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## ***THE CIM-UVIGO PLUG-IN HYBRID PROPULSION VESSEL FOR COASTAL OCEANOGRAPHIC RESEARCH: A TOOL FOR THE ECOLOGICAL TRANSITION***

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**Abstract** – We present an oceanographic research fiberglass reinforced polyester vessel of medium size (19.5 m length x 5.4 m beam) and plug-in hybrid propulsion complemented by a power generation system based on solar panels with polycrystalline cells connected to a charger and two wind turbines connected to their control systems. The vessel will be equipped for scientific research tasks in seas and coastal waters, with an operating cost that makes it viable in the long term, that is environmentally friendly, with an efficient management model, and that facilitates the collection of oceanographic data of high technical quality.

The construction is promoted by the Centro de Investigación Mariña de la Universidade de Vigo (CIM) and commissioned to Rodman Polyships. The vessel's 3-day autonomy will facilitate oceanic observation, the study and monitoring of the effects of climate change on the marine-coastal ecosystem, marine ecotoxicology, sustainable exploitation of marine resources (living and non-living) and integrated management of the coastal zone. It aims to strengthen the center's capabilities to address with greater assurance and competence some of the most critical societal challenges related to climate and environmental change, for which the generation of ocean data is a crucial element to provide adequate information to support the development of the sustainable blue economy.

The infrastructure will be managed as a general service provided by the Marine Environment Unit of the Estación de Ciencias Mariñas de Toralla (ECIMAT), a Research Support Center (CAI) organically dependent on the CIM, with the capacity to invoice and provide the necessary technical assistance. It will be made available to the international community through the European Marine Living Resources Research Infrastructure (EMBRC-ERIC) to which ECIMAT belongs, and through the participation of CIM research groups in other European infrastructure networks such as EMSO or EPOS.