

The unexplored shallow water – introduction to bathymetry

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The vast majority of the world's seabed areas remain a mystery. Current estimates suggest that about 75% of the world's water areas remain unknown and unexplored. This stunning number highlights the limited understanding of the diverse ecosystems, geological formations and potential resources that lie beneath the water's surface. What's more, about 50% of coastal areas, which are a key transition zone for land and sea, have not yet been studied in detail. Coastal areas are home to many megacities around the world. They also play a key role in various industrial applications, ensuring the safe navigation of ships and implementing effective coastal protection and management measures. Consequently, continuous monitoring of the coastal area is becoming a necessity.

This presentation focuses on demonstrating existing bathymetric techniques for shallow water mapping. Three different case studies will be discussed: the simulated area (baby pool), the Sardinian coast, and the coast of southern France. Each technique will be critically assessed, shedding light on their strengths and limitations.