

The INQUA Project Neptune (New Procedures and Technologies for Underwater paleo-landscape reconstruction)

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Under the umbrella of the INQUA Coastal and Marine Processes Commission, (www.inqua.org/commissions/cmp) the Neptune project was launched early this year as a working group for Early Career Scientists aiming to develop multidisciplinary techniques to analyse and reconstruct past landscapes, nowadays submerged due to the postglacial sea-level rise.

Special attention is paid to the technological content, considering that the recent technological innovation applied to geo-acoustic and remote sensing methods opened numerous new possibilities of high-resolution mapping of wide coastal areas, seabed morphologies, and underwater archaeological structures.

The project is placed in the context of regional and local scale studies on coastal landscape changes over the last 12 millennia, by reconstructing submerged landscapes both on- and offshore, from the near-shore zone to the continental shelf.

Furthermore, such information is crucial to assess the potential impact of relative sea-level rise and to prepare the adaptation of coastal communities threatened by climate change.

We focus our attention on the Mediterranean basin, but we are open to researchers working in other geographic areas to provide a broader perspective on the open questions.

With this project, we aim to create a new platform to establish interdisciplinary trans-Mediterranean scientific collaborations between experts in archaeology, coastal geomorphology, and geoarchaeology, as well as experts in marine surveying in order to provide an optimal integration among geological, archaeological and modelling methods.

Therefore, the main aims of NEPTUNE are to propose:

- i) a multidisciplinary approach to underwater paleo-landscape reconstruction by means of innovative technologies integrated with well-established methods;
- ii) a methodological protocol for optimal high-resolution surveying suited to different bathymetric ranges, often corresponding to different time scales.

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