

Monterey Bay Aquarium Seafood Watch®

Seafood Watch® Criteria for Fisheries

Summary of the Seafood Watch Aquaculture Technical Advisory Committee (May 4-5 2015)

Preamble

Seafood Watch assesses the environmental sustainability of fisheries and aquaculture by compiling relevant science-based information and evaluating that information against our standards (called 'Criteria' elsewhere on this website). We periodically revise our standards to ensure we account for developments in the scientific understanding of the ecological impacts of fisheries and aquaculture operations, as well as in our understanding of what producers and managers can do to mitigate those impacts. On May 4-5, 2015, we held a meeting with our Aquaculture Technical Advisory Committee (TAC) to discuss emerging issues, proposals for changes, and suggestions received during our public comment period held from October 27, 2014 to January 16, 2015. The role of the TAC is to provide scientific expertise and advice; it is not a decision-making body, but advice from the TAC was given serious consideration in developing the second draft of our criteria. The meeting notes below represent a brief synopsis of the discussions held during that two-day meeting.

Meeting Objectives

1. To review the goals and terms of reference for the Seafood Watch Aquaculture Technical Advisory Committee
2. To consider potential revisions to the Seafood Watch Aquaculture Criteria
3. To consider new ideas for the Seafood Watch Aquaculture Criteria

Participants

#	Name	Affiliation
1	David Little	University of Stirling
2	Jenna Stoner	Living Oceans Society
3	Alejandro Buschmann	Universidad De Los Lagos

4	Pete Bridson	Seagreen Research
5	John Volpe (by phone)	University of Victoria
6	Simon Bush	Wageningen University
7	Kevin Fitzsimmons	University of Arizona
8	Dan Lee	Global Aquaculture Alliance
9	Stephen Cross	Seavisions Group
10	Peter Tyedmers	Dalhousie University
11	Jose Villalon	Nutreco
12	Michele Stark	Seafood Advisory
13	Anton Immink	Sustainable Fisheries Partnerships
14	Wendy Norden	Seafood Watch
15	Corey Peet	Seafood Watch
16	Lisa Tucker	Seafood Watch
17	Cyrus Ma	Seafood Watch
18	Taylor Voorhees	Seafood Watch
19	Sam Wilding	Seafood Watch
20	Lisa Max	Seafood Watch
21	Robin Pelc	Seafood Watch
22	Brian Albaum	Seafood Watch
23	Santi Roberts	Seafood Watch

Opening statements state and future of Seafood Watch

The meeting opened with the Technical Advisory Committee (TAC) sharing their thoughts on the current state and future of Seafood Watch (SFW). Suggestions included some of the following ideas:

- General interest to see how energy and social will be incorporated into the revised criteria.
- SFW should consider how to at least support the slavery issue with some sort of social criteria or build off the work of others
- It's Important to consider how zonal management approaches could factor into assessments
- Traceability will be critical to address in the near future
- Protein consumption in the US and ensuring that appropriate comparisons are being made to other types of meat production will be an important consideration moving forward
- Finding a way to support the development of new aquaculture food systems and consider how SFW judges these systems will impact these innovators, sharing information to producers, purchasing.
- There is the appearance of a bias against developing country aquaculture based on poor data sharing but Aquaculture has made major strides in the past 10 years and SFW needs to find a way to support these improvements.
- Suggestion that SFW should play a greater role in pushing for greater data transparency across the aquaculture industry and especially with the most developed industries (e.g. salmon, etc.)

- Concern was expressed that the SFW system holds aquaculture to a higher standard than other types of systems
- Concerns about decisions/behaviors of companies trying to chase green.
- Need to keep big picture of what direction we want to go in mind always.
- Criteria does allow you to reverse engineer to a green- multiple pathways to do this.

Terms of Reference

A brief discussion took place on the Terms of Reference for the Technical Advisory Group which explains the rules of engagement for members. In general, the TAC members agreed with the process laid out in the document. Members completed forms to declare any affiliations and potential bias. The voting rule of a 2/3rd's majority was confirmed.

Chemical

Is any highly important and critically important antibiotic use acceptable?

