

HEAVY METAL CONTAMINATION IN SEDIMENTS AND MANGROVES FROM MAOWEI GULF, SOUTH CHINA

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ABSTRACT

Concentrations of eight heavy metals (Cu, Ni, Zn, Cd, Cr, Hg, As and Pb) in the surface sediments and roots, stems and leaves of three mangrove plant species (*Aegiceras corniculatum*, *Kandelia obovata* and *Acanthus ilicifolius*) from the mangrove of Maowei Gulf, South China were measured in this study. Heavy metals in surface sediments in them an grove of Maowei Gulf were: Zn (59.85 ± 14.40 mg kg⁻¹), Cr (30.02 ± 5.79 mg kg⁻¹), Cu (24.81 ± 19.19 mg kg⁻¹), Pb (18.31 ± 3.85 mg kg⁻¹), As (11.56 ± 4.28 mg kg⁻¹), Ni (9.24 ± 3.77 mg kg⁻¹), Cd (0.34 ± 0.26 mg kg⁻¹), Hg (99.85 ± 37.25 µg·kg⁻¹). And the concentration of heavy metals in space presented inside > edge > outside except Cd. High accumulations of most heavy metals were observed in the root tissues while much lower concentrations of heavy metals in other tissues. The results showed that mangrove plants have the same distribution of these eight heavy metal elements and the roots of mangrove plants could strongly immobilize the heavy metals in the Maowei Gulf. Enrichment coefficient showed that the enrichment ability of roots in heavy metals was stronger than other organs in *Aegiceras corniculatum* and *Kandelia obovata*, while the enrichment ability of stems in heavy metals was stronger than other organs in *Acanthus ilicifolius*.