minerals

MDPI

Supplementary material

Table S1. The calculation results of the calculated background values of PTEs.

	Cd	Co	Cu	Cr	Ni	Pb	Zn	V	As	Mo	Sb	Hg
min	0.06	0.51	2.09	14.32	2.06	10.18	8.26	24.75	0.20	0.19	0.55	0.01
Q1	0.23	2.59	9.61	26.12	8.76	16.19	43.09	39.77	5.00	0.38	1.12	0.07
median	0.33	4.12	11.83	31.26	11.75	19.07	55.00	46.75	8.13	0.56	1.51	0.18
Q3	0.42	6.22	15.82	37.80	14.93	22.63	74.33	57.31	14.17	0.79	2.04	0.30
max	1.54	14.77	52.96	102.15	54.90	56.03	418.83	96.65	64.63	3.07	7.62	3.62
Local BVs *	0.32	4.07	12.36	31.88	11.57	19.25	66.53	47.91	8.16	0.56	1.60	0.17

* The normality test of the soil data is carried out in accordance with the GB/T 4882-2001. Cd, Co, Cu, Cr, Ni, Pb, Zn, As, Mo, and Hg are log-normally distributed (P>0.05) showed by K-S test, and their background values are represented by geometric mean values. V and Sb are neither normally distributed nor log-normal. Therefore, the box plot was used to judge and eliminate the outliers outside (Q1-1.5IQR~Q3+1.5IQR) one by one. After eliminating outliers, V and Sb data sets are log-normally distributed, then the corrected geometric mean is regarded as the CBVs.

Table S2. The pH values, particle size compositions, total organic carbon (TOC) in soils in Caidi River Watershed.

Parameter	Max	Min	Average	SD	CV
pH	8.04	4.56	6.37	0.66	0.10
Clay (%, <2μm)	29.34	2.54	8.01	4.34	0.54
Silt (%, 2~50μm)	73.91	16.93	47.64	14.51	0.30
Sand (%, >50μm)	80.45	12.14	44.35	18.05	0.41
TOC (g/kg)	82.83	9.79	36.42	13.55	0.37

Table S3. The intensities of metal loss of different land use types in Caidi River Watershed.

Land use type	Cd	Pb	Sb	Hg	As	Zn	TOC
	g/(ha.a)	g/(ha.a)	g/(ha.a)	g/(ha.a)	g/(ha.a)	g/(ha.a)	kg/(ha.a)
Paddy field	0.002	0.117	0.019	0.002	0.060	0.341	0.216
Dry arable land (slope ≤6°)	0.094	5.353	1.021	0.061	2.864	14.635	10.553
Dry arable land (slope >6°)	0.196	10.608	1.439	0.098	5.325	29.547	20.095
Forest land	0.006	0.312	0.043	0.004	0.162	0.860	0.588
Grassland	0.019	1.031	0.166	0.017	0.569	2.858	1.928