



Ecological Risk Assessment of Pollution in Sedimen on Bentic Fauna in Coast of Bandar Abbas

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Abstract:

The basic definition of ecological risk assessment is that it is the determination of the probability of an adverse effect occurring to an ecological system. Hazard is the potential of a stressor to cause harm to a biological system. sampling was carried out from sediment and benthic communities in 9 stations including fishery Jetty , Gorsozan estuary, Amin hotel, Posht-e-Shahr , Suro, Bahonar Jrty, Powerhouse, Refinery and Rejae Jetty .two groups of indices including ecological risk assessment and biodiversity indices were investigated. result showed that the mean concentration of heavy metals in sediment was as $Cd > Pb > Cu > Zn$ and in gastropod was as $Zn > Cu > Cd > Pb$.the maximum and minimum percent of TOM obtained in Posht-e-shahr and Fishery Jetty with 10.16 and 1.69 percent respectively. hazard index for PAHs in all station was less than 1 however hazard range for this index is 1. comparing the concentration in sediment and tissues and coefficient correlation between heavy metal concentration showed that molusca take these elements from water and crabs and Polychaets take these elements from sediment. bioaccumulation coefficient for Zn and Cu was high in all station and this can effects the biodiversity of benthic fauna negatively. The results of both single and integrated Ecological risk assessment indices was high for all heavy metals in all stations. estimation of ecological risk assessment in PAHs indicated the concentration of this pollutant don't threaten the organism in the sediment and ecosystem. but heavy metals can be hazard for ecosystem and organism in the sediment with decreasing the biodiversity as were shown by indices.

Keywords: Risk, Ecology, Pollution, sediment, Index, Benthic Fauna