

OBJECTIVES

The ultimate goal of LIFE AQUASEF project is to reduce carbon footprint on aquaculture and to improve effluents quality in land-aquaculture installations.

HOW?

Through the implementation of innovative technologies designed to reinforce sustainability at fish and molluscs production life cycle

PROJECT PARTNERS



This Project has been co-funded by the European Commission through the LIFE+ 2013 Program

LIFE 13/ENV/ES/000240



AQUASEF

Eco-efficient Technologies development for Environmental improvement of Aquaculture



LIFE 13/ENV/ES/000240

BENEFITS

- Reduce CO2 emissions
- Oxygen production on site through electrolysis for supplying the hatcheries
- Achieve efficient and low-cost aeration systems
- Use the excess of hydrogen generated in the electrolysis process to generate additional power

CONTACT

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WHAT IS LIFE + AQUASEF PROJECT?

It is an **integrated innovation project** that intertwines different actions focused on improving the energy and environmental sustainability of fish and molluscs aquaculture production.

TECHNICAL ACTIONS

B1: Demonstration of the possibility of energy optimization and renewable energy use.

Action coordinator: **Inoma renovables,sl**

This action demonstrates effectiveness of renewable energies used in aquaculture facilities and the need to optimize energy consumption through the implementation of more efficient technologies.

The renewable Installation counts on a photovoltaic generator, smallwind vertical axis and solar thermal systems . A meteorological station helps controlling the different environmental parameters that influence energy production.



B2: Proof of environmental advantages in the use of hydrogen and fuel cells within the aquaculture sector.

Action coordinator: **ariema**

Many land aquaculture facilities require oxygen for the oxygenation of culture tanks, making the use of hydrogen for generation of heat, movement or electricity possible.

This sector provides an attractive market niche for hydrogen technologies and fuel cells



AQUASEF favors sustainability of aquaculture by using technologies connected to renewable energy sources, which residue is water vapor, not generating CO2.

B3: Proof of the best oxygenation techniques in salt water cultivating tanks

Actions 3 and 4 coordinator:



In aquaculture facilities it is very common that the main energy consumption is the one required for the water oxygenation systems

To reduce this environmental impact, AQUASEF proposes the installation of efficient microbubble generation devices to oxygenate the fish culture tanks.

B4: Proof of the best techniques for by-products valorisation

AQUASEF also uses microalgae as a natural effluent waters filter, studying the use of these algae as a food supplement for fish farming too.

