

AT A GLANCE

TITLE:
PRONICARE

CONSORTIUM:
5 Partners & 1 Associated Partner

COORDINATOR:
SINTEF AS

DURATION:
01 August 2022 – 31 July 2025

PROJECT BUDGET:
€1.92M

ABTG BUDGET: €399,083.46
ABTG FUNDING: €263,794.17

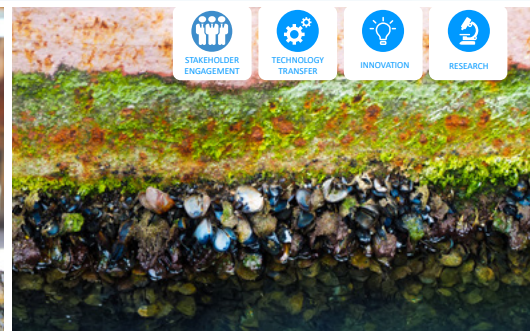


Transnational cooperation for
Protecting Niche areas from marine
corrosion and biofouling by green
coatings and new test technologies.

PRONICARE CONSORTIUM

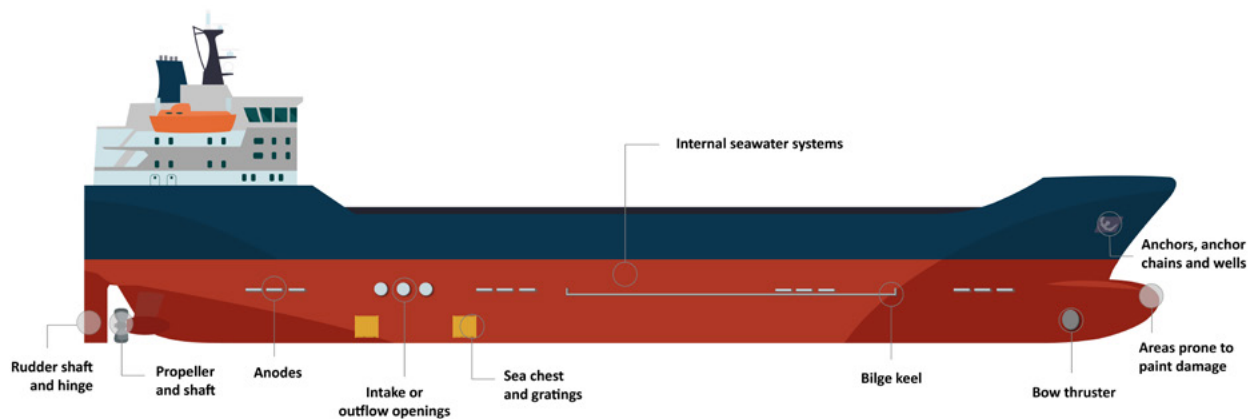
- 1 SINTEF AS Materials and Nanotechnology
- 2 Alfred Wegener Institute, Helmholtz Centre for Polar and Marine Research Bioeconomy/ Aquaculture Research Group
- 3 Ankron Water Services GmbH
- 4 AquaBioTech Group ABTLabs and R&D&I Department
- 5 Funzionano AS
- 6 Kelvion Machine Cooling Systems GmbH (Associated Partner)

This project has received funding from Research Council of Norway, The Malta Council for Science and Technology, and The Federal Ministry for Economic Affairs and Climate Action Germany (BMWK) via the MarTERA – ERA NET co-fund scheme (under grant agreement No 728053-MarTERA) of H2020 of the European Commission.



PRONICARE Project

Marine biofouling and corrosion are two substantial challenges for shipping, offshore infrastructures, and maritime technologies exposed to sea water. Expensive corrosion resistant materials are often needed for smaller functional equipment and surfaces like marine heat exchangers. Antifouling manufacturers have been forced to develop new antifouling coatings after the ban of environmentally damaging tributyltin (TBT) in 2003. There is a great need for environmentally friendly and more cost-effective solutions. In PRONICARE this will be advanced through use of high-tech nanomaterial-based formulations, creating a thin hybrid sol-gel coating with functional antifouling and anti-rust additives in a green and eco-friendly product.



Objectives of PRONICARE

- Develop a copper-free, eco-friendly, cost-effective, thin hybrid sol-gel coating with functional additives for protection of metal surfaces.
- Determine the ecologic fate and behaviour of coating additives to prove eco-friendliness for marine life.
- Develop an innovative modular mobile test unit and new test methodology to evaluate the effectiveness and validate the new coating's feasibility, competitiveness, and eco-friendliness.
- Demonstrate the application of the coatings in test prototypes in niche marine areas: heat exchangers & sea chests.
- Create an SOP applicable to IMO's biofouling guidelines and provide input into IMO's biofouling guidelines.

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 PRONICARE project

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

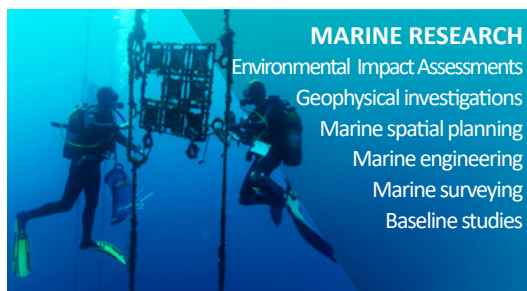
- Ecotoxicological testing of the ingredients and coatings using algae, invertebrates, and fish in accordance with OECD guidelines.
- Evaluate anticorrosion and antifouling efficacy in the lab and field.
- Lead the Communication, Dissemination and Exploitation activities for increased impact.

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



AquaBioTech Group

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