

# How does the organic movement define organic aquaculture?

*IFOAM public consultation questionnaire to organic stakeholders*

*Dates of consultation: May 2, 2014 to July 2, 2014*

## Statements of fair-fish international

(highlighted in yellow)

### Introduction

Organic aquaculture is a sector in fast development. Several countries now have regulations for organic aquaculture, and more countries are developing them. What started as a very localized and niche sector 20 years ago, is today coming into the mainstream markets, as a sign of recognition that organic aquaculture addresses key sustainability questions for our food systems, particularly with regards to fish and other aquatic animals. Fish plays an important role in many people's diets. Its production is however very challenging from a sustainability point of view. Catching wild fish is now done to an extent that depletes the stocks and threatens the existence of many species. Aquaculture has emerged as an alternative, but intensive conventional aquaculture systems have very serious negative environmental impacts, rely on the use of toxic substances and antibiotics, and may increasingly use genetically modified species. Organic aquaculture offers a more sustainable alternative to those unsustainable options, with approaches that respect the environment and consumers' health.

Despite those achievements, there are a number of technical standard issues that aquaculture specialists have been debating over the past years. There are also more fundamental questions that the organic movement as a whole should ask itself: can the "organic" concept really fit aquaculture, and on what scale? The central concept at the heart of organic agriculture – the building of fertile soils – is not relevant to most aquaculture systems. Some aquaculture systems are completely disconnected from the natural environment, and function more as processing plants than as farms (e.g. in-door tank systems), although they are animal production systems. Many species currently raised in organic aquaculture systems are carnivorous, and fed on leftovers from so-called "sustainable fisheries", i.e. feed that is not certified organic and which may negatively impact wild stocks and ecosystems. Is "organic" the best concept to describe those systems? Should the concept of "organic aquaculture" be better defined and more strictly regulated? What principles should it be based on? In addressing all those issues, we should keep in mind that aquaculture is a broader sector than just fish production. It includes also production of other aquatic animals (e.g. shrimps, shells), and aquatic plants.

The IFOAM Standard Committee, in charge of further developing the aquaculture section of the IFOAM Standard, has designed precise questions to help find out what the organic movement wants to see in organic aquaculture standards. **Your opinion matters, even and particularly, if you are not an aquaculture expert!** "Organic" is a concept that belongs to us, the whole organic movement: let us decide what we want it to mean.

**Please fill in the questionnaire below and return it to [ogs@ifoam.org](mailto:ogs@ifoam.org).** You can also have a look at the current draft of the IFOAM Standard aquaculture section revised by the Standard Committee [here](#).

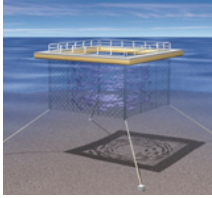
### Questionnaire:

**Your name**, as the person answering this questionnaire:

The organization you belong to, and country: fair-fish international (Zurich),  
[billio@fair-fish.net](mailto:billio@fair-fish.net)

Do the answers reflect your personal opinion or the opinion of your organization: , organization

**1. Open water facilities: should be accepted, regulated or banned under organic aquaculture?**



**Background and the issues:**

Open water facilities are open net pens or cages placed in the sea or in freshwater lakes. The water flows freely between the aquaculture environment (inside the cage) and the natural ecosystem (the sea/lake).

Open water facilities can be considered the closest possible systems to natural systems. They are said to have a higher survival rate and to be the only economically viable option for certain species. Their production costs and energy requirements are low. For invertebrates, such as mollusks, open water systems are the classical method and a somewhat enhanced version of a wild collection system.

On the other hand, the environmental/contamination concerns with open water facilities, not fully addressed in the current draft are:

- Disease and parasite transfer from cultivated fish to the wild fish and reverse
- Release of drugs and other chemicals into the general environment and contamination the other way round.
- Waste effluent (fish excrements) contaminate the ecosystem.
- How to define the adequate distance from conventional open systems?

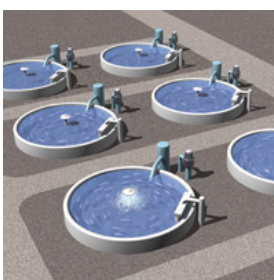
**Question:** What is your opinion about those systems? Should open water facilities be banned altogether from organic aquaculture, or should they be regulated (through which requirements?), or should they be allowed like other aquaculture systems as long as all other requirements are fulfilled?

We have been in contact with RAS systems as well as with land based fish farms or farms in the water body during the last 15 years. Each of these systems has its pros and cons, depending on the management at place mainly.

