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in European Mariculture

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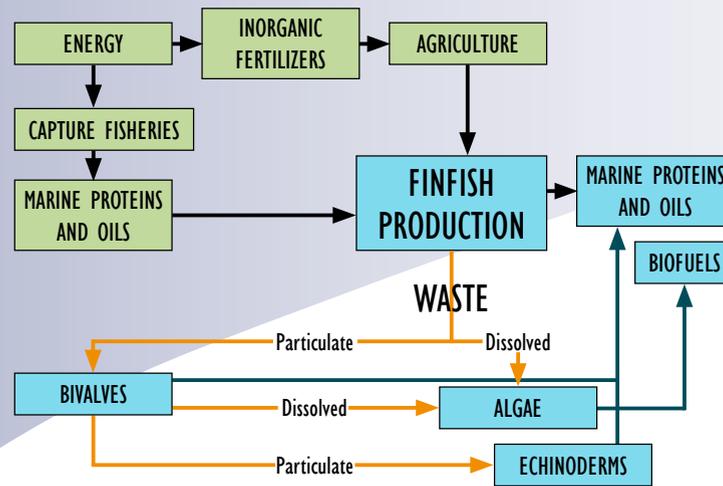
ABOUT IDREEM

Aquaculture is now a major component of global food security, a fast growing food production sector and an important source of economic growth for Europe. The IDREEM project will create a smarter and greener aquaculture industry by adopting an integrated multi-trophic approach (IMTA) for the use of waste streams from principal production and converting them into secondary raw materials, suitable for the production of high value organisms such as seaweed and shellfish. To do this IDREEM will develop, demonstrate and benchmark (against existing production techniques) innovative production technologies for the European aquaculture industry.

ABOUT IMTA

Aquaculture - is the production of fish, invertebrates and seaweeds in aquatic systems and by a variety of production methods. Typically these different types of organisms are grown separately. Integrated Multi Trophic Aquaculture (IMTA) is a concept where different species are grown together in such a way that the co-cultured species can recycle the nutrients that are lost from the culture of the other species.

- Fish are farmed together with other species including shellfish and algae or seaweed, creating a more efficient, cleaner and less wasteful production system.
- IMTA allows nutrients from fish farms that are otherwise lost to the environment to be turned into useful products.
- IMTA addresses concerns about the future sustainability of aquaculture by increasing productivity and profitability.



The results of this work will primarily focus on providing routes to IMTA for enterprises in order to create new employment and growth opportunities as well as tasty and healthy seafood and other products.

ACTIVITIES

- Assessment of environmental interaction;
- Financial and economic assessment of IMTA production;
- Market assessment and review of IMTA market products;
- Assessment of ecosystem service value of IMTA production;
- Life cycle assessment;
- Decision-support tools;
- Analysis of regulatory framework and development of policy recommendations through stakeholders engagement;
- Design, build-up and operation of a pilot IMTA system;
- Development of modeling tools for IMTA systems.

OBJECTIVES

- Reducing inputs, maximizing resource productivity and minimizing waste in European aquaculture through the development of IMTA technologies.
- Reducing farm effluents by converting waste products from one production stage (finfish culture) into secondary raw products in the additional production stages by culturing suspension-feeders, detritivores and macroalgae.
- Demonstrating the combined resource and production efficiency of IMTA as compared to existing monoculture production systems using Life Cycle Assessment.
- Providing the modelling tools for industry and policy makers that enable evidence-based decisions on the impacts of adoption of IMTA.
- Removing the barriers for large scale adoption of IMTA in Europe.

