Journal of sustainability science and management

Abstrak

The distribution and behaviour of dissolved and particulate Zn during estuarine mixing was determined in the Terengganu River and its estuary, which enters the southern South China Sea. Surface water samples were collected during a transect at the full range of salinities region, and filtered through acid-cleaned celluloseacetate 0.45 um filters. Dissolved and particulate Zn was determined using preconcentration-complexation treatment of the filtrate and acid digestion of the filters, respectively. The results showed that the range of concentration of dissolved and particulate Zn was 36-387 (mean=137+94) ug/L and 3-652 (mean=79+129) ug/L, respectively. The concentrations of dissolved and particulate Zn were higher in the freshwater end-member suggesting a riverine input to the estuarine area. Both disolved and particulate Zn behaved non-conservatively, with negative deviation from theoritical conserative mixing line in the estuary, suggesting that the estuary acts as a sink for this metal with removal process accounting for 69-99%