This said, we observe that fish farms in the water body can hardly be run in a way that does not harm the environment, even when no lack of management occurs. There are no means of absolutely preventing escapes or fallout of faeces or feed remains. And there is no absolute guarantee that a fish farmer will never be urged to deploy pharmaceuticals residue of which can harm surrounding wildlife.

Therefore we would advocate to no longer certify open water fish farms against organic standards as they violate by principle the core organic imperative of closed nutrient circles. We could theoretically imagine that open water fish farms still can get organically certified under very restricted conditions, but in practice such restrictions will rend fish farming an economical impossibility.

**2. Can recirculation systems be accepted in organic aquaculture?**



**Background and the issues:**

Recirculating systems raise fish in tanks in which water is treated and recycled through the system. Those systems address many environmental concerns associated with fish farming—fish cannot escape, and wastewater is treated—but they are costly to operate and rely on electricity or other power sources.

There are a number of concerns with recirculation systems, such as:

- The frequent use of disinfection.
- The intensive use of artificial oxygenation.
- The intensive energy use.
- The high density of the fish, which may be a concern for animal welfare.

The debate currently within the organic movement is whether those concerns can be addressed and regulated through specific requirements in the standard (e.g. allowed methods and substances for disinfection, restrictions on oxygenation, optimization of energy use, restrictions on fish density), or whether those systems should be banned altogether. Do we believe that there is a potential of adaptation of those systems, that are currently very intensive, to more organic performance, in which case we should leave some space for innovation? Or do we consider that it is easier and safer to ban those systems completely?

**Question:** In the current IFOAM aquaculture standard draft, it was decided not to ban those systems in principle, in order not to block innovation. The approach in the current draft is rather to address potential concerns through specific requirements that apply to all systems (whether recirculation or not). Is this approach acceptable to you?

Under laboratory conditions, RAS sure is the best system for fish farming as all relevant variables can be fully monitored (including fish welfare, a much neglected issue, astonishingly also in this questionnaire, but an issue of upcoming importance), escape to and contamination of the wildlife can be excluded and input/output ratio can be optimized best. In practice however good functioning of RAS is extremely vulnerable by management failure.

We have always felt that it is wrong to exclude RAS from organic certification as a matter of principle. Intrinsically RAS is the only fish farming system which can comply with the organic imperative of closed nutrient cycles.

### ***3. Should organic aquaculture systems be required to have connection with the soil or with the natural water bodies?***

#### **Background and the issues:**

The connection to the soil (and thereby the natural ecosystem) is a fundamental principle of organic agriculture. It is much harder to apply this principle to aquaculture, as exchange of nutrients or other inputs with the surrounding natural ecosystem (particularly water bodies) has potential negative environmental impacts (see the issues under question 1). Some aquaculture systems, e.g. in-door tanks have zero connection to the surrounding ecosystem, but are often considered to be less environmentally damaging and more sustainable. The question is: can they be considered “organic”?

**Question:** Should organic aquaculture systems be required to have a connection with the soil or natural water bodies, or can we allow organic system to be disconnected from the surrounding ecosystems?

The organic requirement of connecting a system with the soil stems from the plant producer's roots of organic agriculture. Planting in itself is an alienation from the natural ecosystem, and animal husbandry on organic farms is a further illustration of how far practice can be apart from natural living.

Animals do not ask: do I feed on organic? And concerned consumers rather identify animal husbandry on organic farming with species-appropriate living conditions. The life of the fish species in question does not depend on soil in nature, except for spawning. When Bio Suisse was developing its criteria for organic fish farming, natural

soil and plants were an issue with the argument that consumers would expect it. Would fish? Hardly, but you will get some troubles with hygiene in «naturalized» farms. The habitat of the species in question (and for the part of life in question) is just water. Water in all forms: flowing rapidly, flowing just a little bit, not flowing at all. Water of different temperatures. Water under sun and water under shadow. Shallow water and deep water. This is the natural surrounding of the fish we have to discuss. Give the fish the artificial water body which best complies with the needs of the species and the age of the fish you are farming.

#### ***4. How much non-organic feed should be allowed for aquatic animals?***

##### **Background and the issues:**

Most commercialized fish species are carnivores; hence their natural diet is to eat other fish or aquatic animals. Feeding organic fish with organic animals is an economic challenge. Organic standards, including the IFOAM Standard, therefore allow carnivore species to be fed with leftovers from wild “sustainable fisheries”, or to be fed with non-organic terrestrial sources of food (e.g. insects, slaughter waste). This could result in an organic-certified fish having eaten mostly non-certified organic feed: a situation that does not exist with other organic livestock because livestock is typically herbivore or omnivore, not carnivore.

