fair-fish association
Burgstrasse 107 · CH-8408 Winterthur
Fix: 0041 52 301 44 35 · Fax: 0041 52 301 45 80
Mob: 0041 79 54 53 53 9 · info@fair-fish.ch
www.fair-fish.net

fair-fish
fairness with the fish we eat

World Wildlife Fund <katherine.bostick@wwfus.org>
Mrs Katherine Bostick <salmonaquaculture@wwfus.org>
Aquaculture Program Officer
1250 24th Street, NW
USA-Washington DC 20037-1193

June 14, 2011 (by EMail)

Comments on the second draft of standards for responsible Salmon aquaculture by the Salmon Aquaculture Dialogue (SAD2)

Dear Katherine
Dear members of the FTAD steering committee

Thank you for the opportunity to comment on your second draft again.
Like the first time, we focus on the two following issues.

Animal welfare

> *SAD2, page 7*
> *Animal welfare (i.e., farmed fish welfare and wildlife interactions, including treatment of and impacts on predators) has been raised by some stakeholders as an issue for the SAD to address. Wildlife interactions will be addressed under Principle 2. The SC has decided, however, not to comprehensively address farmed fish welfare in the standards document, as the SC believes that 1.) farmed fish welfare does not fall under the mandate of the SAD and was not part of the rationale for creating the SAD, 2.) the SC does not have appropriate expertise on the issue, 3.) other fish welfare standards and processes already exist, and 4.) there is potential to partner in the future with other certification programs that address farmed fish welfare. The SC expects that some aspects of farmed fish welfare will be addressed, indirectly, under the standards (e.g., through several environmental and fish health standards).*

Draft 2 does still not directly address animal welfare. It is true that some other standards adress this, but they represent but a very small part of the market, so this is rather a weak

Advisory Board: Prof. Rudolf Hoffmann, Munich · Prof. Detlef Fölsch, Witzenhausen · Prof. Helmut Segner, Bern
German office: Postfach 630127 · D-10266 Berlin · Austrian office: Luigi-Kasimir-Gasse 30 · A-8045 Graz
The fair-fish association is supported by members, donators and und project grants.
Bank accounts · Switzerland: Postfinance 87-531'032-6 – Germany: Postbank 143'019'706, BLZ 600'100'70

excuse as in reality, practically all future ASC certified Salmon farms will not apply any animal welfare standrads at all.
A standard backed by big WWF could make a change – and should, we feel. **We therefor remind you of our input to draft 1** and would like to underline the following:

1. Any certification scheme for aquaculture should address animal welfare as it is, together with ecology and sustainability issues, **the core concern.** Aquaculture is about rearing and treating animals first of all.

If you are really to set up a standard for responsible Salmon farming without addressing issues like ethology and «humane slaughter», you resp. the farmers who follow your standard will sure have to correct this in future – then certainly under pressure of consumers instead of proactively by your own will.
We again strongly advise you to search for experts in fish ethology and invite them to your dialogue. We would like to offer our help in making contacts to relevant persons.

2. Fish welfare is more than just health of the fish. Fish health is an outcome of fish welfare. Conversely, factors enhancing fish welfare do of course embrace fish health, but many other factors are responsible also, e. g.:
- species appropriate structure of the artificial habitat (allowing a variety of flow velocities, light/shadow, withdrawal of subdominant individuals, a.s.o.)
- species appropriate stocking density (which is a component of fish welfare and not to be discussed with regard to fish health solely)
- avoidance of rapid temperature changes, of noise and freightening
- minimum requirements for handling, transportation, stunning and killing
- minimum requirements for rearing practices (species engineering)
- a.s.o.

