



Is there a possibility of ranking benthic quality assessment indices to select the most responsive to different human pressures?

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Abstract: Although a plethora of benthic indices exist, there is no agreement on what index or indices should be used by environmental managers to establish benthic quality. The objective of this investigation was to rank 35 benthic quality assessment indices used in different countries to evaluate the impact produced by 15 different human pressures (including multipressure, aquaculture, sewage discharges, eutrophication, physical alteration, chemical pollution, climate change, etc.). The ranking was determined by taking into account the coverage area of biogeographical provinces, number of citations testing a pressure and number of citations with significant correlation with pressure. We analysed 363 references, of which 169 showed quantitative data. Over a potential total score of 100, the highest values were obtained by the following indices: (i) AZTI's Marine Biotic Index (AMBI), which scored 77, tested by using 14 pressures in 14 provinces from the Arctic to tropical seas; (ii) multivariate AMBI (M-AMBI), which scored 74, tested with 12 pressures in 13 provinces; (iii) Bentix (BENTIX), which scored 68, tested with nine pressures in six provinces; (iv) Benthic Quality Index (BQI), which scored 66, tested with five pressures in seven provinces; and (v) Benthic Opportunistic Polychaetes Amphipods (BOPA) index, which scored 62, tested with eight pressures in six provinces.

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