AQUASEF

ECO-EFFICIENT TECHNOLOGIES DEVELOPMENT FOR ENVIRONMENTAL IMPROVEMENT OF AQUACULTURE

Background

Aquaculture has experienced a fast growth as the major provider of fish protein for humans. According to FAO, farmed fish production has increased 12 times in the last three decades, and projections show that the sector will have to grow more than double again between 2011 and 2050.

Inland aquaculture facilities in Europe have difficulties connecting to the central grid and therefore depend on highly pollutant, costly, and inefficient diesel engines to generate the electricity they need for their daily activities. Energy consumption in aquaculture installations varies greatly between different regions and countries, but the use of more efficient sources of energy can significantly reduce the energy bill of aquaculture installations while bringing additional environmental and operational benefits to the sector.

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LIFE 13 ENV/ES/000420

Objective

To reduce the carbon footprint and improve the quality of water and effluents from fish and mollusc aquaculture production through the implementation of eco-innovative technologies, which will have a positive impact on the environmental sustainability of the farming cycle.

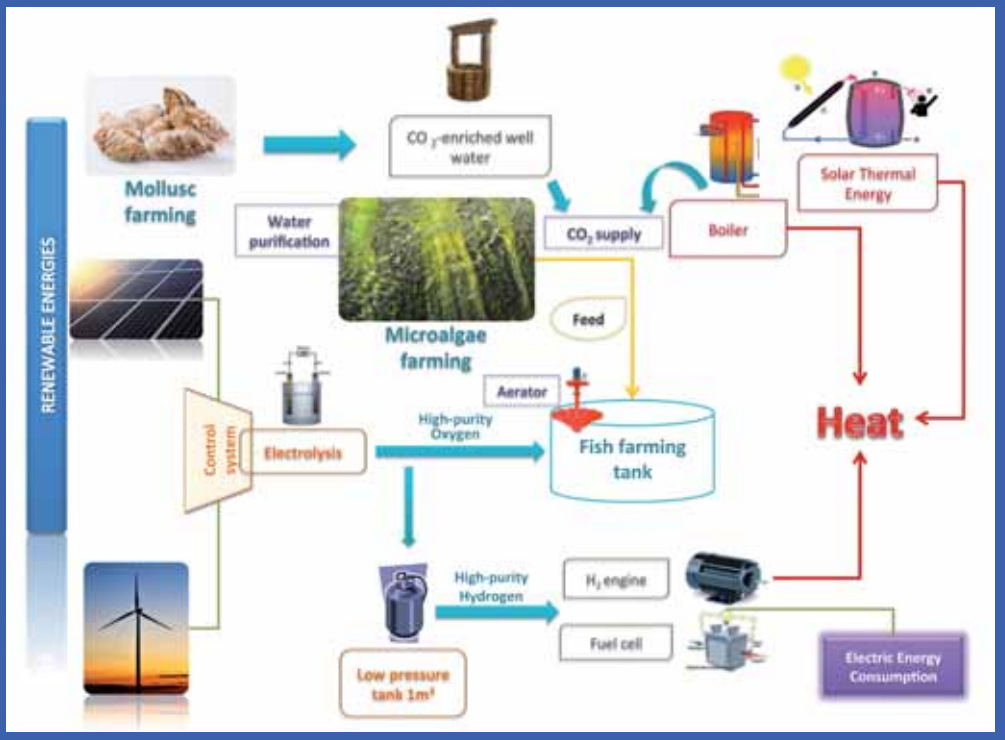
Budget:

1.899.318 €

EU Contribution:

919.744 €

Methodology



Expected results

- To reduce greenhouse gas (GHG) emissions through improved production planning, increased equipment efficiency, and renewable energy use.
- To increase the overall efficiency of the aquaculture cycle by in-situ production of oxygen.
- To reduce fossil fuel usage.
- To demonstrate the benefits of using fuel cells and hydrogen technologies in the aquaculture sector.
- To demonstrate the effectiveness of novel aeration technologies in fish tanks.
- To enhance the nutritional value of feed for farm raised fish and mollusc.
- To improve the quality of fish tank effluents.
- To demonstrate the environmental and economic benefits of microalgae farming for the CO2 fixation.
- To promote the replicability of the project through the appropriate transfer of results, knowledge sharing, and integration of outcomes in the promotion of ecological aquaculture.

AQUASEF PARTNERS:

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