

## Performance improvement of hybrid laminates between natural and synthetic fibres for lightweight marine structures

**Sector:** Marine infrastructures

### Short description of the needs:

The company develops sustainable composite solutions, focusing on natural and recycled fibres as alternatives to conventional synthetic reinforcements. The innovation need lies in enhancing the mechanical performance of hybrid laminates combining carbon or glass fibres with natural or recycled fibres, while minimising the use of virgin raw materials. These composites are required to achieve performance levels as close as possible to those obtained with fully virgin fibre systems, particularly for lightweight marine structural applications.

In parallel, Net Zero Layup intends to optimise natural fibre pre-treatment techniques and to incorporate low-dose nano-additives to increase tensile strength, elastic modulus, toughness and energy dissipation capacity, thereby enabling durable, high-performance and more sustainable materials. The company is seeking cooperation with research organisations and public bodies active in R&D, as well as partners interested in supporting validation activities and the publication/dissemination of the proposed innovative solutions.

**More info:** For more information apply to [eccentric@imast.it](mailto:eccentric@imast.it)

**Company:** Net zero layup S.r.l.

**Point of contact for the brief/challenge:** IMAST - High Tech District on Engineering of Composite Materials and Polymers

**Company position in the value chain:** OEM