Impact of pleasure craft boating on benthic habitats along the Italian waters

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The pressure of maritime traffic on marine life is constantly increasing because of the continuous growth of international trade and the number of ships. This human activity can produce significant and widespread impacts on benthic habitats, affecting marine biodiversity.

The study analyses the impact of pleasure craft marine traffic on the infralittoral seabed habitats in the Italian waters. This boat typology was chosen because of its significant contribution on coastal maritime traffic and therefore for its huge impact on the seabed habitats (such as anchorage, increase of turbidity).

The EMODnet (European Marine Observation and Data Network) centralised portal hosts, among other themes, data on benthic seabed habitats and human activities, the datasets considered in this study. With respect of benthic habitats, the EMODnet portal provides a unique web catalogue of benthic habitat spatial data, from which the sixth iteration of the modelled seabed habitat map (EUSeaMap) and the other relevant spatial products are used. Whereas, the shipping density maps (6 annual average density layers), with a resolution of 1x1 km, cover all the EU waters from 2017 to 2022 are obtained by EMODnet Human Activity. Starting from these layers, vessel density data were reclassified to individuate different potential impact on seabed (low, medium, high).

The results show that the pleasure craft boating often occurs on specific seabed habitats, suggesting a potential strong impact that could affect features of conservation interest and highlighting the needs of specific monitoring activities and relative protection measures.