



## TAXONOMIC VS FUNCTIONAL PATTERNS ACROSS EUROPEAN MARINE BENTHIC HABITATS: USING RESEARCH INFRASTRUCTURES (LIFEWATCH, ESFRI) IN LARGE-SCALE ECOLOGY

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In the framework of EMBOS (European Marine Biodiversity Observatory System) project, soft-bottom communities from marine and transitional ecosystems were sampled from twenty-eight marine sites along the European coastline, using jointly-agreed and harmonised protocols, tools and indicators. The dataset was subsequently used to test a number of hypotheses, by comparing taxonomic to functional patterns across different biogeographical regions sampled and using a variety of multivariate and univariate analyses. The LifeWatch Research Infrastructure (European Strategy Forum on Research Infrastructures) was used to manage and analyze the data. The results of the study indicate that patterns derived from matrices with taxonomic and functional data are similar but not identical. In addition, both taxonomic and functional sufficiency concepts seem to be supported by the data used. Furthermore, the Atlantic Ocean and Mediterranean Sea share a similar pattern of trait representativeness while in the Baltic Sea the pattern differs due to its short geological history and the extreme nature of its habitats. It is concluded that taxonomic and functional approaches result in complementary patterns and thus they should be applied in concert to achieve improved management of marine areas.