

## On assuring aquaculture system neutrality by policy makers

### Background

Aquaculture has a key mission in contributing to the Sustainable Development Goals of United Nations; in particular, for reaching Goal 1 'No Poverty', Goal 2 'Zero Hunger', and mainly for Goal 14 'Life Below Water'. Aquaculture also has a relevant role to play in ensuring food security and food supply to Europe, as part of the Green Deal. Besides avoiding food waste and improving food redistribution, the world needs food for a still growing population: nutritious, healthy, and affordable sustainable food coming both from the sea and freshwater. To accomplish this mission, ways to increase aquaculture production with the least possible use of natural resources and reduced environmental footprint while making a positive social and financial impact are needed. An important part of the solution is in the adoption of new and emerging technologies. New technologies, and the improvement of existing ones, allow for the optimisation of production and can help to make aquaculture production in new spaces possible. Innovation and technological development can enable Europe to increase the production of farmed fish without compromising nature while positively impacting local communities. When a complete set of technological solutions are brought together an aquaculture system is defined, as for example, a net pen system, a recirculation aquaculture system or a pond fish farming system.

However, the selection of the aquaculture production system by the farmer is not always a clear-cut decision. When a biological challenge is solved in the farming of animals, normally through a technological innovation, it can bring unforeseen new challenges. For example, land-based marine fish farming means moving fish out of their natural environment, the sea, that may sound alluring because it offers the possibility to collect uneaten feed and fish faeces, besides growing the fish away from parasites. But this also carries with it the disruption of the biological and chemical balances of the farming water in a degree much more complex than initially expected. Updated land-based solutions may offer better control of water quality parameters, but the changes can also destabilise other complex interactions between the fish and their surrounding environment, their chemical exchanges with the water and microbes present there, light and day length that affect physiological processes that in turn affect the wellbeing of the fish, water flows and water exchange, etc.

Furthermore, organic aquaculture brings another example of how regulatory authorities do not follow neutrality to aquaculture production systems. Regulation (EC) 710/2009 laying down detailed rules on organic aquaculture specifically stipulates that organic aquaculture cannot take place in recirculation aquaculture systems. The reason being as subjective as that organic production should be as close as possible to nature; but at the same time allowing exceptions for recirculation in organic fish hatcheries and nurseries. This regulation puts this aquaculture system in an unfair regulatory disadvantage.

In summary, new aquaculture systems and technologies open new possibilities, but they also introduce unforeseen challenges.

## FEAP Position

Given the positive growth expectations attached to aquaculture by high-level organisations like the FAO and the European Union institutions, this federation expects European national and regional public authorities to foster the development of the aquaculture sector as a whole. Within the appropriate legal framework, business driven technological development and innovation will expand aquaculture production, as they have done in the past. At the same time new technologies will allow the development of aquaculture in spaces not used so far, or to little extent. This applies both at sea and on land. In this way, aquaculture in Europe could meet its high expectations to produce more nutritious, healthy, and affordable sustainable food.

The FEAP acknowledges that growth of this industry should not take place at the expense of nature or local communities. Aquaculture must tread lightly on the environment, produce few greenhouse gas emissions and excel on fish welfare.

The FEAP stresses that social, environment and economic pillars of sustainability must be considered by the public authorities when establishing the requirements for the licensing of a farm and when technology choices must be made. Decisions on the selection of a system, that can mean a considerable financial investment, is about adapting aquaculture operations to local conditions to ensure that a farm complies with the requirements set by the competent public authorities for it.

At any moment in time, neither the policy makers, nor the industry, can point out in a single direction for the use of a specific type of system. The reason being that there is never only one but many technological development directions and production strategies for each situation.

The FEAP highlights that the role of policy makers and public authorities is to establish the legal framework, and the spatial planning, that will ensure that any activity, like aquaculture, will maintain an acceptable environmental footprint, is socially acceptable and assures good fish welfare conditions while providing a fair income to the farmers.

The FEAP position is that policy makers must adopt a system neutral approach in their planning of the aquaculture industry by providing a regulatory framework that will not favour nor disfavour specific aquaculture systems. This would leave fish farmers to freely decide on the adoption of the most appropriate technologies as long as they comply with whatever environmental and social requirements are imposed to the operations

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*The Federation of European Aquaculture Producers is an organisation that represents the European fish farming profession and is based in Brussels. FEAP is composed of 24 national fish farming associations from 23 countries, both EU and non-EU. The combined yearly production of FEAP members surpasses 2,5 million tonnes of nutritious, safe, delicious and environmentally sustainable fish.*