

## Survey of Monsoon phenomenon effect on heavy metals concentration (Cd, Cu, Ni, Pb and Zn) in the sediment of Gulf of Gwatr to Pozm

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### Abstract

Heavy metals in marine ecosystems are from both natural and anthropogenic sources. The monsoon is a natural phenomenon that can effect the heavy metals concentration. The monsoon can affect heavy metal concentration in coastal areas through rainfall and leaching and also disrupting of water layer. The effect of monsoon on changes of concentrations heavy metals such as Cd, Cu, Ni, Pb and Zn in the sediment of Chabahar coast were studied in 2010. Samples were collected from the sediment of Gwatr, Beris, Ramin, Chabahar, Tis and Pozm stations in premonsoon, monsoon and post monsoon seasons (May, August and November respectively) during low tide. After preparation of samples, heavy metal concentration was determined by using the atomic absorption spectrophotometer. The concentration of Cd, Cu, Ni, Pb and Zn were 0.36, 4.97, 17.14, 8.88 and 24.93  $\mu\text{g/g}$  dw respectively. The Cd concentration in the sediment was influenced by regional sources. The increase of Cu and Zn concentration from monsoon until post monsoon could be caused by rainfall and disturbance in the coastal sediments. The increase of Pb concentration in monsoon and post monsoon could be due to rapid precipitations of Pb, this increase could be affected due to coastal runoff in monsoon and the resumption of the vessel's activity in post monsoon.

**Key words:** Monsoon, Heavy metals, Sediments, Chabahar

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