



# AAC Recommendation on Organic Aquaculture

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## I. Background

The Commission has launched an action plan to support increased organic production in the EU.<sup>1</sup> This is in line with the Farm to Fork strategy,<sup>2</sup> which aims to increase food production in the region while also making food systems fair, healthy and environmentally friendly. The new Strategic Guidelines for Aquaculture<sup>3</sup> support organic production, and a European Market Observatory for fisheries and aquaculture (EUMOFA) report<sup>4</sup> points out barriers to growth for organic aquaculture. The EU's legislation on organic production states, 'Organic production is an overall system of farm management and food production that combines best environmental and climate action practices, a high level of biodiversity, the preservation of natural resources and the application of high animal welfare standards and high production standards in line with the demand of a growing number of consumers for products produced using natural substances and processes. Organic production thus plays a dual societal role, where, on the one hand, it provides for a specific market responding to consumer demand for organic products and, on the other hand, it delivers publicly available goods that contribute to the protection of the environment and animal welfare, as well as to rural development.' The recommendations in this paper would help establish positive growth in this sector, as identified by the EUMOFA 2022 report.

The Commission suggests that one way forward is to promote an increase in the overall production share and consumption of organically farmed products, including a significant increase in organic aquaculture. On 18 July 2022, the Council of the European Union stressed the need to fully analyse the current situation and assess the barriers hindering the development of organic aquaculture, many of which are explored in these recommendations. The Council goes further and invites the Commission to consider amendments to regulation (EU) 2018/848 on organic production and the labelling of organic products to address these challenges.<sup>5</sup>

### A. REGULATORY BARRIERS TO THE GROWTH OF THE ORGANIC SECTOR

Whilst the aims of the Green Deal and the Farm to Fork Strategy are clear, a number of significant regulatory barriers remain, which inhibit the growth of the organic aquaculture sector. These issues relate to the rules on feed, juveniles and shellfish water quality. Without reform, these barriers will inhibit organic production from playing a full role in delivering a sustainable and competitive European aquaculture market. As will be discussed in the 'Organic Market' section, this is confounded by the complexity of the regulations, which inhibit producers from making business decisions.

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<sup>1</sup> 'Action plan for the development of organic production', [https://eur-lex.europa.eu/resource.html?uri=cellar:13dc912c-a1a5-11eb-b85c-01aa75ed71a1.0003.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:13dc912c-a1a5-11eb-b85c-01aa75ed71a1.0003.02/DOC_1&format=PDF)

<sup>2</sup> 'A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system', <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0381>

<sup>3</sup> 'Strategic guidelines for a more sustainable and competitive EU aquaculture for the period 2021 to 2030', <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:236:FIN>

<sup>4</sup> 'Organic aquaculture in the EU', EUMOFA report, May 2022, <https://www.eumofa.eu/documents/20178/432372/Organic+aquaculture+in+the+EU+final+report+ONLINE.pdf>

<sup>5</sup> Council Conclusions on the EU's new aquaculture strategic guidelines, 18 July 2022: <https://data.consilium.europa.eu/doc/document/ST-11496-2022-INIT/en/pdf>

## B. SHORTAGE OF ORGANIC JUVENILES

Due to a number of production and health problems that particularly affect broodstock, there is a shortage of organic juveniles. The current supply of organic juveniles is limited largely to companies that have control of the whole production chain, and such companies have little incentive to produce juveniles beyond their own needs. Commercially available species are limited to high-value species such as Atlantic salmon. Lower trophic species such as carp, which have the potential to provide multiple ecosystem services, have a small juvenile market that is extremely vulnerable to climatic and economic shocks. For other species covered by the organic regulations, reproduction techniques are currently not possible. In addition, there is a ban on imports/exports of eggs in many regions. The intention of the EU Organic Regulation is to build up an organic market for species not developed as organic previously, but more needs to be done to support the juvenile market for established but vulnerable species.

## C. ORGANIC FEED

There is a lack of clarity when defining organic feed. For example, the existing rules on feed for carnivorous aquaculture animals take into consideration the animals' particular dietary behaviours and allows the inclusion of certain non-organic inputs. In addition to organic feed of aquaculture origin, fish ingredients derived from sustainable fisheries, as defined by the organic regulations (EU) No 1380/2013 and (EU) 2018/848, can also be used (EC 2018/848 (3.1.3.3)(d)). As implementation of this regulation across Member States (MS) is not consistent, guidance is needed from the Commission in line with the principles of organic aquaculture, especially on developing the use of trimmings to replace the use of whole fish where possible.

