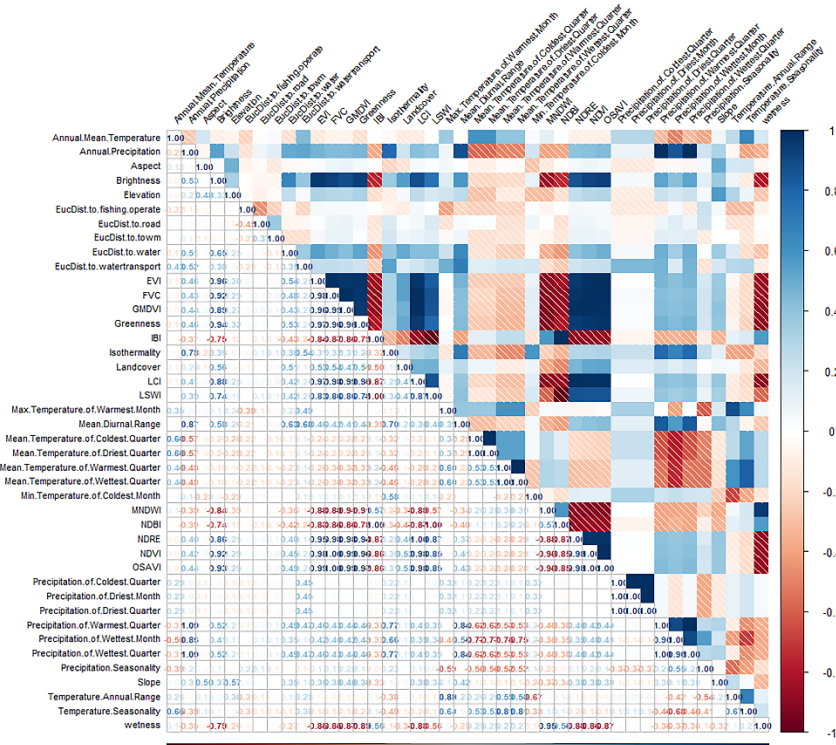
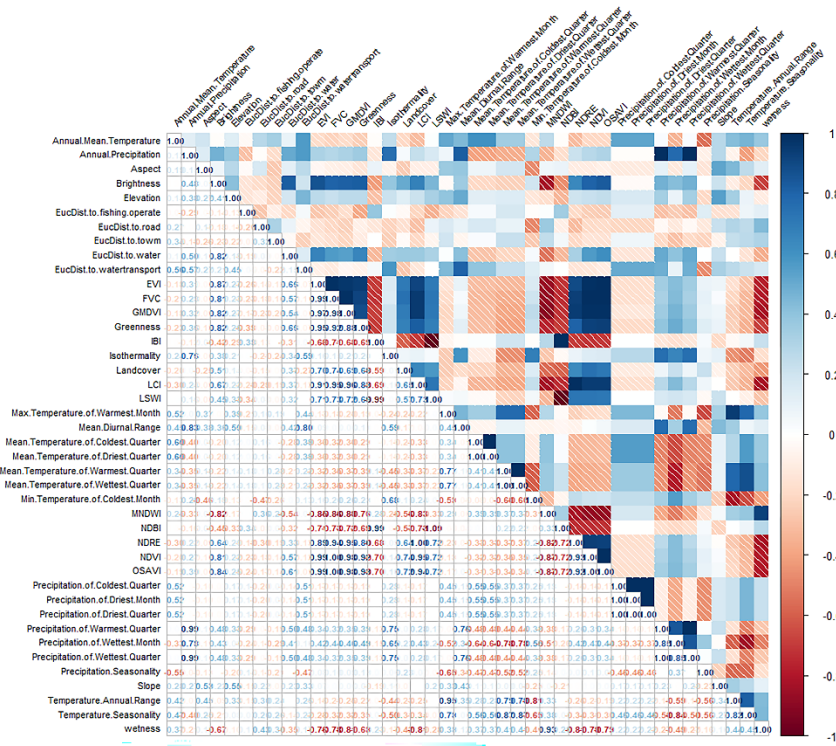


Supplementary Materials



a. Correlation analysis of breeding period



b. Correlation analysis of migration period

Figure S1. Correlation analysis of impact factors. ((a) Correlation of 42

variables in breeding period. (b) Correlation of 42 variables in Migratory period.)

