



Environmental Quality Assessment of Sediments in the South East ports of Caspian Sea by use of the Biotic Index (AMBI) And (M-AMBI)

Baniamam M.^{1*}; Fallahi R.²

1-Department of Research and Strategic Planning of Food Safety, Faculty of Sciences, Agricultural Planning, Economic and Rural Development Research Institute (APERDRI)

2- Researcher in Iranian Fisheries Science Research Institute.

*Corresponding autor's Email: Bani.amam@yahoo.com

Abstract

The present study aims to investigate and determine the effects of Ecological quality on benthic communities of soft and mud sediments in the southeastern Caspian ports based on the AZTI Marine Biological Index (AMBI) and the sensitivity of benthic organisms to Environmental pollution and stress. Surface sediment samples were collected using a Van Veen grab at 12 sampling points, from four transects in Noshshr, Fereydunkenar, Amir abad Turkmen port, at three different depths of 5,10,15 m in July 2016 .Samples were determined by chromatographic gas device , mass spectrometry and ICP –OES. The amplitude of the AMBI index was between 2.1 and 5.6, the average index in the spring between (2.1-5.6), in the summer between (2.5-5.2), in the fall between (3 -4.9), and in the winter between (2.5-4.2) Calculated. The AMBI index, M-AMBI show a better and more realistic judgment of the ecological status of the ports in question. In this study, considering that the M-AMBI index uses AMBI results, Shannon and Margalf diversity index and value Shannon is used as a control value or reference, so the results of this M-AMBI index can show a stronger judgment of the ecological situation in the region. According to the results of the correlation between AMBI and M-AMBI indicators with the studied pollutants, M-AMBI index is evaluated as a valid and stronger index for the southeastern ports of the Caspian Sea. The port is not highly polluted unless it is affected by the hydrodynamic conditions of the region and the unfavorable conditions.

Keywords: AMBI Marine Biological Index, M-AMBI, Southeast Caspian Ports