The inclusion of insects and feed ingredients derived from insects in the diet of organic aquaculture species would offer feeds of premium quality for organic fish farming, in conformity with the objectives and standards of the organic regulatory framework. Insect farming provides a valuable solution to support the growth of aquaculture and reduces reliance on non-organic marine ingredients that might be associated with a negative impact on marine biodiversity. Nevertheless, organic regulations on insect production should consider the needs of aquaculture producers and similarly, organic aquaculture regulations should accommodate this new source of protein. For instance, in Canada, whole insects, insect meal and insect oil can be included in the diet of organic aquaculture species. The insect sector is developing rapidly, and organic production should play a key part in these early stages. Other novel feed ingredients, such as microalgae, yeast meals and vegetable protein concentrates, as well as feed ingredients from former waste streams, such as trimmings from sustainable fisheries, will also be an important part of future-proofing sustainable organic aquaculture. Thus, market and regulatory mechanisms to support the development of these ingredients and insect meal production should be considered.

There are a growing number of vitamins on the EU Register of Feed Additives that are produced through fermentation, using genetically modified microorganisms (GMM). In particular, all suppliers of Vitamin B2 are now employ GMMs in their production process. However, GMMs are excluded from organic production. Although no alternatives are available, a regulatory mechanism is needed to support the health of organic animals, and public investment may be needed where there is a limited economic interest for industry to invest in the production of sources of vitamins due to the small market size and difficulties in protecting the intellectual property.

#### D. SPECIFIC SHELLFISH AND ALGAE CONCERNS

To farm shellfish and algae according to organic standards, farming must be performed on sites that have reached a certain level of water quality in terms of hygiene standards. According to EU legislation, growing areas for molluscs must be suitable from a health point of view and must be of 'high ecological status', as defined by Directive 2000/60/EC; of 'good environmental status', as defined by Directive 2008/56/EC; or of equivalent quality to the production zones classed as 'A', in accordance with Article 18(8) of Regulation (EU) 2017/625. Similarly, growing areas for algae production must be of 'high ecological status' (2000/60/EC) or of equivalent quality to the production zones classed as 'A or B' (art. 18(8) 2017/625). This equivalent quality can be achieved directly through the sanitary classification of existing production areas in each country or through the implementation of voluntary microbiological analyses at the expense of seaweed producers.

Unfortunately, Article 18(8) of Regulation (EU) 2017/625 prevents the development of organic shellfish aquaculture in Europe and, in fact, reverses the certification of organic producers who have previously achieved organic production. Clarity on the interpretation of 'equivalent quality to zone A of Regulation (EU (2017/625))' is required from the Commission, particularly in relation to water quality for organic mussels.

The point of interpretation on whether certain conditions are cumulative has received a clear answer.<sup>6</sup> However, other issues have not been confirmed and have not surfaced recently.

In general, there cannot be a single criterion to define what good environmental status means in different sea areas. For example, a lagoon area or an area located near the mouth of a river are not comparable to an uncontaminated sea area or a tourist beach. These environments have always had different characteristics, and the difference does not always depend on an environmental alteration but can be specific to each of these areas. For instance, the presence of phytoplankton is needed to breed filter-feeding molluscs, but this contrasts with the criteria for a good environment according to the Water Framework Directive (WFD) and the Marine Strategy Framework Directive (MSFD). MS also do not use the same threshold values to define ecological or environmental statuses, and it would be advisable for DG Environment to let us know how the MS behave.

In France, the interpretation (zone A/zone B) that excludes de facto the B zones for organic shellfish, the precision of the translation of the 'very good' ecological state and the fact that the Marine Strategy Framework Directive does not apply to lagoons excludes almost all Mediterranean companies from organic bivalve production.

In France, the suppression of B zones from organic regulation has excluded 50% of the surfaces that allow organic production, and reaching a high ecological level still constitutes a problem. For example, some water bodies are unable to achieve high ecological status due to the monitoring of the temperature indicator, which has a maximum threshold for good status.

The Irish shellfish industry made a proposal to their national agencies to determine water quality for organic bivalve molluscs that is of equivalent quality to zone A of Regulation (EU (2019/627)) and does not compromise the classification system for Irish shellfish waters. While the national agencies' interpretation of 'equivalent quality to zone A of Regulation (EU (2019/627))' is more about being 'equal' than 'equivalent', aquaculture producers would argue that this is not the case. Clarification

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<sup>6</sup> EU Directorate-General for agriculture and rural development, Letter to *Ministero delle politiche agricole alimentari e forestali* (PQAI 1) in response to an email from 24 March 2021.

from the Commission on the interpretation of 'equivalent quality' would help MS and aquaculture producers to determine organic status for bivalve molluscs.