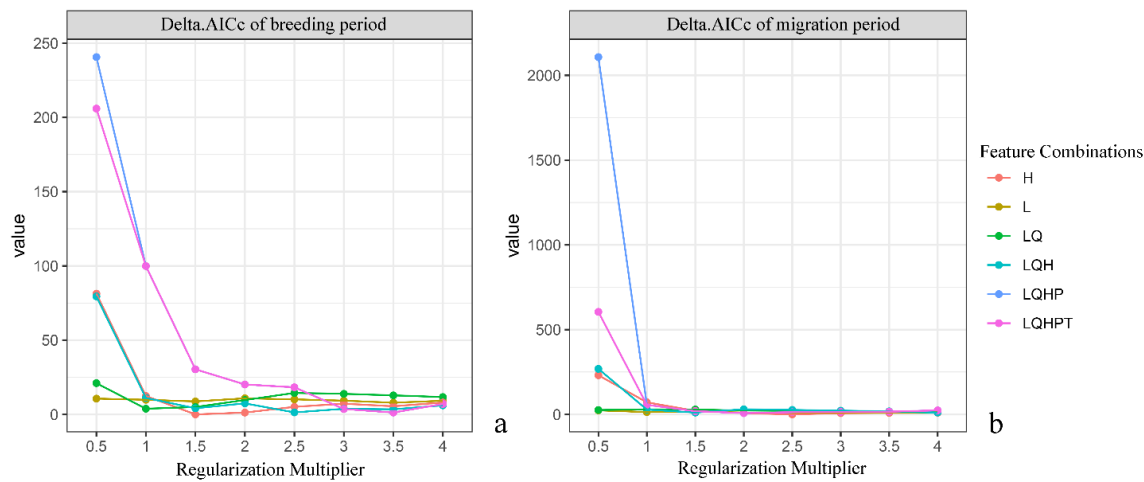


Figure S2 Delta.AICc of the different period. ((a) Delta.AICc of breeding period. The results show that RM selects 1.5 and FC selects Hinge during the breeding period. (b) Delta.AICc of migration period. The results show that RM selects 2.5 and FC selects Hinge during the migration period.)

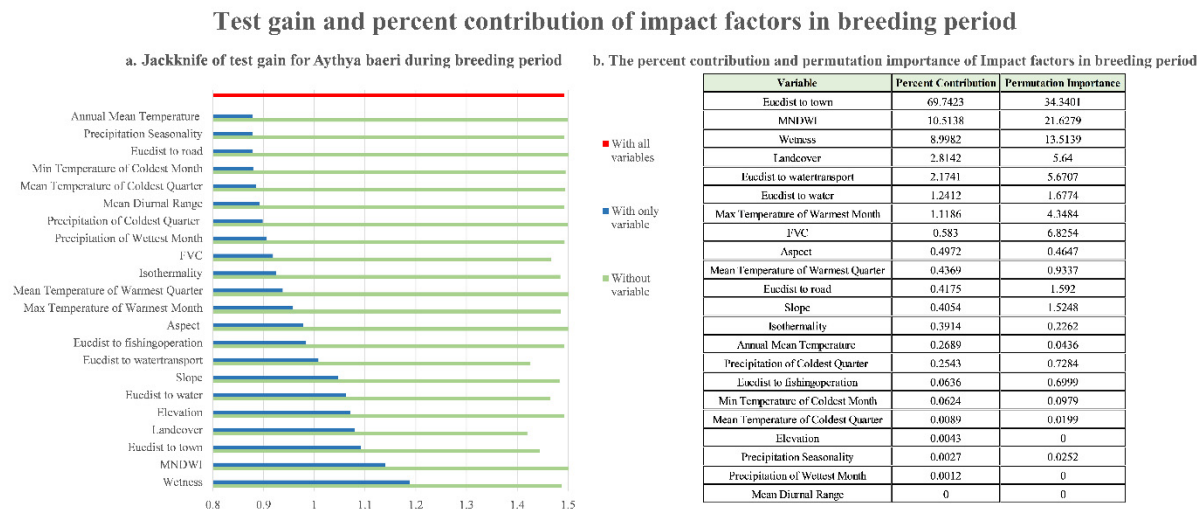


Figure S3. Text gain and percent contribution of impact factors in breeding period. ((a) shows the folding knife test values of the filtered reproductive period impact factors, and (b) shows the contribution and significance of the

filtered reproductive period impact factors in the model.)

