

KNOWING BETTER THE BIODIVERSITY OF THE PORTUGUESE CONTINENTAL SHELF: SOFT BOTTOM BENTHIC MACROFAUNA COMMUNITIES

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Soft bottom benthic macrofauna communities are comprised by small invertebrates that live on sediments. They are formed by long-lived species which hence integrate the surrounding conditions over long periods of time. Amenable to quantitative sampling and responding in relatively predictable manner to a number of anthropogenic stressors, macrofauna communities have long been regarded reliable indicators of the ecosystem health status. They are often prime elements in studies focusing on the biological and ecological effects assessment of disturbance. The identification, characterization and mapping of the benthic macrofauna communities of the Portuguese continental shelf are so key elements to know our seascape, its similarities and uniqueness in relation to other European shelf areas. Such knowledge is vital to an educated management of our marine resources, and to better understand their trajectories of change, either in relation to natural or to anthropogenic pressures.

Our present knowledge of the Portuguese shelf is nevertheless fragmented as very few comprehensive studies have been undertaken. Under the projects ACOSHELF, first and MeshAtlantic, afterwards, the whole of the Portuguese coastal shelf was studied, in greater detail to the North of the Nazaré Canyon, where the shelf is the widest and soft bottoms predominate. This ongoing study allowed so far the identification of more than 700 species, of which four are new to science and nearly 40 are first time records in Portuguese waters. Sediment grain-size, organic matter, depth and hydrodynamic regime were the variables best related to the macrofauna distribution pattern. The study is showing the richness of the Portuguese Coastal shelf macrofauna communities and highlights its transitional characteristics, where cold temperate, warm temperate and subtropical faunas coexist.

FIGURE 1
Portuguese Continental Shelf soft bottom macrofauna.

