



Proactive in-water cleaning supporting the Clean Hull Initiative

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## Bellona and Armach launch collaboration

**This release was originally issued on 4<sup>th</sup> October 2022 by Armach Robotics, a company launched in November 2021 by marine software pioneer Greensea Systems, Inc. Both companies were merged into Greensea IQ on 1<sup>st</sup> September 2023. The content remains relevant and factual.**

**"Biofouling is a global problem, and to solve a global problem we need to collaborate globally. This collaboration aims to accelerate the uptake of proactive hull cleaning, as well as to understand the limits and risks with**

**such solutions”, say CEO of Bellona, Hallstein Havåg and VP Growth and Strategy at Armach Robotics, Rob Howard.**

The build-up of marine life on ships’ hulls – biofouling – is an age-old problem for the environment, for ship operators, and for the international shipping industry. The problem is significant, increasing emission pollution and spreading invasive species across continents.

Fouling slows the affected ship and can increase its fuel consumption by as much as 40%, boosting already high CO<sub>2</sub> emissions. Better biofouling management of the global shipping fleet is associated with considerable economic and environmental benefits.

“Armach is dedicated to leading the industry with its cutting-edge technological solutions for hull efficiency and proactive ship maintenance, so we feel our work with Bellona and others is crucial to informing and guiding an industry that is faced with rapid change around ship efficiency in the very near future with EEXI and CII regulations taking effect in 2023”, says Rob Howard, VP Armach Robotics.

Armach and Bellona, in coordination with the Clean Hull Initiative, a consortium of industry stakeholders led by Jotun, will work together in tandem towards the common goal to improve the facilitation of proactive hull cleaning around the globe, having the understanding of the limits and risks of such solutions. The aim is to raise awareness and understanding among decision-makers in policy and the shipping business.

“Proactive hull cleaning has great potential to reduce the environmental footprint caused by international shipping. Bellona is working towards increasing international awareness and setting common standards, and our collaboration with Armach will only strengthen our ability to create a positive impact for climate and our environment”, says Hallstein Havåg.

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***About the Bellona Foundation***

*The Bellona Foundation is an international environmental NGO based in Norway. Founded in 1986 as a direct-action protest group, Bellona has become a recognised technology and solution-oriented organisation with offices in Oslo, Brussels, Berlin and London. Altogether, some 67 engineers, ecologists, nuclear physicists, economists, lawyers, political scientists and journalists work at Bellona. The Bellona Foundation is one of eight partners in the Clean Shipping Coalition, and a Strategic Partner to the GEF-UNDP-IMO GloFouling Partnerships project.*

### **About Armach Robotics**

*Incorporated in November 2021 as a spin-out company from Greensea Systems Inc., Armach offers shipowners a proactive, autonomous in-water robotic cleaning solution. Armach harnesses purpose-built robotics with proprietary navigation and operational software to efficiently and quickly clean ship hulls. The resulting clean hull optimises ship efficiency, lowers fuel cost/consumption and provides a complete hull condition report giving shipowners new insight into the condition of their ships' hull.*

*Armach Robotics technology is ready to meet the demand for cleaner, more efficient shipping operations, moving the industry forward with a disruptive, high tech solution to cleaner ship operations.*

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