Review program to confirm that targets for mortality reduction are reasonable and based on historical data.</p>	<p>Fish Health Manager provided information on targets for reduction in mortalities based on recent levels of mortalities, and management procedures.</p>	
		<p>c. Ensure that farm management communicates with the veterinarian, fish health manager, and staff about annual targets and planned actions to meet targets.</p>	<p>C. Interview workers to confirm their understanding of mortalities recording, classification, and annual targets for reduction (see also 5.1.1, 5.1.3).</p>	<p>Staff interviewed onsite were clear on mortality classifications and target reductions.</p>	

Criterion 5.2 Therapeutic treatments [101]					
		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
Footnote	[101] See Appendix VI for transparency requirements for 5.2.1, 5.2.5, 5.2.6 and 5.2.10.				
<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	<p><b>Indicator:</b> On-farm documentation that includes, at a minimum, detailed information on all chemicals [102] and therapeutants used during the most recent production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing, and all disease and pathogens detected on the site</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	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.	A. Review records of chemical and therapeutant use. Verify accuracy through cross-check with purchase orders and sales records, inventories, documentation from feed manufacturer for any in-feed treatment, and veterinary records.	Records for antibiotic use were reviewed. Oxytetracycline had been used on fish at Roberts Point Lease in the Channel Zone (smolt site and not assessed for ASC certification) before moving fish to Soldiers Point and Sheppards leases where no antibiotics were used. This was cross checked against veterinary records.	Conforming
		b. If not already available, assemble records of chemical and therapeutant use to address all points in 5.2.1a for the previous two production cycles. For first audits, available records must cover one full production cycle immediately prior to the current cycle.	B. Confirm that farm has detailed records for chemical and therapeutant use that covers the previous two production cycles.	Records of antibiotic use since 2007 were provided, including quantity, issuing vet, location, treatment rate and treatment duration.	
		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).	C. Confirm that client has submitted therapeutant information to ASC (Appendix VI).	The Client has submitted therapeutant information to the ASC.	
Footnote	[102] Chemicals used for the treatment of fish.				
5.2.2	<p><b>Indicator:</b> Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [103] in any of the primary salmon producing or importing countries [104]</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	a. Prepare 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].	A. Review list and supporting evidence. If ASC has agreed to maintain a list of relevant therapeutants, farm can demonstrate that they have this list.	List of substances not permitted for use on food producing animals in Australia was available. List of banned/therapeutants in EU was also provided.	Conforming
		b. Maintain records of voluntary and/or mandatory chemical residue testing conducted or commissioned by the farm from the prior and current production cycles.	B. Verify records.	Annual NRS results of testing for chemicals and therapeutants in Tassal Fish 2015-16 was provided.	
		-	C. Cross-check records of therapeutant use (5.2.1a) against the list of banned therapeutants to verify compliance with requirements.	Records cross checked and compliance verified.	
Footnote	[103] "Banned" means proactively prohibited by a government entity because of concerns around the substance. A substance banned in any of the primary salmon-producing or importing countries, as defined here, cannot be used in any salmon farm certified under the SAD, regardless of country of production or destination of the product. The SAD recommends that ASC maintain a list of a banned therapeutants.				
Footnote	[104] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.				
5.2.3	<p><b>Indicator:</b> Percentage of medication events that are prescribed by a veterinarian</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	a. Obtain prescription for all therapeutant use in advance of application from the farm veterinarian (or equivalent, see [96] for definition of veterinarian).	A. Review documentary evidence (on-farm records, veterinary records, and prescriptions) to confirm all therapeutants were prescribed by a qualified individual. See [96] for definition of veterinarian.	No medications used for most recent year class at Sheppards and Soldiers Point.	Conforming
		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.	B. Cross-check with results from chemical residue testing provided under 5.2.2b.	Cross checked.	
5.2.4	<p><b>Indicator:</b> Compliance with all withholding periods after treatments</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	a. Incorporate withholding periods into the farm's fish health management plan (see 5.1.1a).	A. Review the farm's fish health management plan to confirm inclusion of withholding periods and interview farm staff to verify implementation.	Fish health management plan includes withholding periods.	Conforming
		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.	B. Review documentation for completeness and accuracy. Compare to records of therapeutant use (5.2.1a).	No therapeutant use.	
		c. Show compliance with all withholding periods by providing treatment records (see 5.2.1a) and harvest dates for the most recent production cycle.	C. Review documentary evidence and, if applicable, results from chemical residue testing (5.2.2b), to confirm legal withholding periods were met for the most recent production cycle and harvest.	N/A	
5.2.5	<p><b>Indicator:</b> Maximum farm level cumulative parasitocidal treatment index (PTI) score as calculated according to the formula in Appendix VII</p> <p><b>Requirement:</b> PTI score ≤ 13</p> <p><b>Applicability:</b> All</p>	a. Using farm data for therapeutants usage (5.2.1a) and the formula presented in Appendix VII, calculate the cumulative parasitocidal treatment index (PTI) score for the most recent production cycle. Calculation should be made and updated on an ongoing basis throughout the cycle by farm manager, fish health manager, and/or veterinarian.	A. Review the farm's calculations to verify that the PTI score was calculated correctly and that the scores are accurate. Cross-check with records of parasitocidal use.	N/A as no sea lice on Tasmanian salmon.	N/A
		b. Provide the auditor with access to records showing how the farm calculated the PTI score.	B. Verify that the farm level cumulative PTI score ≤ 13.		
		c. Submit data on farm level cumulative PTI score to ASC as per Appendix VI for each production cycle.	C. Confirm that client has submitted data on cumulative PTI score to ASC (Appendix VI).		

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.

5.2.6	<p><b>Indicator:</b> For farms with a cumulative PTI <math>\geq 6</math> in the most recent production cycle, demonstration that parasiticide load [105] is at least 15% less than that of the average of the two previous production cycles</p> <p><b>Requirement:</b> Yes, within five years of the publication of the SAD standard (i.e. by June 13, 2017)</p> <p><b>Applicability:</b> All farms with a cumulative PTI <math>\geq 6</math> in the most recent production cycle</p>	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.	A. Review farm's cumulative PTI score to determine if Indicator 5.2.6 is applicable.	N/A	N/A
		b. Using results from 5.2.5 and the weight of fish treated (kg), calculate parasiticide load in the most recent production cycle [105].	B. Review the farm's calculation of parasiticide load to verify accuracy.		
		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.	C. Review farm's calculations to verify that parasiticide load for the most recent production cycle is at least 15% less than that of the two previous cycles.		
		d. As applicable, submit data to ASC on parasiticide load for the most recent production cycle and the two previous production cycles (Appendix VI).	D. Confirm that client has submitted data on parasiticide load to ASC (Appendix VI) as applicable.		

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.

5.2.7	<p><b>Indicator:</b> Allowance for prophylactic use of antimicrobial treatments [106]</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	a. Maintain records for all purchases of antibiotics (invoices, prescriptions) for the current and prior production cycles.	A. Review purchase records and calculate total amount procured by client. Inspect storage areas to verify quantities on-site.	Records of antibiotic purchases were provided.	Conforming
		b. Maintain a detailed log of all medication-related events (see also 5.2.1a and 5.2.3)	B. Review log of medication events to verify that the quantity of antibiotic applied by the client does not suggest prophylactic use.	Medication log reviewed and suggested no prophylactic use.	
		c. Calculate the total amount (g) and treatments (#) of antibiotics used during the current and prior production cycles (see also 5.2.9).	C. Verify that the total amount of antibiotics used in the current production cycle is equal to the total amount prescribed.	No antibiotics prescribed in current production cycle at Sheppards or Soldiers Point.	

Footnote [106] The designated veterinarian must certify that a pathogen or disease is present before prescribing medication.

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.

5.2.8	<p><b>Indicator:</b> Allowance for use of antibiotics listed as critically important for human medicine by the World Health Organization (WHO [107])</p> <p><b>Requirement:</b> None [108]</p> <p><b>Applicability:</b> All</p>	a. Maintain a current version of the WHO list of antimicrobials critically and highly important for human health [107].	A. Confirm that the farm has the current copy of the WHO list of antibiotics.	Farm has current copy of WHO listed antibiotics.	Conforming
		b. If the farm has not used any antibiotics listed as critically important (5.2.8a) in the current production cycle, inform the CAB and proceed to schedule the audit.	B. During the on-site audit, verify that no antibiotics listed as "critically important" have been used on the farm through cross-check of records for 5.2.1 and 5.2.7.	No critically important antibiotics have been used.	
		c. If the farm has used antibiotics listed as critically important (5.2.8a) to treat any fish during the current production cycle, inform the CAB prior to scheduling audit.	C. Make note of the farm's antibiotic usage and do not schedule an on-site audit until the client provides additional information as specified in 5.2.8d.	N/A	
		d. If yes to 5.2.8c, request an exemption from the CAB to certify only a portion of the farm. 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.	D. Review the farm's exemption request and supporting documents to verify that the farm can satisfactorily demonstrate traceability [108] to merit an exemption.	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: [http://www.who.int/foodborne\\_disease/resistance/CIA\\_3.pdf](http://www.who.int/foodborne_disease/resistance/CIA_3.pdf).

Footnote [108] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.

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).

5.2.9	<p><b>Indicator:</b> Number of treatments [109] of antibiotics over the most recent production cycle</p> <p><b>Requirement:</b> <math>\leq 3</math></p> <p><b>Applicability:</b> All</p>	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.	A. Review documents to confirm that the client maintains a record of all treatments of antibiotics. Cross-check against records of on-farm chemical & therapeutic use (5.2.1a), medication events (5.2.3a), and prescription records (5.2.3b).	A record of antibiotic treatments was reviewed and none were used at either Sheppards or Soldiers Point in the most recent production cycle. This was crosschecked against chemical and therapeutic use and prescription records.	Conforming
		b. Calculate the total number of treatments of antibiotics over the most recent production cycle and supply a verifiable statement of this calculation.	B. Confirm that the client used $\leq 3$ treatments of antibiotics over the most recent production cycle.	see above	

Footnote [109] A treatment is a single course medication given to address a specific disease issue and that may last a number of days.

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.

5.2.10	<p><b>Indicator:</b> If more than one antibiotic treatment is used in the most recent production cycle, demonstration that the antibiotic load [110] is at least 15% less than that of the average of the two previous production cycles</p> <p><b>Requirement:</b> Yes [111], within five years of the publication of the SAD standard (i.e. full compliance by June 13, 2017)</p> <p><b>Applicability:</b> All</p>	a. Use results from 5.2.9b to show whether more than one antibiotic treatment was used in the most recent production cycle. If not, then the requirement of 5.2.10 does not apply. If yes, then proceed to 5.2.10b.	A. Review results to confirm whether 5.2.10 is applicable to the client. Record the results and, if applicable, proceed to 5.2.10B.	N/A as more than one antibiotic treatment was not used in most recent production cycle.	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.	B. Review farm's calculations for accuracy and completeness of coverage. Cross-check against treatment records (5.2.1a).		
		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.	C. Review evidence to verify that farm complies with requirement.		
		d. Submit data on antibiotic load to ASC as per Appendix VI (if applicable) for each production cycle.	D. Confirm that client has submitted data on antibiotic load to ASC (Appendix VI) as applicable.		

