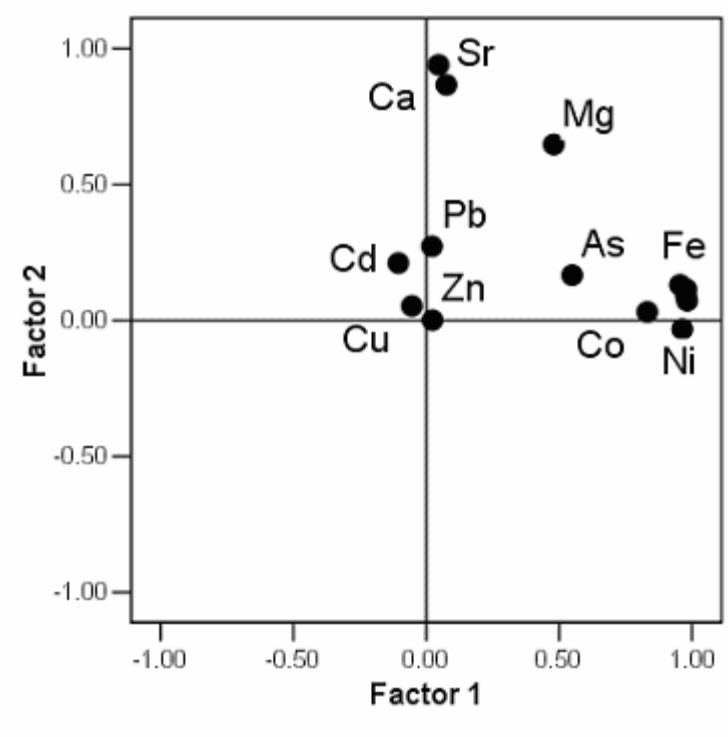
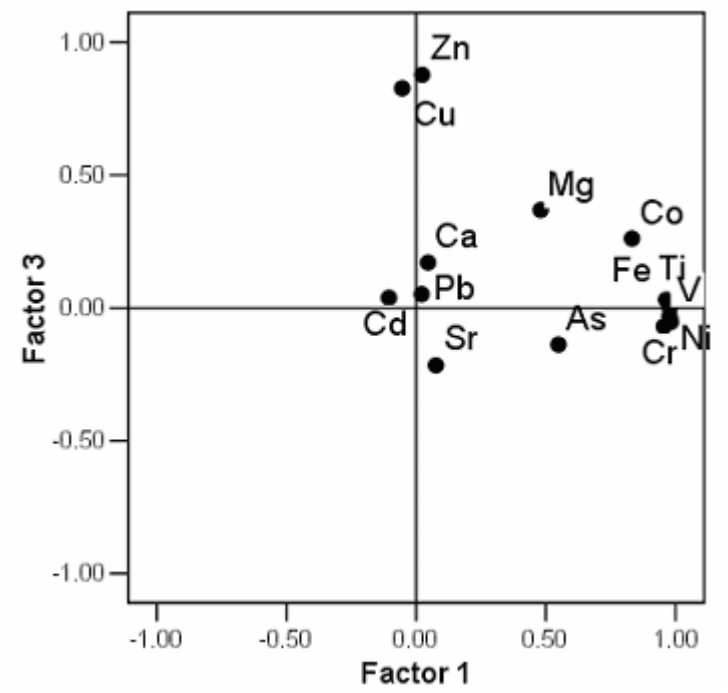
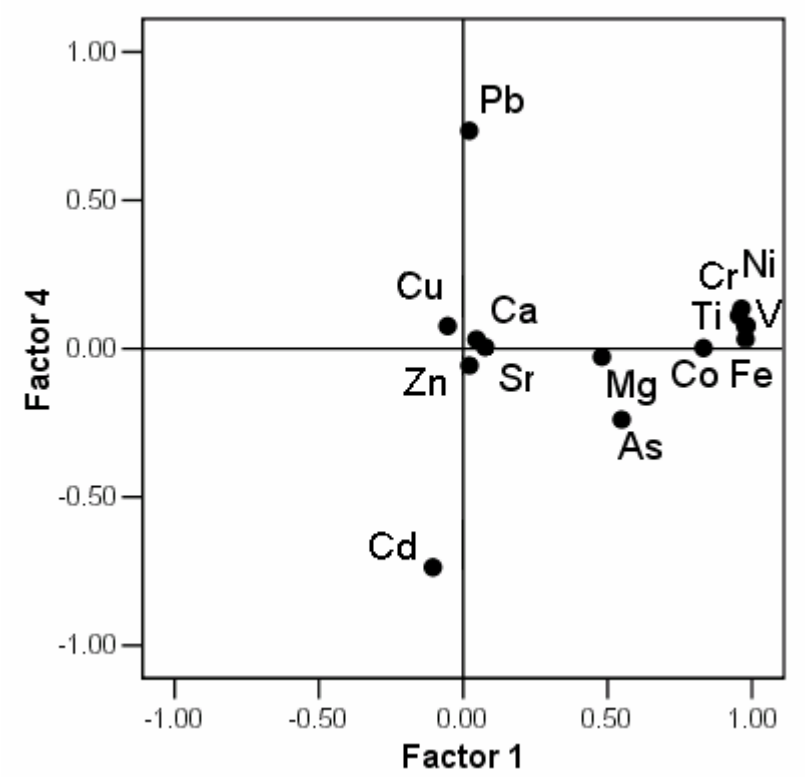

Sr
Ca
Mg
Pb
Cd
As
Fe
Zn
Cu
Co
Ni
1.00
0.50
0.00
-0.50
-1.00
Factor 2
-1.00
-0.50
0.00
0.50
1.00
Factor 1


Zn
Cu
Mg
Co
Ca
Fe
Ti
V
Pb
Cd
As
Sr
Cr
Ni
1.00
0.50
0.00
-0.50
-1.00
Factor 3
-1.00
-0.50
0.00
0.50
1.00
Factor 1



FigureJ-4: Factor Scores from PCA showing elemental associations for the four principal factors. Top panel: F1 vs F2, middle panel: F1 vs F3, bottom panel: F1 vs F4. Elements such as Fe, Ti, Cr, Ni, V, and, to a lesser extent Co, which have high loadings on F1 are considered to represent natural terrigenous inputs, elements such as Ca and Sr, which display high loadings on F2 represent natural marine inputs. Certain elements, e.g., Mg and As likely derive from mixed sources. Other elements such as As, Cu, Pb, and Zn show loadings on minor (e.g., F3, F4), but important factors, that likely represent anthropogenic sources.