## D-04 Uptake of heavy metals by some inhabitant flora of Lunawa lagoon

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Lunawa lagoon which is situated 19km from Colombo city is highly polluted and about 750$m^3$/day of industrial waste water is discharged into it. The possible use of *Eichhornia crassipes* as a remover of toxic pollutants including heavy metals has been suggested. This paper describes the potential of *Eichhornia crassipes, Panicum proliferum* and *Ipomoea aquatica* in removing heavy metals from lagoon water.

The relative abundance of each plant species in the lagoon was determined and expressed as dry weight/$m^2$. Plant samples were ashed at 500$^0$C and ash (1g) was made into pellets using the instrument "Specac". Elemental analysis of pelleted samples was carried out by using the Energy dispersive X-ray fluorescence method.

Relative abundance (Dry matter/$m^2$) of *Panicum proliferum* was found to be 2-fold when compared to *Eichhornia crassipes* and *Ipomoea aquatica*. In the uptake of zinc, *Panicum proliferum* was equally efficient (74.4mg/kg) as *E.crassipes* (80.8mg/kg). Removal of zinc by *P.proliferum* (2.74mg/$m^2$) was greater than that of *E.crassipes* (1.15mg/$m^2$) due to its higher abundance. *Panicum* removed the highest amount of Ni (0.74mg/$m^2$) from the medium when compared to the other 2 species. *I. aquatica*, a leafy vegetable had a fairly high content of As (4.0mg/kg).

*Panicum proliferum* and *Ipomoea aquatica* were equally efficient as *Eichhornia crassipes* in the uptake of Zn, Ni, As, Cu, Al, Mn, and Fe. Therefore, it could be possible to use them as potential heavy metal removers from industrial waste waters.