Table S2 One-way ANOVA comparison of selected HM pollution for different geographical directions in the target area.

Metals		Sum of Squares	df	Mean Square	F	Sig.
	Between Groups	311.32	3	103.77	0.953	0.417
As	Within Groups	15905.89	146	108.94		
	Total	16217.22	149			
	Between Groups	7.041	3	2.34	2.003	0.116
Cr	Within Groups	171.09	146	1.174		
	Total	178.13	149			
	Between Groups	3.103	3	1.034	1.03	0.197
Co	Within Groups	95.52	146	0.654		
	Total	98.62	149			
	Between Groups	16939.54	3	5646.51	0.187	0.905
Fe	Within Groups	4407446.42	146	30187.98		
	Total	4424385.96	149			
	Between Groups	39.62	3	13.20	0.293	0.830
Mn	Within Groups	6573.87	146	45.02		
	Total	6613.49	149			
	Between Groups	51.90	3	17.30	0.195	0.900
Mo	Within Groups	12944.6TJ ET 48.6 673.315(146)-2849.7(0.654)-3725( )-38 ET 48.6 673.V				

Table S3Correlation matrix of selected HM in ground water samples (n=150).

n=150	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	-0.042	1.000							
Co	0.199*								

Correlations

Table S4Correlation matrix of selected HMs in well water samples (n= 33).

Well	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	0.058	1.000							
Co	0.045	-0.001	1.000						
Fe	0.000	0.270	-0.156	1.000					
Mn	0.955**	0.121	0.110	0.080	1.000				
Mo	-0.015	-0.100	-0.240	0.067	0.000	1.000			
Zn	0.074	-0.196	-0.213	0.102	0.120	0.813**	1.000		
Ni	0.157	-0.091	-0.110	0.050	0.204	0.885**	0.762**	1.000	
Hg	-0.204	-0.149	0.085	-0.034	-0.131	-0.037	0.027	-0.039	1.000

** correlation is significant at the 0.01 level (2-tailed); * correlation is significant at the 0.05 level (2-tailed)

Table S5Correlation matrix of selected HMs in spring water samples (n=15).

Spring	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	-0.123	1.000							
Co	0.714**	0.132	1.000						
Fe	0.441	0.224	0.333	1.000					
Mn	CN[a]	CN	CN	CN	1.000				
Mo	0.314	-0.168	0.438	-0.151	CN	1.000			
Zn	0.078	0.360	0.109	0.807**	CN	-0.426	1.000		
Ni	0.541*	-0.033	0.311	0.227	CN	0.099	0.356	1.000	
Hg	0.046	-0.215	-0.115	0.052	CN	-0.317	-0.051	0.159	1.000

** correlation is significant at the 0.01 level (2-tailed); * correlation is significant at the 0.05 level (2-tailed); a. cannot be computed because at least one of the variables is not constant

Table S6Correlation matrix of selected HMs in tank water samples (n=102).

Tank	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	-0.039	1.000							
Co	0.094	0.151	1.000						
Fe	-0.065	0.176	0.060	1.000					
Mn	-0.028	0.028	0.075	0.098	1.000				
Mo	-0.015	0.156	0.135	0.182	-0.055	1.000			
Zn	-0.045	0.101	0.111	0.480**	0.376**	-0.028	1.000		
Ni	0.042	0.022	0.149	0.236*	-0.011	0.115	0.234*	1.000	
Hg	-0.069	0,127	-0.039	0.007	-0.008	0.128	-0.043	0.021	1.000

** correlation is significant at the 0.01 level (2-tailed);

Table S10Correlation matrix of selected HMs in eastern direction

Eastern	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	-0.263	1.000							
Co	0.301	0.375	1.000						
Fe	-0.139	-0.046	-0.358	1.000					
Mn	-0.049	0.509	-0.163	0.193	1.000				
Mo	-0.110	0.077	-0.430	0.704**	0.523*	1.000			
Zn	-0.177	-0.153	-0.368	0.442	-0.156	0.565*	1.000		
Ni	0.393	-0.049	-0.106	0.399	0.204	0.268	-0.188	1.000	
Hg	-0.336	0.345	0.209	-0.011	-0.020	-0.047	-0.031	-0.317	1.000

*correlation is significant at the 0.05 level (2-tailed); **correlation is significant at the 0.01 level (2-tailed)

Table S11Correlation matrix of selected HMs in slope 0

	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	-1.000**	1.000							
Co	1.000**	-1000**	1.000						
Fe	1.000*	-1000**	1.000**	1.000					
Mn	NC[a]	NC	NC	NC	1.000				
Mo	1.000**	-1.000**	1.000**	1.000**	NC	1.000			
Zn	1.000*	-1.000**	1.000**	1.000**	NC	1.000**	1.000		
Ni	1.000*	-1.000**	1.000**	1.000**	NC	1.000**	1.000**	1.000	
Hg	NC	NC	NC	NC	NC	NC	NC	NC	1.000

** correlation is significant at the 0.01 level (2-tailed); [a]cannot be computed because at least one of the variables is not constant

Table S12Correlation matrix of selected HMs in slope 0-8

	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	0.196	1.000							
Co	0.046	0.140	1.000						
Fe	-0.008	0.399**	-0.063	1.000					
Mn	0.818**	0.157	0.076	0.055	1.000				
Mo	-0.023	-0.084	-0.133	0.066	-0.014	1.000			
Zn	-0.003	0.111	-0.166	0.178	-.005	0.306*	1.000		
Ni	0.197	0.071	-0.082	0.084	0.126	0.841**	0.469**	1.000	
Hg	-0.204	-0.446**	-0.311*	-0.005	-0.062	-0.030	0.216	-0.042	1.000

** correlation is significant at the 0.01 level (2-tailed); *correlation is significant at the 0.05 level (2-tailed).

Table S13Correlation matrix of selected HMs in slope 8-15

	As	Cr	Co	Fe	Mn	Mo	Zn	Ni	Hg
As	1.000								
Cr	-0.223	1.000							
Co	-0.062	0.194	1.000						
Fe	-0.204	0.035	-0.021	1.000					
Mn	-0.002	0.119	0.226	0.240	1.000				
Mo	-0.310	0.034	0.285	0.466**	0.228	1.000			
Zn	-0.114	0.271	0.056	0.377*	0.457**	0.112	1.000		
Ni	-0.221	0.027	0.220	0.298	0.281	0.415**	0.217	1.000	
Hg									