

Compiled public comments and responses

October 17, 2016

Public Comment Guidance:

This document provides an opportunity to comment on some changes that we are proposing to implement based on our use of the Aquaculture standard over the course of the last year. Our intent with these changes is to improve clarity and ease of use of the standard. Most are minor clarifications, but one area which could potentially be more substantive is regarding the percent of harvested, farmed fish byproducts that are used for further protein production, addressed under Criterion 5.

Seafood Watch is accepting comments on these proposed changes to the Standard for Fisheries from August 18th through September 18th 2016.

Proposed change	Comment	Response
Criterion 1 – No proposed changes	n/a	n/a
<p>Criterion 2 - Factor 2.1b – Production system discharge</p> <p>Changes proposed in Criterion 2 Factor 2.1b are clarifications to the text which would not materially affect the outcome of assessments. It is to clarify that we assess water exchange rates as an average, annual, daily rate over an entire grow out cycle, rather than on a day-to-day basis, which the earlier language could be interpreted to mean. This is not a change to the way Seafood Watch will assess water exchange rates in ponds. It is a clarification of the language.</p>	No comments	
<p>Criterion 2 - Factor 2.2a – Content of effluent management measures</p> <p>Changes proposed in Criterion 2 Factor 2.2a are clarifications to the scoring option for score 3 out of 5. They do not affect the outcome of assessments, only help to clarify the intent of this scoring option. The proposed changes to text clarify that this scoring option is applicable in scenarios where management measures set effluent limits that are site-specific, but are not</p>	No comments	

part of a larger, cumulative or area-based management strategy for effluent.		
Criterion 3 – No proposed changes	n/a	n/a
<p>Criterion 4 - Background and rationale The proposed additional clarifies that the trend adjustment, which was added as part of the Seafood Watch Aquaculture Standard update in 2015, cannot be applied if the base score for Criterion 4 is Critical.</p> <p>This functions to ensure that if ongoing activities are egregious enough to warrant a Critical score, a decline in chemical use will not improve the score and sweep those activities under the rug.</p>	<p>Overall, background and proposed changes are acceptable.</p> <p>Reference to 70-80% excretion rates of antibiotics administered is not an accurate value. The reference given should be verified and updated- please see references below. The Christensen study referenced does not itself evaluate antibiotic lost to the environment, but references other studies- this goes back to research by Samuelsen, Torsvik and Ervik (1990), which is outdated and considers only oxytetracycline. Farming practices and antibiotic choice have changed greatly since this research.</p> <p>More commonly used antibiotics, such as florfenicol, are more readily absorbed by salmon, with far lower excretion levels than oxytetracycline. For example, Florfenicol has a bioavailability of 96.5% in cultured salmon (Martinsen et al. 1993). In contrast, oxytetracycline has a much lower bioavailability, ranging from 0.6 to 8.6% depending on food intake, fish species and water quality parameters (Cravedi et al., 1987; Grondel et al., 1987; Plakas et al., 1988; Bjorklund, 1991). This information demonstrates that these drugs differ in their pharmacokinetics (how the salmon processes the antibiotic), and that the 70-80% figure should not be used to describe antibiotic excretion across the board.</p>	Not part of the request for feedback. Will be addressed in 2019 update.
Criterion 4 – Chemical use – Score 4 out of 10	No comments	