**Question:** Is this approach acceptable in organic systems? If yes, should there be a maximum allowed percentage and timeline for non-organic feed, (and if so, what should it be?).

The real important question when feeding fish is not whether the components are «organic» but whether the input of wild fish (be it so-called «sustainably» fished or not!) is bigger than the output of eadable meat, or much smaller. Labels like MSC or FOS are much too permissive in this issue. Organic aquaculture schemes should not allow the farming of fish with FIFO bigger than 0.2 : 1.0. This is what fair-fish directives for aquaculture demand.

#### ***5. Is there a need for a conversion period when there is no risk of contamination?***

##### **Background and the issues:**

Some aquaculture facilities are established from scratch as organic. Others have objectively got rid of all prohibited materials by draining, cleaning, refilling with non-contaminated water, and getting new fish stock. In such cases, there is no risk of contamination. The IFOAM Standard has currently waived the conversion period for such facilities, assuming that there would be only costs and no gain from a conversion period in such cases.

**Question:** is this approach acceptable, or is there still a need to impose a conversion period, and if so, why?

The conversion of a fish-farm needs some time, according to the species, the actual age of the fish and the farming system. This period should be defined. Similar to the conversion period in agriculture, a fish farmer should be allowed to declare his products as «organic fish in conversion».

#### ***6. Should organic aquaculture be required to foster biodiversity, and how?***

**Background and the issues:**

Biodiversity on farm is usually an important aspect of organic agriculture. For example, organic farmers are required to plant a diversity of crops, to leave hedges and other areas for wild biodiversity on the farm, etc. Transposing this principle to aquaculture raises challenges, particularly for tank systems, which are disconnected from the surrounding ecosystem, or even for open water facilities, in which one should try not to interfere with the ecosystem beyond the cage. In most current organic aquaculture systems, only one specie (the commercial specie is grown).

**Questions:** Should organic aquaculture systems be obliged to grow or use a diversity of species (e.g. in the tank?) even if that is not economical, or to provide habitat for wild species (and how?)? Or can we let go of the biodiversity aspect when it comes to organic aquaculture standards?

Aquatic biodiversity is not only a question of polyculture but of the entire variety of aquatic organisms. Biodiversity should be fostered in earth ponds, while it does not seem to make any sense in raceways, concrete ponds, net cages or even RAS.

What would those biodiversity requirements be and how would you recommend such requirements to be formulated in the standard in a manner that is inspectable and practical to the sector in question?

Give earth ponds with enhanced biodiversity an extra point in audits so they can claim being top of top.

7. **Can organic aquaculture system contain species that are normally migratory?**

**Background and the issues:**

Migratory species like salmon are currently produced organically. Their migration behavior obviously cannot be respected in aquaculture, as by definition it has to contain the fish. This goes against the organic principle to respect the natural behavior of the animal.

**Question:** Should we allow organic aquaculture to inhere the migratory behavior of fish, in order to keep having organic salmon, or should we give up organic salmon (and other migratory species) altogether (hence all salmon would be wild or conventional)?

Under «organic», consumers expect a product that has been produced not too distant from «natural» conditions.

Would you say that pigs spending their whole life in closed stables and do not have access to pasture are «organic». Hopefully not.

Therefore, migratory species like salmonides (incl. trouts) should not be allowed to keep in organic farms.

Generally, organic fish should not stem from predator species wandering around, but from omnivores and herbivores. Here is a true challenge for the organic movement to outstand from the bulk!

8. **Should aquaculture systems be permitted at all to use chemical allopathic veterinary treatments?**

**Background and the issues:**

The use of allopathic veterinary treatments is generally controversial in organic agriculture (e.g. the diverging positions between the US approach that fully bans the use of antibiotic and other synthetic drugs, and the EU approach that allows up to 3 treatments a year per animal). In aquaculture, this issue becomes even more controversial because of the potential release of the substances into the ecosystem (the treatments are usually put into the water, as opposed to given to fish individually). It is also difficult to target the treatments, so they are often administered to an entire stock of fish, meaning that for some of them, this is equivalent to a prophylactic treatment (although this is normally prohibited).

On the other hand, the allowance of veterinary treatments can be considered important for animal welfare. It can also be argued that they help preventing the spread of diseases/parasites to wild species, which would be an ecological problem. In the current draft of the IFOAM Standard, we have banned the use of antibiotics altogether. However, other chemical allopathic veterinary treatments are allowed as exceptions, up to 3 treatments per year per animal.

**Question:** Should the use of chemical allopathic veterinary treatments be at all permitted in organic aquaculture?

Simply no!

If a fish farm is well set up and well managed, health care should be feasible without chemical treatments.

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