Footnote	[110] Antibiotic load = the sum of the total amount of active ingredient of antibiotics used (kg).			
Footnote	[111] 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.			
5.2.11	<p><b>Indicator:</b> Presence of documents demonstrating that the farm has provided buyers [112] of its salmon a list of all therapeutants used in production  <b>Requirement:</b> Yes  <b>Applicability:</b> All</p>	<p>a. Prepare 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).   b. Maintain records showing the farm has informed all buyers of its salmon about all therapeutants used in production.</p>	<p>A. Review the farm's procedure and confirm implementation based on relevant documentary evidence (e.g. sales records, invoices).   B. Review sales records for completeness and cross-check against treatment records (5.2.1a) to verify that buyers were adequately informed about therapeutants used in production.</p>	<p>Disclosure to Buyers Procedure provided.   Buyers are informed about therapeutants used in production in annual Sustainability Reports.</p>
Footnote	[112] Buyer: The company or entity to which the farm or the producing company is directly selling its product.			
<b>Criterion 5.3 Resistance of parasites, viruses and bacteria to medicinal treatments</b>				
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>
<p><b>Instruction to Clients for Indicator 5.3.1 - Identifying the 'Expected Effect' of Medicinal Treatment</b>  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.  Example: sea lice treatment with emamectin benzoate  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.  Note: If field-based bio-assays for determining resistance are ineffective or unavailable, the farm shall have samples analysed 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>				
5.3.1	<p><b>Indicator:</b> Bio-assay analysis to determine resistance when two applications of a treatment have not produced the expected effect  <b>Requirement:</b> Yes  <b>Applicability:</b> All</p>	<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.  b. Whenever the farm uses two successive treatments, keep records showing how the farm evaluates the observed effect of treatment against the expected effect of treatment.   c. For any result of 5.3.1b that did not produce the expected effect, ensure that a bio-assay analysis of resistance is conducted.   d. Keep a record of all results arising from 5.3.1c.</p>	<p>A. Review farm records to confirm recording of all successive medicinal treatments.  B. If applicable, review how the farm evaluates the observed effect of treatment against the expected effect of treatment.   C. Review farm records to confirm that bio-assays were done in every case where successive treatments did not produce the expected effect. Confirm that bio-assays were performed by a qualified independent laboratory.   D. Verify that farm maintains records from bio-assays (as applicable).</p>	<p>N/A Records showed no successive use of medicinal treatments.   N/A</p>
5.3.2	<p><b>Indicator:</b> When bio-assay tests determine resistance is forming, use of an alternative, permitted treatment, or an immediate harvest of all fish on the site  <b>Requirement:</b> Yes  <b>Applicability:</b> All</p>	<p>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.   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.</p>	<p>A. Review evidence from bio-assay tests to determine whether Indicator 5.3.2 is applicable.   B. If applicable, review records to verify that the farm either used an alternative treatment that is permitted in the area of operation or else harvested all fish on site.</p>	<p>N/A   N/A</p>
<b>Criterion 5.4 Biosecurity management [113]</b>				
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>
Footnote	[113] See Appendix VI for transparency requirements for 5.4.2 and 5.4.4.			
5.4.1	<p><b>Indicator:</b> Evidence that all salmon on the site are a single-year class [114]  <b>Requirement:</b> 100% [115]  <b>Applicability:</b> All farms except as noted in [115]</p>	<p>a. Keep records of the start and end dates of periods when the site is fully fallow after harvest.   b. Provide evidence of stocking dates (purchase receipts, delivery records) to show that there were no gaps &gt; 6 months for smolt inputs for the current production cycle.   -</p>	<p>A. Review records and verify fallow periods by cross-checking during interviews with farm staff and community representatives.   B. Review evidence to confirm there were no gaps in smolt inputs &gt; 6 months. Inspect pens during the on-site audit to see if fish size (which may be variable) is consistent with the production of a single-year class.   C. Verify that the available evidence shows that salmon on the site are from a single-year class.</p>	<p>A Variance Request was submitted to ASC on 12/10/2015 for more than one year class to be present on a farm at one time. This was approved on 27/10/15.</p>
Footnote	[114] Gaps of up to six months between inputs of smolts derived from the same stripping are acceptable as long as there remains a period of time when the site is fully fallow after harvest.			
Footnote	[115] Exception is allowed for: 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, 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).			

5.4.2	<p><b>Indicator:</b> Evidence that if the farm suspects an unidentifiable transmissible agent, or if the farm experiences unexplained increased mortality, [116] the farm has:</p> <ol style="list-style-type: none"> <li>Reported the issue to the ABM and to the appropriate regulatory authority</li> <li>Increased monitoring and surveillance [117] on the farm and within the ABM</li> <li>Promptly [118] made findings publicly available</li> </ol> <p><b>Requirement:</b> Yes <b>Applicability:</b> All</p>	<p>a. For mortality events logged in 5.1.4a, 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]. The accepted level of significance (for example, <math>p &lt; 0.05</math>) should be agreed between farm and CAB.</p>	<p>A. Review evidence to confirm that the farm evaluated mortality events for statistically significant increases relative to background mortality rates (compare to farm's time-series dataset in 5.1.7a).</p>	<p>Reviewed mortality data with farm managers and no statistically significant mortality events were observed.</p>	Conforming
		<p>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.</p>	<p>B. Determine if the farm suspected any unidentified transmissible agents associated with mortality events during the most recent production cycle. An abrupt increase in unexplained mortality should be cause for suspicion.</p>	<p>No unidentified transmissible agents were suspected.</p>	
		<p>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.</p>	<p>C. Confirm that the farm took the correct action based on results from 5.4.2a and 5.4.2b and whether 5.4.2d is applicable to the farm.</p>	<p>N/A, see above.</p>	
		<p>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.</p>	<p>D. If applicable, verify that the farm keeps records to show how each of the required steps was completed.</p>		
		<p>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).</p>	<p>E. Confirm that client submits data to ASC (Appendix VI) about unidentified transmissible agents or unexplained increases in mortality as applicable.</p>		
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.				
Footnote	[118] Within one month.				
<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>					
5.4.3	<p><b>Indicator:</b> Evidence of compliance [119] with the OIE Aquatic Animal Health Code [120]</p> <p><b>Requirement:</b> Yes <b>Applicability:</b> All</p>	<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.</p>	<p>A. Verify that farm management is aware of practices described in the most current version of the code during interviews.</p>	<p>Current version of OIE Aquatic Animal health code is available and staff are aware of practices.</p>	Conforming
		<p>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.</p>	<p>B. Review farm policies and procedures to verify that the farm has documented how its practices are consistent with the OIE Aquatic Animal Health Code and Indicator 5.4.4.</p>	<p>IMS-P1090 Zero Harm for Fish Animal Welfare Policy (28/09/2015, Issue #2).</p>	
		<p>-</p>	<p>C. During the on-site inspection look for evidence that policies and procedures in 5.4.3a are implemented. Cross-check in interviews with staff.</p>	<p>Evidence was provided of implementation of policies.</p>	
Footnote	[119] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).				
Footnote	[120] OIE 2011. Aquatic Animal Health Code. <a href="http://www.oie.int/index.php?id=171">http://www.oie.int/index.php?id=171</a> .				
5.4.4	<p><b>Indicator:</b> If an OIE-notifiable disease [121] is confirmed on the farm, evidence that:</p> <ol style="list-style-type: none"> <li>the farm has, at a minimum, immediately culled the pen(s) in which the disease was detected</li> <li>the farm immediately notified the other farms in the ABM [122]</li> <li>the farm and the ABM enhanced monitoring and conducted rigorous testing for the disease</li> <li>the farm promptly [123] made findings publicly available</li> </ol> <p><b>Requirement:</b> Yes <b>Applicability:</b> All</p>	<p>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.</p>	<p>A. Review farm policies and procedures (see 5.4.3A) to verify that the farm has documented actions in response to an OIE-notifiable disease.</p>	<p>N/A -- no OIE-notifiable disease occurred on farms.</p>	N/A
		<p>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.</p>	<p>B. Record whether there were any OIE-notifiable diseases confirmed on the farm during the current or two previous production cycles.</p>		
		<p>c. If an OIE-notifiable disease was confirmed on the farm (see 5.4.4b), then retain documentary evidence to show that the farm: 1) immediately culled the pen(s) in which the disease was detected; 2) immediately notified the other farms in the ABM [122] 3) enhanced monitoring and conducted rigorous testing for the disease; and 4) promptly (within one month) made findings publicly available.</p>	<p>C. If applicable, review documentary evidence to verify the farm's response complied with the four actions required under Indicator 5.4.4.</p>		
		<p>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).</p>	<p>D. Confirm that client submits data to ASC (Appendix VI) about any OIE-notifiable disease that was confirmed on the farm (as applicable).</p>		
		<p>e. If an OIE-notifiable disease was confirmed on the farm, verify that notifications were made to regulatory bodies required under law and the OIE Aquatic Animal Health Code [122].</p>			
Footnote	[121] At the time of publication of the final draft standards, OIE-notifiable diseases relevant to salmon aquaculture were: Epizootic haematopoietic necrosis, Infectious haematopoietic necrosis (IHN), Infectious salmon anaemia (ISA), Viral haemorrhagic septicaemia (VHS) and Gyrodactylus (Gyrodactylus salaris).				
Footnote	[122] This is in addition to any notifications to regulatory bodies required under law and the OIE Aquatic Animal Health Code.				
Footnote	[123] Within one month.				

