

WHO WE ARE

- ★ MARETEC is a Research Centre of Instituto Superior Técnico (IST) for Marine, Environment and Technology, with two main research areas: Modelling of marine and land systems, and Sustainability.
- ★ MARETEC addresses Environmental Systems through a comprehensive approach to water, soil and atmosphere. Geophysical Fluid Mechanics, Thermodynamics, Transport Phenomena and Computational Fluid Dynamics provide the grounds to Ecological and Economic studies necessary to support Environmental Sciences, Engineering and Management.

OUR EXPERIENCE

- ★ **Modelling of marine and land systems** - MARETEC's main activities in this area focus on numerical modelling applied to water environmental problems, monitoring and data management. MARETEC has more than 20 years of experience in the development and application of numerical models to coastal and ocean areas and 10 years of experience in land and riparian areas. It is also strongly involved with different monitoring programs for coastal areas concerning water quality and primary production. The MOHID system - a public domain code with users worldwide - is an integrated modeling system developed by MARETEC. It includes two main models: MOHID WATER and MOHID LAND;
- ★ **Sustainability** – in this research area MARETEC aims at creating a theoretical, mathematical basis for sustainability assessment, through the integration of Thermodynamics, Ecology and Economics. For this purpose, MARETEC has notably worked on Dynamic Energy Budget theory for the metabolism of organisms; the useful exergy approach to energy accounting; energy and economic growth; carbon responsibility indicators; ecosystem services; comprehensive accounting; and sustainable agriculture. Within this overarching framework MARETEC has most notably published in the areas of metabolic ecology, ecosystem services, sustainable agriculture, energy analysis, green accounting, and carbon responsibility.



WHAT WE DO IN IMPRESSIONS

- ★ We will take part in linking biophysical and economic ES valuation, also involving partners from the outermost region of Azores to address island biodiversity and ES.
- ★ By testing and reviewing methods for ES assessment, mapping, and valuation, we hope to contribute to the development of an integrated and flexible methodology to inform policy and decision-making processes.

WE ARE ALSO INVOLVED IN

Mapping and Assessment of Ecosystem Services in Portugal (ptMAES); MAES Working Group; Ecopotential (<http://www.ecopotential-project.eu/>); Ecosystem Services Partnership; IPBES.



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- ★ Biodiversity Policy and Ecosystem services Assessment
- ★ Environmental Economics



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- ★ Ecological Economics
- ★ Ecological Modelling



**Vânia
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- ★ Postdoc Researcher, MARETEC/IST
- ★ Biodiversity and ecosystem services assessment
- ★ Biodiversity change modelling



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- ★ ES mapping and assessment, Economic valuation of ES
- ★ Environmental Impact Assessment