

A comparative study of heavy metal concentrations in the clam *Corbicula javanica* and surface sediments collected from clean and polluted sites of Langat River, Selangor.

Abstract

Previously, anthropogenic activities in Langat River had been reported to have negative impact on the riverine water quality (Sarmani, 1989; Azrina et al., 2006). This involved a wide range of macrobenthic invertebrates. Since the Langat River serves as one of the major sources of drinking water for the citizens of Kuala Lumpur (Sarmani, 1989), pollution due to domestic and industrial wastes from rubber mills which can be found at the south of Hulu Langat town and palm oil refineries close to Banting (Sarmani, 1989). This has raised concern on the need to conduct continuous monitoring of hazardous materials at Langat River, particularly heavy metals. There are several monitoring approaches to quantify and investigate heavy metal contamination, such as, by analyses of concentrations in water, sediments and biota. Sarmani (1989) had reported arsenic concentrations was slightly higher than that of natural level, particularly water of downstream of the river. In respect of sediment analysis, Shazili et al. (2006) have reported sediments of Langat River were confronted with Pb and Zn. In current study, the quantification of heavy metal concentrations in the surface sediments and the measurement of metal concentrations in indigenous biomonitor clam *Corbicula javanica* were conducted. The metal concentrations found in the biomonitor have high relevant from ecotoxicological point of view because they reflect the metal bioavailabilities to the biomonitor from the ecosystem (Rainbow, 1995).

Keyword: *Corbicula javanica*; Langat River; Heavy metals concentrations; Sediments.