

Supplementary

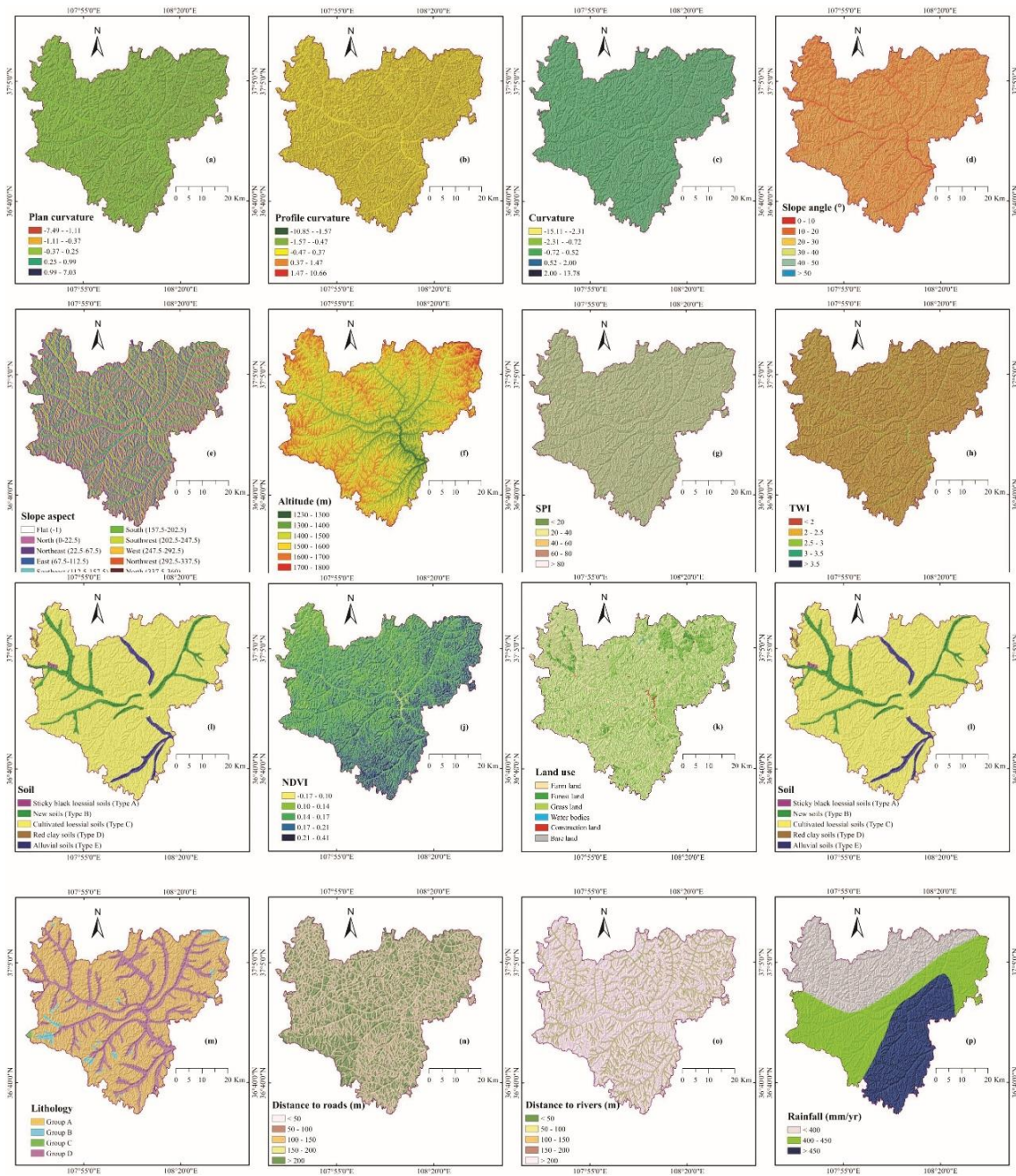


Figure S1.Spring conditioning factors