PRINCIPLE 6: DEVELOP AND OPERATE FARMS IN A SOCIALLY RESPONSIBLE MANNER				
6.1 Freedom of association and collective bargaining [124]				
Footnote		Compliance Criteria	Evidence	Evaluation
		[124] Bargain collectively: A voluntary negotiation between employers and organizations of workers in order to establish the terms and conditions of employment by means of collective (written) agreements.		
6.1.1	<p><b>Indicator:</b> Evidence that workers have access to trade unions (if they exist) and union representative(s) chosen by themselves without managerial interference.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>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.</p> <p>b. Union representatives (or worker representatives) are chosen by workers without managerial interference. ILO specifically prohibits "acts which are designated to promote the establishment of worker organizations or to support worker organizations under the control or employers or employers' organizations."</p> <p>c. Trade union representatives (or worker representatives) have access to their members in the workplace at reasonable times on the premises.</p> <p>d. Be advised that workers and union representatives (if they exist) will be interviewed to confirm the above.</p>	<p>The current Enterprise Agreement incorporates access to information about and representation from the Australian Workers Union (AWU). The Branch Secretary of the AWU (Tasmania) ratified the Enterprise Agreement.</p> <p>The farm-site union representative confirmed that he was elected by the other workers. Cross-checking through interviews with other employees confirmed this.</p> <p>In recent times there has been disagreement between the Client and the AWU regarding access to employees at the farm-sites in question. This issue primarily revolved around the Union wanting to visit employees on site and the Client not wanting to use company resources to ferry Union Officials around on the water. The current compromise is for the Union to have access during pre-work meetings. The Auditor witnessed such a meeting and spoke with Union Officials afterwards, whom stated that they are prepared to see if the new arrangements brings improvements. Observation.</p> <p>Interviews with workers revealed that Union membership is ~30% and that there isn't a general feel of restricted union access. Several workers expressed the view that they focus on the job at hand and do not have a keen interest in Union activities.</p>	Conforming with Observations
6.1.2	<p><b>Indicator:</b> Evidence that workers are free to form organizations, including unions, to advocate for and protect their rights</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Employment contract explicitly states the worker's right of freedom of association.</p> <p>b. Employer communicates that workers are free to form organizations to advocate for and protect work rights (e.g. farm policies on Freedom of Association; see</p> <p>c. Be advised that workers will be interviewed to confirm the above.</p>	<p>Contracts are structured in accordance with the Enterprise Agreement, which specifies a workers right of freedom of association.</p> <p>The Enterprise Agreement details the employees rights of freedom of association.</p> <p>Interviews with workers confirmed that they are free to form or join unions to protect their rights.</p>	Conforming
6.1.3	<p><b>Indicator:</b> Evidence that workers are free and able to bargain collectively for their rights</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Local trade union, or where none exists a reputable civil-society organization, confirms no outstanding cases against the farm site management for violations of employees' freedom of association and collective bargaining rights.</p> <p>b. Employer has explicitly communicated a commitment to ensure the collective bargaining rights of all workers.</p> <p>c. There is documentary evidence that workers are free and able to bargain collectively (e.g. collective bargaining agreements, meeting minutes, or complaint resolutions).</p>	<p>The AWU confirmed that there presently aren't any outstanding cases against the farm-site management for violations of employee freedom of association.</p> <p>The Enterprise Agreement states "The AWU is a bargaining representative of Employees and is covered by this Enterprise Agreement subject to the requirements of the Fair Work Act 2009." The Enterprise Agreement has been ratified by the AWU and the Federal Government's Fair Work Commission, which is responsible for the Fair Work Act.</p> <p>The Enterprise Agreement is the only evidence provided to the Auditor demonstrating collective bargaining.</p>	Conforming
Criterion 6.2 Child labour				
Footnote		Compliance Criteria	Evidence	Evaluation
6.2.1	<p><b>Indicator:</b> Number of incidences of child [125] labour [126]</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All except as noted in [125]</p>	<p>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.</p> <p>b. Minimum age of permanent workers is 15 or older (except in countries as noted above).</p> <p>c. Employer maintains age records for employees that are sufficient to demonstrate compliance.</p>	<p>There is no set age for when you can start working in Tasmania. The youngest worker at the farm-site was 17 who is a part-time worker and enrolled in the Australian School Based Apprenticeship Scheme, which aims to balance work and education in partnership with the employer and the school.</p> <p>All permanent workers are &gt;18 years old.</p> <p>A list of employees birthdates was provided to the Auditor.</p>	Conforming
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.			
Footnote	[126] Child Labour: Any work by a child younger than the age specified in the definition of a child.			
6.2.2	<p><b>Indicator:</b> Percentage of young workers [127] that are protected [128]</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	<p>a. Young workers are appropriately identified in company policies &amp; training programs, and job descriptions are available for all young workers at the site.</p> <p>b. All young workers (from age 15 to less than 18) are identified and their ages are confirmed with copies of IDs.</p> <p>c. Daily records of working hours (i.e. timesheets) are available for all young workers.</p> <p>d. For young workers, the combined daily transportation time and school time and work time does not exceed 10 hours.</p> <p>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.</p> <p>f. Be advised that the site will be inspected and young workers will be interviewed to confirm compliance.</p>	<p>As part of the Australian School Based Apprenticeship Scheme it is the employers responsibility to work with the school and provide a complimentary, safe and educational environment. The scheme is a state government based incentive, the Auditor has been provided with policy and information documentation regarding the scheme.</p> <p>This compliance criteria was not assessed during the audit.</p> <p>This compliance criteria was not assessed during the audit.</p> <p>This compliance criteria was not assessed during the audit.</p> <p>The Client has stated that young workers are provided with non-hazardous duties relevant to their age and capabilities.</p> <p>There was no evidence of young workers on-site or suggestion of their being any during discussions with management and staff.</p>	Conforming
Footnote	[127] Young Worker: Any worker between the age of a child, as defined above, and under the age of 18.			
Footnote	[128] Protected: Workers between 15 and 18 years of age will not be exposed to hazardous health and safety conditions; working hours shall not interfere with their education and the combined daily transportation time and school time, and work time shall not exceed 10 hours.			
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).			

Criterion 6.3 Forced, bonded or compulsory labour				
		Compliance Criteria	Evidence	Evaluation
6.3.1	Indicator: Number of incidences of forced, [131] bonded [132] or compulsory labour Requirement: None Applicability: All	a. Contracts are clearly stated and understood by employees. Contracts do not lead to workers being indebted (i.e. no 'pay to work' schemes through labour contractors or training credit programs). b. Employees are free to leave workplace and manage their own time. c. Employer does not withhold employee's original identity documents. d. Employer does not withhold any part of workers' salaries, benefits, property or documents in order to oblige them to continue working for employer. e. Employees are not to be obligated to stay in job to repay debt. f. Maintain payroll records and be advised that workers will be interviewed to confirm the above.	Interviews with employees confirmed that they have a good understanding of their contracts and are not being indebted to the Client. In accordance with the Enterprise Agreement, workers are free to manage their own time outside of their work shifts. The employer does not withhold employee identity documentation. Interviews with employees and management demonstrated that employees are never obliged to continue to work for the Client. Interviews with employees confirmed that they are not obliged to stay in a job to re-pay debts. Interviews with workers confirmed that working conditions are aligned with the work place agreement.	Conforming
Footnote	[131] Forced (Compulsory) labour: All work or service that is extracted from any person under the menace of any penalty for which a person has not offered himself/herself voluntarily or for which such work or service is demanded as a repayment of debt. "Penalty" can imply monetary sanctions, physical punishment, or the loss of rights and privileges or restriction of movement (e.g., withholding of identity documents).			
Footnote	[132] Bonded labour: When a person is forced by the employer or creditor to work to repay a financial debt to the crediting agency.			
Criterion 6.4 Discrimination [133]				
		Compliance Criteria	Evidence	Evaluation
Footnote	[133] Discrimination: Any distinction, exclusion or preference that has the effect of nullifying or impairing equality of opportunity or treatment. Not every distinction, exclusion or preference constitutes discrimination. For instance, a merit- or performance-based pay increase or bonus is not by itself discriminatory. Positive discrimination in favour of people from certain underrepresented groups may be legal in some countries.			
6.4.1	Indicator: Evidence of comprehensive [134] and proactive anti-discrimination policies, procedures and practices Requirement: Yes Applicability: All	a. Employer has 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. b. Employer has clear and transparent company procedures that outline how to raise, file, and respond to discrimination complaints. c. Employer respects the principle of equal pay for equal work and equal access to job opportunities, promotions and raises. d. All managers and supervisors receive training on diversity and non-discrimination. All personnel receive non-discrimination training. Internal or external training	The Client has a "Harassment, bullying and discrimination policy (IMS-P 1004)" which is related to their "Recruitment and promotion policy (IMS -1045)", both policies are aligned with equal opportunity laws. Corresponding "Harassment, bullying and discrimination procedure (HR - 100)" and "Harassment, bullying and discrimination guidelines (HR - 101)", have also been developed by the Client to implement the policy. To further convey the importance and requirements around such issues, employees are also given anti-harassment, bullying and discrimination training, plus these topics are covered in detail during the corporate introduction for new employees. Employee's are tested on the topics covered during the induction is to gauge level of comprehension. Overarching this approach to harassment, bullying and discrimination is a "Code of conduct policy (IMS-P1046)" that aims to ensure all employees are treated with respect, courtesy and dignity. The Harassment, bullying and discrimination procedure describes how to raise, file and respond to discrimination complaints. The Client follows "The National Employment Standards" as set by the Fair Work Ombudsman in accordance with the Fair Work Act 2009. see 6.4.1 a	Conforming
Footnote	[134] Employers shall have written anti-discrimination policies 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.			
6.4.2	Indicator: Number of incidences of discrimination Requirement: None Applicability: All	a. Employer maintains a record of all discrimination complaints. These records do not show evidence for discrimination. b. Be advised that worker testimonies will be used to confirm that the company does not interfere with the rights of personnel to observe tenets or practices, or to meet needs related to race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation or any other condition that may give rise to discrimination.	Discrimination and grievances are recorded in individual employee files. Individual files were shown to the Auditor. A recent case involving disciplinary action and a dispute between the employee and the Client were also shown the Auditor. This occurrence was also flagged independently by several workers during interviews. In all occasions no one expressed any concern the processes that occurred were unfair or discriminatory. No incidences of discrimination were stated or implied by the workers.	Conforming
Criterion 6.5 Work environment health and safety				
		Compliance Criteria	Evidence	Evaluation
6.5.1	Indicator: Percentage of workers trained in health and safety practices, procedures [135] and policies on a yearly basis Requirement: 100% Applicability: All	a. Employer has 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. b. Employees know and understand emergency response procedures. c. Employer conducts 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.	The Client has a suite of procedures addressing workplace health and safety (WHS). These include: - Safety induction procedure; - WHS hazard reporting procedure; - Safety notice boards preparation control procedures; - WHS management system procedure; - WHS hazard identification risk assessment and control procedure; - Health and safety emergency procedures. These procedures are based on a range of policies including: - Safety partnership agreement policy; - WHS escalation of risk policy; - Golden safety rules policy; - WHS hazard management policy; - WHS policy. The combined coverage of these policies and procedures are sufficient for the level of risk and size of the farming operation at the farm sites. All workers stated that they understood the safety rules, were adequately trained and appeared to have an appreciation for the importance of WHS. All staff are inducted on WHS and effective use of PPE and are tested on their understanding on the requirements.	Conforming
Footnote	[135] Health and safety training shall include emergency response procedures and practices.			

6.5.2	<b>Indicator:</b> Evidence that workers use Personal Protective Equipment (PPE) effectively <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer maintains a list of all health and safety hazards (e.g. chemicals).	The Client maintains a comprehensive list of all health and safety hazards, in particular chemicals.	Conforming
		b. Employer provides workers with PPE that is appropriate to known health and safety hazards.	All staff are supplied with appropriate PPE, trained in its usage. The Client takes responsibility to maintain all PPE.	
		c. Employees receive annual training in the proper use of PPE (see 6.5.1c). For workers who participated in the initial training(s) previously an annual refreshment training may suffice, unless new PPE has been put to use.	The training of staff in PPE is conducted in accordance with WHS legal requirements and managed by WHS staff.	
		d. Be advised that workers will be interviewed to confirm the above.	The workers stated that they were supplied and trained with appropriate PPE.	
6.5.3	<b>Indicator:</b> Presence of a health and safety risk assessment and evidence of preventive actions taken <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer makes regular assessments of hazards and risks in the workplace. Risk assessments are reviewed and updated at least annually (see also 6.5.1a).	The Client maintains a consolidated action plan for actionable items, which entails the identification of hazards and associated issues to find solutions then follow up on their resolution.	Conforming
		b. Employees are trained in how to identify and prevent known hazards and risks (see also 6.5.1c).	The Client has developed and implemented a safety induction procedure (WHS - 124) that outlines the processes employees and management must undertake in order to comply with WHS policies and procedures.	
		c. Health and safety procedures are adapted based on results from risk assessments (above) and changes are implemented to help prevent accidents.	The Client maintains a risk register that is linked to the consolidated action plan. The risk register is based on an eleven stage process from identification to risk rating.	
6.5.4	<b>Indicator:</b> Evidence that all health- and safety-related accidents and violations are recorded and corrective actions are taken when necessary <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer records all health- and safety-related accidents.	Every WHS incident is recorded and monitored by the Client. The Auditor was shown a comprehensive and efficient system by the manager responsible.	Conforming
		b. Employer maintains complete documentation for all occupational health and safety violations and investigations.	The Auditor was shown several past incidents, violations and investigations and was given access to the files. All witnessed files followed the due process.	
		c. Employer implements 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.	Corrective actions plans are in place and are implemented. The Auditor was walked through several examples of recent incidents from identification to mitigation.	
		d. Employees working in departments where accidents have occurred can explain what analysis has been done and what steps were taken or improvements made.	Employees demonstrated a sound understanding of the WHS system.	
6.5.5	<b>Indicator:</b> Evidence of employer responsibility and/or proof of insurance (accident or injury) for 100% of worker costs in a job-related accident or injury when not covered under national law <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer maintains 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.	The Client has provided a certificate of currency stating insurance coverage for liability under the Tasmanian Workers' Rehabilitation and Compensation Act 1998.	Conforming
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.				
6.5.6	<b>Indicator:</b> Evidence that all diving operations are conducted by divers who are certified <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer keeps 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.	The Client has provided a their diving operations manual, a matrix of diver competency and a copy of the Australian New Zealand Standard (AS/NZS 2299.1:2007) for Occupational diving operations that they adhere to.	Conforming
		b. Employer maintains 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.	The Client maintains all diver certification. All divers are certified through accredited organizations.	
<b>Criterion 6.6 Wages</b>				
		<b>Compliance Criteria</b>	<b>Evidence</b>	<b>Evaluation</b>
6.6.1	<b>Indicator:</b> The percentage of workers whose basic wage [136] (before overtime and bonuses) is below the minimum wage [137] <b>Requirement:</b> 0 (None) <b>Applicability:</b> All	a. Employer keeps 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.	All workers are paid above the minimum wage in accordance with the Fair Work Act.	Conforming
		b. Employer's records (e.g. payroll) confirm that worker's wages for a standard work week (≤ 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.	As part of the approval of the Enterprise Agreement under the Fair Work Act 1999 the Client undertook a Better Off Overall Test (B.O.O.T) to confirm that employees are in a generally more advantageous position than if on the award wage alone.	
		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.	Copies of employee time-sheets and payslips have been provided to the Auditor. Discussions with workers demonstrated that they receive fair pay for fair work.	
Footnote	[136] Basic wage: The wages paid for a standard working week (no more than 48 hours).			
Footnote	[137] If there is no legal minimum wage in a country, basic wages must meet the industry-standard minimum wage.			
6.6.2	<b>Indicator:</b> Evidence that the employer is working toward the payment of basic needs wage [138] <b>Requirement:</b> Yes <b>Applicability:</b> All	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.	The Client's Enterprise Agreement has been ratified by the Fairwork Commission and the AWU, who's primary functions are workers rights and access to fair pay for fair work.	Conforming
		b. Employer has calculated the basic needs wage for farm workers and has compared it to the basic (i.e. current) wage for their farm workers.	The Client has not calculated a basic needs wage. However, they have conducted a Better Off Overall Test (B.O.O.T) and pay above award wages. The award wages are set by the government to be above the minimum wage, so in effect satisfy a basic needs wage in a national context. It should also be noted that the price of living in Tasmania is considerably lower than in several other areas of Australia (e.g. Sydney or Melbourne).	
		c. Employer demonstrates how they have taken steps toward paying a basic needs wage to their workers.	As part of the approval of the Enterprise Agreement under the Fair Work Act 1999 the Client undertook a B.O.O.T. to confirm that employees are in a generally more advantageous position than if on the award wage alone.	
Footnote	[138] Basic needs wage: A wage that covers the basic needs of an individual or family, including housing, food and transport. This concept differs from a minimum wage, which is set by law and may or may not cover the basic needs of workers.			
6.6.3	<b>Indicator:</b> Evidence of transparency in wage-setting and rendering [139] <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Wages and benefits are clearly articulated to workers and documented in contracts.	Wages and benefits are clearly described in the Clients Enterprise Agreement.	Conforming
		b. The method for setting wages is clearly stated and understood by workers.	Interviewed workers demonstrated an understanding of wage setting and how the system works.	
		c. Employer 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.	Workers are paid by direct deposit into a nominated bank account.	
		d. Be advised that workers will be interviewed to confirm the above.	Discussions with workers confirmed the above.	