3. Lack of animal welfare in a fish farm is directly linked with a range of subsequent issues which, by the way, have economical consequences:
- increased disposition to disease and increased rates of medicamentous treatment
- increased inclination to (genetically) engineer the species in order to render the animals more «robust»
- increased tendency to escape from unappropriate living conditions
- increased mortality
- loss of flesh quality

It is hard to understand how a scheme fostered by WWF and other NGOs can just look away when it comes to the «leading characters» in aquaculture.

fish in : fish out ratio

SAD2, page 31

Criterion 4.2 Use of wild fish for feed

INDICATOR	***STANDARD***
4.2.1 Fishmeal Forage Fish Dependency Ratio (FFDRm) for grow-out (calculated using formulas in Appendix IV, subsection 1)	*<1.35*
4.2.2 Fish oil Forage Fish Dependency Ratio (FFDRo) for grow- out (calculated using formulas in Appendix IV, subsection 1) *OR* *Maximum amount of EPA and DHA from direct marine sources (calculated according to Appendix IV, subsection 2)*	*FFDRo <2.95* *or* *(EPA + DHA) < 30 g/kg feed*
4.2.3 Protein Retention Efficiency (PRE) for grow-out (calculated using formulas in Appendix IV, subsection 3)	*≥35%*

SAD2, page 32

Rationale
The Salmon aquaculture industry has significantly reduced the inclusion rates of fishmeal and fish oil from forage fish in Salmon feeds during the past two decades. The Forage Fish Dependency Ratios (FFDR) contained in these standards aim to support the trend toward lower inclusion rates and increasingly efficient use of marine resources, which are expected to continue. Fishmeal and fish oil are both finite resources that must be shared across a range of users with increasing demands, from direct human consumption to aquaculture to pig and poultry production. The SAD intends to promote the efficient use of these resources, producing increasing amounts of farmed Salmon from a given input of fishmeal and oil.

1. Generally, one would expect that an aquaculture standard fostered by WWF and other NGOs sets a top priority in reducing wild fish consumption for fish feed.

The reduction of use of forage fish is **not only an issue of stock preservation but also a major animal welfare concern.** Counted in individuals, the predominant majority of wild fish caught are destinated for the production of fishmeal and fish oil, mainly for feeding purposes in aquaculture.
The industrial fishing methods applied onto these stocks do not address the suffering of the animals in any way, neither during the catch by huge nets nor during the slaughter process. While wild fish in general are treated like a unconscious biomass, this is all the more true for the catch of forage fish.

We acknowlegde that predators like Salmons cannot (yet) be fed without any fish (which as a matter of fact is a much critized fact with most species farmed for the markets in Europe and Northern America. But the **development of a fully fishery independent aquculture** should be taken serious as a goal to be reached, and the definition of an overall reduction of the FIFO would enhance such development.

With regard to the forage fish still needed until then, it is of course crucial to define the stocks which can be sustainably used. Given the continuous and fast growth of the aquaculture industry, we feel the problem of sustainable sourcing is quite bigger that the pro domo solution presented by FTAD. **Why do you consider ISEAL and MSC as the only instruments to guarantuee appropriate catch?** Why not include forage fisheries already certified by Friend of he Sea in good quantities?

SAD2, page 33

Criterion 4.3 Source of marine raw materials

INDICATOR	***STANDARD***
4.3.1 Timeframe for all fishmeal and fish oil used in feed to come from fisheries certified under a scheme that is ISEAL accredited and has guidelines that specifically promote responsible environmental management of small pelagic fisheries promote responsible environmental management of small pelagic fisheries	*<5 years after the date of publication of the SAD standards*
4.3.2 Prior to achieving 4.3.1, the FishSource score for the fishery(ies) from which all marine raw material in feed is derived. (See Appendix IV, subsection 4 for explanation of FishSource scoring)	*All individual scores ≥6, and biomass score ≥8*
4.3.3 Prior to achieving 4.3.1, demonstration of chain of custody and traceability for fisheries products in feed through an ISEAL accredited or ISO 65 compliant certification scheme that also incorporates the FAO47	*Yes*
4.3.4 Feed containing fishmeal and/or fish oil originating from by-products48 or trimmings from IUU49 catch or from fish species which are categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species50	*Non*