Brittany's Comity for fisheries and aquaculture led an assessment to evaluate the importance of the organic label for producers in terms of costs, job creation, impact on biomass and access to space. As of 2021, 65% of the seaweed producers in the region were labelled, and 15% of the non-labelled producers expressed an interest in labelling themselves in the short or medium term.

The assessment shows that the loss of the organic label may lead to a spatial shift in harvesting activity, which could lead to more localised environmental pressures and social tensions for the whole region. It would also foster imports from abroad (UE and outside UE). There have even been reports of up to a 38% potential total stoppage of production activity due to losing specific markets (food and cosmetics).

To defend the label, the Breton producers voted for the introduction of an additional compulsory fee of €180, starting in 2023. This contribution will allow the financing of voluntary microbiological analyses in the case of sectors that do not have shellfish production zones. These analyses cost from €13,000 to €20,000 annually.

In shellfish production, a hatchery product cannot be labelled as organic. We would like to underline this difference with finfish aquaculture. As a consequence, European shellfish organic production will not be able to benefit from future progress in genetics (e.g., to improve disease resistance), even for introduced species such as *Crassostrea gigas* or Manila clams.

Low trophic and unfed aquaculture systems are in line with organic production principles. As production practices are developed with a low bar to entry to the organic market, mechanisms to support the growth of this sector and provide clarity and consistency to producers should be sought.

## E. THE ORGANIC MARKET

We must evaluate the economy of these primary producers to learn if it is achievable for them to be part of a significant increase in organic aquaculture. Issues including increased costs of feed, farm adjustments and new licences for access to space must be balanced with a higher income from sold products and/or payments for public goods and ecosystem services provided. This could be achieved through an economic impact assessment at the farm level and mechanisms to support organic products through the value chain. This will be essential in achieving a fair food system and a sustainable livelihood for primary producers, as defined in the Farm to Fork strategy.

However, the new regulations on organic production are too diffuse and complex for many farmers to understand. Furthermore, it is difficult to secure a supply of juveniles and feed, which implies that the whole value chain must be secured. This creates uncertainty, difficulties in calculating return on investment and low investment interest. Whilst there are clear regulatory issues associated with the lack of supply of organic juveniles, producers do not see a clear economic benefit to start producing more expensive organic juveniles because the current demand does not specifically ask for it. The producers who do produce organic fish just aim to cover their own internal needs.

The price of organic vegetable feed sourced from global markets is highly volatile and vulnerable to shocks, and demand often exceeds supply. With feed representing one of the main factors leading to higher production costs in European organic aquaculture, it remains crucial to further identify local close-to-market solutions that can improve competitiveness, in line with the principles of the organic regulatory framework.

The benefits from the current genetic improvement in aquaculture cannot yet be used in organic production. The 'Horizon EU' Work Programme for 2023–24 includes a call on building breeding programmes for organic aquaculture, but the results of this research may take 10 years to benefit the production.

There is an evergreen risk that organic farming and other sustainable labels are perceived as a form of greenwashing and that these techniques are no more effective than correctly following all the rules and regulations currently applicable in the EU. The recent drop in organic sales in the Swedish market<sup>7</sup> emphasises the importance of maintaining a high level of trust in EU organic legislation.

The pricing of products produced through more regulated methods, such as organic products, often involves higher production costs and targets wealthier consumers. Wealthier consumers can quickly change habits when trust is lost or preferences change in favour of something else, such as local products to support food security, as is obvious during wartime. However, high prices exclude a large part of the population from enjoying the food produced with these methods.

It is critical to assess the position of organic production in all aspects related to sustainability, including animal welfare and primary producers' incomes per work hour. This assessment would help to clarify, in the following three ways, if organic farming is an option:

1. The farmer would know what to invest in when considering converting the farm to achieve a better, more secure income, while also delivering most of the societal values.
2. The funding authority would know where to allocate funds, such as to areas where significant growth and benefits for society and the environment are likely to occur.
3. Consumers would be able to make an educated choice about spending on products, organic or not, that offer better taste, nutrition and sustainability.

