

Supplementary Materials

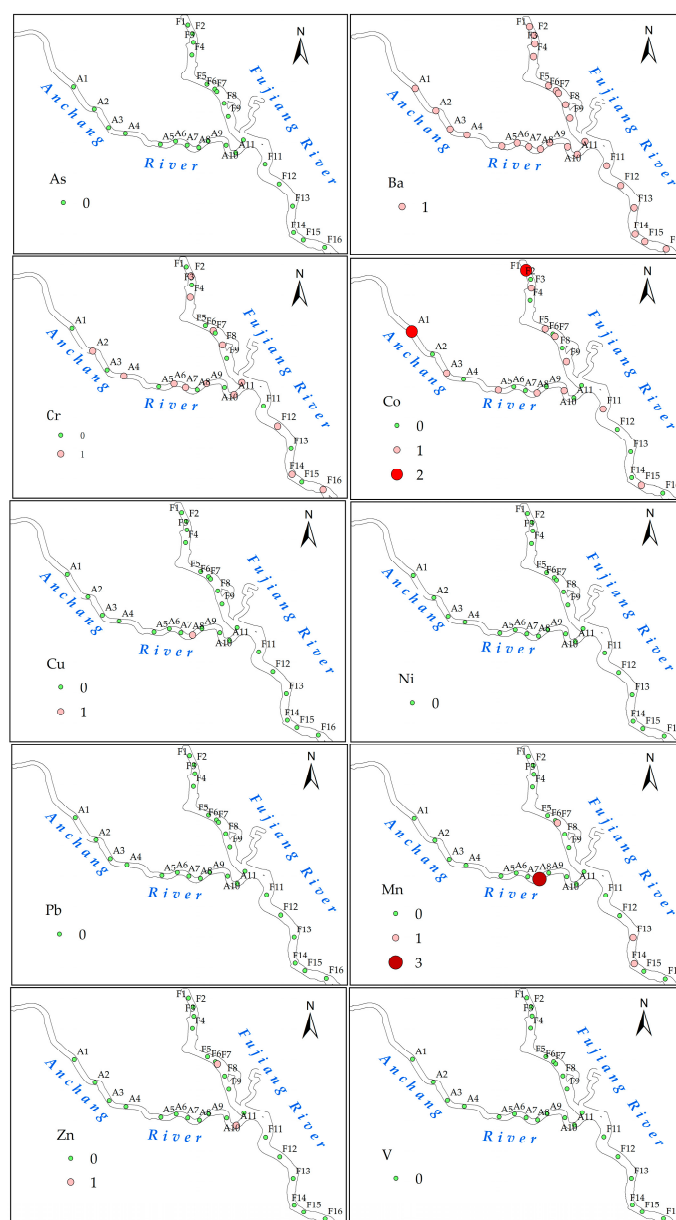
# Source apportionment and probabilistic ecological risk of heavy metal(loid)s in Mianyang-section sediments of Fujiang River, China

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**Figure S1.** The  $I_{geo}$  level of HMs in Mianyang section of Fujiang River.