Footnote	[139] Payments shall be rendered to workers in a convenient manner.		
<b>Criterion 6.7 Contracts (labour) including subcontracting</b>			
		<b>Compliance Criteria</b>	<b>Evidence</b>
6.7.1	<b>Indicator:</b> Percentage of workers who have contracts [141] <b>Requirement:</b> 100% <b>Applicability:</b> All	a. Employer maintains a record of all employment contracts. b. There is no evidence for labour-only contracting relationships or false apprenticeship schemes. c. Be advised that workers will be interviewed to confirm the above.	The Client maintains records of all employment contracts. No evidence of labour-only contracting or false apprenticeship schemes were detected. Discussions with workers confirmed the above.
Footnote	[141] Labour-only contracting relationships or false apprenticeship schemes are not acceptable. This includes revolving/consecutive labour contracts to deny benefit accrual or equitable remuneration. False Apprenticeship Scheme: The practice of hiring workers under apprenticeship terms without stipulating terms of the apprenticeship or wages under contract. It is a "false" apprenticeship if its purpose is to underpay people, avoid legal obligations or employ underage workers. Labour-only contracting arrangement: The practice of hiring workers without establishing a formal employment relationship for the purpose of avoiding payment of regular wages or the provision of legally required benefits, such as health and safety protections.		
6.7.2	<b>Indicator:</b> Evidence of a policy to ensure social compliance of its suppliers and contractors <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Farm has a policy to ensure that all companies contracted to provide supplies or services (e.g. divers, cleaning, maintenance) have socially responsible practices and policies. b. Producing company has criteria for evaluating its suppliers and contractors. The company keeps a list of approved suppliers and contractors. c. Producing company keeps records of communications with suppliers and subcontractors that relate to compliance with 6.7.2.	The Client has a procedure (QA-F103) and checklist in order to conduct a supplier desk top review, which incorporates all relevant social aspects to the ASC Salmon standard. This procedure is aligned with the Clients' "Contractor handbook (WHS-F139)" and "Contractor Information packs (WHS-F140 & 141)". The Client maintains a list of approved suppliers and contractors. The Client has been provided with "process flow chart for internal and supplier audits (IMS-103)".
<b>Criterion 6.8 Conflict resolution</b>			
		<b>Compliance Criteria</b>	<b>Evidence</b>
6.8.1	<b>Indicator:</b> Evidence of worker access to effective, fair and confidential grievance procedures <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer has a clear labour conflict resolution policy for the presentation, treatment, and resolution of worker grievances in a confidential manner. b. Workers are familiar with the company's labour conflict policies and procedures. There is evidence that workers have fair access. c. Maintain documentary evidence (e.g. complaint or grievance filings, minutes from review meetings) and be advised that workers will be interviewed to confirm the above.	The Client has a "Grievance prevention and handling policy (IMS-P1057)", which is associated with their Enterprise Agreement. These documents cover presentation, treatment and resolution of worker grievances. Discussions with workers confirmed that they are familiar with the Client's labour conflict policies and procedures. Workers provided general examples of incidents where grievances have been identified, expressed and mitigated. However, on one occasion it was expressed to the Auditors that employee complaints about birds entering nets and other employees littering the waterways have been largely ignored. Observation. Minor incidents are resolved verbally, at the employee and direct line manager level. Beyond this records are kept in individual employee files. This system was confirmed through discussions with workers and was primarily considered satisfactory. However, it was brought to the attention of the Auditors that some workers feel that not all grievances are met with due concern. Observation.
6.8.2	<b>Indicator:</b> Percentage of grievances handled that are addressed [142] within a 90-day timeframe <b>Requirement:</b> 100% <b>Applicability:</b> All	a. Employer maintains a record of all grievances, complaints and labour conflicts that are raised. b. Employer keeps a record of follow-up (i.e. corrective actions) and timeframe in which grievances are addressed. c. Maintain documentary evidence and be advised that workers will be interviewed to confirm that grievances are addressed within a 90-day timeframe.	This compliance criteria was not assessed during the audit. This compliance criteria was not assessed during the audit. This compliance criteria was not assessed during the audit.
Footnote	[142] Addressed: Acknowledged and received, moving through the company's process for grievances, corrective action taken when necessary.		
<b>Criterion 6.9 Disciplinary practices</b>			
		<b>Compliance criteria</b>	<b>Evidence</b>
6.9.1	<b>Indicator:</b> Incidences of excessive or abusive disciplinary actions <b>Requirement:</b> None <b>Applicability:</b> All	a. Employer does not use threatening, humiliating or punishing disciplinary practices that negatively impact a worker's physical and mental health or dignity. b. Allegations of corporeal punishment, mental abuse [144], physical coercion, or verbal abuse will be investigated by auditors. c. Be advised that workers will be interviewed to confirm there is no evidence for excessive or abusive disciplinary actions.	The Auditor did not suspect any use of excess use of disciplinary practices during the site visit through discussions with workers and managers. No allegations were made. See above.
Footnote	[144] Mental Abuse: Characterized by the intentional use of power, including verbal abuse, isolation, sexual or racial harassment, intimidation or threat of physical force.		
6.9.2	<b>Indicator:</b> Evidence of a functioning disciplinary action policy whose aim is to improve the worker [143] <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Employer has written policy for disciplinary action which explicitly states that its aim is to improve the worker [143]. b. Maintain documentary evidence (e.g. worker evaluation reports) and be advised that workers will be interviewed to confirm that the disciplinary action policy is fair and effective.	The Client has a disciplinary procedure (HR-106) that explicitly states that it's purpose is to "change and improve behaviour or performance whilst protecting the employee concerned...". Documentary evidence of disciplinary procedures were provided to the Auditor. Discussions with workers confirmed that they believed that the disciplinary action policy was fair and effective.
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.		

