Supplementary Material

Fractionation characteristics of inorganic phosphorus in cold temperate forest soils: Associating mechanisms of soil aggregate protection and recovery periods after forest fire disturbance

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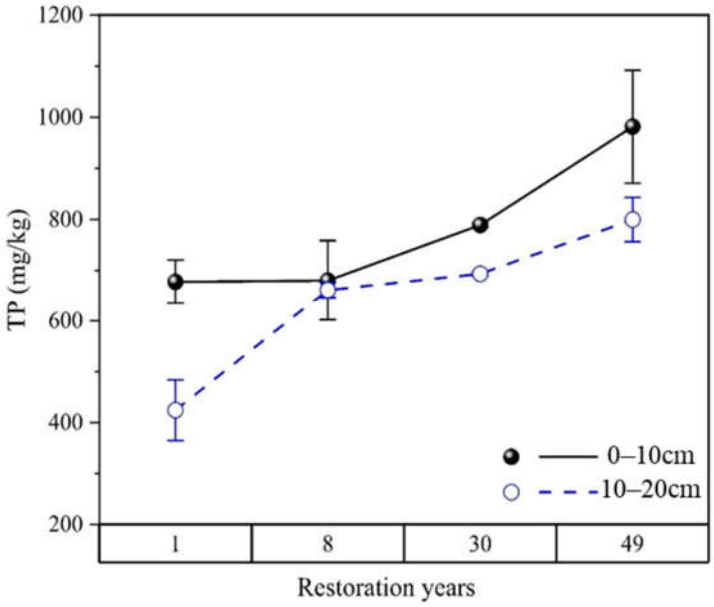

Figure S1 TP variation in bulk soils during different restoration periods.

Table S1. P fractions in bulk soils during different restoration years.

Recovery periods (yrs)	Depth (cm)	Concentration of P fractions (mg/kg)								
		Active-P				Stable-P				
		Ex-P	Al-P	Fe-P	Sum	Oc-P	ACa-P	De-P	Or-P	Sum
1	0–10	3.47±0.36	2.94±0.37	246.01±40.19	252.43±40.19	171.91±3.60	183.19±17.55	25.49±0.93	44.71±0.49	425.30±20.71
	10–20	2.39±0.45	3.01±2.30	74.10±23.75	79.50±25.60	87.90±10.60	172.77±37.84	51.91±1.79	32.09±11.83	344.67±58.48
8	0–10	2.68±0.38	11.43±3.79	177.28±12.45	191.38±16.62	141.15±20.83	204.52±71.51	48.55±8.27	94.61±6.22	488.83±94.39
	10–20	0.99±0.45	10.53±1.72	142.67±6.94	154.19±8.21	124.56±15.67	213.17±13.06	81.95±16.04	87.73±15.44	507.41±29.33
30	0–10	3.68±1.40	3.85±0.99	169.90±30.00	177.42±27.62	308.70±29.46	152.95±31.11	83.04±23.66	67.08±8.88	611.78±34.19
	10–20	1.61±0.12	1.92±0.59	133.46±19.95	136.98±19.23	230.35±17.61	185.32±9.95	100.15±5.49	40.71±11.81	556.53±24.96
49	0–10	3.63±0.10	7.96±1.03	371.71±24.45	383.30±25.38	332.21±130.01	160.86±7.77	18.16±1.86	86.94±10.52	598.16±130.90
	10–20	3.82±0.31	4.44±1.66	294.89±43.44	303.15±45.41	264.22±19.60	159.67±7.42	31.67±12.78	56.03±2.64	511.59±37.16

