



## Agroecology for organic agriculture in the Mediterranean

10-12 September 2015 Vignola Castle (Modena)

### European Organic Aquaculture:




*Science-based recommendations for further  
development of the EU regulatory framework and  
to underpin future growth in the sector*

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delle Risorse del Mare

## **OrAqua project will suggest improvements for the current EU regulatory framework for organic aquaculture based on:**

-  **the review of the relevant available scientific knowledge;**
-  **the review of the organic aquaculture production and economics;**
-  **the consumer perceptions of organic aquaculture.**

**The project will focus on the aquaculture production of relevant European species of finfish, molluscs, crustaceans and seaweed.**

# rAqua PARTNERS

1. Nofima, Norway
2. COISPA Tecnologia & Ricerca, Italy
3. DTU – Technical University of Denmark, Denmark
4. Ifremer – French Research Institute for Exploitation of the Sea, France
5. USB – University of South Bohemia in České Budejovice, Czech Republik
6. SLU – Swedish University of Agricultural Sciences, Sweden
7. DLO – Stichting Dienst Landbouwkundig Onderzoek, Netherlands
8. Debio Association, Norway
9. ICEA – Istituto per la Certificazione Etica ed Ambientale, Italy
10. ICROFS – International Centre for Research in Organic Food Systems, Denmark
11. FEAP – Federation of European Aquaculture Producers, France
12. IZSve – Istituto Zooprofilattico Sperimentale delle Venezie, Italy
13. Culmarex SA, Spain



# The amending regulations 889/2008

Since the introduction of the implementing rules on organic aquaculture into the Reg. 889/08, the organic market has continued to have a dynamic development

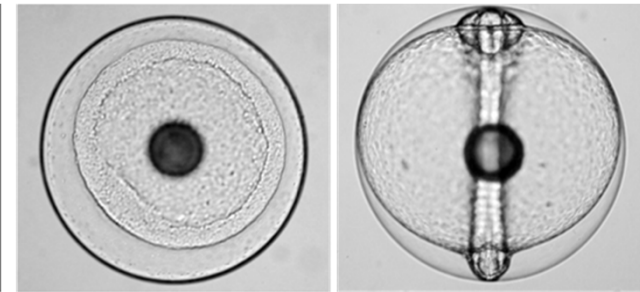
**In addition, the legislation has shown elements of complexity along with unresolved issues, which are stopping farmers from joining the Union's organic aquaculture scheme**

Some of the most controversial matters have been addressed by the Expert Group for Technical Advice on Organic Production (EGTOP), which delivered a first report (Part A) on December 2013 and a second report (Part B) on July 2014

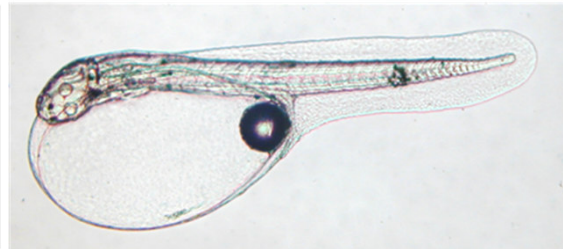
# Challenge of Sourcing of Organic Juveniles

- Inadequate supply of organic juveniles, except trout ova/fry from Denmark.
- Lack of specific rules for organic hatcheries (FW & MW) to distinguish organic and non-organic hatcheries, e.g.:
  - Ⓢ Stocking densities;
  - Ⓢ Management;
  - Ⓢ Phytoplankton and zooplankton production;
  - Ⓢ Essential nutrients;
  - Ⓢ Organic weaning diets, etc. (e.g. Hatching, weaning).

