



**Table S1.** The derived soil thresholds of Cd based on soil-plant transfer models.

Protection levels (%)	Soil thresholds			
	pH ≤ 5.5	5.5 < pH ≤ 6.5	6.5 < pH ≤ 7.5	pH > 7.5
95	0.07	0.09	0.11	0.13
90	0.10	0.12	0.15	0.18
80	0.15	0.18	0.22	0.27
50	0.33	0.40	0.49	0.59
20	0.72	0.87	1.07	1.31
10	1.08	1.31	1.61	1.99
5	1.51	1.85	2.27	2.82

The thresholds at soil pH values of 5.0, 6.0, 7.0, and 8.0 were used for scenarios of soil pH ≤ 5.5, 5.5 < pH ≤ 6.5, 6.5 < pH ≤ 7.5, and pH > 7.5, respectively.



**Table S2.** The derived soil thresholds of Cd based on species sensitivity distribution.

Protection levels (%)	Soil thresholds			
	pH ≤ 5.5	5.5 < pH ≤ 6.5	6.5 < pH ≤ 7.5	pH > 7.5
95 (HC <sub>5</sub> )	0.06	0.08	0.14	0.09
90 (HC <sub>10</sub> )	0.09	0.13	0.25	0.15
80 (HC <sub>20</sub> )	0.14	0.24	0.50	0.30
50 (HC <sub>50</sub> )	0.35	0.76	1.89	1.03
20 (HC <sub>80</sub> )	1.05	2.43	7.10	3.57
10 (HC <sub>90</sub> )	2.22	4.47	14.18	6.84
5 (HC <sub>95</sub> )	4.63	7.39	25.12	11.70