

Aquaculture Advisory Council

Answers received from the Member States to the AAC letter on the Decarbonisation of finfish farming facilities

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CYPRUS

16 May 2024, Vassilis Papadopoulos, Ministry of Agriculture, Rural Development and Environment

1. Does your administration take decarbonisation into consideration in the spatial planning of finfish farms, especially the distance between the sites provided to offshore marine farms and the harbours at which they operate?

The existence of port / harbour infrastructure in close proximity with the open sea fish farms in Cyprus has been always considered an important criterion for the development of this activity as the existence of appropriate infrastructure is essential for the support of the relevant required operations.

Furthermore, decarbonization of finfish farming facilities has been taken into consideration during the development of our national marine spatial plan which was officially adopted in December 2023. Within the framework of our national policy and strategic planning for the sustainable development of the aquaculture sector as well as the national marine spatial plan, our Department, is in the process of creating new aquaculture port / harbor facilities in an aquaculture zone / area where 7 out of the 9 marine offshore farms of Cyprus (corresponding to approximately 70% of the total national production) are located. Beside the environmental parameters of the project, the basic criterion was to be in close proximity and to increase the efficiency of the operation of the fish farms. This will result in decreasing the distance that the aquaculture vessels have to travel to get to their farms, therefore reducing their carbon footprint by approximately 40%. This project is included in the framework of the European Recovery and Resilience Fund.

2. Does your Member State provide EMFAF support for investment and/or innovation projects aimed at reducing emissions of GHG from land-based and/or marine fish farming facilities?

In the new aquaculture scheme drafted within the EMFAF framework and the operational programme for the period 2021 - 2027, among others, there is budget allocated only for investments on renewable energy and for certified high energy-efficient equipment.



SLOVAKIA

23 May 2024, Zlatica Daubnerová, Permanent Representation of the Slovak Republic to the EU

1. Does your administration take decarbonisation into consideration in the spatial planning of finfish farms, especially the distance between the sites provided to offshore marine farms and the harbours at which they operate?

Slovakia as a landlocked country with freshwater aquaculture focused especially on trout and carp farming in ponds and concrete ponds. Decarbonisation is one of the key role in agriculture sector for producing healthy and nutritionally meal from crop and animal. In Slovakia, aquaculture has the status of one of the least polluting branches of agriculture because of his way of farming. There is small aquaculture sector and the distances between each aquaculture facilities is not significant. The support of sustainable aquaculture can be a significant element in the nutrition of the population in the future.

Aquaculture farmers uses mainly pond, which is eco-friendly style of farming. It is characterised as a low input system, with low labour and capital input. Ponds are an integral part of the landscape contributing to its nature value because of ability to capture and purify water. Strictly limited using fertilisers by law is possible just with special permission. The aim of manure (as an organic fertiliser) application, as an almost solely used fertilisation method at present, is to ensure not only the essential mineral nutrients but also to provide the organic material for bacteria that are usable directly by some fish food organisms. Slovak fish farmers have opportunity to register their fish farms as an ecological agricultural production, which could be a way to diversification of agricultural activity and at the same time careful management of the environment, which is an extremely important component in fish farming. Innovation is crucial in the development of strategies to preserve both the production and non-production values of fishponds and the aquaculture sector. The increasing limitations of the flow-through technology also forced the European farmers to introduce Recirculating Aquaculture Systems (RAS). These are one of the most automated and low energy eco-friendly systems for example for trout breeding (clarias, eel, sturgeon...) but with high capital input. The other important innovation challenge in the RAS sector is the reuse of the concentrated effluent from the farms. This nutrient rich side-stream is a valuable resource as agriculture fertilizer or for biogas production. The strategic plan for the development of aquaculture in Slovakia 2030 includes the entire issue among the priorities of the aquaculture sector, such as building new aquaculture facilities and diversification of existing ones, waste management, increasing the share of organic/extensive fish production and non-production functions.

