



Oceans in climate negotiations: What role for blue foods?

***Driving the successful adaptation of European Fish farming
to climate change and its contribution to low carbon diets***

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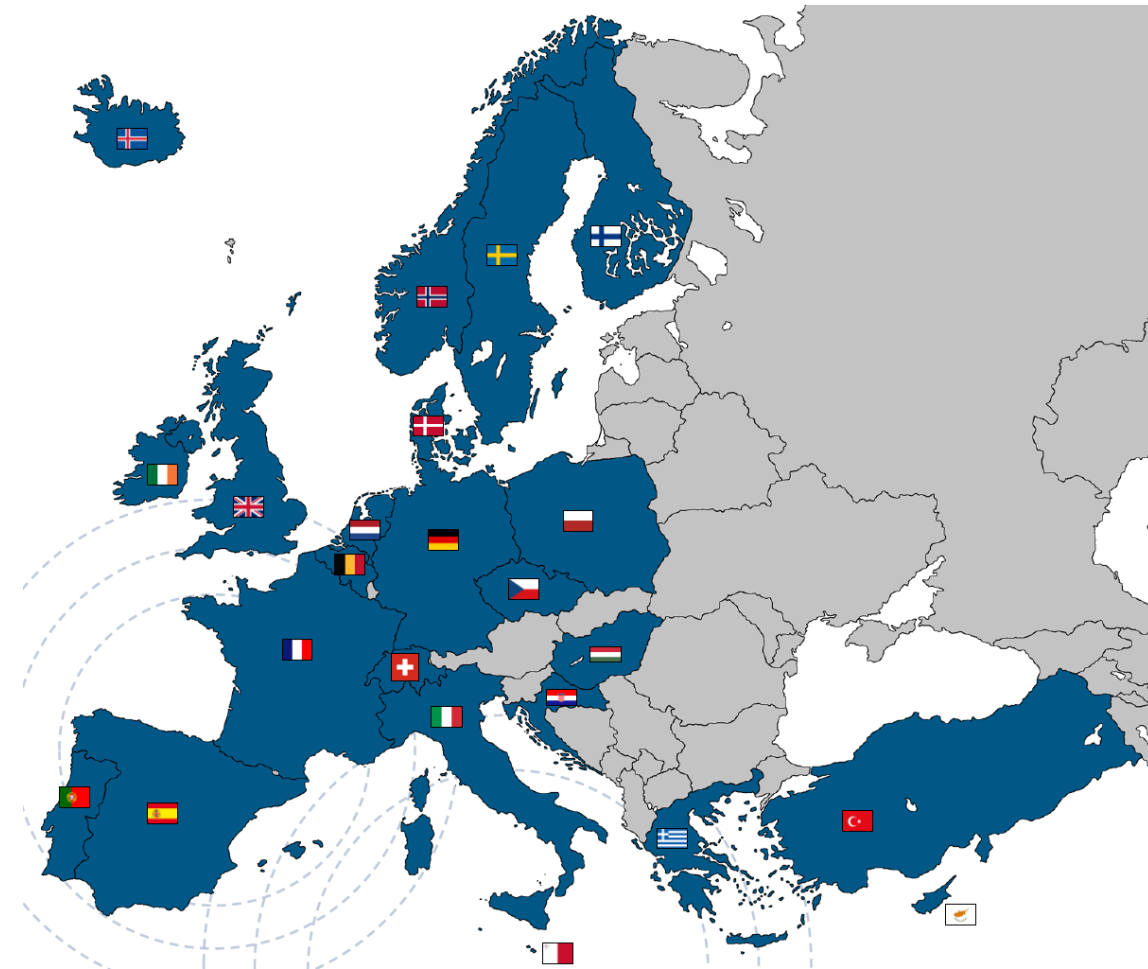
Federation of European Aquaculture Producers

Objectives

- Promote sustainable aquaculture.
- Improve the competitiveness of European aquaculture farmers.