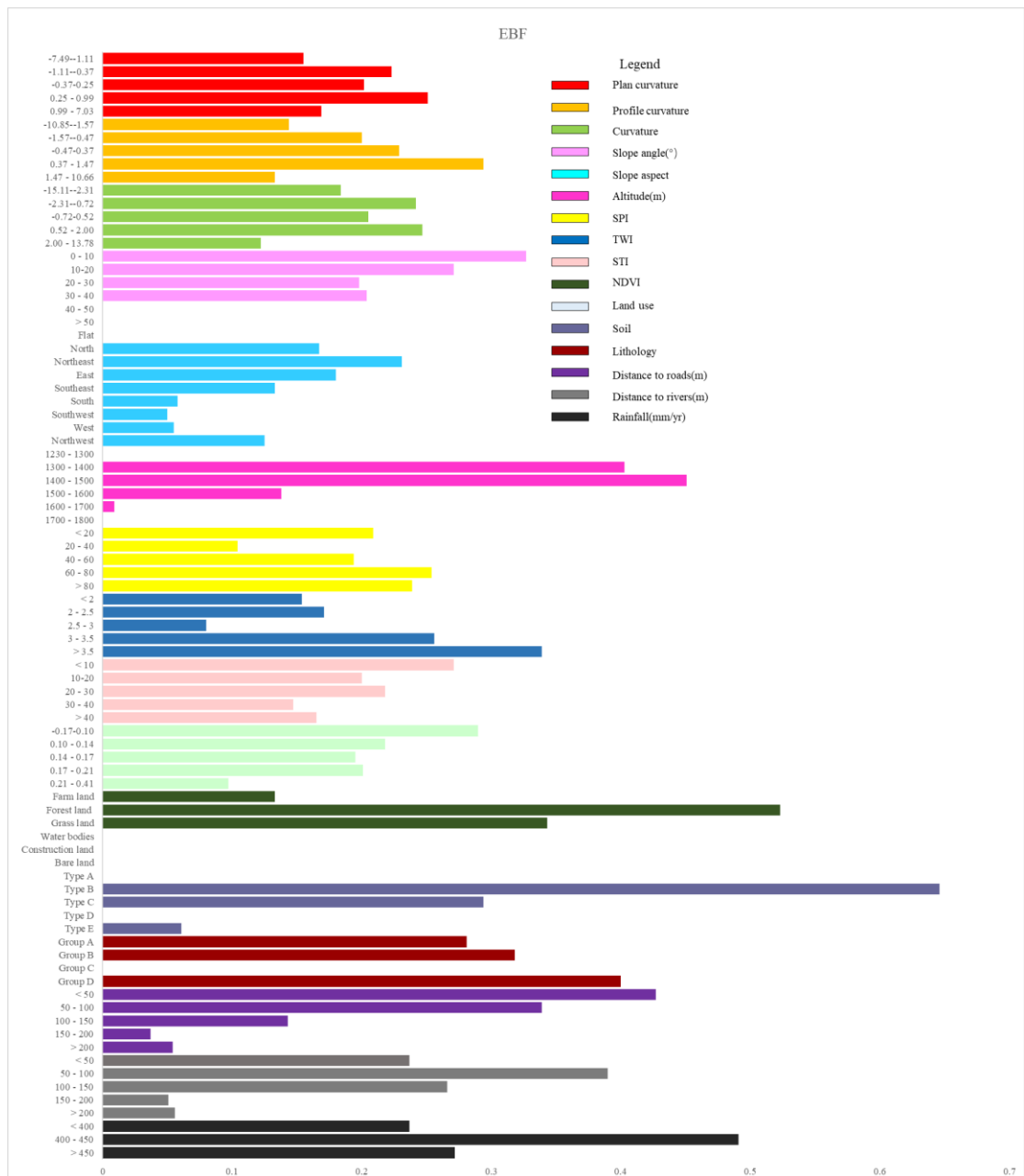
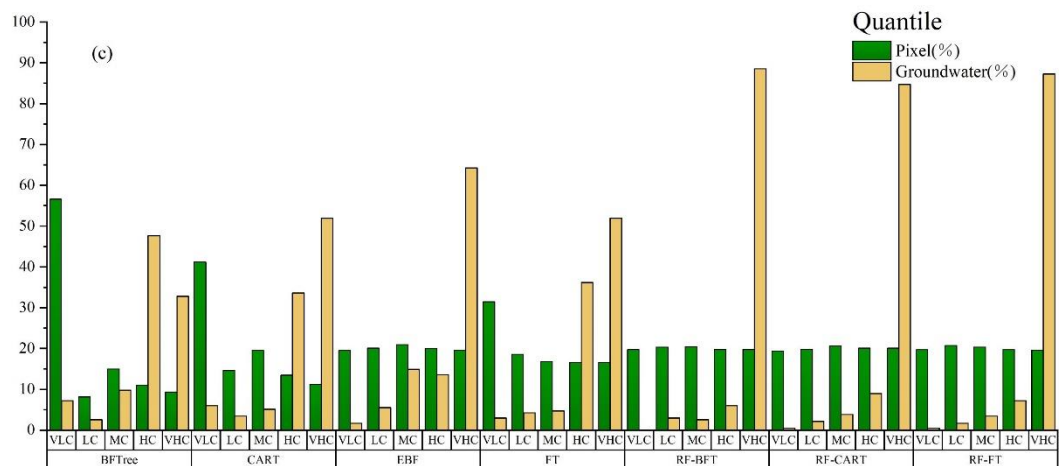
