Evaluation of the Persian Gulf coastal environment Health, based on biological indicators (case study Bahrakan area)

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Abstract
Bahrakan region is one of the four important and major areas of oil and economy in the Persian Gulf. The aim of this study was to evaluate the use of meiofauna as bioindicator of environmental pollution and the influence of organic contaminants on variation of meiofauna. Sampling has done from 9 stations in three transects perpendicular to the intertidal shoreline, in the cold season (winter 2014) and warm season (summer 2014). A total of 54 sediment samples were taken to study meiofaunal assemblage and 9 samples for assessment of organic matter. In this study eight groups of meiofunana including foraminifera, ostracoda, gastropoda, bivalvias, nematodes, copepoda and polycheata were identified and counted. The most abundant group was foraminifera (%54.38). In this study, the Shannon diversity index, Simpson dominance, Menhnic richness and Hill evenness was used. The value of Shannon diversity index (H') was between 0.82 to 2.36 and Simpson dominance index value varied between 0.12 and 0.67. Based on the results, density and distribution of meiofauna influenced by contamination of organic matter origin with a strong correlation (r =0.584).

Keywords: Persian Gulf, Coastal environment health, Welch, Bahrakan area.