Supplementary Materials: A Comprehensive Exploration on Occurrence, Distribution and Risk Assessment of Potentially Toxic Elements in the Mul-ti-Media Environment from Zheng-zhou, China

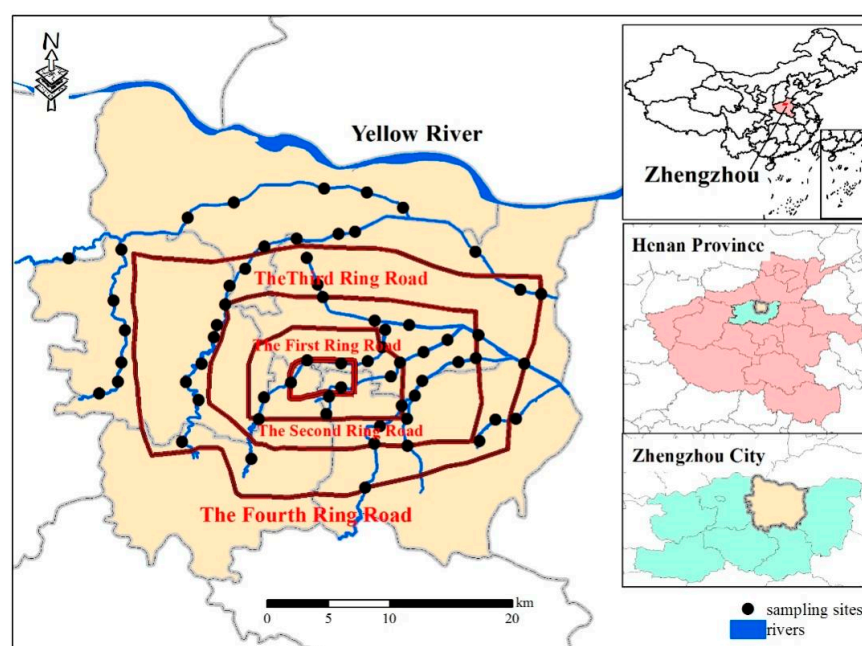**Jialu Li, Qiting Zuo, Hao Hu, Feng Feng, Hongtao Jia and Yingxin Ji**

Figure S1. Study area and sampling sites in Zhengzhou.

Table S1. The recovery rate of standard soil (North Plain soil (GSS-13)).

	measured value (mg/kg)	standard value (mg/kg)	recovery rate (%)
Cr	64.08	65±2	98.59
Ni	27.47	28.5±1.2	96.40
Cu	20.57	21.6±0.8	95.22
Zn	70.18	65±3	107.97
As	10.92	10.6±0.8	103.04
Cd	0.14	0.13±0.01	109.84
Hg	0.49	0.052±0.006	93.97
Pb	22.52	21.6±1.2	104.24

Table S2. Contamination categories based on I_{geo} values.

I_{geo}	class	pollution level
≤ 0	0	Uncontaminated
0-1	1	Uncontaminated to moderately contaminated
1-2	2	Moderately contaminated
2-3	3	Moderately to heavily contaminated
3-4	4	Heavily contaminated

4-5	5	Heavily to extremely contaminated
> 5	6	Extremely contaminated
≤ 0	0	Uncontaminated

Table S3. Grades of potential ecological risk.

E_r^i		RI	
<40	low risk	<150	low risk
40-80	moderate risk	150-300	moderate risk
80-160	considerable risk	300-600	considerable risk
160-320	high risk	600-1200	high risk
>320	very high risk	>1200	very high risk