SAD2, page 77

1. Forage Fish Dependency Ratio calculation

Feed Fish Dependency Ratio (FFDR) is the quantity of wild fish used per quantity of cultured fish produced. This measure can be weighted for fishmeal or fish oil, whichever component creates a larger burden of wild fish in feed. In the case of Salmon at current status, the fish oil usually will be the determining factor for the FFDR. The dependency on wild forage fish resources should be calculated for fishmeal and fish oil using the formulas provided below. In this standard, it is the highest number (i.e., dependency) that is relevant and which must be used. This formula calculates the dependency of a single site on wild forage fish resources, independent of any other farm.

$$FFDR_m = \frac{(\%\ \text{fishmeal in feed from forage fisheries}) \times (\text{eFCR})}{22.2}$$

$$FFDR_o = \frac{(\%\ \text{Fish oil in feed from forage fisheries}) \times (\text{eFCR})}{5.0}$$

Compared with draft 1, we do not see much improvement in draft 2.
We therefore remind you of our input to draft 1 and would like to underlien the following:

2. The formulas presented in the draft are too complicated in practice – and too permissive instead of reducing resolutely the FIFO to an absolute minimum.

3. We advocate a more determined and more pragmatical formula which clearly limits the use of forage wild fish to one-fifth of the farmed fish weight while making best use of fish by-products and waste fish, as defined in the fair-fish standard for aquaculture:

> 6.1 Feed components that originate from wild fish caught for feeding purpose may not exceed a fish in : fish out ratio (FIFO) of 0.2 : 1.0 on the farm in question, i. e. for the production of 1 kg farmed fish (harvest live weight) at the most 200 g of wild fish (live weight) may be fed.
> This FIFO does not embrace:
> - Fishmeal and fish oil which verifiably origin from by-products (trimmings) of processed farmed fish, but at the maximum the weight that can be produced out of the by-products provided by the farm in question.

- Fishmeal and fish oil which stem from the following sources but do not exceed a maximum of 30% of the total of fishmeal and fish oil employed by the farm in question:
    - by-products of fish (certified or not)
    - not marketable fish from certified sustainable fisheries
    - not marketable fish which had to be fished away by directive of the competent fishing authority in order to keep up the ecosystem's equilibrium

6.2 As far as available, the farm in question employs fishmeal and fish oil products approved by one of the following certification schemes: fair-fish, a bio-label, MSC or Friend of the Sea.

6.3 Fishmeal or fish oil it shall not originate from the species to be fed.

4. Such a formula can be managed by the feed producer and be controlled alongside with other criteria for fish feed.

In practice, for Salmon farming this would mean a farm could employ fishmeal up to the following amount per kg of farmed fish (harvest live weight):

- 22,2% of 200 g wild fish = 44.4 g fish meal
- 22,2% of 30% per kg of farmed fish (harvest live weight)= 66.6 g fishmeal (supposed the by-products represent 30% of the harvest live weight and are recycled to fishmeal)
- 47.6 g (30% of the total of fish meal employed by the farm)

Thus up to 158.6 g fish meal per kg farmed fish (harvest live weight) would be tolerated even under the strict fair-fish approach. This satisfies about 50% to 75% of what is usually employed today. It should not be so difficult to drive the Salmon industry there, should it?
Similar calculation has to be made with fish oil of course.

5. Any foresighted Salmon farmer who claims to produce sustainable and to present an alternative to the depletion of fish stocks **should aim at phasing out his fishmeal and fish oil input** according to such calculation (and even to zero) before public pressure urges him to do so overnight.

Conclusion

We take the efforts made by FTAD participants for serious, and we are far from polemics about the results as the task is not so easy.
Nevertheless we feel that responsible Salmon farming should yield a good answer to the two questions discussed above. With the criteria presented in draft 2, ASC would just bring in more of the same. This is not the answer concerned consumers are expecting – and consequently it is not a standard concerned farmers could relay upon for long. When will they have to reinvest next time to cope with demand?

Thank you very much for taking our input into account.

Kind regards

fair-fish association

Billo Heinzpeter Studer
Director