AT A GLANCE

TITLE:
MUSICA

CONSORTIUM:
14 partners

COORDINATOR:
University College Cork, Ireland

DURATION:
1 January 2020- 31 December 2024

TOTAL COST:
€ 9,834,521.43

EU CONTRIBUTION:
€ 8,999,705

MUSICA
Multiple use of space for island clean autonomie

The MUSICA project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement N° 862252

MUSICA PARTNERS

1. AquaBioTech Group (Malta)
2. University College Cork (Ireland)
3. Heriot-Watt University (UK)
4. University of the Aegean (Greece)
5. Municipality of Chios (Greece)
6. University of Malta (Malta)
7. Coral LTD (Greece)
8. Forkys (Greece)
9. Network of Sustainable Greek Islands (Greece)
10. Platforma Oceania De Canarias (Spain)
11. Innosea (France)
12. Neodyne LTD (Ireland)
13. Sinnpower GMBH (Germany)
14. INSB Class International Classification Society (Greece)
15. International Consortium of Research Staff Associations (Ireland)

MUSICA

This project will demonstrate that the MUSICA MUP is a viable enabling infrastructure for multiple RES, desalination and BG aquaculture services for small islands, that can share the same space and work synergistically together, sharing Supply Chains and reducing Operating and Maintenance costs and solving the increasing demand for space.

MUSICA will provide a full suite of Blue Growth solutions for a small island including:

- Three forms of renewable energy (RE) (wind, PV and wave) (total 870kW), providing high RES penetration and competitively affordable electricity. Three forms of RE provide non-correlated supply.
- Innovative energy storage systems on the MUP, provide all required storage for power on the island and platform, as well as electrical output smoothening (compressed air storage and batteries).
- Smart energy system for the island, including: demand response, modelling and forecasting based on high flexibility services from distributed generation.
- Desalinated water made by desalination unit on the MUP powered by RES providing 1000m^3 fresh water for a water stressed island.
- Green support services for island's aquaculture (pilot 200 tonnes production).

Objectives of MUSICA

- Develop the pilot demonstrator of the MUSICA MUP solution, and install on site at Innousses Island to test and demonstrate the validity of the MUP in a real operating environment to TRL7.
- Implement health and safety plans and improve professional skills through training.
- Maximise the societal acceptance and use of MUSICA MUP based RES, water supply and aquaculture support service, and align impacts with SDGs by embedding the principles of RRI
- Address key non-technical barriers and challenges including those that are environmental, regulatory and legal.
- Support economically viable replication of the MUSICA smart MUP solution through Exploitation and Sustainability Plans for commercialisation and continuation beyond the project end.
- Demonstrate, test and validate the MUSICA MUP solution covering functional and non-functional readiness, cost reduction, shared expenditure, better economic, environmental and social viability.

AT A GLANCE

TYPE:
Research SME

LOCATION:
Mosta, MALTA G. C.

CAPABILITIES:
R&D / Consultancy / Engineering

EXPERTISE:
Aquaculture / Marine Research
Blue Growth / Aquatic Environment

AquaBioTech Group

Who we Are

AquaBioTech Group is an international aquaculture and fisheries consulting company strategically located in the Mediterranean, on the island of Malta. It operates globally, with clients and projects in over fifty-five countries. Staff are recruited from across the globe, enabling communication with clients in thirteen languages.

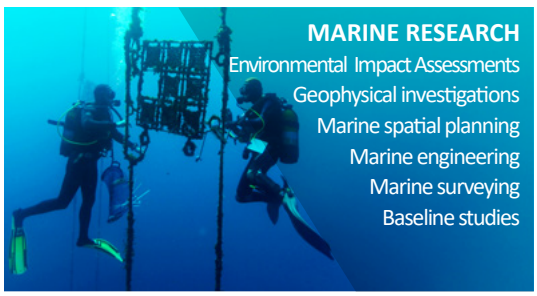
AquaBioTech Group undertakes a variety of aquaculture, fisheries, marine surveying, aquatic environmental, financial, and technical projects, performed with its selected, worldwide partners.

Our role in the MUSICA project

AquaBioTech Group's main tasks within the MUSICA project include:

- Contributing to the design and production technology of the aquaculture component of the Multiuse Platform (MUP) and helping to develop offshore farming that can be integrated in to MUPs, based on a review of current state-of-the-art offshore farming technologies.
- Leading the design and installation of an aquaculture cage and complementary mooring design, based on site resource results.
- Remote monitoring of aquaculture performance using EMS, SCADA and remote telemetry.
- Assisting public engagement studies regarding aquaculture aspects of the project and Blue Growth for 6 case study islands.
- Provide a containerised business model, commercial validity assessments and roadmaps for Aquaculture in Malta.
- Dissemination of project results and participation in networking activities.

Our Research Activities



AquaBioTech Group

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