Response curves of the main impact factors during the breeding period

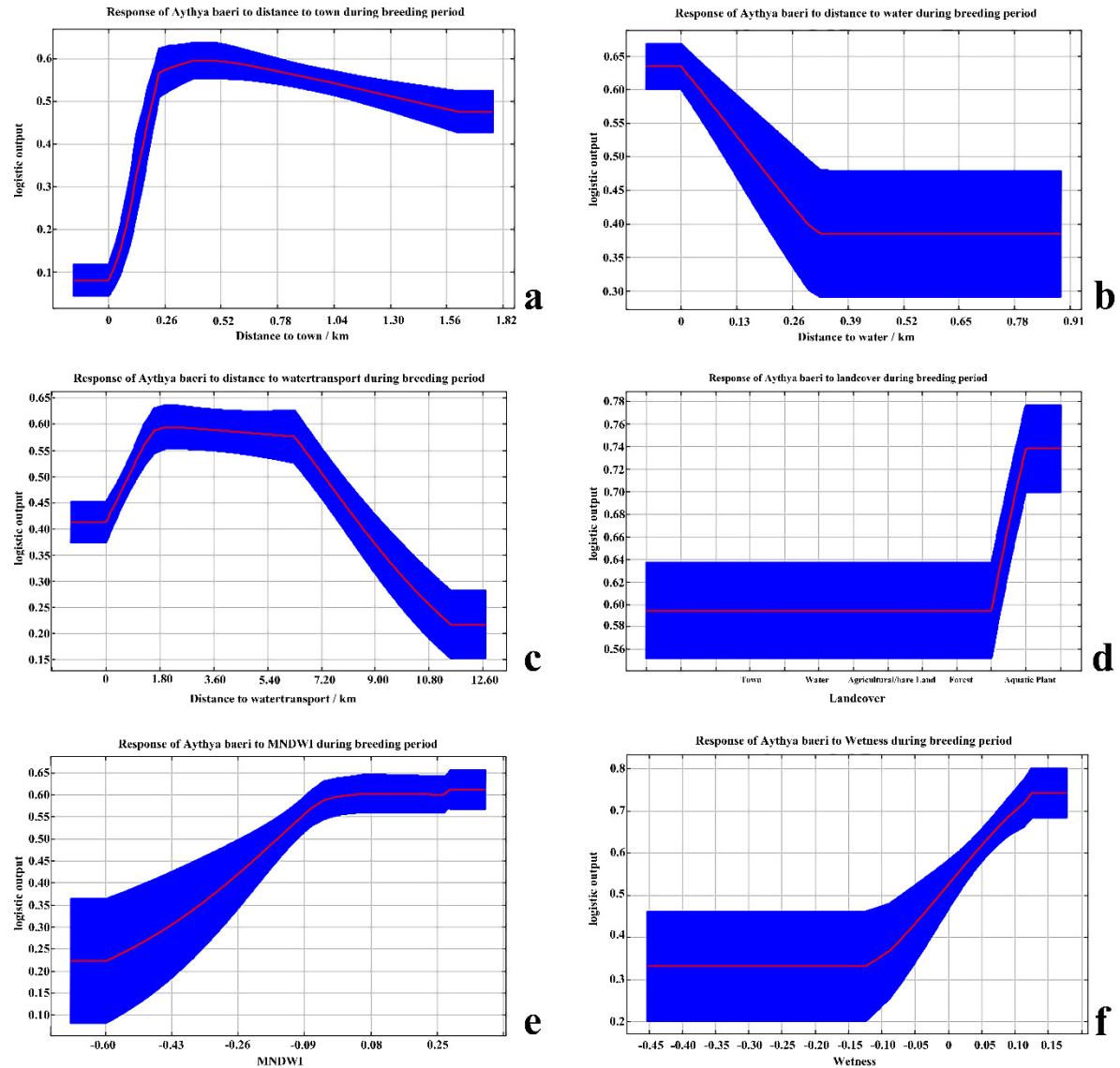


Figure S4. Response curves of the main impact factors during the breeding period. ((a) is the response curves of Distance to rown. (b) is the response curves of Distance to water. (c) is the response curves of Distince to watertransport. (d) is the response curves of Landcover. (e) is the response curves of MNDWI. (f) is the response curves of Wetness.)

