

AT A GLANCE

TITLE:

Producing advanced bio-based fertilisers from fisheries waste

CONSORTIUM:

26 partners

COORDINATOR:

NEIKER | Instituto Vasco de investigaciones agrarias

DURATION:

January 2021- 31 December 2024

TOTAL BUDGET:

€ 8,853,401,54

EU CONTRIBUTION:

€ 7,748,383,50

SEA2LAND

Producing advanced bio-based fertilisers from fisheries wastes

SEA2LAND PARTNERS

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| <ul style="list-style-type: none"> 1 NEIKER INSTITUTO VASCO DE INVESTIGACIONES AGRARIAS (Spain) 2 BARNIA (Spain) 3 CAVIAR PIRINEA (Spain) 4 NUTRILOOP (Estonia) 5 FUNDACIÓN AZTI – AZTI FUNDazioA (Spain) 6 CATAR (France) 7 UNIVERSITÀ POLITECNICA DELLE MARCHE (Italy) 8 AQUABIOTECH GROUP (Malta) 9 BETA TECHNOLOGICAL CENTRE UVIC-UCC (Spain) 10 FERTINAGRO BIOTECH (Spain) 11 GRONN GJØDSEL (Norway) 12 NIBIO – NORSK INSTITUTT FOR BIOØKONOMI (Norway) 13 INSTITUTO DE SOLDADURA E QUALIDADE (Portugal) | <ul style="list-style-type: none"> 14 INSTITUT NATIONAL POLYTECHNIQUE DE TOULOUSE (France) 15 UNIVERSITEIT GENT (Belgium) 16 ESSTI TAIMEKASVATUSE INSTITUUT (Estonia) 17 UNIVERSITÀ DEGLI STUDI DI MILANO (Italy) 18 CHAMBRE D'AGRICULTURE DES PYRÉNÉES ATLANTIQUES (France) 19 FORSCHUNGSINSTITUT FÜR BIOLOGISCHEN LANDBAU STIFTUNG (Switzerland) 20 UNIVERSITÉ DE LIÈGE (Belgium) 21 NORSK LANDBRUKSRADGIVNING NORD NORGE (Norway) 22 INICIATIVAS INNOVADORAS (Spain) 23 INSTITUTO DE INVESTIGACIONES AGROPECUARIAS (Chile) 24 FORSCHUNGSINSTITUT FÜR BIOLOGISCHEN LANDBAU (Belgium) 25 IPS KONZALTING DOO ZA POSLOVNE USLUGE (Croatia) 26 SOCIETÀ COOPERATIVA PESCATORI MOLLUSCHICOLTORI (Italy) |
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SEA2LAND

European Agriculture relies heavily on external sources for the supply of key fertilisers, while at the same time large quantities of minerals are discharged into the environment through a variety of organic waste streams.

The SEA2LAND project is a 4-year collaborative Innovation Action (IA) which aims to provide solutions that help overcome challenges related to food production, climate change and waste reuse through the use of these organic waste streams. To this end, the SEA2LAND project will work on improving and adapting nutrient recovery technologies to produce bio-based fertilisers from fish and aquaculture processing by-products.

SEA2LAND will optimise technologies, some of them combined, (advanced composting, bio-drying, freeze concentration and extraction, algae production, pyrolysis, membrane technology, chitin extraction, thermo-mechanical fractionation, enzymatic hydrolysis) that will generate bio-based (BBF) and tailor-made fertilisers, both for local crops and conditions and for export.

The proposed technologies range from well-known processes (bokashi, composting, etc.) that can be a solution in some areas due to its low cost and simplicity to others more sophisticated that go from thermo-mechanical fractionation to enzymatic hydrolysis. The technologies will be applied to different by-products, and they will produce several BBFs either for local crops and conditions, and others for exporting (with high value and effectiveness to assure a low impact). BBFs will be characterized to ensure compliance with EU regulations, including those related to organic farming.

The effects on soil biodiversity, environmental sustainability and the impact on social parameters and local economy will be studied and business plans will be defined. Finally BBFs from by-products will serve to partially replace imported nutrients for agriculture in Europe, contributing to reduce the negative environmental effects of the misuse of by-products.

Objectives of SEA2LAND

- Production of biofertilisers within a local and circular framework through the development of demonstration pilots that can be replicated across Europe.
- Application of more than 10 technologies in 7 case studies in 6 representative areas of the fisheries and aquaculture sector (North, Baltic, Atlantic, Cantabrian, Mediterranean and Adriatic).

AT A GLANCE

TYPE:

Research SME

LOCATION:

Mosta, MALTA G. C.

CAPABILITIES:

R&D / Consultancy / Engineering

EXPERTISE:

Aquaculture / Marine Research

Blue Growth / Aquatic Environment



Who We Are

AquaBioTech Group is an international consulting, engineering and R&D company with over 20 years of experience in aquaculture, fisheries and other aquatic sciences. Located in the center of the Mediterranean on the island of Malta, although operating globally with clients and projects in over fifty-five countries.

The vast majority of the organisation's work is related to the marine or aquatic environment, encompassing aquaculture developments, market research/intelligence through project feasibility assessments, finance acquisition, project management, technology sourcing, technical support and training.



Our Role in the SEA2LAND project

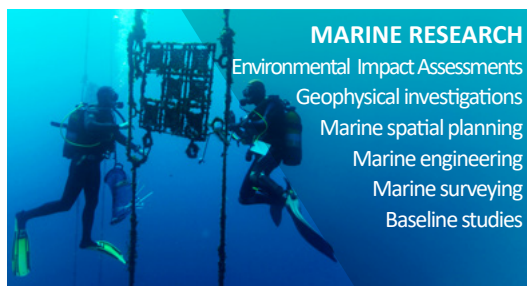
AquaBioTech Group's main tasks in the SEA2LAND project include:

- Assisting in the recovery of nutrients from aquaculture industry by-products through:
 - Supplying Mediterranean marine-based wastewater and sludge for valorization by UVIC
 - Implementing a pilot study for recovery of nutrients and valorization of aquaculture industry by-products for use in product testing
- Involvement in the Techno-economic Assessment of the innovations and in the creation of the model business and market analysis
- Contribution to the dissemination and communication of the project results

Our Research Activities

**AQUACULTURE R&D**

Fish & shellfish hatchery technology
Health & disease prevention
Nutraceutical development
New species development
Aquatic nutrition research
Production techniques

**MARINE RESEARCH**

Environmental Impact Assessments
Geophysical investigations
Marine spatial planning
Marine engineering
Marine surveying
Baseline studies

**WATER TECHNOLOGIES R&D**

Recirculation Aquaculture Systems
Aquaponics
Wastewater treatment
Energy efficiency
Sustainability
Innovation

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