

BREEZE

BREEZE is a sustainable, effective sea lice treatment, developed with the environment, fish welfare, food safety and farm economics in mind.

It will support the Aquaculture sector in Europe to continue to grow sustainably, meeting the increased demand for farmed seafood.



Funded by the
European Union

Who?

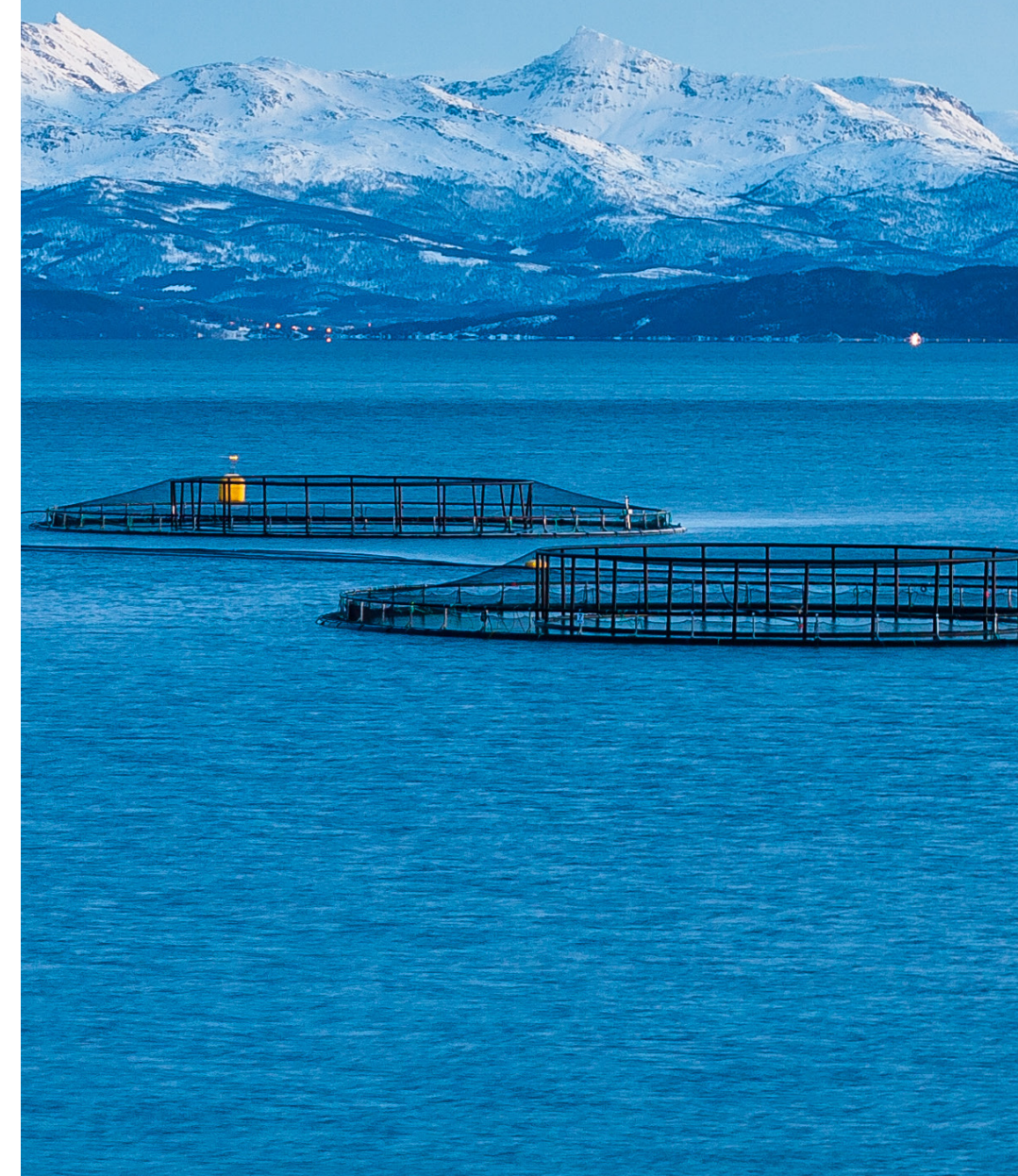
BREEZE is a collaboration between Norway and Scotland, bringing together technology developer **PULCEA**, veterinary services and systems provider **AQUA PHARMA**, the **Norwegian University of Science and Technology** and the **University of Stirling, Scotland**.

Vision

The aquaculture industry's ambition for growth will only be realised when viable new integrative methods for preventing and controlling diseases reach the marketplace.

BREEZE aims to improve existing methods with new sustainable technologies.

The concept will be a significant tool to help overcome the challenges of sea-lice, help further reduce the environmental footprint of the sector and reduce the need for less sustainable methods. This will reinforce the positive perception of aquaculture, leading to increased consumer trust in farmed seafood.



How?

The market need for BREEZE is driven by an increasing world population and a trend towards healthy diets.

Aquaculture has successfully positioned itself as a sustainable solution to meet this growing global population and demand for healthy proteins, contributing to the UN SDG of reaching zero hunger (UN SDG 2&3), while striving for the most sustainable practises possible (UN SDG 13&14). Around half the fish consumed in the human food chain today is grown on fish farms. This is expected to rise to 75% by 2025.

Expanding fish farming is one way to meet the demand of the world's growing population. Increasing numbers of fish on farms also increases the risk of disease spreading among the fish and affecting their health and growth if left untreated. A variety of treatment methods are available, but continuous improvement and development of even more sustainable methods is a must for the sector.

BREEZE aims to improve existing H₂O₂ (oxygenated water) bath treatments.

Why?

The main benefit of the H₂O₂ bath concept is that it is **non-toxic** for the fish but **quickly removes the parasites** and **kills the eggs** of gravid females, **leaving no residue** in the fish itself.

In the environment H₂O₂ decomposes into oxygen and water. Thanks to their eco-friendly nature, H₂O₂ treatments are recognised by the Global Salmon Initiative as an alternative to standard medical treatments. This effective combination of benefits led the Solar Impulse Foundation to award the World Alliance for Efficient Solutions label to the H₂O₂ bath concept in 2020.



BREEZE will combine:

- 1. Acoustic acceleration technology** to counteract the tolerance of marine ectoparasites to the treatment
- 2. Post-treatment biological clean-up** which will neutralise the H₂O₂ using catalase, a naturally occurring enzyme
- 3. Minimal handling of the fish** to ensure fish welfare

Impact on European aquaculture sector

Farmed Atlantic salmon has become a significant and healthy dietary option for the modern consumer. Certification bodies, such as the Aquaculture Stewardship Council (ASC) or the RSPCA welfare standards for farmed Atlantic salmon, provide further consumer reassurance, as do international industry collaborations, such as the Global Salmon Initiative (GSI). We adhere to the standards set by all these organisations.

BREEZE will support aquaculture producers in the environmentally friendly and healthy, non-toxic production of farmed European seafood, which will further contribute to driving consumer demand for salmon and other aquaculture species in the future.

Project information



BREEZE is a 2-year grand challenge project funded by EIT FOOD and involving 4 European partners from education, research sectors, academia and industry. The project runs from May 2021 – May 2023 and is led by Aqua Pharma Group.

Partners

CONSORTIUM



EXTERNAL