Test gain and percent contribution of impact factors in migration period

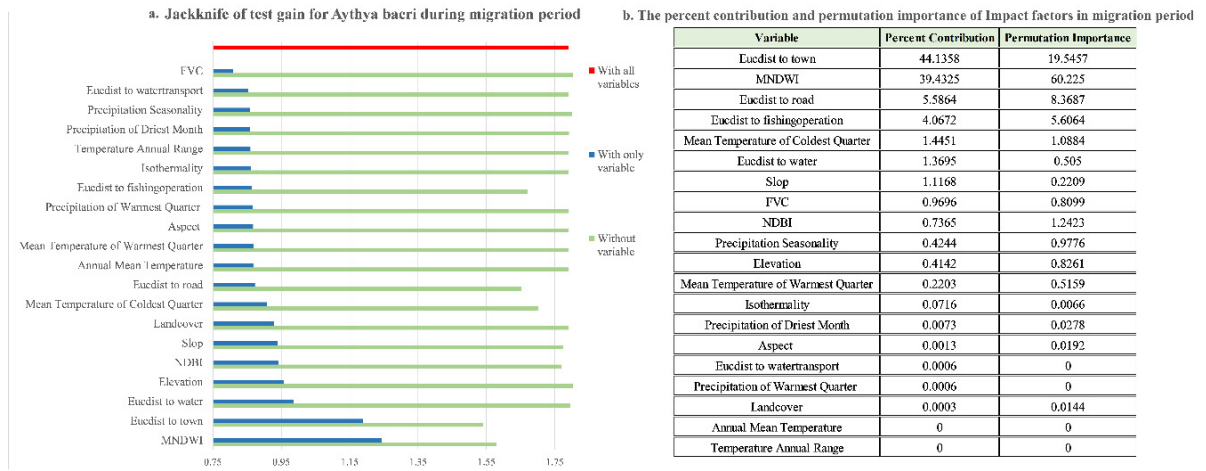


Figure S5. Text gain and percent contribution of impact factors in migration period. ((a) shows the folded knife test values of the screened migration period impact factors, and (b) shows the contribution and significance of the screened migration period impact factors in the model.)