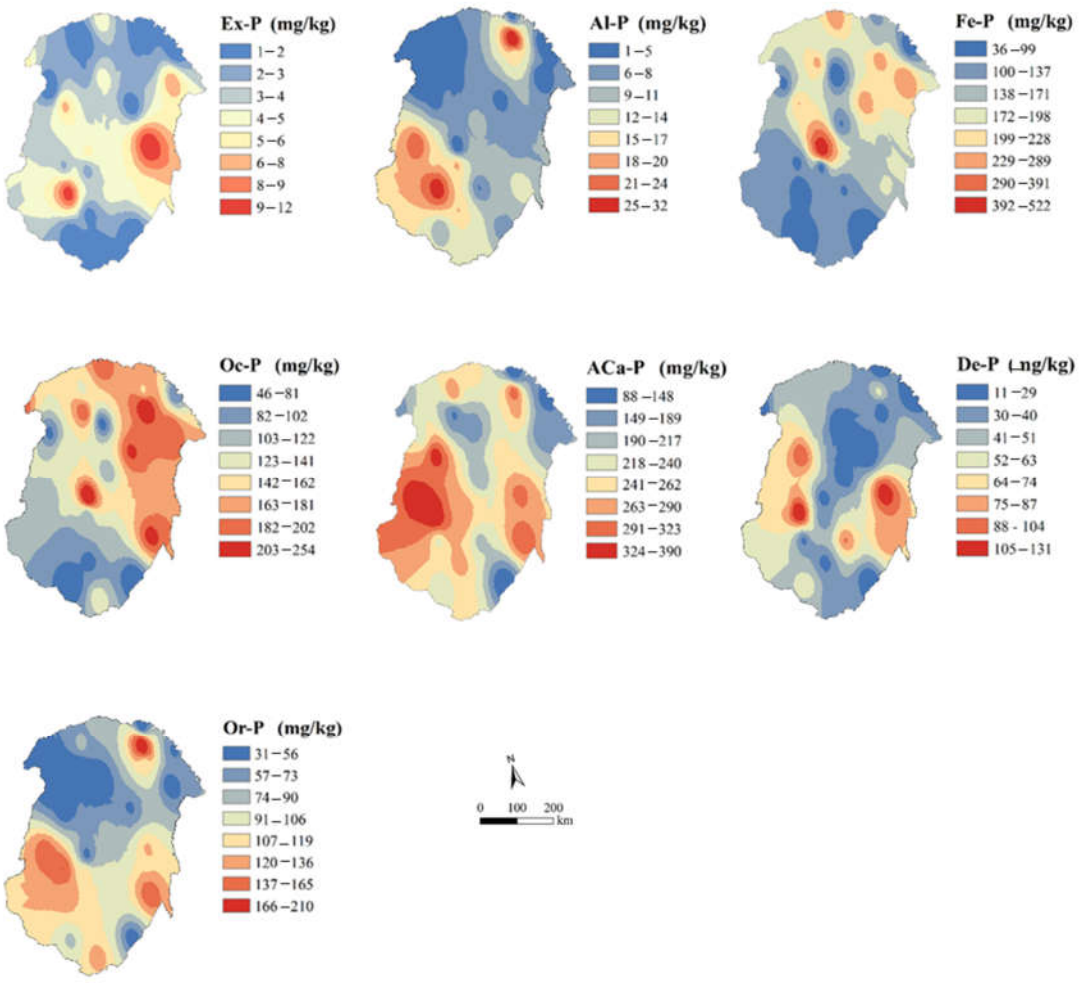

Figure S2 Spatial patterns of various P fractions in bulk soils.

Table S2. Distribution of TP in soil aggregates during different restoration years.

Recovery periods (yrs)	Depth (cm)	Concentration of TP (mg/kg)								
		>250μm	53–250μm					<53μm		
		cPOM	LF	iPOM	μSilt	μClay	Sum	dSilt	dClay	Sum
1	0–10	648.97	1025.89	556.77	346.61	3103.05	752.19	642.32	1637.79	649.51
	10–20	392.99	810.31	320.78	282.18	2629.37	504.94	391.60	974.10	398.53
8	0–10	645.39	1042.64	448.33	507.66	1907.28	710.28	727.84	1361.67	736.54
	10–20	626.22	651.55	586.12	529.08	1426.53	601.29	795.71	936.80	796.93
30	0–10	1022.55	718.34	288.12	320.05	1953.65	491.00	544.78	3921.40	561.82
	10–20	1089.17	823.69	430.56	433.59	1875.20	555.69	589.44	1242.04	600.16
49	0–10	1021.09	1057.60	756.81	461.14	2290.33	870.65	936.49	1177.80	946.13
	10–20	842.13	751.07	692.29	438.60	2134.11	775.20	804.83	1422.54	816.13

