

Supplementary material

Table S1. Beijing's ERL areas

Dominant function	ERL areas
Soil conservation	Xi Mountain ERL area (Xi ERL area)
	Beijing Southwestern ERL area (SW ERL area)
	Badaling ERL area (BDL ERL area)
	ERL of Miyun upstream Reservoir area (MY ERL area)
Water retention	Sizuolou ERL area (SZL ERL area)
	Jundu Mountain ERL area (JD ERL area)
	Beijing Eastern ERL area (BE ERL area)

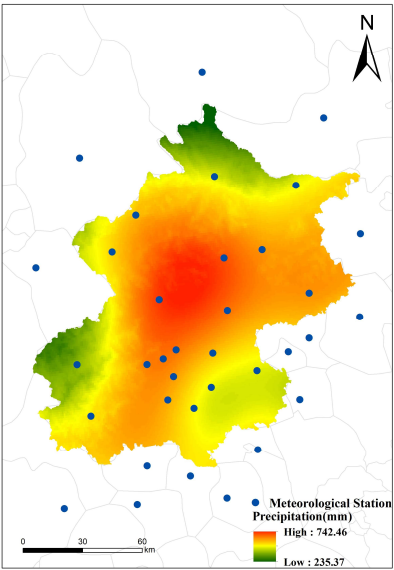


Figure S1. The spatial distribution of meteorological stations and precipitation in Beijing of 2015