The committee discussed this issue and there was general agreement that SFW could allow some use of these in their criteria although SFW does not consider animal welfare within their scope. Another approach would be to categorize based on the concern of environmental impact as some types of chemicals are more concerning than others. Studies have shown that aquaculture has very limited use compared to terrestrial industries so this should be considered moving forward.

What use (volume) of antibiotics significant? What use is considered low?

The committee discussed this issue and there is a significant difficulty when quantifying the level of risk to determine where is it ok and where does it become a problem especially when there is a huge range of practices (e.g. salmon versus SE Asia). Some antibiotics for human health should be restricted in animal production and moving forward there is a need to understand what these antibiotics are doing in the aquatic systems and if chemical use is being managed in some way that makes sense from an impact perspective. Acceptable quantities and frequencies depends on the type of diseases and bacteria you have so it's difficult to define a hard rule. May need to consider how to set different limits for different species or arenas of production to account for different biological / ecological realities. It's also important to figure out how to build in the responsibility of the industry.

If illegal activity is not having a significant eco impact should we penalize them?

The general consensus from the group on this issue is that it is difficult to go against government and under no circumstances should Seafood Watch say that illegal activities are ok. However, the Illegal label can have different levels of applicability and Chinese laws, EU laws, US laws can define 'illegal' very differently which poses a big challenge for interpretation. SFW is going to figure out how to integrate this into the criteria in new ways.

Feed

Fisheries byproducts are not currently included in the feed calculation? Should they be? If so, how?

Fishery byproducts are considered low economic value to humans but have the same ecological cost of production as whole wild fish. While byproducts are not included in the FFER calculation, they are included in the feed Footprint calculation to account for area required to produce aquaculture feeds. Generally, it's very hard to get data for most of the feed ingredients especially at the country scale and if SFW was to include byproduct impacts then it might unfairly penalize rather than give them any credit for using byproducts. There was concern expressed that if SFW does start to account for byproducts going in then SFW would need to look at byproducts going out and it may not really be responsible for a large enough conservation concern to warrant inclusion in the criteria.

Shrimp farming has a low impact on ocean resources but cumulative ecological issues (trash fish) are problematic? How should SFW address?

The problem here is how to allocate the appropriate level of concern that might only be associated with one or two bad actors that ends up affecting the entire industry. The social impacts changes the context of this question and SFW needs to consider options for assessments. One option could be to change the weighting of the source of the fisheries in the criteria and include a "kill switch" that SFW can use as a place holder. Concern was expressed by the TAC about how do you assess these situations especially when there is no data or published scientific reports? SFW could consider kill switches for IUU trash fish fisheries only when farming sector is known to directly drive fishery sustainability problems (by-catch of critically threatened species) but we need to be very careful on this issue.

How should SFW recognize the ecological impacts of different groups of ingredients (marine, crop and land animals) and net conversion efficiencies?

There are whole initiatives around some things like palm oil and it's difficult to justify reducing marine feeds for soy and palm oil. The challenge SFW will face is where do you draw the line? Do we need to call out specific products? Soy coming from amazon rainforest is something that should be addressed but there could be a whole lot more work for analysts without much gain especially given the challenge of getting data from feed companies.

Effluent

What are the most important effluent impact concerns that need to be addressed by the criteria? Does the criterion sufficiently address cumulative effluent impacts?

There were no major effluent impacts identified by the TAC that SFW needs to consider moving forward. However, some of the TAC suggested specifically promoting/acknowledging polyculture by SFW to extent possible and to consider giving positive adjustments. In addition, the challenge of addressing cumulative impacts was noted by the TAC and acknowledged by SFW as a consistent and ongoing challenge. The key may be to reward management systems that specifically addresses cumulative impacts via area based management strategies that account for other industries when the in the case where data is not available

Is it necessary to have a global database of management effectiveness scores across a variety of key aqua producing countries?

SFW would very much like to have this if it was actually possible to do it. Currently, SFW considers management effectiveness as a proxy to identify risk of impact but cannot defer to it as a credible means of impact prevention. Management was in the original but didn't apply to all criteria and therefore was removed in the current version.