2. Does your Member State provide EMFAF support for investment and/or innovation projects aimed at reducing emissions of GHG from land-based and/or marine fish farming facilities?

The above-mentioned priorities should be use in the aquaculture projects of the SK Fisheries Operational Program, which supports introducing innovations, elimination of environmental burdens and transition to sustainable and low-carbon competitive aquaculture sector contributing to food security through European Maritime, Fisheries and Aquaculture Fund.



ITALY

27 May 2024, Irene Adelaide Forcella, Ministry of Agriculture, Food Sovereignty and Forests

1. Does your administration take decarbonisation into consideration in the spatial planning of finfish farms, especially the distance between the sites provided to offshore marine farms and the harbours at which they operate?

Through the National Strategic Plan for Aquaculture (NSPA) 2021-2027, MASAF has outlined objectives to pursue and strategic actions to implement for the next seven years, as part of the framework for measures to be activated mainly under the EMFAF fund or other national or regional funding schemes.

Regarding AZA, the most directly relevant strategic actions are:

S2.1 – Updating and implementing regional plans for areas allocated for aquaculture (AZA) in coastal and inland waters.

S2.3 – Spatial planning and environmental monitoring of aquaculture sites, with particular reference to areas for shellfish farming.

Thanks to the strengthening and optimization of technical-informatic tools (e.g., GIS), both at the central and regional levels, it should be possible to collect data useful for spatial planning and environmental monitoring of aquaculture sites, facilitating the use of such tools for the actors directly involved in the decision-making process.

Within the framework of the National Program co-funded by the European Maritime, Fisheries and Aquaculture Fund (EMFAF) 2021-2027, Priority 2 - "Promoting sustainable aquaculture activities and the transformation and marketing of fishery and aquaculture products, contributing to the EU's food security" - Specific Objective 2.1 - "Promoting sustainable aquaculture activities, particularly by strengthening the competitiveness of production and ensuring that activities are environmentally sustainable in the long term" - the NSPA highlights that that is highly recommended for intermediate bodies (Regional authorities) to support actions aimed at the planning and coordinated management of spaces for aquaculture, fostering the possibility of competing with other economic activities for access to spaces and resources in marine and inland waters, with the efficient use of breeding water, planning of space for aquaculture, and the development of synergies between activities and space uses.

2. Does your Member State provide EMFAF support for investment and/or innovation projects aimed at reducing emissions of GHG from land-based and/or marine fish farming facilities?

Several strategic actions in the NSPA 2021-2027, a document drafted and approved by farmers associations and intermediate bodies, have been foreseen to address EMFAF measures towards investments to increase sustainability and lower emissions of aquaculture production facilities:

S2.5 – Encouragement of integrated aquaculture, synergies between different productive activities in the combined use of spaces, and aquaculture systems providing environmental services. This strategic line aims to promote and support the establishment and development of sustainable aquaculture systems and/or those that provide environmental services, also through support for organic certification.



S3.1 – Investments to improve the competitiveness, sustainability, profitability, and resilience of aquaculture enterprises. This line encourages actions for mitigating environmental impacts through the establishment or upgrading of aquaculture systems with reduced greenhouse gas production and carbon dioxide sequestration functions. It will also be essential to increase the energy efficiency of breeding systems, while simultaneously assessing the ecological footprint of products, to enhance the value of those with a lower footprint.

S3.6 – Promotion of highly compatible aquaculture systems and/or those that provide environmental services. This strategic line aims to promote and incentivize aquaculture companies to adopt sustainable production models, with high eco-compatibility and that provide environmental services based on the efficient use of resources to improve the environmental performance of activities. Environmental services refer to the economic value of goods and services generated by the proper management of productive activities, or the positive externalities generated by them, such as the sequestration of nitrogen, phosphorus, and carbon dioxide.