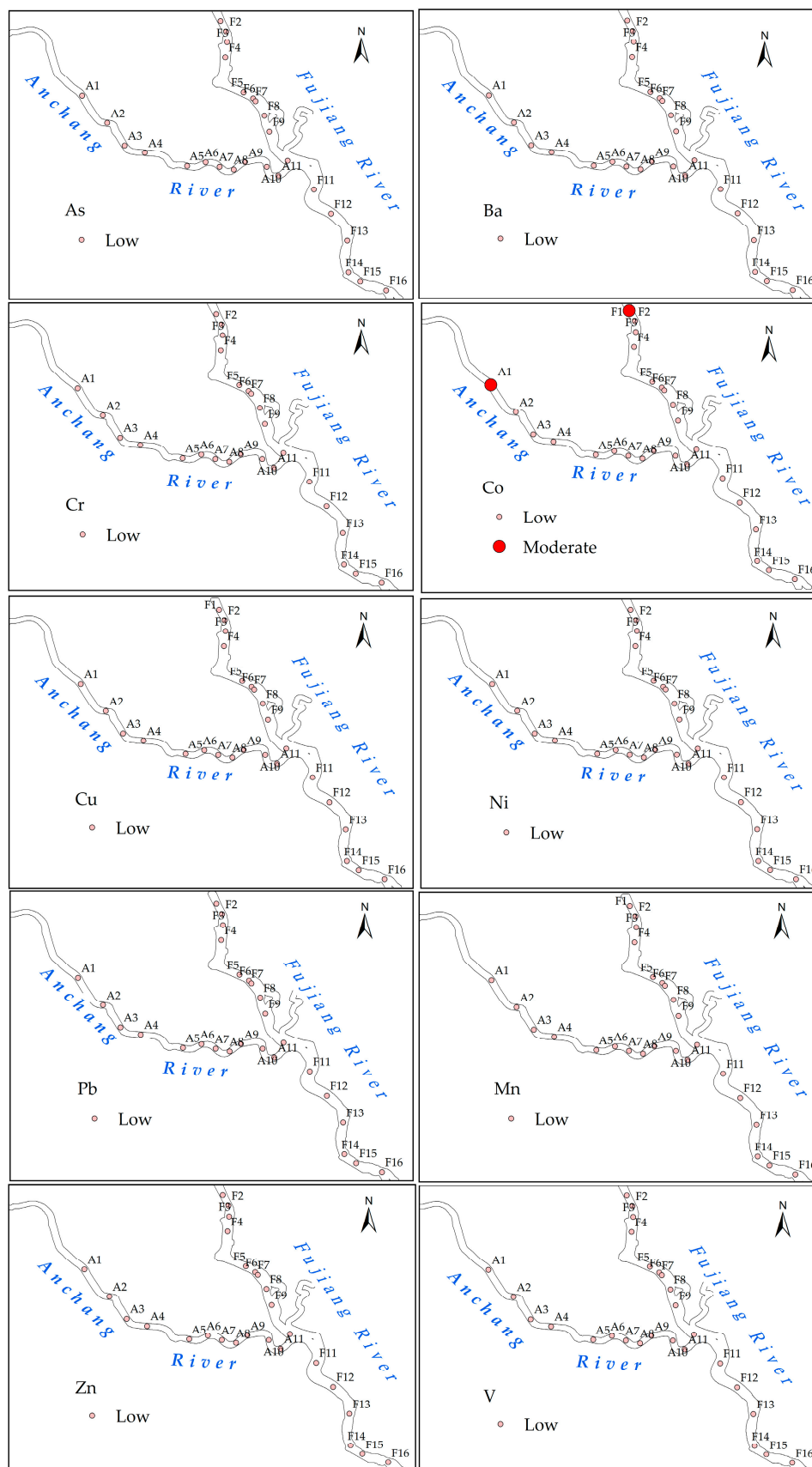
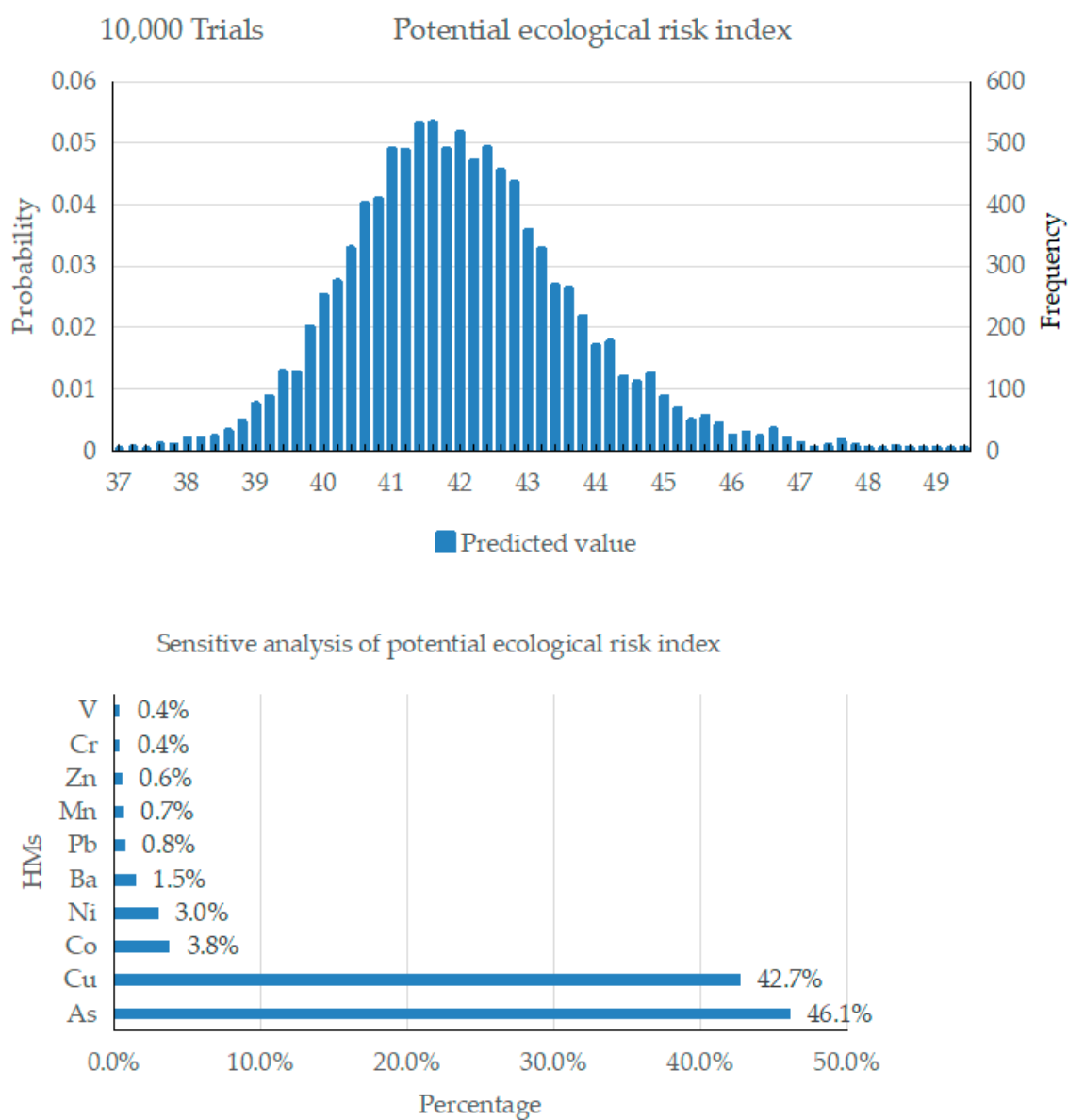