<b>Criterion 6.10 Working hours and overtime</b>				
		<b>Compliance criteria</b>	<b>Evidence</b>	<b>Evaluation</b>
Note: Working hours, night work and rest periods for workers in agriculture should be in accordance with national laws and regulations or collective agreements (e.g. The Safety and Health in Agriculture Convention, 2001). Additional information can be found on the website of the International Labour Organization (www.ilo.org).				
6.10.1	<b>Indicator:</b> Incidences, violations or abuse of working hours and overtime laws [145] <b>Requirement:</b> None <b>Applicability:</b> All	a. Employer has 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. b. Records (e.g. time sheets and payroll) show that farm workers do not exceed the number of working hours allowed under the law. c. If an employer requires employees to work shifts at the farm (e.g. 10 days on and six days off), the employer compensates workers with an equivalent time off in the calendar month and there is evidence that employees have agreed to this schedule (e.g. in the hiring contract). d. Be advised that workers will be interviewed to confirm there is no abuse of working hours and overtime laws.	The Client's Enterprise Agreement has been ratified by the Fairwork Commission and the AWU, who's primary functions are workers rights and access to fair pay for fair work. The Fairwork Commission is their responsible government agency for the Fair Work Act 2009. This compliance criteria was not assessed during the audit. The Enterprise Agreement details legal allowable total working hours and overtime over the course of a pay period for a variety of employment configurations. Discussions with workers confirmed that there is no abuse of working hours and overtime laws.	Conforming
Footnote	[145] In cases where local legislation on working hours and overtime exceed internationally accepted recommendations (48 regular hours, 12 hours overtime), the international standards will apply.			
6.10.2	<b>Indicator:</b> Overtime is limited, voluntary [146], paid at a premium rate and restricted to exceptional circumstances <b>Requirement:</b> Yes <b>Applicability:</b> All except as noted in [146]	a. Payment records (e.g. payslips) show that workers are paid a premium rate for overtime hours. b. 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). c. Be advised that workers will be interviewed to confirm that all overtime is voluntary except where there is a collective bargaining agreement which specifically allows for compulsory overtime.	Payment records demonstrate that workers are paid appropriately. This compliance criteria was not assessed during the audit. Discussions with workers confirmed that they are aware that overtime is voluntary.	Conforming
Footnote	[146] Compulsory overtime is permitted if previously agreed to under a collective bargaining agreement.			
Footnote	[147] Premium rate: A rate of pay higher than the regular work week rate. Must comply with national laws/regulations and/or industry standards.			
<b>Criterion 6.11 Education and training</b>				
		<b>Compliance criteria</b>	<b>Evidence</b>	<b>Evaluation</b>
6.11.1	<b>Indicator:</b> Evidence that the company encourages and sometimes supports education initiatives for all workers (e.g., courses, certificates and degrees) <b>Requirement:</b> Yes <b>Applicability:</b> All	a. 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. b. Employer maintains records of worker participation in educational opportunities as evidenced by course documentation (e.g. list of courses, curricula, certificates, degrees). c. Be advised that workers will be interviewed to confirm that educational initiatives are encouraged and supported by the company.	The Client has a Training Policy (IMS-P1058) in place, which covers their requirement to provide appropriate training and development to ensure employees have the correct skills and competencies to effectively perform the duties of their position. The Client maintains records of all employee training and qualifications on individual employee records. Discussions with workers confirmed that educational initiatives are encouraged and supported.	Conforming
<b>Criterion 6.12 Corporate policies for social responsibility</b>				
		<b>Compliance criteria</b>	<b>Evidence</b>	<b>Evaluation</b>
6.12.1	<b>Indicator:</b> Demonstration of company-level [148] policies in line with the standards under 6.1 to 6.11 above <b>Requirement:</b> Yes <b>Applicability:</b> All	a. Company-level policies are in line with all social and labour requirements presented in 6.1 through 6.11. b. Company-level policies (see 6.12.1a) are approved by the company headquarters in the region where the site applying for certification is located. c. 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). d. The site that is applying for certification provides auditors with access to all company-level policies and procedures as are needed to verify compliance with 6.12.1a (above).	The Client's company wide policies are aligned with all social and labour requirements presented. All policies applicable to the Channel Zone are company wide. The policies cover all company operations in relation to salmonid production. The Client has provided the Auditor with all relevant policies and procedures.	Conforming
Footnote	[148] Applies to the headquarters of the company in a region or country where the site applying for certification is located. The policy shall relate to all of the company's operations in the region or country, including grow-out, smolt production and processing facilities.			
<b>PRINCIPLE 7: BE A GOOD NEIGHBOR AND CONSCIENTIOUS CITIZEN</b>				
<b>Criterion 7.1 Community engagement</b>				
		<b>Compliance Criteria</b>	<b>Evidence</b>	<b>Evaluation</b>
7.1.1	<b>Indicator:</b> Evidence of regular and meaningful [149] consultation and engagement with community representatives and organizations <b>Requirement:</b> Yes <b>Applicability:</b> All	a. The farm pro-actively arranges for consultations with the local community at least twice every year (bi-annually). b. Consultations are meaningful. OPTIONAL: the farm may choose to use participatory Social Impact Assessment (pSIA) or an equivalent method for consultations. c. Consultations include participation by representatives from the local community who were asked to contribute to the agenda. d. Consultations include communication about, or discussion of, the potential health risks of therapeutic treatments (see Indicator 7.1.3). e. Maintain records and documentary evidence (e.g. meeting agenda, minutes, report) to demonstrate that consultations comply with the above. f. Be advised that representatives from the local community and organizations may be interviewed to confirm the above.	The Client has demonstrated that they actively engage in community consultation throughout the year via meetings with local yacht clubs, Indigenous groups, Natural Resource Management (NRM) groups, along with engagement with NGOs, the fishing industry peak body the Tasmanian Seafood Industry Council (TSIC), the Tasmanian Rock Lobster Fisherman's Association, The D'Entrecasteaux Huon Collaboration, Local Council and direct communication with local residents. A list of groups, along with a description of the Client's activities and intent have been provided to the Auditor. This compliance criteria was not assessed during the audit. The Client has provided evidence through email correspondence that they have sourced the opinions of stakeholders and provided opportunity for them to contribute to the agenda and focus of meetings. The Client uses their webpage's sustainability dashboard to communicate with stakeholders regarding the use of therapeutants. This information includes date of treatment, number of pens and the therapeutant used. A description of why and how therapeutants are used is also provided. The minutes of meetings with the D'Entrecasteaux Huon Collaboration, Tasmanian Rock Lobster Fisherman's Association and correspondence with TSIC and Kingsborough Council over the past 12 months have been provided to the Auditor as evidence of the Client's pro-active approach to community engagement. This compliance criteria was not assessed during the audit.	Conforming

Footnote	[149] Regular and meaningful: Meetings shall be held at least bi-annually with elected representatives of affected communities. The agenda for the meetings should in part be set by the community representatives. Participatory Social Impact Assessment methods may be one option to consider here.			
7.1.2	<p><b>Indicator:</b> Presence and evidence of an effective [150] policy and mechanism for the presentation, treatment and resolution of complaints by community stakeholders and organizations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Farm policy provides a mechanism for presentation, treatment and resolution of complaints lodged by stakeholders, community members, and organizations.</p> <p>b. The farm follows its policy for handling stakeholder complaints as evidenced by farm documentation (e.g. follow-up communications with stakeholders, reports to stakeholder describing corrective actions).</p> <p>c. The farm's mechanism for handling complaints is effective based on resolution of stakeholder complaints (e.g. follow-up correspondence from stakeholders).</p> <p>d. Be advised that representatives from the local community, including complainants' where applicable, may be interviewed to confirm the above.</p>	<p>The Client has a documented "Community complaint policy (IMS-P1103)" and accompanying "Community and stakeholder complaints procedure (ES-120)". The stated intent of the policy is "..... to maintain the support and goodwill of neighbours surrounding our operations. Timely resolution of complaints received is a key pillar of maintaining support and goodwill". The procedure demonstrates that primary responsibility for community complaints lie with the Community Engagement Officer</p> <p>The Client appears to be compliant with their own community consultation strategies and have provided the Auditor with meeting notes and correspondence with different groups.</p> <p>This compliance criteria was not assessed during the audit.</p> <p>This compliance criteria was not assessed during the audit.</p>	Conforming
Footnote	[150] Effective: In order to demonstrate that the mechanism is effective, evidence of resolutions of complaints can be given.			
7.1.3	<p><b>Indicator:</b> Evidence that the farm has posted visible notice [151] at the farm during times of therapeutic treatments and has, as part of consultation with communities under 7.1.1, communicated about potential health risks from treatments</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Farm has a system for posting notifications at the farm during periods of therapeutic treatment. (use of anaesthetic baths is not regarded a therapeutic)</p> <p>b. Notices (above) are posted where they will be visible to affected stakeholders (e.g. posted on waterways for fishermen who pass by the farm).</p> <p>c. Farm communicates about the potential health risks from treatments during community consultations (see 7.1.1)</p> <p>d. Be advised that members of the local community may be interviewed to confirm the above.</p>	<p>The Client has a "Antibiotic use notification procedure (ES-114)", which involves a four stage process including signage on pens, involvement of then Community Engagement Officer and updating the sustainability dashboard on the Client's webpage.</p> <p>Notices of antibiotic usage are posted on the relevant pens, photographic evidence has been provided to the Auditor. During the onsite audit a "medicated feed" sign was observed on the feed barge at the Bruny Island farm-site. This grow-out sign is not meant to have medicated feed. This issue was brought up with the Client who explained that the sign was left on the barge after it was recently moved from the Roberts smolt site. The Client has provided the Auditor with a copy of the Government approved alteration to their licence to re-locate the feed barge to the Bruny Island site. Observation.</p> <p>The potential for a health risk to humans and mitigation measures are provided in the Client's sustainability dashboard on their website.</p> <p>This compliance criteria was not assessed during the audit.</p>	Conforming with Observations
Footnote	[151] Signage shall be visible to mariners and, for example, to fishermen passing by the farm.			
<b>Criterion 7.2 Respect for indigenous and aboriginal cultures and traditional territories</b>				
		<b>Compliance Criteria</b>	<b>Evidence</b>	<b>Evaluation</b>
<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. The intent behind the ASC Salmon Standard is that the farm will identify all neighbouring 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 neighbours. Effective community consultations are one of the best ways to identify such impacts to neighbour 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 neighbours should create a forum where any key issue can be discussed and resolved.</p>				
7.2.1	<p><b>Indicator:</b> Evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]</p>	<p>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.</p> <p>b. Farm management demonstrates an understanding of relevant local and/or national laws and regulations that pertain to consultations with indigenous groups.</p> <p>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.</p> <p>d. Be advised that representatives from indigenous groups may be interviewed to confirm the above.</p>	<p>The Client has provided an exert from the "Your Marine Values: Public Report 2013", which states "No single comprehensive survey of Aboriginal heritage sites has been undertaken for the D'Entrecasteaux Channel or lower Huon Estuary. Over 600 coastal Aboriginal heritage sites are recorded within the TASI for the coastal areas (up to 1km inland) of the region and include caves, stone quarries, artefact scatters, shell middens and isolated artefacts. Historically significant sites include Oyster Cove. Aboriginal cultural heritage value extends to collections of sites and, in some cases, entire landscapes." It is unknown if any of the Client's operations are within close proximity to indigenous territory or artefacts. The site in which land based operations are conducted was a former industrial site and is surrounded by industrial and residential properties.</p> <p>The Client has demonstrated that they are cognisant of the fact that all Aboriginal heritages are protected under the Aboriginal Relics Act 1975.</p> <p>The Client has provided a background document detailing their engagement with different groups in the broader Tasmanian Aboriginal community. This document contains the date, individuals involved and the outcomes from ten different meetings during 2013 - 2015. More recently the Client has been attempting to build ties with the local indigenous community and has hired an additional person to work in communications and government liaison who has links with aboriginal archaeological research.</p> <p>This compliance criteria was not assessed during the audit.</p>	Conforming

7.2.2	<b>Indicator:</b> Evidence that the farm has undertaken proactive consultation with indigenous communities <b>Requirement:</b> Yes [152] <b>Applicability:</b> All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.2 apply to the farm.	N/A	N/A
		b. Be advised that representatives from indigenous communities may be interviewed to confirm that the farm has undertaken proactive consultations.	N/A	

Footnote [152] All standards related to indigenous rights only apply where relevant, based on proximity of indigenous territories.

7.2.3	<b>Indicator:</b> Evidence of a protocol agreement, or an active process [153] to establish a protocol agreement, with indigenous communities <b>Requirement:</b> Yes <b>Applicability:</b> All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [152]	a. See results of 7.2.1a (above) to determine whether the requirements of 7.2.3 apply to the farm.	N/A	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	
		c. Be advised that representatives from indigenous communities may be interviewed to confirm either 7.2.3b1 or b2 (above) as applicable.	N/A	

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.

**Criterion 7.3 Access to resources**

Compliance Criteria				
7.3.1	<b>Indicator:</b> Changes undertaken restricting access to vital community resources [154] without community approval <b>Requirement:</b> None <b>Applicability:</b> All	a. Resources that are vital [155] to the community have been documented and are known by the farm (i.e. through the assessment process required under Indicator 7.3.2).	The Client has provided the Auditor with a copy of the D'Entrecasteaux Channel Marine Farming Development Plan 2002, which outlines the co-ordinates and management controls for marine farming in the area. The Client has also provided copies of the legislative instruments they need to abide with to not impact upon other uses of the community resources, including: the Australian Maritime Safety Authority Act 1990; Navigation Act 2012 and the Marine and Safety (Mooring) By-laws 2013.	Conforming
		b. The farm seeks and obtains community approval before undertaking changes that restrict access to vital community resources. Approvals are documented.	The Client has provided a Stakeholder Engagement plan for the Channel Zone with an emphasis on ASC requirements. This plan specifies engagement activities during August 2015 to November 2016. The details of these engagements indicate that they Client is actively corresponding with the surrounding community.	
		c. Be advised that representatives from the community may be interviewed to confirm that the farm has not restricted access to vital resources without prior community approval.	This compliance criteria was not assessed during the audit.	

Footnote [154] Vital community resources can include freshwater, land or other natural resources that communities rely on for their livelihood. If a farm site were to block, for example, a community's sole access point to a needed freshwater resource, this would be unacceptable under the Dialogue standard.

7.3.2	<b>Indicator:</b> Evidence of assessments of company's impact on access to resources <b>Requirement:</b> Yes <b>Applicability:</b> All	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.	This compliance criteria was not assessed during the audit.	N/A
		b. Be advised that representatives from the community may be interviewed to generally corroborate the accuracy of conclusions presented in 7.3.2a.	This compliance criteria was not assessed during the audit.	