<p>The proposed language change clarifies the application of this scoring option. It is intended to be applicable to management measures for limits on frequency of use, total use, and mitigation measures (as seen in the proposed update in score 2 out of 10 below).</p>		
<p>Criterion 4 – Chemical use – Score 2 out of 10 The proposed additional text is intended to capture scenarios where there is confirmed resistance, and management measures are either not in place or are ineffective.</p> <p>This clarifying text is proposed in order to differentiate this scoring option from the proposed language discussed in the Score 4 out of 10 (as seen in the proposed language for score 4 out of 10 above).</p>	<p>No comments</p>	
<p>Criterion 4 – Chemical use – Score Critical The proposed text is intended to decrease subjectivity and clarify the intent of this scoring option.</p> <p>This scoring option is intended for long-term negative impacts from illegal chemical use.</p> <p>The original wording could have been incorrectly interpreted as applying to a scenario where a one-time illegal activity had a minimal, short-term ecological impact.</p>	<p>No comments</p>	<p>Proposed text “long-term” changed to “persistent.”</p>
<p>Criterion 5 - Factor 5.2 – Net protein gain/loss</p>	<p>No comments</p>	<p>Assumption changed from 100% to 50%</p>

<p>One of the assumptions currently made in Seafood Watch’s calculation of protein gain/loss is that 100% of the by-products generated during processing of harvested farmed fish (i.e. the materials often considered non-edible, such as skin, viscera, head and rack, etc.) are used for further protein production, unless it is known that such products are not utilized.</p> <p><u>We are requesting constructive comment on this assumption, and welcome specific, referenced suggestions for an alternative value that is representative of the global aquaculture industry’s further use of harvesting by-products.</u></p> <p><i>*Please note that this assumption is not applicable to unfed species or systems (i.e. shellfish), as those species/systems are automatically awarded a Feed Criterion score of 10 out of 10.</i></p>		
<p>Criterion 6 - Factor 6.1 – Escape risk Proposed additional scoring option for score 4 out of 10. This text has been added in order to maintain consistency with similarly themed scoring options in other scores within this factor.</p>	Reference to footnote 41 under moderate is incorrect	Addressed
<p>Criterion 6 - Factor 6.2 – Invasiveness The proposed title change from “Invasiveness” to “Competitive and genetic interactions” is to reduce confusion about the applicability of this factor. “Invasiveness” implies impacts from non-native species, whereas this factor focuses on impacts from both native and non-native escaped, farmed species to wild species and environments.</p>	No comments	
<p>Criterion 7 – No proposed changes</p>	n/a	n/a
<p>Criterion 8X – No proposed changes</p>	n/a	n/a
<p>Criterion 9X – No proposed changes</p>	n/a	n/a

<p>Criterion 10X - This proposal is to change the title of Criterion 10X from “Escape of non-target species” to “Escape of secondary species.” There has been confusion over the interpretation of “non-target,” and we believe “secondary” better captures the intent, which is to describe species that are unintentionally moved along with the target species.</p> <p>An example would be in the transport of shrimp post larvae (target species). Any pathogens that are unintentionally transported along with the post larvae would be considered secondary. This criterion assesses the risk of secondary species entering and exiting the grow- out site.</p>	<p>No comments</p>	
<p>Other (Criterion 6)</p>	<p>We have concerns with wording in the background/rational. P. 48 notes that, through escape events and introduction attempts, no reports of reproducing Atlantic salmon have been found in BC, yet states that establishment is “uncertain”. Recommend included the most recent literature, Andres, 2015 (http://www.dfo-mpo.gc.ca/Library/357053.pdf) which states that “it can reasonably be concluded that...establishment of feral populations has not occurred” (p. 18) and removing the word uncertain.</p>	<p>Not related to any specified updates. Will be addressed with 2019 update.</p>
<p>Other (Criterion 7)</p>	<p>We have serious concerns with footnote 63- “the values are not contested by conservation organizations”. Because a value is contested by a conservation organization does not mean that it is not scientifically robust. For example,</p>	<p>The quoted text has been deleted.</p>

	<p>in British Columbia, sea lice thresholds have been set at a level that is conservative and for the purpose of protecting wild salmon. These levels have been shown to be effective in this purpose (e.g. http://bamp.ca/images/2013%20Rogers%20et%20al%20-%20journal.pone.0060096.pdf), but remain contested by groups who will argue that any louse is too many. Contestation by a conservation organization is not a reasonable rationale to downgrade a score on this criterion.</p>	
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