



Figure 1. Study areas:
Case study I
Rookhope catchment

Case Study II
River Trent catchment

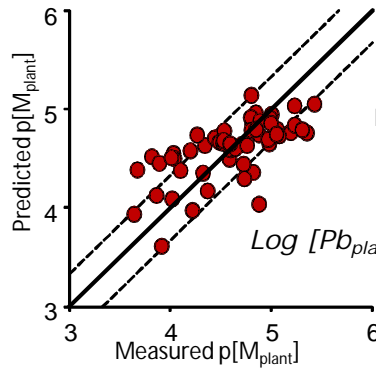


Figure 2. Prediction of Pb uptake into grass and heather in Rookhope catchment based on the Free Ion Activity Model (FIAM)

$$\text{Log} [Pb_{plant}] = 3.23 + 0.12[pH] + 0.54\text{log}[Pb_c]$$

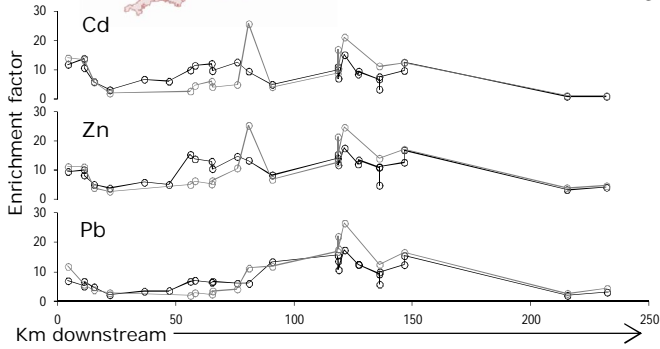


Figure 3. Spatial distribution of Cd, Pb and Zn along the sampling area. Enrichment factors calculated over background levels (Mercia Mudstone)



Figure 4. Erosion of bank deposits of the River Trent

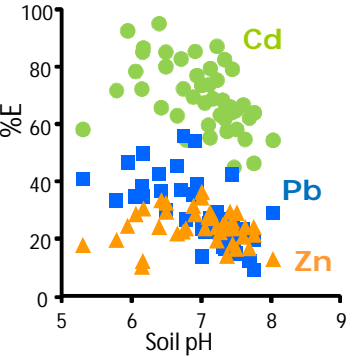


Figure 5. Influence of soil pH on the lability of metals

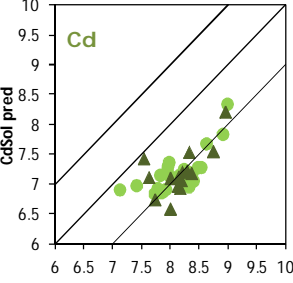
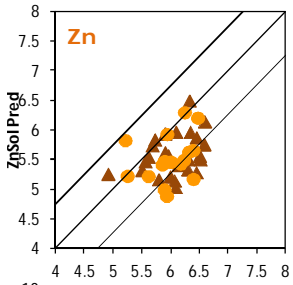
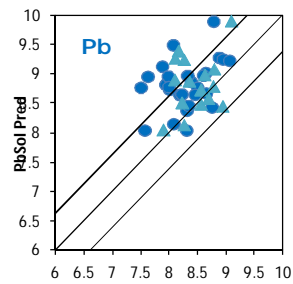


Figure 6. Metal concentration in soil pore water: observed vs predicted concentrations, based on E-value measurements (WHAM)

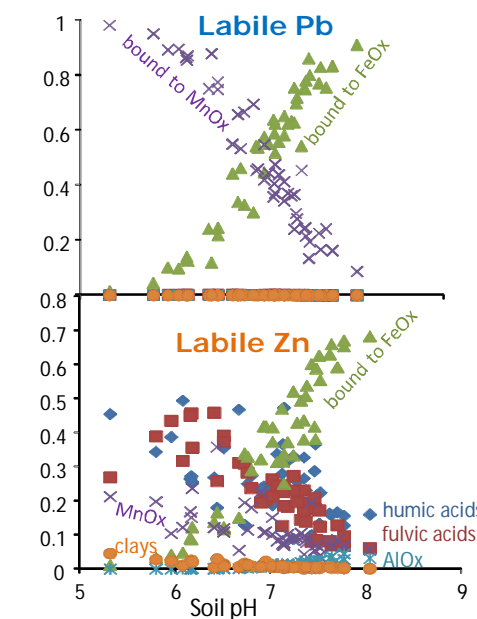


Figure 7. Dominant binding surfaces vs soil pH (as predicted by WHAM)

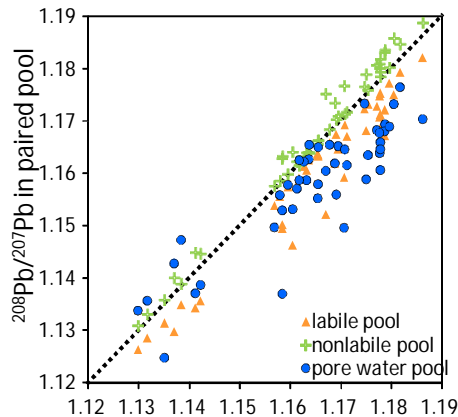


Figure 8. Comparison of Pb isotope ratios in the total pool with other pools for each soil

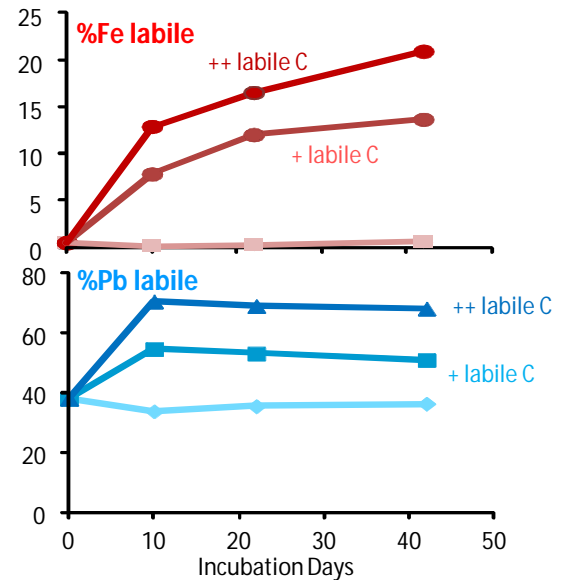


Figure 9. Changes in the lability of metals in submerged soils incubated in free O₂ atmosphere for 42 days

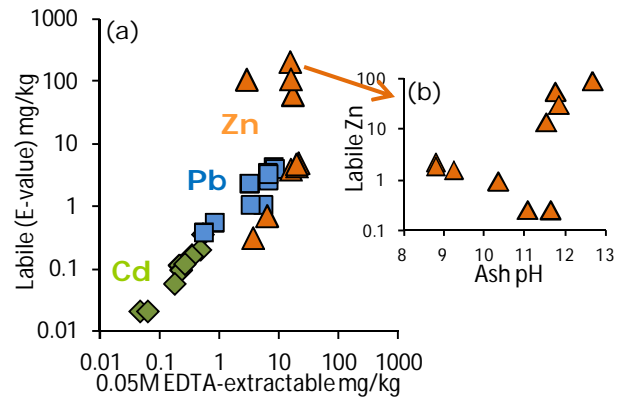


Figure 10. (a) Correlation between EDTA-extractable pool and labile pool of Cd, Pb and Zn in fresh and weathered ash. (b) Influence of pH on the lability of Zn in ash.