Response curves of the main impact factors during the migration period

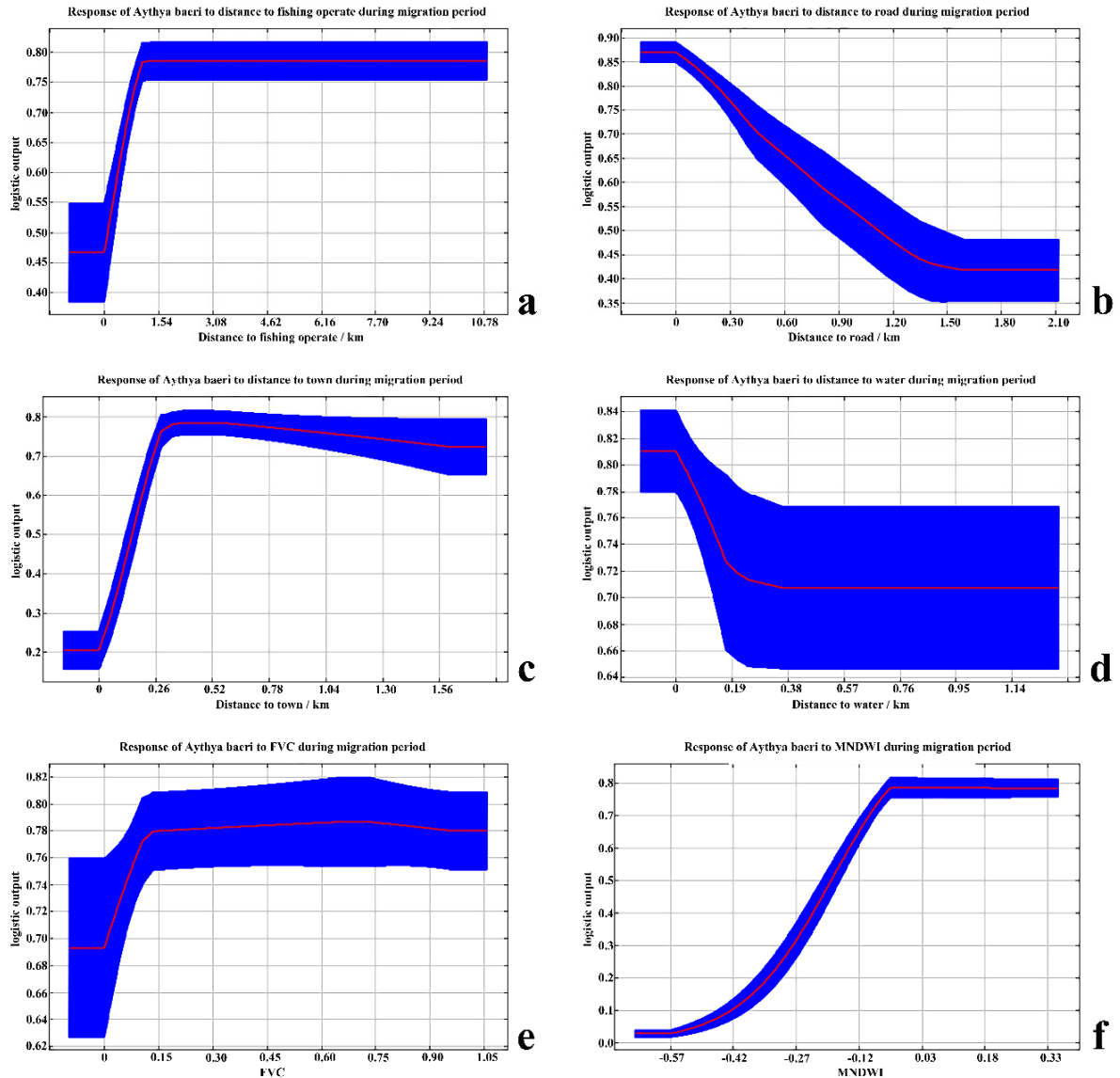


Figure S6. Response curves of the main impact factors during the migration period. ((a) is the response curves of Distance to fishing operate. (b) is the response curves of Distance to road. (c) is the response curves of Distance to town. (d) is the response curves of Distance to water. (e) is the response curves of FVC. (f) is the response curves of MNDWI.)

Table S1. Specific area and corresponding percentage of each suitable habitat type for Baer's Pochard during the breeding season.

	Area	Proportion of BYD	Proportion of Total Suitable Habitat Area
Suitability Habitat	162.39 km ²	44.37%	— —
Low- suitability Habitat	65.35 km ²	17.85%	40.24%
Moderate- suitability Habitat	69.12 km ²	18.89%	42.57%
High- suitability Habitat	27.92 km ²	7.63%	17.19%

Table S2. Specific area and corresponding percentage of each suitable habitat type for Baer's Pochard during the migratory season.

	Area	Proportion of BYD	Proportion of Total Suitable Habitat Area
Suitability Habitat	124.44 km ²	33.99%	— —
Low- suitability Habitat	48.02 km ²	13.12%	38.59%
Moderate- suitability Habitat	52.90 km ²	14.45%	42.51%
High- suitability Habitat	23.52 km ²	6.42% ¹	18.90%