

EMSO-PT INITIATIVE

Fostering ocean observation in Portugal

Coordinated by Portuguese Institute for Sea and Atmosphere, I.P. (IPMA)

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PARTNERS



The European Multidisciplinary Seafloor and water column Observatory – Portugal (EMSO-PT) is a research consortium joining 15 R&D institutions, with the aim of implementing a network of multidisciplinary underwater observatories in the Atlantic, as well as laboratories and data processing support infrastructures.

EMSO-PT is the Portuguese counterpart of EMSO ERIC (European Multidisciplinary Seafloor and Water Column Observatory – European Research Infrastructure Consortium), and it's coordinated by IPMA.

OUR GOAL

EMSO-PT's priority is to generate continuous scientific data on marine environmental processes related to the interaction between the geosphere, biosphere, and hydrosphere and the development of new sensors and platforms which will extend ocean monitoring in the near future.

Monitoring will include biotic and abiotic variables of the ocean floor and water column, namely temperature, salinity, turbidity, acoustics, currents, and dissolved oxygen aiming at addressing the Essential Ocean VariableS (EOVs) of the Iberian Margin.

THE DEEP OCEAN IS ONE OF THE LAST FRONTIERS IN OCEAN SCIENCE.

PORTUGAL, AS AN EUROPEAN MEMBER STATE WITH MARITIME JURISDICTION, HAS LEGAL OBLIGATIONS ON MONITORING AND STUDYING THE DEEP OCEAN.

"THERE'S NO ECONOMIC ACTIVITY OCEAN-RELATED THAT DOESN'T REQUIRE OCEANOGRAPHIC PHYSICAL AND BIOLOGIC INFORMATION".

Miguel Miranda, IPMA's President and EMSO-PT Coordinator

CURRENTLY LESS THAN 10% OF THE SEAFLOOR AS HAS BEEN MAPPED.

OBSERVATORIES AND LABORATORIES TO SUPPORT SCIENCE-BASED SERVICES

OUR FOCUS: EMSO-PT focus on the Iberian Margin Node of EMSO ERIC.

WHAT IS THE RELEVANCE OF THE IBERIAN MARGIN? It is characterized by wind-induced coastal upwelling controlling fisheries, the presence of Mediterranean outflow with implications on deep ocean circulation, and it provides excellent sites to study the variations in the hydrologic cycle.

OUR EQUIPMENT: The land-based analytic and engineering network that supports data includes a wide range of equipment, namely, a mass spectrometry with inductively coupled plasma (ICP-MS) ICP PlasmaQuant, a MCSL-XCT, a X-ray fluorescence (XRF) core scanner, EMSO Generic Instrument Module (EGIMs), gliders, a1 plankton multinet, a multibeam for the deep sea remote operated vehicle (ROV) Luso, a long endurance autonomous surface vehicle, a water column profiler, and a pressurized bioreactor system.

STAKEHOLDERS

• R&D community • National administration entities related with ocean policy and governance • Policymakers • Economic sector.

DATA DISSEMINATION

WHERE CAN YOU FIND EMSO-PT DATA? • Through the European Multidisciplinary Seafloor and Water Column Observatory on EMSO ERIC platforms) • on IPMA's digital platform of the project "Atlantic Observatory – Data and Monitoring Infrastructure" funded by the "Blue Growth" Program of the EEA Grants Portugal 2014–2021.