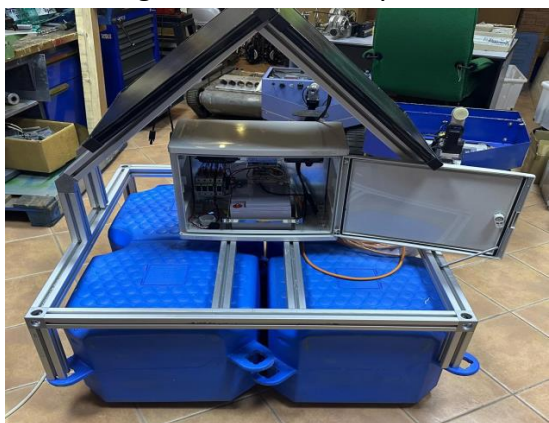


POAH & FAE project: technology at the service of sustainable mussel farming in Taranto

A changing sea, a resource to be saved

The Mar Piccolo of Taranto is a key resource for Italian mussel farming, but also a fragile ecosystem. The increase in temperatures and the anthropogenic impact have caused recurring environmental crises and sudden deaths of mussels, with serious economic and social consequences. It is in this scenario that **POAH – Precision Aquaculture for One Health** was born, a project by **Xensorama**, which aims to anticipate environmental criticalities thanks to intelligent sensors, cloud and artificial intelligence. The project, supported by the **municipality of Taranto** and carried **out in collaboration with Egeolab**, involves the installation of floating rafts in the two sinuses of the Mar Piccolo. These rafts house sensors capable of monitoring fundamental parameters such as temperature, pH, redox potential, dissolved oxygen, salinity, **chlorophyll** and turbidity in real time. Egeolab contributed both to the supply and configuration of the sensors and to the integration between the gateways and the application platform, ensuring the correct functioning of the entire system. The data collected is analyzed by an artificial intelligence algorithm that is able to predict critical situations a few days in advance, thus allowing mussel farmers the opportunity to intervene in good time.



FAE's GW525: the bridge between sea and cloud

For data transmission, a robust, self-contained device capable of operating in harsh environments was required. For the POAH project, FAE's GW525 was chosen for real-time data collection and transmission in the version with a solar panel for off-grid operation in marine environments. The simplicity of installation

completes the profile of a device designed for IoT in remote and unattended contexts.

A network of collaborations for innovation at the service of man and the environment

The POAH project is a concrete example of how technological innovation can become a lever for environmental and economic resilience. The adoption of **FAE's GW525** has made it possible to combine data collection, artificial intelligence and predictive capabilities in an effective and sustainable system. With a solid network of players, from startups to technology companies, up to public research with CNR-IRSA, the Mar Piccolo can now count on effective tools to address one of its most urgent challenges.

