

The Distribution of Lead Accumulation (Soil, Water and Mangrove Vegetation) to Conserve Segara Anakan Lagoon

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Abstract	<p>Segara Anakan Lagoon is a specific lagoon as dispose industry waste area, i.e. lead waste. Distribution of lead accumulation in vegetation, soil and water can explain pollution status in Segara Anakan Lagoon. This study aims to analysis lead accumulation distribution (soil, water and vegetation), bioaccumulation factor (BAF), translocation factor (TF), leaf morphometric (the lead effect for mangrove vegetation), and to develop pre-design a mangrove zoning based on lead accumulation. The results showed that lead accumulation in Segara Anakan Lagoon (SAL) was 0.177 mg/l (water), 0.320 mg/kg (soil), 4.80 mg/kg (mangrove roots), for stem between 2.48 mg/kg (mangrove stem), and 1.48 mg/kg (mangrove leaf). BAF of mangrove vegetation scored between 22.2 and 40.1 and TF between 0.9 and 1.3. The lead accumulation of soil depths were 8.89 mg/kg (0-50 cm) to 0.56 mg/kg (150-200 cm). The effect of lead accumulation was observed as leaf damage between 2-60 % of surface leaves. And based on best lead accumulation of mangrove vegetation showed that the first mangrove zoning was <i>Rhizophora apiculata</i>, <i>Bruguiera sexangula</i>, <i>Aegiceras corniculatum</i> and <i>Sonneratia caseolaris</i>. Keyword: lead accumulation; mangrove capacity; bioaccumulation factor; translocation factor; lead effect</p>
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Author	Dr ENDANG HILMI, S.Hut, M.Si