Konsentrasi logam berat (CD dan PB) pada sedimen permukaan perairan Teluk Bayur Propinsi Sumatera Barat Indonesia

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Abstrak

The purpose of this study is to clarify the ecosystem quality of Bayur Bay based on heavy metalic elements (CD and Pb) behaviour in surface sediment. Sediment samples were collected using grap sampler from 4 stations in Bayur Bay. West Sumatera Province, Indonesia in March to April 2009. Surface sediment samples were used for the mechanical analysis by the settlingtube method, and mean size diameter was calculated based on the proportion of grain - size distribution. Concentration of CD and of Pb in the samples were determined using Automic Absorption Spectrofotimetry (ASS). One way Analysis variance (ANOVA) was carried to clarify the relation between the concentration of Cd, and mean size diameter of sediment. General trend of Cd and Pb distribution strongly indicate that the ecosystem quality of Bayur Bay is in same level for all stations as shown by result of one way anova (Tcalculate < Ttable). The study area is under influence of human activities supplied Cd and Pb to the surface sediment . Result of linier regression analysis show is under influence of human activities supplied Cd and Pb to the surface sediment. results of linier regression analysis show negative correlation between Cd concentration and mean size diameter shows positive value (Y = -0.031x + 1.262). Constrastingly, correlation between Pb concentration and mean size diameter show positive value (Y = 0,098x - 0,10). Cd and Pb concentrations in surface sediment of Bayur Bay are lower than the ERL (Effect Range Low : Cd = 1,2 ppm; Pb = 46,7 ppm) and ERM (Effect Range Median : Cd = 9,6 ppm; Pb = 218 ppm) indicating the Bayur Bay ecosystem is not yet polluted by the concentrations.