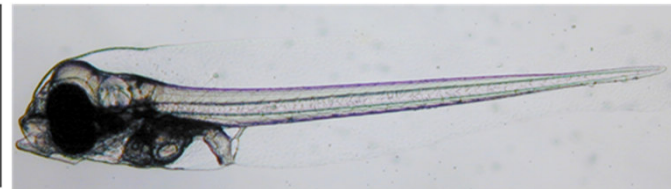
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# Feed and Nutrition Challenge

## *FM & FO are limited resources*

- Premium FM from whole fish may be prioritized for brood-stock and fry/fingerling diets;
- FM & FO from trimmings for limited use;
- Alternative sources of proteins and lipids urgently needed to optimize dietary AA-profile (micro-/macro organisms high in essential AA and FA, plants, PAP, worms, etc.);
- Supplementation with essential AA and FA and other essential nutrients derived from processes in line with organic principles.



# Welfare Challenge

## *Interactions:*

- Feed quality;
- Stocking density;
- Water quality;
- Rearing conditions;
- Day-length – Geography;
- Physical injuries;
- Transportation;
- Slaughter methods (preventing suffering in fish, preserving the flesh quality, human safe).

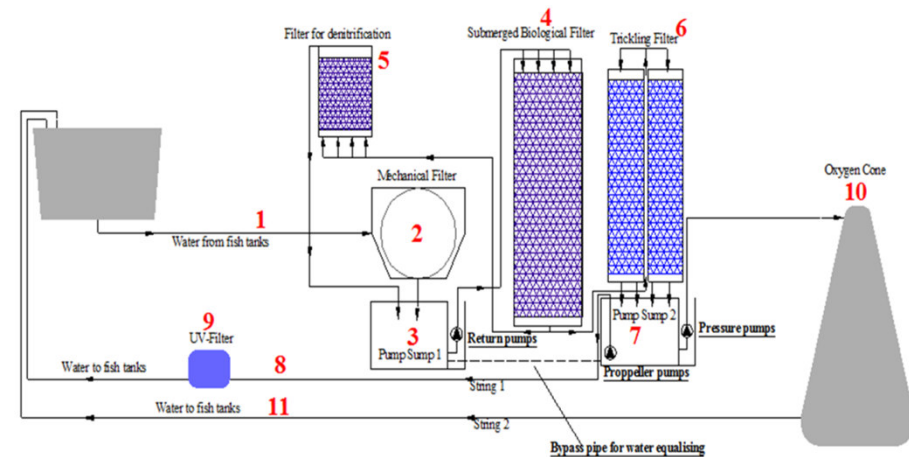


***Consider holistic approach***



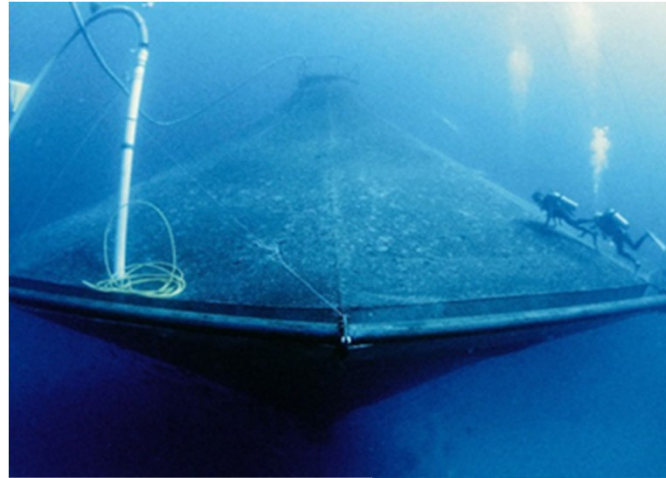
# Production Systems Challenge

- ② RAS not allowed due to intensive & energy issues
- ② Reuse of water is in line with organic principles.
- ② Only mechanical aerators;
- ② Prefer renewable energy sources;
- ② Pure oxygen only permitted in critical situations.