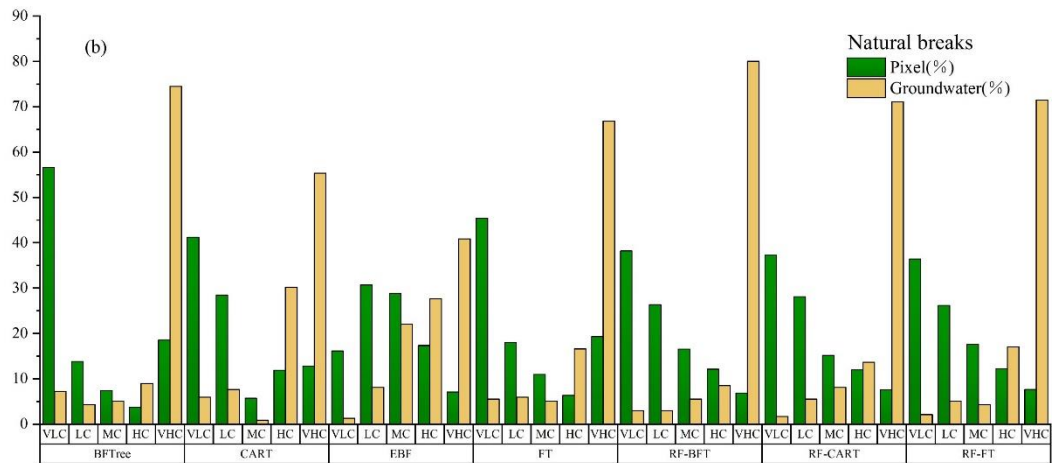
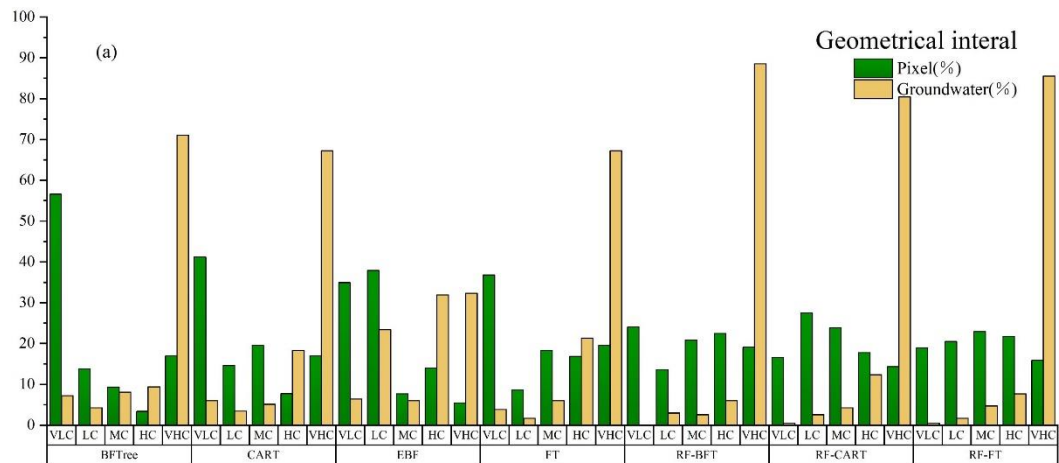


