

## **Accumulation of heavy metals in organs of *Typha angustifolia* grown in acid mine drainage (AMD) at ex-Mamut copper mine, Ranau**

### **ABSTRACT**

This research was carried out to determine the capability of *Typha angustifolia* for accumulation of seven heavy metals (Cd, Cr, Cu, Fe, Ni, Pb and Zn). *Typha angustifolia* were replanted at Ex-Mamut Copper Mine, Sabah which treated with acid mine drainage (AMD). Samples of plant tissue were digested using hot concentrated nitric acid and the amounts of heavy metals were determined using Inductively Coupled Plasma (ICP). While, the heavy metals which attached on the roots surface were identified using Scanning Electron Microscope- Energy Dispersive X-ray Spectrometer (SEM-EDX). The result showed that the highest concentration of heavy metal in *T. angustifolia* was Fe in the end of experiment. Only the elements of Fe and Cu were detected on the roots surface. On the whole, the roots presented highest accumulation of heavy metals than the stem and leaves.