## **II. Justification**

- a) The growth of organic aquaculture and the transition of the industry to lower trophic species and a more diverse production model are hampered by the lack of organic juveniles in all species apart from those of the most commercial importance (such as Atlantic salmon, sea bass and sea bream). (EC) 2018/848 Annex II Part III (3.1.2.1) restricts the number of juveniles brought in for on-growing to 50% only for species that are not currently being produced under organic conditions before January 2022. In many cases, there is no commercial incentive to produce the other 50%, as organic juveniles (and in some specific cases, the technology and production methods) do not exist to produce key species under the requirements of the organic production regulations.
- b) Consistency in the rules for feeding carnivorous aquaculture animals is required along with the development of organic feed from aquaculture origin and the use of trimmings from sustainable fisheries (as defined by the organic regulations (EU) No 1380/2013 and (EU) 2018/848). Alongside the use of insects and encouraging the use of trimmings, there is an urgent need to develop this market to ensure quantity of supply to provide the organic aquaculture market.

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<sup>7</sup> The Swedish Food Retailers Federation: <https://www.svenskdagligvaruhandel.se/arsrapport-2022/forsaljningsutveckling-ekologiskt-2022/>

- c) While feedstuffs of vegetal origin were previously considered the primary alternative to marine inputs, the complete replacement of fishmeal or fish oil with plant-based sources was proven to lead to detrimental consequences to fish metabolism (nutrient deficiencies or even higher mortality) or health (reduced resistance in the absence of certain immunostimulants). Evidence indicates that insects are likely to diminish such risks, being a promising solution to complement the increasing demand for fishmeal. In addition, insects are part of the natural diet of a wide range of fish species. More specifically, some fish species, such as salmon or trout, have developed their aerial feeding behaviour to consume non-aquatic food, including insects.
- d) Some nutrient-rich waters in the EU are suitable for shellfish and algae farming and can, by this measure, be upgraded to higher water quality standards that are suitable for organic farming. It is necessary to clarify what the parameters and their limit values are to identify with certainty the 'high ecological status', as defined by Directive 2000/60/EC or the 'good environmental status', as defined by Directive 2008/56/EC. This aspect is essential for ensuring the homogeneous application of standards in all MS.
- e) According to the Farm to Fork strategy, the current food value chains in the EU lead, in general, to lower, unfair compensation for primary producers. To encourage increased organic aquaculture farming, primary producers should have the opportunity to achieve an economic livelihood that is closer to the EU's average income per worked hour. Aquaculture primary producers should not be required to interpret multiple complicated regulations to convert to organic farming only to discover that they are worse off in terms of earnings because the income per worked hour from organic farming is even lower.<sup>8</sup> Different interpretations of the regulations in MS lead to difficulties in ensuring a level playing field within the EU, as described in the answer to the EC from the Federation of European Aquaculture Producers (FEAP) and COPA-COGECA on the subject.<sup>9</sup>
- f) Some organic farming requires more space than conventional farming to produce the same volume, and some use the same amount of space. However, significantly increasing the EU's organic aquaculture production volume makes the availability of new sites essential.
- g) To increase trust among primary producers, the EU's organic production system must undergo an economic impact assessment, including an evaluation of (i) the farm economy; (ii) societal values that may be reimbursed (nutrient harvest, biologic diversity, climate, etc.); (iii) the generation of higher market prices; or (iv) the generation of enough confidence for farmers to absorb the costs themselves.
- h) Aquatic species are among the very few foodstuffs available in the EU from both wild and farmed origins. The perception among many consumers is that wild finfish are a more natural form of these species than their farmed counterparts. Consequently, when

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<sup>8</sup> T. Kruse et al., 'Green revenues, profitability and market valuation: Evidence from a global firm level dataset', Centre for Climate Change Economics and Policy Working Paper No. 363, January 2000, <https://www.lse.ac.uk/granthaminstitute/wp-content/uploads/2020/01/working-paper-331-Kruse-et-al-2.pdf>

<sup>9</sup> FEAP/COPA-COGECA, letter to the Directorate-General for maritime affairs and fisheries and the Directorate-General for agriculture and rural development, 11 October 2021.



consumers wish to purchase what they consider more natural products, they turn to wild-caught fish and not to organically farmed fish, leading to a negative impact on the potential of organic aquaculture.