Figure S2. Conditioning factor histogram based on EBF



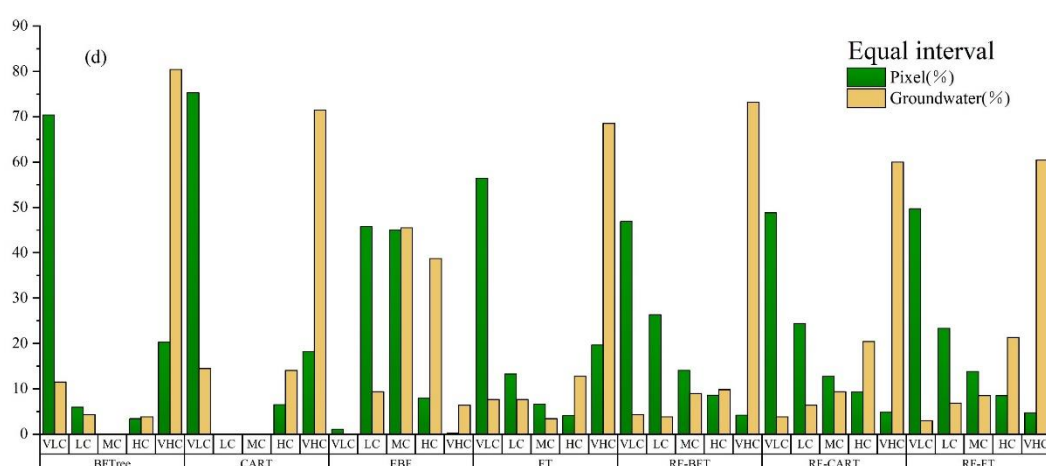


Figure S3. Selection of the best classification method for groundwater potential map:(a) geometrical interval, (b) natural breaks, (c) quantile, (d) equal interval.

Table S1. Performance of models using cutoff-dependent metrics

Metrics	BFT	RFBFT	EBF	CART	RFCART	FT	RFFT
TP	128	138	118	130	137	132	138
TN	119	134	125	111	140	122	135
FP	46	31	40	54	25	43	30
FN	37	27	47	35	28	33	27
Sensitivity	0.776	0.836	0.715	0.788	0.830	0.800	0.836
Specificity	0.721	0.812	0.758	0.673	0.848	0.739	0.818
Accuracy	0.748	0.824	0.736	0.730	0.839	0.770	0.827
F-score	0.748	0.824	0.731	0.729	0.839	0.769	0.827
MCC	0.498	0.649	0.473	0.464	0.679	0.540	0.655
TSS	0.497	0.648	0.473	0.461	0.678	0.539	0.654

Table S2. Validation of models using cutoff-dependent metrics

Metrics	BFT	RFBFT	EBF	CART	RFCART	FT	RFFT
TP	44	48	40	45	48	47	49
TN	44	56	53	42	55	45	55
FP	26	14	17	28	15	25	15
FN	26	22	30	25	22	23	21
Sensitivity	0.629	0.686	0.571	0.643	0.686	0.671	0.700
Specificity	0.629	0.800	0.757	0.600	0.786	0.643	0.786
Accuracy	0.629	0.743	0.664	0.621	0.736	0.657	0.743
F-score	0.629	0.742	0.630	0.621	0.735	0.657	0.742
MCC	0.257	0.489	0.334	0.243	0.474	0.314	0.488
TSS	0.258	0.486	0.329	0.243	0.472	0.314	0.486