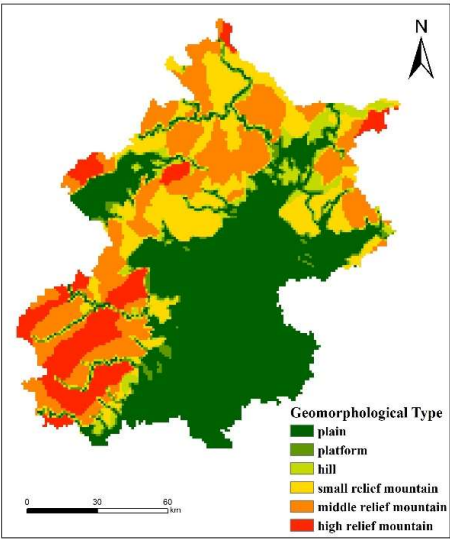


Figure S2. Geomorphological types of Beijing

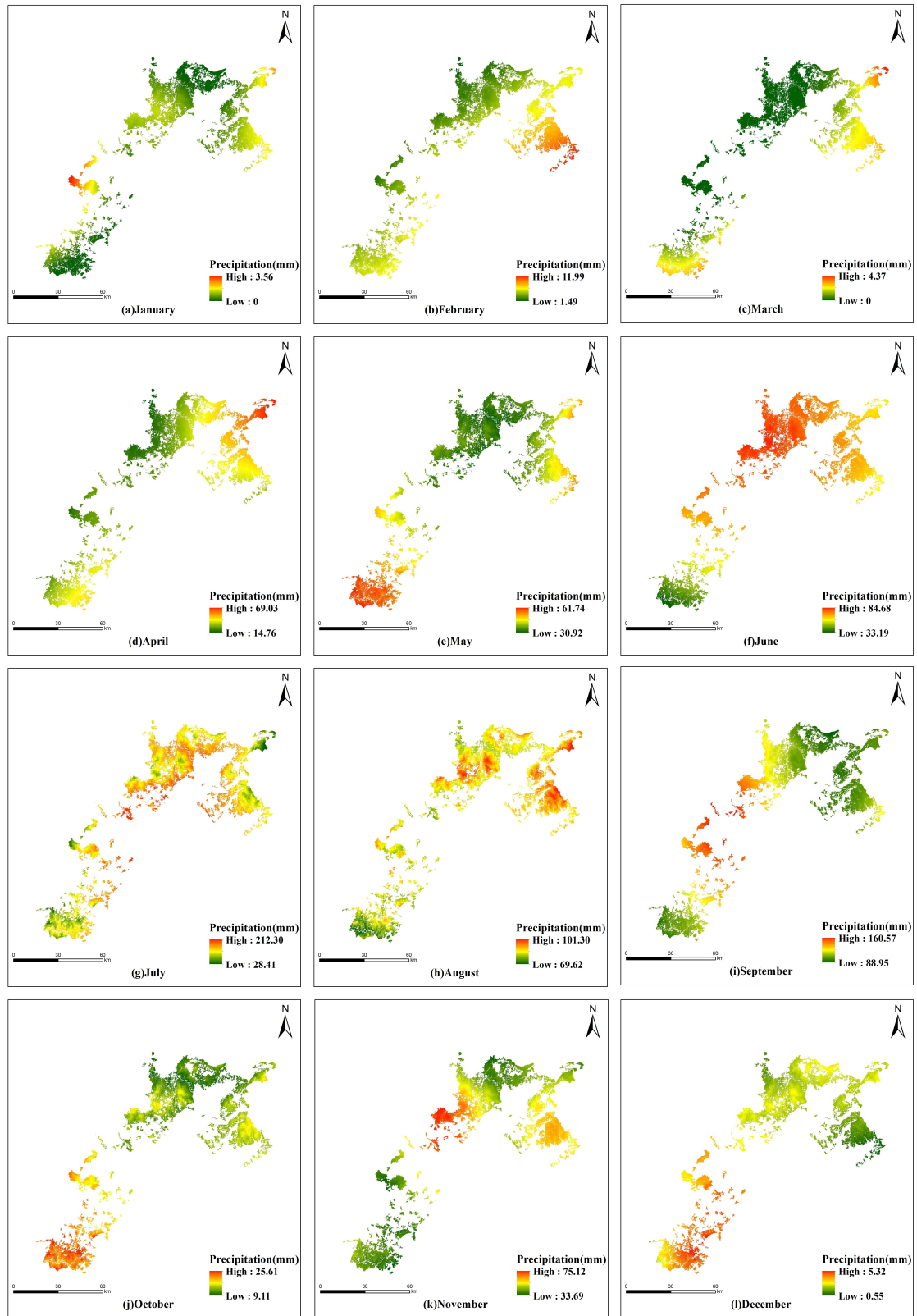


Figure S3. Spatial distribution of monthly precipitation in ERL areas

Table S2. Soil erosion, water yield and geographical environmental factors
in Beijing and ERL areas

	Soil erosion (t ha ⁻¹ a ⁻¹)	Water yield (mm)	Slope (°)	Elevation (m)	Precipitation (mm)	Vegetation coverage
Beijing	5.46	169.98	11.39	355.75	590.26	0.24
Xi ERL area	21.93	139.98	21.80	653.01	606.97	0.69
SW ERL area	16.36	159.14	24.01	540.81	546.86	0.67
BDL ERL area	7.82	217.16	15.71	311.43	656.60	0.70
MY ERL area	4.07	103.04	18.87	487.93	562.11	0.76
SZL ERL area	4.13	146.76	21.38	460.49	612.98	0.76
JD ERL area	5.48	185.22	21.09	625.67	622.85	0.75
BE ERL area	5.41	150.74	19.37	437.03	588.94	0.74

Table S3. Statistics of *q* value about factors affecting soil erosion in soil conservation ERL areas

		Precipitation	Elevation	Geomorphological type	Land use type	Slope	Vegetation coverage
2016	Xi ERL area	0.035	0.018	0.037	0.091	0.346	0.338
	SW ERL area	0.004	0.018	0.020	0.093	0.120	0.416
2017	Xi ERL area	0.019	0.060	0.071	0.061	0.314	0.339
	SW ERL area	0.004	0.023	0.017	0.019	0.170	0.346
2018	Xi ERL area	0.155	0.072	0.069	0.069	0.312	0.314
	SW ERL area	0.029	0.015	0.017	0.017	0.154	0.351

Table S4. Statistics of *q* value about factors affecting water yield in water retention ERL areas of 2016

	Precipitation	Elevation	Geomorphological type	Land use type	Slope	Vegetation coverage
BDL ERL area	0.228	0.188	0.102	0.612	0.127	0.060
MY ERL area	0.093	0.025	0.017	0.685	0.021	0.111
SZL ERL area	0.289	0.261	0.193	0.666	0.028	0.031
JD ERL area	0.193	0.082	0.079	0.582	0.012	0.054
BE ERL area	0.283	0.267	0.179	0.492	0.024	0.036

Table S5. Statistics of q value about factors affecting water yield in water retention ERL areas of 2017

	Precipitation	Elevation	Geomorphological type	Land use type	Slope	Vegetation coverage
BDL ERL area	0.089	0.159	0.171	0.771	0.203	0.032
MY ERL area	0.071	0.044	0.021	0.775	0.011	0.057
SZL ERL area	0.074	0.100	0.029	0.775	0.063	0.052
JD ERL area	0.263	0.114	0.082	0.699	0.012	0.089
BE ERL area	0.126	0.016	0.027	0.697	0.007	0.061

Table S6. Statistics of q value about factors affecting water yield in water retention ERL areas of 2018

	Precipitation	Elevation	Geomorphological type	Land use type	Slope	Vegetation coverage
BDL ERL area	0.080	0.136	0.188	0.740	0.241	0.193
MY ERL area	0.061	0.032	0.038	0.712	0.039	0.030
SZL ERL area	0.086	0.063	0.028	0.762	0.058	0.060
JD ERL area	0.351	0.079	0.092	0.552	0.012	0.087
BE ERL area	0.587	0.088	0.135	0.309	0.016	0.046