- i) The extensive (semi-intensive) aquaculture systems in the EU – especially pond and lagoon aquaculture, which are based on natural nutrient cycles and operate as an open ecological system, where natural and technological processes are built on each other – represent unique production methods with a long European heritage. In several (mainly landlocked) EU member states, the pond aquaculture is the predominant part of aquaculture production. However, the statistical data prove that organic pond aquaculture production has slightly decreased in the last decade. The most significant obstacle to the growth of organic production in these areas is that consumers already accept products from ponds as a sustainable choice. Therefore, farmers in these areas do not see real opportunities for converting to organic production.
- j) The primary input used for fishmeal production comes from wild-harvested fish species. Considering the environmental challenges associated with such farming practices (controversies related to the 'invisible costs' of such products, the origin of ingredients used in aquaculture feed, competition with other farming sectors whenever plant-based/terrestrial materials are used instead of marine/aquatic inputs), stakeholders involved in aquaculture are investing more and more energy in sustainable approaches that aim at diminishing the overall footprint of feed production. Therefore, the inclusion of insect feed as organic feed could bring economic and environmental benefits.
- k) The high standard and noble aim of producing sustainable food must not only be financed by a higher market price that excludes a large part of consumers from eating this healthy and sustainable food. For a just transition to organic production, the aim should be to sell products to consumers outside the 20% market share that does not care about pricing.
- l) Public procurement of food and the serving of public meals reach all parts of the population. For a fair distribution of the healthy and sustainable food produced according to the Green Deal, an increased budget for public procurement would help and show true political interest in following the Green Deal.

### **III. Recommendations**

#### **A. FOR THE EUROPEAN COMMISSION**

1. Make strategic and time-limited amendments to rules about introducing non-organic juveniles for species that are not commercially impactful and meet requirements of the European Vision for sustainable aquaculture alongside market incentives to produce these species under organic conditions.
2. Develop a consistent approach to a priority list for feeding carnivorous animals that encourages a positive uptake of this list with the objective of restricting the amount of whole fish in the diet (EC 2018/848 (3.1.3.3)).

3. Promote the production of alternative feed ingredients, such as insects and appropriate additives, used for the production of aquatic animals and provide amendments to (EU) 2018/848 Annex II Part III and 3.1.3.3, authorising the feeding of insects to carnivorous fish.
4. Clarify and homogenise among MS the interpretation of 'high ecological status', as defined by Directive 2000/60/EC and 'good environmental status', as defined by Directive 2008/56/EC.
5. Clarify the interpretation of 'equivalent quality to zone A of Regulation (EU (2017/625))', particularly in relation to water quality for organic mussels.
6. Set up a helpdesk at the EU level to ensure that primary producers have access to clear and uncomplicated definitions/guidelines about possible designs, operational procedures and permitted new technologies that are aligned with the directions in the Strategic Guidelines for EU Aquaculture.
7. Work through the value chain with citizens to increase learning and public understanding about organic aquaculture.
8. Encourage MS to facilitate new licences for organic aquaculture production in areas deemed unsuitable for conventional farming due to environmental legislation but where organic farming at a controlled level is consistent with environmental legislation and ecological limits.
9. Develop and make available a map of marine regions with the potential for organic aquaculture production.
10. Improve the economic livelihoods of primary aquaculture producers by finding equivalent ways in all MS to ensure payments for the delivery of public goods and ecosystem services associated with the increased value to society from using more sustainable production methods.
11. Create a comparison of the implementation of the rules relating to organic farming among (i) the different EU MS; (ii) with the non-EU countries putting organic products on the EU market; and (iii) between certification bodies. This to ensure consistent interpretation across the EU and a level playing field with imports.
12. Commission a study to assess the position of organic production for different aquatic products. The study should include animal welfare and primary producer income per worked hour, as well as an economic impact assessment describing the value for society delivered by farming activities as the foundation for reimbursement to farmers.

## B. FOR THE MEMBER STATES

1. Facilitate new licences for organic aquaculture production in areas deemed unsuitable for conventional farming due to environmental legislation but where organic farming at a controlled level is consistent with environmental legislation and ecological limits.
2. Enhance the budget for public procurement in a way that allows for better access to sustainable products by citizens and shows true political interest in leading the development towards a sustainable food system.



#### **IV. Dissenting Opinion**

Eurogroup for Animals, Compassion in World Farming and Vissenbescherming consider that insects should not be used in organic production unless they are produced according to organic rules and fed on food waste. Organic rules for insect production must include requirements for the insects' welfare during rearing and slaughter. Until development of the requisite animal welfare science, the precautionary principle should be applied to industrial insect farming to ensure that it is compatible with the EU's objectives for a sustainable food system.

The Aquatic Life Institute believes that the current unknowns, concerns for animal welfare and pathogen risks surrounding insect-based feed make it an unsuitable replacement for feed in organic aquaculture, while plant-based alternatives provide better options.

For these reasons, all these AAC members do not support the inclusion of insects in Recommendation No 3.



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