

Strategic Plan of CENTEC 2018-2022

CENTEC aims at continuing to be one of the world's leading research centres in the area of Marine Technology and Ocean Engineering, specifically in the subject areas of Marine Environment, Marine Dynamics and Hydrodynamics, Marine Structures and Safety and Logistics of Maritime Transportation. In all those areas, the work of CENTEC has a significant degree of uncertainty modelling and risk assessment.

Currently, the proposed plan for strategic development of CENTEC is focused on consolidating its core areas and in developing new research areas that will allow it to continue in the forefront of research in the area of Marine Technology and Ocean Engineering worldwide.

The consolidation of the core research areas is done through the research lines of the existing research groups, which include more than 45 PhD researchers:

- Marine Environment.
- Marine Dynamics and Hydrodynamics.
- Marine Structures.
- Safety and Logistics of Maritime Transportation.

The plan for strategic development of new research areas is done through a series of thematic lines, involving from one to all four groups:

- Renewable Energies Offshore.
- Energy efficiency in the design and operation of ships.
- Subsea Production of Oil & Gas
- Blue Economy

The renewable energies will address resource evaluation, dynamics, strength, and safety and maintenance of the equipment.

The study on energy efficiency in the operation of ships will concentrate on energy efficiency during operations without compromising safety in storm conditions.

The study of Subsea Production of Oil & Gas considers the various possible ways of exploring oil and gas in very deep waters, by giving more emphasis to subsea than to

surface production, as follows from the interests of Portuguese companies in the exploitation of natural reserves in Brazil and Africa. Emphasis will be given to safety and reliability of production as well as maintenance planning.

Attention will be given to the various aspects of Blue Economy by looking at the interfaces and synergies of activities like renewable energy, offshore aquaculture, maritime operations and other new uses of the sea.

It is envisaged to give continuity to Advanced Education through research, providing training to PhD students and experience to post-doctorate researchers, in an environment of wide international research cooperation. Dissemination will also be one of the main directions through the publication of journal papers and participation in conferences as well as organizing international conferences and seminars.