

## **Heavy metal concentrations in an important mangrove species, *Sonneratia caseolaris*, in Peninsular Malaysia.**

### **ABSTRACT**

Mangrove forests in Peninsular Malaysia are increasingly threatened by heavy metal pollution. Due to their unique location, mangroves receive heavy metal pollution from upstream areas and the sea. However, little is known about the capacity of mangrove plants to take up and store heavy metals. In this study, the concentrations of cadmium (Cd), chromium (Cr), copper (Cu), lead (Pb) and zinc (Zn) in an important mangrove species, *Sonneratia caseolaris*, were measured. It was found that the total concentrations of Cd, Cr, Cu, Pb, and Zn in the sediments were below the general critical soil concentrations. However, the total concentrations of Cu and Pb in both the roots and leaves of *Sonneratia caseolaris* exceeded the general normal upper range in plants. This study has therefore shown the potential of *Sonneratia caseolaris* as a phytoremediation species for selected heavy metals in Malaysian mangrove ecosystem.

**Keyword:** Heavy metal pollutions; *Sonneratia caseolaris*; Mangrove sediments.