Habitat

What are the most important habitat impact concerns that need to be addressed? Does the criterion adequately address cumulative habitat impacts?

There was concern expressed by the TAC about the lack of options that can be actively used by a farmer to implement change as the current language of the criteria suggests farmers have the ability to choose better sites which is often not the case. Ecosystem services often depends on who you are talking to and perhaps measuring biodiversity loss would be easier to measure. It's clear that there is a strong need to have a better metric for defining ecosystem services although across a range of different habitat types, production systems, and species it's very difficult to find a tool that can measure habitat value accurately. There was a suggestion to consider the habitat as an exception criterion since it generally comes out ok for most assessment.

Escapes

Is the escape risk scoring correct?

The key message from this section is for SFW to consider how to provide incentive for improvement and reward good performers. If there were data on escapes, what's the record of actual escapes for different production systems; (i.e., in the past, per million animals held in this type of system how many have typically escaped?) The current tables are an attempt to make an objective framework for an analyst and there is usually very little data to use. A key question to consider is how you balance the track record versus production system measures/ management to quantify the risk of escape? The TAC would like to see the criteria provide the carrot to provide process for superior performers (with data to back it up) to be recognized in criteria. Need a way to award good performers, especially if they have the historical data to show it.

What evidence do we need to reduce the level of concern (Atlantic salmon in BC/Chile)?

If there is a national monitoring program in place for that specific species then could accept a reduced risk but otherwise cannot accept reducing this risk in the scoring. If you lower the concern people will get relaxed about it and this could cause a credibility problem. Important to note that there are many case of species not successfully establishing over the years and then all of a sudden they do because the environment changes. There was a suggestion that SFW needs to consider the quality of the receiving environment in the assessment because that could be a predictor of risk and impact. SFW will reevaluate the table and restructure how to evaluate net pens in addition to considering how to reevaluate the receiving environment

Disease

Does the legacy of the farmed salmon disease transfer justify the current level of concern/precaution in this criteria?

There is the challenge of the available evidence being sufficient to draw conclusions on the level of actual risk to wild stock as it's impossible to definitively link farms to diseased fish. There are at least a dozen diseases that can be lethal to salmon but scientists are not sampling for them so this has to be a risk-based criterion. Based on this we can justify being precautionary in the criteria. Currently, disease incidents on the farm are not a major concern for the criteria but this is indicative of poor management and perhaps should be reconsidered especially when there is evidence of repetition of disease outbreaks at the farm. Disease on the farm does not necessarily equal disease in wild populations and there is a danger making it too simplistic.

Data Quality

How should data availability play a role in SFW criteria?

Publicly available versus protecting proprietary info is the challenge of the assessments. C1 does not currently count toward overall scoring decision rules but perhaps this should be reconsidered as it may be contradictory to the goal of the program. Impact is best judged by real data that is posted publicly. Could explore options to separate out proprietary data if necessary. One of SFW principles is to increase the amount of publically available data and this is an important role for SFW.

Greenhouse gas emission presentation

There was a presentation by Lisa Max (Seafood Watch Fisheries Scientist) on the draft Greenhouse Gas criteria for the Seafood Watch program. Most research indicates that GHG is being driven by the feeds in aquaculture so perhaps it's important to focus there. This would be the first criterion that would be comparable to beef and this could be an important new area for Seafood Watch to explore and there is support from the TAC to explore this.

Social issues

Should SFW consider social issues?

Ideally we don't want to make this from scratch if SFW includes it all. SFW is hopeful that we can could use someone else's work as a bolt-on and are exploring options to do that already. If you look at seafood, there is a high correlation with poverty and aquaculture value chains are known to be transformative to people's lives so there is a strong argument that you cannot separate environmental issues from social issues but it's important to recognize that you cannot address poverty through standards. Seafood Watch does impact the value chain by making recommendations and there is a need to take this responsibility seriously.

Parking lot Issues to be discussed in the Future

This issues listed below were topics that were either addressed insufficiently at the meeting or not at all and there is a need to revisit them at the next meeting or via webinar.

- **Competitive research tenures to address key knowledge gaps**
- **Producer support tools**

- **Traceability**