**INDICATORS AND STANDARDS FOR SMOLT PRODUCTION**  
 A farm seeking certification must have documentation from all of its smolt suppliers to demonstrate compliance with the following standards. The requirements are, in general, a subset of the standards in Principles 1 through 7, focusing on the impacts that are most relevant for smolt facilities. In addition, specific standards are applied to open systems (net pens), and to closed and semi-closed systems (recirculation and flow-through).

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

**SECTION 8: STANDARDS FOR SUPPLIERS OF SMOLT**

**Standards related to Principle 1**

	Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
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).	A. Review the farm's list of smolt suppliers. Confirm that the client submitted to ASC information on the type of production system used by smolt suppliers (Appendix VI).	Principle 8 was not assessed as part of this surveillance audit.	
	b. Where legal authorisation related to water quality are required, obtain copies of smolt suppliers' permits.	B. Verify that client obtains copies of legal authorisation from smolt suppliers (if applicable).		
	c. Obtain records from smolt suppliers showing monitoring and compliance with discharge laws, regulations, and permit requirements as required.	C. Verify that farm obtains records from smolt suppliers to show compliance with discharge laws, regulations, and permit requirements.		
	-	D. Verify that farm keeps records to show how smolt suppliers comply with regulations on discharge and applicable permitting requirements related to water quality.		
8.2	a. Obtain declarations from smolt suppliers affirming compliance with labour laws and regulations.	A. Verify farm obtains declaration from smolt suppliers.		
	b. Keep records of supplier inspections for compliance with national labour laws and codes (only if such inspections are legally required in the country of operation; see 1.1.3a)	B. Verify that farm obtains inspection records from suppliers (as applicable).		

Standards related to Principle 2				
	Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
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.				
8.3	<p><b>Indicator:</b> Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>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.</p> <p>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.</p>	<p>A. Review the assessment to confirm that it complies with all components outlined in Appendix I-3.</p> <p>B. Review declaration.</p>	
<p><b>Instruction to Clients for Indicator 8.4 - Calculating Total Phosphorus Released per Ton of Fish Produced</b></p> <p>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.</p> <p>If applicable, farms may take account of any physical removals of phosphorus in the form of sludge provided there is evidence to show:</p> <ul style="list-style-type: none"> <li>- the smolt supplier has records showing the total quantity of sludge removed from site over the relevant time period;</li> <li>- the supplier determined phosphorus concentration (% P) in removed sludge by sampling and analysing representative batches; and</li> <li>- the sludge was properly disposed off site and in accordance with the farm's biosolid management plan.</li> </ul>				
8.4	<p><b>Indicator:</b> Maximum total amount of phosphorus released into the environment per metric ton (mt) of fish produced over a 12-month period (see Appendix VIII-1)</p> <p><b>Requirement:</b> 5 kg/mt of fish produced over a 12-month period; within three years of publication of the SAD standards, 4 kg/mt of fish produced over a 12-month period</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain records from smolt suppliers showing amount and type of feeds used for smolt production during the past 12 months.</p> <p>b. For all feeds used by the smolt suppliers (result from 8.4a), keep records showing phosphorus content as determined by chemical analysis or based on feed supplier declaration (Appendix VIII-1).</p> <p>c. Using the equation from Appendix VIII-1 and results from 8.4a and b, calculate the total amount of phosphorus added as feed during the last 12 months of smolt production.</p> <p>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.</p> <p>e. Calculate the amount of phosphorus in fish biomass produced (result from 8.4d) using the formula in Appendix VIII-1.</p> <p>f. If applicable, obtain records from smolt suppliers showing the total amount of P removed as sludge (formula in Appendix VIII-1) during the past 12 months.</p> <p>g. Using the formula in Appendix VIII-1 and results from 8.4a-f (above), calculate total phosphorus released per ton of smolt produced and verify that the smolt supplier is in compliance with requirements.</p>	<p>A. Verify that farm has records for feeds used by smolt suppliers over the relevant time period.</p> <p>B. Verify that farm has records showing that smolt supplier determined phosphorus content in feeds.</p> <p>C. Confirm that calculations are done according to Appendix VIII-1.</p> <p>D. Verify that farm obtained from the smolt supplier all records needed to calculate the amount of biomass produced during the past 12 months.</p> <p>E. Confirm that calculations are done according to Appendix VIII-1.</p> <p>F. As applicable, verify farm has records showing that smolt supplier determined the amount of phosphorus removed from the system as</p> <p>G. Review calculations to confirm that the farm's smolt supplier(s) do not exceed requirements for release of phosphorus.</p>	
Standards related to Principle 3				
	Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
8.5	<p><b>Indicator:</b> If a non-native species is being produced, the species shall have been widely commercially produced in the area prior to the publication [156] of the SAD standards</p> <p><b>Requirement:</b> Yes [157]</p> <p><b>Applicability:</b> All Smolt Producers except as noted in [157]</p>	<p>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.</p> <p>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).</p> <p>c. If the smolt supplier cannot provide the farm with evidence for 8.5b, provide documentary evidence that the farm uses only 100% sterile fish.</p> <p>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:</p> <ol style="list-style-type: none"> <li>1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained;</li> <li>2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce; and</li> <li>3) barriers ensure there are no escapes of biological material that might survive and subsequently reproduce.</li> </ol> <p>e. Retain evidence as described in 8.5a-d necessary to show compliance of each facility supplying smolt to the farm.</p>	<p>A. Verify that the farm has evidence that their smolt suppliers do not produce non-native species. If the farm can show that smolt suppliers produce only native species, then Indicator 8.5 does not apply.</p> <p>B. If applicable, verify the farm has evidence from smolt suppliers confirming when the non-native species was first brought into wide commercial production in the area where production is occurring now.</p> <p>C. Review evidence to confirm that smolt suppliers use only 100% sterile fish.</p> <p>D. Review evidence that the farm's smolt suppliers comply with each point raised in 8.5d.</p> <p>E. Verify that farm retains evidence of compliance by all smolt suppliers.</p>	

Footnote	[156] Publication: Refers to the date when the final standards and accompanying guidelines are completed and made publicly available. This definition of publication applies throughout this document.				
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.				
8.6	<p><b>Indicator:</b> Maximum number of escapees [158] in the most recent production cycle</p> <p><b>Requirement:</b> 300 fish [159]</p> <p><b>Applicability:</b> All Smolt Producers except as noted in [159]</p>	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.	A. Review the farm's records for escape monitoring by the smolt supplier to confirm completeness and accuracy of information.		
		b. Using smolt supplier records from 8.6a, 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.	B. Review the farm's calculation and confirm that the smolt supplier complied with the requirement.		
		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]).	C. Confirm that the farm informs their smolt suppliers that they must maintain records for escape monitoring for > 10 years.		
		d. If an escape episode occurs at the smolt production facility (i.e. an incident where > 300 fish escaped), the farm may request a rare exception to the Standard [159]. 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.	D. Review the farm's request for a rare exception to the Standard for an escape event at the smolt production site. Confirm no prior exceptional events were documented during the previous 10 years, or since the date of the start of the production cycle during which the farm first applied for certification. An example of an exceptional event is vandalization of the farm. Events that are not considered exceptional include failures in moorings due to bad weather and boat traffic incidents due to poor marking of the smolt production facility.		
Footnote	[158] Farms shall report all escapes; the total aggregated number of escapees per production cycle must be less than 300 fish.				
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.				
8.7	<p><b>Indicator:</b> Accuracy [160] of the counting technology or counting method used for calculating the number of fish</p> <p><b>Requirement:</b> ≥98%</p> <p><b>Applicability:</b> All Smolt Producers</p>	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.	A. Confirm that the farm keeps records of counting accuracy for the counting technology or method used on site at stocking and harvest.		
		B. Review records to verify that accuracy of the smolt supplier's counting technology or counting method is ≥ 98%.	B. Verify that farm has records showing that the accuracy of the smolt supplier's counting technology or counting method is ≥ 98%.		
Footnote	[160] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand counts.				
<b>Standards related to Principle 4</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
8.8	<p><b>Indicator:</b> Evidence of a functioning policy for proper and responsible treatment of non-biological waste from production (e.g., disposal and recycling)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	a. From each smolt supplier obtain a policy which states the supplier's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the supplier's policy is consistent with best practice in the area of operation.	A. Confirm that the farm has relevant policies on file from each smolt supplier and review those policies to verify the farm's suppliers are in compliance with the requirement.		
Note: see instructions for Indicator 4.6.1.					
8.9	<p><b>Indicator:</b> Presence of an energy-use assessment verifying the energy consumption at the smolt production facility (see Appendix V subsection 1 for guidance and required components of the records and assessment)</p> <p><b>Requirement:</b> Yes, measured in kilojoule/mt fish/production cycle</p> <p><b>Applicability:</b> All Smolt Producers</p>	a. Obtain records from the smolt supplier for energy consumption by source (fuel, electricity) at the supplier's facility throughout each year.	A. Verify that the farm obtains records for energy consumption from smolt suppliers.		
		b. Confirm that the smolt supplier calculates total energy consumption in kilojoules (kj) during the last year.	B. Verify that the farm has reviewed the supplier's calculations for completeness and accuracy.		
		c. Obtain records to show the smolt supplier calculated the total weight of fish in metric tons (mt) produced during the last year.	C. Verify that the farm has supplier records for total weight of fish produced during the last year.		
		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.	D. Verify that the farm has records to show that the smolt supplier's calculations are complete and accurate.		
		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.	E. Verify that the farm has evidence that its smolt supplier(s) has undergone an energy use assessment verifying the supplier's energy consumption.		
Note: see instructions for Indicator 4.6.2.					

8.10	<p><b>Indicator:</b> Records of greenhouse gas (GHG [161]) emissions [162] at the smolt production facility and evidence of an annual GHG assessment (See Appendix V, subsection 1)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	a. Obtain records of greenhouse gas emissions from the smolt supplier's facility.	A. Verify that the farm obtains records of GHG emissions from smolt suppliers.		
		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.	B. Verify that the farm confirms that calculations by smolt suppliers are done annually and in compliance with Appendix V-1.		
		c. For GHG calculations, confirm that the smolt supplier selects the emission factors which are best suited to the supplier's operation. Confirm that the supplier documents the source of the emissions factors.	C. Verify that the farm has records from smolt suppliers for all emissions factors used and their sources.		
		d. For GHG calculations involving conversion of non-CO2 gases to CO2 equivalents, confirm that the smolt suppliers specify the Global Warming Potential (GWP) used and its source.	D. Verify that the farm has records from smolt suppliers for all GWPs used and their sources.		
		e. Obtain evidence to show that the smolt supplier has undergone a GHG assessment in compliance with requirements Appendix V-1 at least annually.	E. Verify that the farm has evidence that smolt suppliers undergo a GHG assessment annually and that the methods used are in compliance with requirements of Appendix V-1.		
Footnote	[161] 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> ).				
Footnote	[162] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.				
<b>Standards related to Principle 5</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
8.11	<p><b>Indicator:</b> Evidence of a fish health management plan, approved by the designated veterinarian, for the identification and monitoring of fish diseases and parasites</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	a. Obtain a copy of the supplier's fish health management plan for the identification and monitoring of fish disease and parasites.	A. Verify that the farm obtains copies of fish health management plans from smolt suppliers.		
		b. Keep documentary evidence to show that the smolt supplier's health plans were approved by the supplier's designated veterinarian.	B. Verify that farm has evidence that supplier's fish health management plan was approved by designated veterinarian.		
8.12	<p><b>Indicator:</b> Percentage of fish that are vaccinated for selected diseases that are known to present a significant risk in the region and for which an effective vaccine exists [163]</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All Smolt Producers</p>	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.	A. Review list and the supporting analysis.		
		b. Maintain a list of diseases for which effective vaccines exist for the region, developed by the farm veterinarian and supported by scientific evidence.	B. Review list and the supporting analysis.		
		c. Obtain from the smolt supplier(s) a declaration detailing the vaccines the fish received.	C. Verify client has the list from the smolt supplier(s).		
		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.	D. Cross-check lists to verify that all required vaccines were received by all batches of smolt received by the farm during the current production cycle.		
Footnote	[163] The farm's designated veterinarian is responsible for undertaking and providing written documentation of the analysis of the diseases that pose a risk in the region and the vaccines that are effective. The veterinarian shall determine which vaccinations to use and demonstrate to the auditor that this decision is consistent with the analysis.				
<b>Instruction to Clients for Indicator 8.13-- Testing of Smolt for Select Diseases</b>					
<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). 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>					
8.13	<p><b>Indicator:</b> Percentage of smolt groups [164] tested for select diseases of regional concern prior to entering the grow-out phase on farm</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All Smolt Producers</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.	A. Review list. If auditor has questions about the list, request and review supporting analysis.		
		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).	B. Verify records show that each smolt group was tested prior to entering the water at the farm (the grow-out site).		
Footnote	[164] A smolt group is any population that shares disease risk, including environment, husbandry and host factors that might contribute to sharing disease agents for each group. Only diseases that are proven, or suspected, as occurring in seawater (and for which seawater fish-to-fish transmission is a concern) but originating in freshwater should be on the list of diseases tested. The designated veterinarian to the smolt farm 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. A written analysis must be available to the certifier on demand.				