Membership

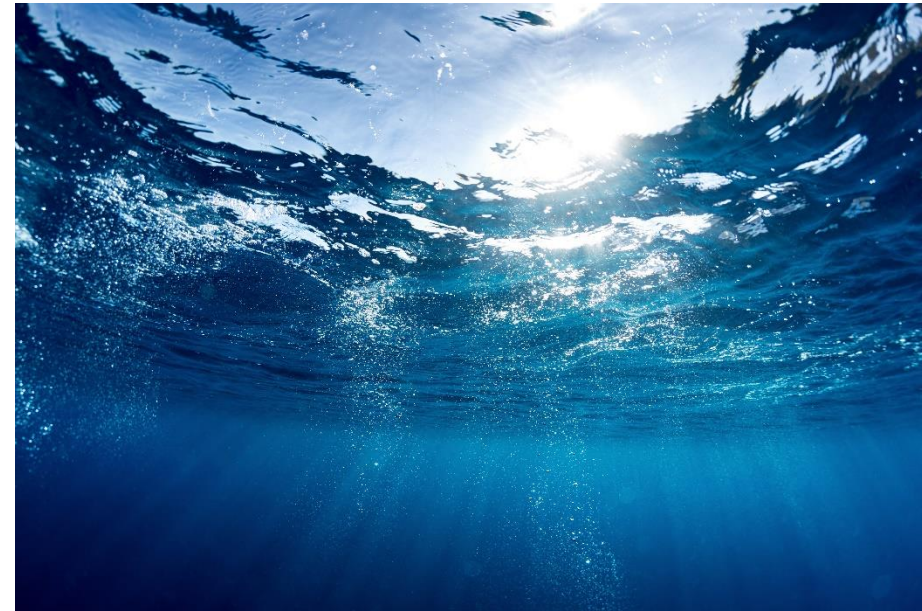
- A European federation composed of national fish farming associations representing 24 national associations from 23 countries.
- European-wide, not only EU.
- Atlantic salmon, rainbow trout, seabass, seabream, turbot, sole, meagre, sturgeon/caviar, bluefin tuna, arctic char, carp... (and many more).



Aquaculture and climate change

1. CONSEQUENCES

- Significant changes in the availability and trade of aquatic food products.
- Implications on European aquaculture farmers, local communities will depend on their exposure, sensitivity and adaptive capacity
- EU aquaculture mainly takes place in territorial waters – operators vulnerable to appropriate spatial planning and governance.
- The consequences of climate change on the aquaculture sector will be determined by:
 - 1) The sector's capacity to innovate and adapt.
 - 2) The Adaptive spatial planning and governance.
 - 3) Consumers making responsible choices at purchase points to contribute to carbon neutrality.



Aquaculture and climate change

1. CONSEQUENCES

Direct impacts on aquaculture

On production:

- Large scale loss of production and infrastructure from extreme events (floods, sea storms).
- Fish feed raw material availability.
- Changes in temperature and ocean acidification.
- Increased risks of diseases.
- Frequent harmful algal blooms and sea hypoxia events.
- Reduced precipitation leading to increasing competition for freshwater.

On the markets:

- Weakening of food security and self-sufficiency rate
- Financial sustainability risks - additional costs along the value chain



Aquaculture and climate change

2. ADAPTATION MEASURES

Adaptation starts with:

- understanding of aquaculture's dependence on the natural environment and
- a reliable assessment of climate impacts at local and global levels.

By fish farmers to increase resilience:

- Adjustment of farm siting, management and husbandry.
- Diversification of species.
- Selective breeding to build biological resilient stocks
- Improved and adaptive biosecurity to monitor fish health

By public administrations and governance:

- Adapt licensing framework and spacial planning to enable/accelerate the implementation of adaptation measures (MANPs - OPs)
- Facilitate the diversification of farmed species suitable to the new environmental conditions.
- Adapt insurance schemes



Aquaculture and climate change

3. MITIGATION ACTIONS

- Aquatic species production has a lower carbon footprint than terrestrial livestock
- Aquaculture is a small contributor of GHG emissions, but options exist for reducing fuel use and GHG emissions.
- Strategic and operational changes can be made to reduce GHG emissions across the lifecycle, from aquafeed production through to product distribution.
- The main options for high-volume reductions in greenhouse gas (GHG) emissions in aquaculture come from changes in fish feed production, transport and power input



Aquaculture and climate change

3. MITIGATION ACTIONS



Actions to be taken at farm level:

- Improve production technologies to increase efficiency.
- Decarbonise farming facilities & vessels (swift to low emissions energy sources & transport)
- Use of renewable energy sources for pumping, oxygen and general systems.
- Improvement of feed conversion rates.

Actions to be taken at sectorial level:

- Innovate with a holistic view. FEAP is involved in the FutureEUAqua H2020 research project: pursuing genetic resilience towards a changing climate, production of innovative feed including low trophic ingredients, monitoring health and welfare with IoT in different production systems and reaching the value chain with environmentally friendly processing and packaging methods.
- Successful implementation of mitigation actions demands good consumer perception and their willingness to choose sustainable aquatic food.





WE ARE **THE SOLUTION** 
 WE ARE **THE FUTURE**

Thank you.
I hope you found this presentation interesting.

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