S3.8 – Supporting research, innovation and its scalability as well as improving knowledge and the transfer of results for business needs. This strategic line aims to promote research and innovation to support businesses, facilitating the dissemination of scientific and technical knowledge, innovative practices, networking, as well as the exchange of experiences and best practices. Special attention is given to the theme of energy efficiency and highly compatible aquaculture among the promoted actions. It is appropriate to develop research activities aimed at acquiring increasingly greater knowledge of the impacts generated by productive activities and techniques for reducing/mitigating negative externalities, contributing to the conservation of environmental resources and the protection of aquatic ecosystems. One objective will be to promote further exploration of the ecosystem services provided by these activities (e.g., CO₂ sequestration), accompanied by appropriate models for their quantification.

It is specifically in line with these NSPA strategic goals that National Operational Program includes a specific Priority to sustain sustainable aquaculture products (2 - Promote sustainable aquaculture activities and the processing and marketing of fishery and aquaculture products, contributing to the security EU food security).

Particularly regarding the reduction of GHG emissions the Program sustains:

"... Eco-sustainability of aquaculture (including for support vessels), processing and marketing activities, supporting decarbonization through investments to reduce energy consumption by 30% and increase efficiency energy efficiency, the achievement of 50% reduction targets for antibiotic use, development of organic aquaculture by increasing investments by 5%, and production and safe use of seaweed, including with premium selection criteria. The following will be encouraged product traceability, certification, and brand development as well as conversion to sustainable production methods (i.e. Sustainable Aquaculture Certification) and the land management, with regard to investment in shellfish farming as a provider of ecosystem services to regulate and control the environment and for valliculture ..."



MALTA

18 June 2024, Alexia Georgakopoulos, Permanent Representation of Malta to the European Union

Does your administration take decarbonisation into consideration in the spatial planning of finfish farms, especially the distance between the sites provided to offshore marine farms and the harbours at which they operate?

Decarbonisation and spatial planning are important considerations in the development of sustainable Maltese finfish farms. The distance between offshore marine finfish farms and harbours is indeed a crucial factor to consider, as it can impact the environmental sustainability and carbon footprint of the operations (closer proximity can reduce transportation costs and emissions). Therefore, the Department of Fisheries and Aquaculture (DFA) in Malta takes special consideration in promoting sustainable aquaculture practices as well as decarbonization strategies, such as reducing energy consumption, using renewable energy sources, and minimizing/reusing waste based on circular economy principles. In terms of spatial planning, the DFA takes an eco-friendly aquaculture zoning approach, which aims to balance economic, social, and environmental concerns. In this regard, all the current and future designated Aquaculture Zones will be effectively managed through an Ecosystem-based Approach to ensure that cumulative pressures are compatible with Good Environmental Status (GES) and sustainable use of resources, and the concepts of physical, ecological, and social carrying capacity in aquaculture planning will be applied. Such aquaculture establishments, especially for those close to shore should prioritise any emerging species, including finfish species, lower trophic organisms, and microalgae and macroalgae, and innovative and SMART production systems that minimise the overall environmental impact with the aim of increasing resilience to climate change effects.

Does your Member State provide EMFAF support for investment and/or innovation projects aimed at reducing emissions of GHG from land-based and/or marine fish farming facilities?

Considering that, at present, the Maltese aquaculture industry is completely a marine aquaculture conducted exclusively using floating cages, Malta is not providing EMFAF support for investment and/or innovation projects aimed at reducing emissions of GHG from marine fish farming facilities. However, Malta must underline that through the EMFAF 2 aquaculture projects have been financed and which are implemented by a research company based in Malta, who assists through the testing, research and piloting of actions to support the aquaculture farms. One of the targets of Malta's Multiannual National Plan for the Development of Sustainable Aquaculture 2022-203 is to integrate climate-proofing, technological and financing innovations that increase adaptation and resilience of the sector, including emission reductions and renewable energy systems such as co-location of new aquaculture sites with offshore infrastructures such as offshore oil rigs, wind and wave energy facility installations or photovoltaic power generation or using renewable energy heating and cooling systems and water pumps or hydropower and other aquatic-based energy systems that exploit maximize the energy potential of tides, currents, waves and wind.