8.14	<p><b>Indicator:</b> Detailed information, provided by the designated veterinarian, of all chemicals and therapeutants used during the smolt production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing and all disease and pathogens detected on the site</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<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>	<p>A. Review records of chemical and therapeutant use for completeness and confirm the records were signed by a qualified veterinarian.</p>		
8.15	<p><b>Indicator:</b> Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [165] in any of the primary salmon producing or importing countries [166]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>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].</p> <p>b. Inform smolt supplier that the treatments on the list cannot be used on fish sold to a farm with ASC certification.</p> <p>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.</p>	<p>A. Verify list has been provided and is consistent with the list in 5.2.2a.</p> <p>B. Verify that the farm informed the smolt supplier.</p> <p>C. Review farm's comparison to verify accuracy.</p>		
Footnote	[165] "Banned" means proactively prohibited by a government entity because of concerns around the substance.				
Footnote	[166] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.				
8.16	<p><b>Indicator:</b> Number of treatments of antibiotics over the most recent production cycle</p> <p><b>Requirement:</b> ≤ 3</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain from the smolt supplier records of all treatments of antibiotics (see 8.14a).</p> <p>b. Calculate the total number of treatments of antibiotics from their most recent production cycle.</p>	<p>A. Verify farm obtains treatment records from smolt supplier (See also 8.14A).</p> <p>B. Confirm that the smolt supplier used ≤ 3 treatments of antibiotics over the most recent production cycle.</p>		
8.17	<p><b>Indicator:</b> Allowance for use of antibiotics listed as critically important for human medicine by the WHO [167]</p> <p><b>Requirement:</b> None [168]</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Provide to smolt supplier(s) a current version of the WHO list of antimicrobials critically and highly important for human health [167].</p> <p>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.</p> <p>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.</p>	<p>A. Confirm that the farm provided smolt supplier with the current copy of the WHO list of antibiotics.</p> <p>B. Verify that the farm informed the smolt supplier.</p> <p>C. Review farm's comparison to verify accuracy.</p>		
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> .				
Footnote	[168] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.				
Note: see instructions for Indicator 5.4.3 regarding evidence of compliance with the OIE Aquatic Animal Health Code.					
8.18	<p><b>Indicator:</b> Evidence of compliance [169] with the OIE Aquatic Animal Health Code [170]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>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).</p> <p>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.</p> <p>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.</p>	<p>A. Verify that farm has provided the smolt supplier with copies of (or access to) the OIE Aquatic Animal Health Code.</p> <p>B. Confirm that the farm informed its smolt supplier(s) that any supplier to an ASC certified farm must show compliance with the OIE Aquatic Animal Health Code.</p> <p>C. Review the smolt supplier's declaration and supporting policies and procedures to verify compliance with the OIE Aquatic Animal Health Code.</p>		
Footnote	[169] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).				
Footnote	[170] OIE 2011. Aquatic Animal Health Code. <a href="http://www.oie.int/Index.php?id=171">http://www.oie.int/Index.php?id=171</a> .				
<b>Standards related to Principle 6</b>					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>	<b>Evidence</b>	<b>Evaluation</b>
8.19	<p><b>Indicator:</b> Evidence of company-level policies and procedures in line with the labour standards under 6.1 to 6.11</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain copies of smolt supplier's company-level policies and procedures and a declaration of compliance with the labour standards under 6.1 to 6.11.</p> <p>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 labour standards under 6.1 to 6.11.</p>	<p>A. Verify that farm obtains copies of company-level policies and procedures from all of its smolt suppliers and a declaration of</p> <p>B. Review supplier documents provided by the farm to verify compliance of the smolt supplier's policies and procedures with labour requirements.</p>		

Standards related to Principle 7					
		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):	Evidence	Evaluation
<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.					
8.20	<b>Indicator:</b> Evidence of regular consultation and engagement with community representatives and organizations <b>Requirement:</b> Yes <b>Applicability:</b> All Smolt Producers	a. From each smolt supplier obtain documentary evidence of consultations and engagement with the community.  b. Review documentation from 8.20a to verify that the smolt supplier's consultations and community engagement complied with requirements.	A. Verify that farm obtains required information from each smolt supplier.  B. Review evidence for compliance.		
8.21	<b>Indicator:</b> Evidence of a policy for the presentation, treatment and resolution of complaints by community stakeholders and organizations <b>Requirement:</b> Yes <b>Applicability:</b> All Smolt Producers	a. Obtain a copy of the smolt supplier's policy for presentation, treatment and resolution of complaints by community stakeholders and organizations.	A. Verify that farm obtains copies of supplier's complaints procedures from each of its smolt suppliers.		
8.22	<b>Indicator:</b> Where relevant, evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations  <b>Requirement:</b> Yes <b>Applicability:</b> All Smolt Producers	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.	A. Review evidence to determine whether Indicator 8.22 is applicable to the farm's smolt supplier(s).		
		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.	B. Verify that the smolt supplier complies with relevant requirements.		
8.23	<b>Indicator:</b> Where relevant, evidence that the farm has undertaken proactive consultation with indigenous communities <b>Requirement:</b> Yes <b>Applicability:</b> All Smolt Producers	a. See results of 8.22a (above) to determine whether the requirements of 8.23 apply to the smolt supplier.	A. Review evidence to determine whether Indicator 8.23 is applicable to the farm's smolt supplier(s).		
		b. Where relevant, obtain documentary evidence that smolt suppliers undertake proactive consultations with indigenous communities.	B. Review documentary evidence to confirm that the smolt supplier has undertaken proactive consultations.		
<b>ADDITIONAL REQUIREMENTS FOR OPEN (NET-PEN) PRODUCTION OF SMOLT</b>					
In addition to the requirements above, if the smolt is produced in an open system, evidence shall be provided that the following are met:					
<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.					
<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:					
1. the farm was stocked prior to June 13, 2012; and					
2. 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.					
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.					
Native: native to the area and with a history of naturally occurring and also if intentionally stocked for restoration purposes. Areas with a combination of wild native and enhanced native populations are included.					
8.24	<b>Indicator:</b> Allowance for producing or holding smolt in net pens in water bodies with native salmonids <b>Requirement:</b> None <b>Applicability:</b> All Smolt Producers Using Open Systems	a. Obtain a declaration from the farm's smolt supplier stating whether the supplier operates in water bodies with native salmonids.	A. Verify that the farm obtains relevant declarations from its smolt supplier(s).		
		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.	B. Confirm that the farm obtains information on the water bodies in which its suppliers are operating net pens for smolt production.		
		c. For any water body identified in 8.24b as a source of smolt for the farm, determine if native salmonids are present by doing a literature search or by consulting with a reputable authority. Retain evidence of search results.	C. Review search results and cross-check against the other lines of evidence for salmonid distribution in the region (e.g. results from 3.1.5a).		

8.25	<p><b>Indicator:</b> Allowance for producing or holding smolt in net pens in any water body</p> <p><b>Requirement:</b> Permitted until five years from publication of the SAD standards (i.e. full compliance by June 13, 2017)</p> <p><b>Applicability:</b> All Smolt Producers Using Open Systems</p>	a. Take steps to ensure that by June 13, 2017 the farm does not source smolt that was produced or held in net pens.	A. Prior to the effective date, confirm that the client understands the requirement of Indicator 8.25. After the effective date, confirm that the farm is in full compliance with the requirement.		
8.26	<p><b>Indicator:</b> Evidence that carrying capacity (assimilative capacity) of the freshwater body has been established by a reliable entity [171] within the past five years [172], and total biomass in the water body is within the limits established by that study (see Appendix VIII-5 for minimum requirements)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers Using Open Systems</p>	a. For the water body(s) where the supplier produces smolt for the client (see 8.24b), obtain a copy of the most recent assessment of assimilative capacity.	A. Verify that the farm obtains copies of assimilative capacity assessments as are relevant to the water bodies in which its smolt supplier(s) operate.		
		b. Identify which entity was responsible for conducting the assessment (8.26a) and obtain evidence for their reliability.	B. Verify that the assessment was done by a reliable entity (e.g. government body or academic institution).		
		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.	C. Verify that the assessment report is in compliance with requirements.		
		d. Review information to confirm that the total biomass in the water body is within the limits established in the assessment (8.26a).	D. Verify that the farm confirms that total biomass in the water body does not exceed carrying capacity.		
		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.	E. Verify that the farm requests an updated assessment (< 2 years old) if there was a significant increase in nutrient inputs to the water body.		
Footnote	[171] E.g., Government body or academic institution.				
Footnote	[172] If the study is older than two years, and there has been a significant increase in nutrient input to the water body since the completion of the study, a more recent assessment is required.				
<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 centimetres 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 down current 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>					
8.27	<p><b>Indicator:</b> Maximum baseline total phosphorus concentration of the water body (see Appendix VIII-6)</p> <p><b>Requirement:</b> ≤ 20 µg/l [174]</p> <p><b>Applicability:</b> All Smolt Producers Using Open Systems</p>	a. Obtain documentary evidence to show that smolt suppliers conducted water quality monitoring in compliance with the requirements of Appendix VIII-6.	A. Verify that the farm obtains copies of the smolt supplier's monitoring records (datasets, protocols, reports).		
		b. Obtain from smolt suppliers a map with GPS coordinates showing the sampling locations.	B. Review and confirm that the spatial arrangement of sampling stations complies with requirements of Appendix VIII-6.		
		c. Obtain from smolt suppliers the TP monitoring results for the past 12 months and calculate the average value at each sampling station.	C. Review TP monitoring results.		
		d. Compare results to the baseline TP concentration established below (see 8.29) or determined by a regulatory body.	D. Repeat comparison.		
		e. Confirm that the average value for TP over the last 12 months did not exceed 20 µg/l at any of the sampling stations nor at the reference station.	E. Verify that TP ≤ 20 µg/l in the receiving water body.		
Footnote	[173] This concentration is equivalent to the upper limit of the Mesotrophic Trophic Status classification as described in Appendix VIII-7.				
Note: see instructions for Indicator 8.27.					
8.28	<p><b>Indicator:</b> Minimum percent oxygen saturation of water 50 centimetres above bottom sediment (at all oxygen monitoring locations described in Appendix VIII-6)</p> <p><b>Requirement:</b> ≥ 50%</p> <p><b>Applicability:</b> All Smolt Producers Using Open Systems</p>	a. Obtain evidence that smolt supplier conducted water quality monitoring in compliance with the requirements (see 8.27a).	A. Verify as above (see 8.27A).		
		b. Obtain from smolt suppliers the DO monitoring results from all monitoring stations for the past 12 months.	B. Verify that farm has copies of supplier's DO monitoring results.		
		c. Review results (8.28b) to confirm that no values were below the minimum percent oxygen saturation.	C. Review the supplier's monitoring results to verify compliance with requirements.		

