AT A GLANCE

TITLE:
AMBULANT

CONSORTIUM:
6 partners

COORDINATOR:
Malta College for Arts Science and Technology (MCAST), Malta

China Agricultural University (CAU), China

DURATION:
October 2022 - October 2024

PROJECT BUDGET:
€ 216,460.00

ABTG BUDGET:
€ 60,440.00

ABTG FUNDING:
€ 30,220.00

AMBULANT

AutonoMous Bio-mimetic Underwater vehicLe for digitAl cage moNiToring

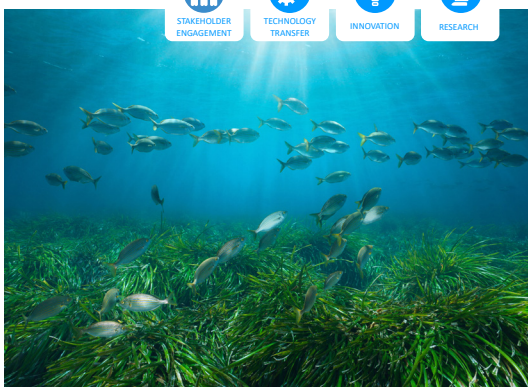
AMBULANT received funding from the Malta Council for Science and Technology (MCST) and the Ministry for Science and Technology of the People's Republic of China (MOST), through the Sino-Malta Fund 2021 (Science and Technology Cooperation)

AMBULANT CONSORTIUM

Maltese partners
1. Malta College for Arts Science and Technology
2. AquaBioTech Group

Chinese partners
3. China Agricultural University
4. Shandong Laizhou Mingbo Aquatic Products Co.
5. Beijing University of Information Science and Technology
6. Beijing Quanlu Communication and Signal Research and Design Institute Group Co.

STAKEHOLDER ENGAGEMENT | TECHNOLOGY TRANSFER | INNOVATION | RESEARCH



AMBULANT PROJECT

AMBULANT has an intention to create a biomimetic robot with an intelligent monitoring system for identifying seabed habitats, as well as fish and their biomass in aquaculture. This would be a transformation and upgrade of traditional aquaculture, as the technologies used until now put distress on the living organisms because of their frightening appearance, loud noise and poor concealment. Biomimetic, in this case, means it will physically appear and move as a fish. These robots have high efficiency, high practicality and low disturbance towards fish stocks. They will support environmental protection of commercially important species and detect endangered and invasive species. In aquaculture it will improve fish welfare and monitoring of risk factors, reduce inefficacy in the farming process, as well as further develop monitoring technology, which will lead to economic growth.

Objectives of AMBULANT

- Development of a dynamic monitoring system for deep-water aquaculture
- Design of an innovative biomimetic robot
- Design and construction of a spatiotemporal prediction model for water quality
- Development and construction of a biomass estimation model
- Development and construction of an automated seabed detection and identification system

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 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.

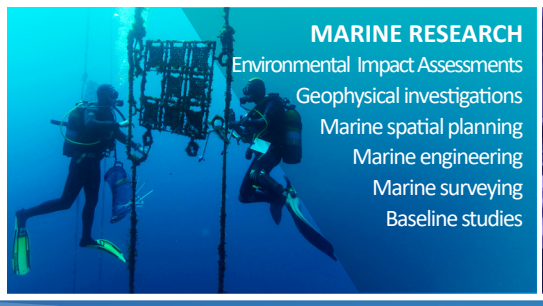
The vast majority of the organisation's work is related to the marine or aquatic environment, encompassing aquaculture developments, market research/intelligence through project feasibility assessments, finance acquisition, project management, technology sourcing, technical support and training.

Our role in the AMBULANT project

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

- Collecting videos of the seabed at different depths around Maltese waters using an ROV equipped with a camera, lighting and GPS
- Converting videos into still images representing a variety of marine habitats, while conducting a scientific methodology for image analysis and segmentation
- Exporting the final dataset in an industry-standard format
- Contributing to the development and construction of an automated seabed detection and identification system
- Assessing the model's performance during the evaluation process from a marine point of view

Our Research Activities



AquaBioTech Group

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