

Study on accumulation of Fe, Pb, Zn, Ni and Cd in *Nerita lineata* and *Thais bitubercularis* from Tanjung Harapan and Teluk Kemang, Malaysia

ABSTRACT

The presence of Cd, Cu, Zn, Ni, Fe, Al, Zn, Mn, Cr, and Sn were attributed to metal industries. Cu contamination was associated with piggery industry. Shipping activities contribute to elevated levels of Pb, Cu and As. Elevated levels of metals in the sediments are attributed to anthropogenic activities. Samples were collected in April 2012 and analysed using inductively coupled plasma mass spectrometry (ICP-MS). Fe is the most abundant metal in the tissue and shell compared to the rest of the metals. The concentrations of heavy metals in the soft tissues of *Nerita lineata* taken from Tanjung Harapan follow this order: Fe > Zn > Ni > Cu > Cd while in *Thais bitubercularis*, the metal concentrations were higher following the order of Fe > Zn > Cu > Ni > Cd. The samples taken from Teluk Kemang were higher and exhibited different trend for both organisms. Results from this study are useful for further exploration of *Thais bitubercularis* as accumulators of Cu, Cd, and Zn. For recommendation, more studies on monitoring the concentration level of heavy metals in marine environment should be done regularly and increase numbers of samples use to biomonitor the heavy metals in marine environment as it is important to have information or data regarding the quality of marine environment in order to control pollution such as water pollution from being contaminated with heavy metals. This is essential as the pollutants emit in the marine environment may affect marine lives as well as human's health.

Keyword: Solid waste; Sustainable management; Environmental awareness; 3R's concept; Libya