Figure S2. The  $E_i$  degree of HMs in Mianyang section of Fujiang River.



**Figure S3.** Probability distribution and sensitivity analysis of potential ecological risk index.

**Table S1.** Pollution level of geo-accumulation index ( $I_{geo}$ ) value and improved Nemerow index (INI).

$I_{geo}$	INI	Grade	Pollution degree
$\leq 0$	$INI < 0.5$	0	Uncontaminated
$0 < I_{geo} \leq 1$	$0.5 \leq INI < 1$	1	Uncontaminated to moderately contaminated
$1 < I_{geo} \leq 2$	$1 \leq INI < 2$	2	Moderately contaminated
$2 < I_{geo} \leq 3$	$2 \leq INI < 3$	3	Moderately to heavily contaminated
$3 < I_{geo} \leq 4$	$3 \leq INI < 4$	4	Heavily contaminated
$4 < I_{geo} \leq 5$	$4 \leq INI < 5$	5	Heavily to extremely contaminated
$I_{geo} > 5$	$INI \geq 5$	6	Extremely contaminated

**Table S2.** Grade of potential ecological risk index.

$E_i$	RI	Ecological risk degree
$E_i < 15$	$E_i < 50$	Low
$15 \leq E_i < 30$	$50 \leq RI < 100$	Moderate
$30 \leq E_i < 60$	$100 \leq RI < 200$	Considerable
$60 \leq E_i < 120$	$\geq 200$	High
$E_i \geq 120$		Very high

**Table S3.** Distribution test and fitting results of HM contents.

HMs	Mean	Median	Standard deviation	Minimum	Maximum	Distribution
As	8.72	7.90	2.72	4.90	14.50	Gamma
Ba	917.71	878.0	134.67	725.80	1340.60	Lognormal
Cr	121.11	118.6	51.67	59.5	229.6	Beta
Co	26.86	18.8	14.65	10.6	54.4	Beta
Cu	35.57	34.3	6.14	24.4	55.7	Logistic
Ni	37.27	36.8	6.46	27.1	48.7	Beta
Pb	22.27	22.1	5.00	16.2	36.4	Beta
Mn	886.41	686.5	777.47	455.9	4627.6	Lognormal
Zn	104.89	101.5	27.77	71.9	205.3	Max Extreme
V	103.24	100.3	15.72	80.2	141.9	Beta