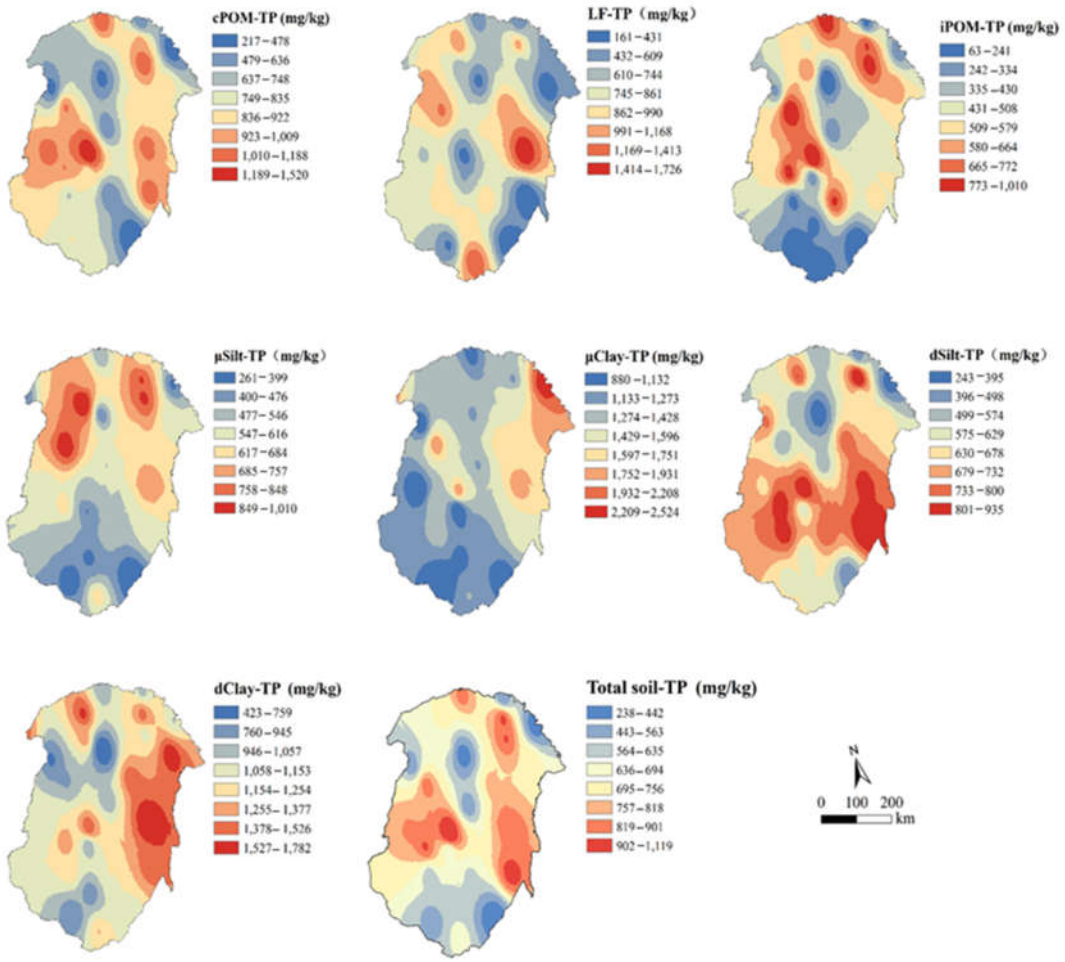

Figure S3. Spatial patterns of TP in soil aggregates.