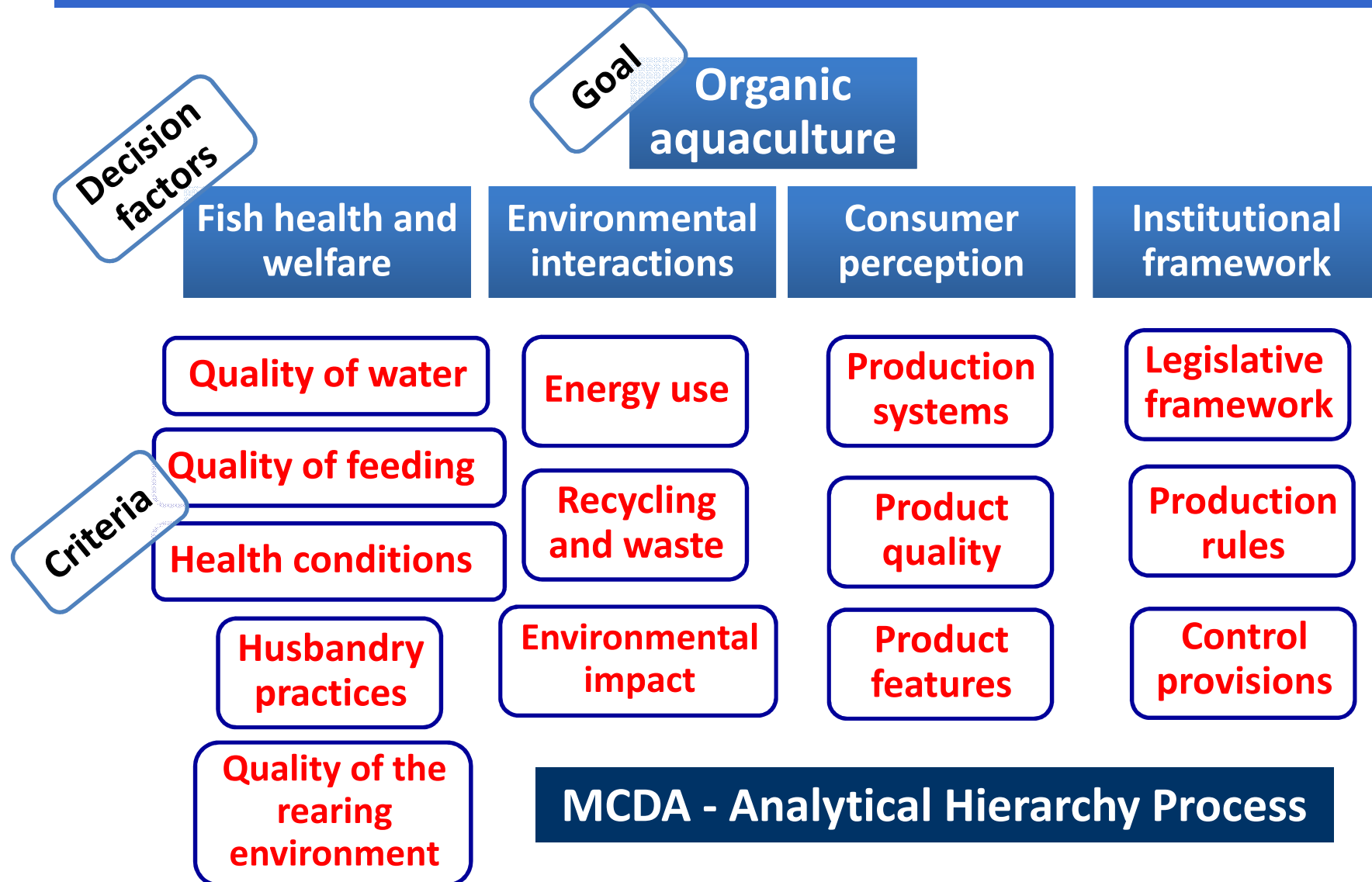
# Environmental Challenge



**Escapee,  
pollution ...**



# Multi Stakeholder Platform





... organic aquaculture can contribute to meet the nutritional and economic requirements of peoples, while conserving natural resources and mitigating the impact of farming and fishing activities on climate change ...