8.29	<b>Indicator:</b> Trophic status classification of water body remains unchanged from baseline (see Appendix VIII-7) <b>Requirement:</b> Yes <b>Applicability:</b> All Smolt Producers Using Open Systems	a. Obtain documentary evidence from the supplier stating the trophic status of water body if previously set by a regulator body (if applicable).	A. Verify that farm obtains evidence from suppliers (as applicable).	
		b. If the trophic status of the waterbody has not been classified (see 8.29a), obtain evidence from the supplier to show how the supplier determined trophic status based on the concentration of TP.	B. Review how supplier determined trophic status (as applicable).	
		c. As applicable, 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.	C. Verify that the farm conducts a review of the supplier's results and conclusions regarding trophic status of the water body.	
		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.	D. Review the farm's conclusion to verify compliance with the requirement.	
8.30	<b>Indicator:</b> Maximum allowed increase in total phosphorus concentration in lake from baseline (see Appendix VIII-7) <b>Requirement:</b> 25% <b>Applicability:</b> All Smolt Producers Using Open Systems	a. Determine the baseline value for TP concentration in the water body using results from either 8.29a or 8.29b as applicable.	A. Verify that farm has supplier's records for baseline TP concentrations in the water body.	
		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).	B. Repeat comparison.	
		c. Verify that the average observed TP concentration did not increase by more than 25% from baseline TP concentration.	C. Repeat calculation to verify compliance with the requirement.	
8.31	<b>Indicator:</b> Allowance for use of aeration systems or other technological means to increase oxygen levels in the water body <b>Requirement:</b> None <b>Applicability:</b> All Smolt Producers Using Open Systems	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.	A. Verify that the farm obtains relevant declarations from its smolt supplier(s).	
<b>ADDITIONAL REQUIREMENTS FOR SEMI-CLOSED AND CLOSED PRODUCTION OF SMOLTS</b>				
Additionally, if the smolt is produced in a closed or semi-closed system (flow through or recirculation) that discharges into freshwater, evidence shall be provided that the following are met [177]:				
<b>Instructions to Client for Indicators 8.32-8.35 - Requirement for smolts 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 not produced, for part or all of the growth phase from alevin to smolt, in open (net-pen) systems, indicators 8.32 - 8.35 are applicable. -If the production system is closed or semi-closed and does not discharge into freshwater, indicators 8.32 - 8.35 are not applicable to smolt producers as per [176]. For such an exemption, farms must provide documentary evidence to the CAB. Auditors shall fully document their rationale for awarding exemptions in the audit report.				
Footnote	[176] Production systems that don't discharge into fresh water are exempt from these standards.			

8.32	<p><b>Indicator:</b> Water quality monitoring matrix completed and submitted to ASC (see Appendix VIII-2)</p> <p><b>Requirement:</b> Yes [177]</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>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.</p> <p>b. Obtain water quality monitoring matrix from smolt suppliers and review for completeness.</p> <p>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.</p>	<p>A. Verify that farm has records to show smolt suppliers conducted water quality monitoring at the required frequency and duration.</p> <p>B. Confirm that smolt supplier's water quality monitoring program covers sampling of all parameters given in Appendix VIII-2 (i.e. TP, TN, BOD, TSS).</p> <p>C. Confirm that client has submitted to ASC the smolt supplier's water quality monitoring matrix for the last 12 month period.</p>		
Footnote [177] See Appendix VI for transparency requirements for 8.32.					
8.33	<p><b>Indicator:</b> Minimum oxygen saturation in the outflow (methodology in Appendix VIII-2)</p> <p><b>Requirement:</b> 60% [178,179]</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Obtain the water quality monitoring matrix from each smolt supplier (see 8.32b).</p> <p>b. Review the results (8.33a) for percentage dissolved oxygen saturation in the effluent to confirm that no measurements fell below 60% saturation.</p> <p>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 at least a week demonstrating a minimum 60% saturation at all times (Appendix VIII-2).</p>	<p>A. Verify that the farm obtains water quality monitoring records from its smolt supplier(s).</p> <p>B. Review the supplier's monitoring results to verify compliance with requirements.</p> <p>C. Verify that the farm obtained evidence for enhanced DO monitoring by the smolt supplier (as applicable).</p>		
Footnote [178] A single oxygen reading below 60 percent would require daily continuous monitoring with an electronic probe and recorder for at least a week demonstrating a minimum 60 percent saturation at all times.					
Footnote [179] See Appendix VI for transparency requirements for 8.33.					
8.34	<p><b>Indicator:</b> Macro-invertebrate surveys downstream from the farm's effluent discharge demonstrate benthic health that is similar or better than surveys upstream from the discharge (methodology in Appendix VIII-3)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Obtain documentation from smolt supplier(s) showing the results of macro-invertebrate surveys.</p> <p>b. Review supplier documents (8.34a) to confirm that the surveys followed the prescribed methodology (Appendix VIII-3).</p> <p>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.</p>	<p>A. Verify that the farm has documentation of macro-invertebrate benthic surveys from its smolt supplier(s).</p> <p>B. Review documents from the farm's smolt supplier to verify the surveys were conducted as required in Appendix III-3.</p> <p>C. Review documents to verify that survey results demonstrate compliance with requirements.</p>		
8.35	<p><b>Indicator:</b> Evidence of implementation of biosolids (sludge) Best Management Practices (BMPs) (Appendix VIII-4)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Maintain a copy of smolt supplier's biosolids (sludge) management plan and confirm that the plan addresses all requirements in Appendix VIII-2.</p> <p>b. Obtain from smolt suppliers a process flow diagram (detailed in Appendix VIII-2) showing how the farm is dealing with biosolids responsibly.</p> <p>c. Obtain a declaration from smolt supplier stating that no biosolids were discharged into natural water bodies in the past 12 months.</p> <p>d. Obtain records from smolt suppliers showing monitoring of biosolid (sludge) cleaning maintenance, and disposal as described in Appendix VIII-2.</p>	<p>A. Review the supplier's biosolids management plan for compliance with Appendix VIII-2.</p> <p>B. Review the supplier's biosolids process flow diagram for compliance with Appendix VII- 2.</p> <p>C. Confirm that farm obtains declarations from smolt suppliers.</p> <p>D. Review the farm's records from smolt suppliers to verify there is evidence of implementation of biosolids management as required in Appendix VIII-2.</p>		

## ASC Audit Report Summary

### 11 Findings

#### 11.1 A summary table that lists all non-conformities and observations

NC reference	NC Status	Clause Reference	Description of NC	Descriptions of actions pending
CZ2016 - 1	Open	2.5.6b	Over the past two years there have been 16 lethal incidents at the Bruny Island farm-site all of which were birds. Over the equivalent period at the North West Bay farm-site 16 birds and one marine mammal were reported as dead. These figures are well above the trigger points for the standard.	Upgraded infrastructure. Nightwatch now also assess farm pens to ensure we are bird free.
CZ2016-2	Open	3.1.1	A specific AMA has not been developed and signed off by the two companies operating in this region.	Formal AMA to be progressed once all companies have achieved certification.
CZ2016-3	Open	5.1.6	Unexplained mortalities from YC 13 at both Sheppards and Soldiers Point was >40% of total mortalities. For YC14 many of these unexplained mortalities were classed as 'Environmental' and so unexplained mortality was <40% at both Sheppards and Soldiers Point. Additional justification of causes of mortalities as 'environmental' rather than 'unexplained' is desirable.	Our classification procedure aims to move away from divers diagnosing cause of death and to concentrate simply on observing the mortality instead. If mortalities are remarkable or at a high level then the Technical Officer or site management will investigate further and either diagnose or collaborate with the health team to understand root cause.
CZ2016 - 4	Open	6.1.1	In recent times there has been disagreement between the Client and the AWU regarding access to employees at the farm-sites in question. This issue primarily revolved around the Union wanting to visit employees on site and the Client not wanting to use company resources to ferry Union Officials around on the water. The current compromise is for the Union to have access during pre-work meetings. The Auditor witnessed such a meeting and spoke with Union Officials afterwards, whom stated that they are prepared to see if the new arrangements brings improvements.	N/A - observation
CZ2016 - 5	Open	6.8.1	Discussions with workers confirmed that they are familiar with the Client's labour conflict policies and procedures. Workers provided general examples of incidents where grievances have been identified, expressed and mitigated. However, on one occasion it was expressed to the Auditors that employee complaints about birds entering nets and other employees littering the waterways have been largely ignored.	N/A - observation
CZ2016 - 6	Open	7.1.3	Notices of antibiotic usage are posted on the relevant pens, photographic evidence has been provided to the Auditor. During the onsite audit a "medicated feed" sign was observed on the feed barge at the Bruny Island farm-site. This grow-out sign is not meant to have medicated feed. This issue was brought up with the Client who explained that the sign was left on the barge after it was recently moved from the Roberts smolt site. The Client has provided the Auditor with a copy of the Government approved alteration to their licence to re-locate the feed barge to the Bruny Island site.	N/A - observation

11.2 A copy of the non-conformity report form completed for each non-conformity and observation raised.

**12 Evaluation Results**

12.1 A report of the results of the audit of the operation against the specific elements in the standard and guidance documents.	The current surveillance audit identified three minor non-conformities involving bird mortalities, area based management and unexplained stock mortalities. All three non-conformities are new for the Channel Zone and represent areas that the Client can improve upon. The Client action plans presented should facilitate these improvements.
12.2 a clear statement on whether or not the audited operation has the capability to consistently meet the objectives of the relevant standard(s).	The Channel Zone farm sites recently went through a restructuring, resulting in minimal impact on the audit outcome. The minor non-conformities that have been identified do not represent systemic problems and should be able to be closed out within the 12 month time frame. For these reasons along with the high level of organisation witnessed during the onsite audit, the audit team believes the Client has sufficient capability to consistently meet the objectives of the Standard.
12.3 In cases where Biodiversity Environmental Impact Assessment (BEIA) or Participatory Social Impact Assessment (PSIA) it shall be added in full to the audit report. IF these documents are not in English, then a synopsis in English shall be added to the report as well.	N/A

**13 Decision**

13.1 Has a certificate been issued? (yes/no)	Yes
13.2 The Eligibility Date (if applicable)	N/A - surveillance audit
13.3 Is a separate coc certificate required for the producer? (yes/no)	N/A
13.4 If a certificate has been issued this section shall include:	
13.4.1 The date of issue and date of expiry of the certificate.	Certificate issuance date: 10 Jun 2014 North West Bay; 16 Oct 2014 Bruny Island Certificate expiry date: 9 Jun 2017 North West Bay; 15 Oct 2017 Bruny Island
13.4.2 The scope of the certificate	Aquaculture production of Atlantic Salmon ( <i>Salmo salar</i> ) from the Channel Zone: Bruny Island MF110 & North West Bay MF 94.

**14 Surveillance**

14.1 Next planned Surveillance	
14.1.1 Planned date	
14.1.2 Planned site	
14.2 Next audit type	
14.2.1 Surveillance 1	
14.2.2 Surveillance 2	
14.2.3 Re-certification	x
14.2.4 Other (specify type)	

The audit team attended a morning tool box meeting during the on-site visit to witness an address by the Australian Workers Union (AWU) to farm staff. Facilitated by the Client with the consent of the workplace union representative and the union its self. The auditor had the opportunity to discuss matters with the AWU privately and confidentially following the onsite address, and during a subsequent phone call. These discussions with the AWU were centered around a recent compromise between the Client and the AWU regarding Union access to employees. The outcome of the compromise was that the AWU could access members and staff during pre-work meetings, as was witnessed by the Auditor.