

Supplementary material 1. Comparison of models performance used in our study.

Table S1. The table shows a comparison of linear and quadratic (polynomial) models used in our study evaluated by their coefficient of determination (R^2) and root mean-squared error (RMSE).

Explanatory variable	Model	R^2	RMSE
Mires			
Mean annual temperature	linear	0.005	27.86
Mean annual temperature	polynomial	0.005	27.857
Sum of annual precipitation	linear	0.019	27.656
Sum of annual precipitation	polynomial	0.052	27.191
Aridity Index	linear	0.061	27.056
Aridity Index	polynomial	0.063	27.037
Livestock density	linear	0.028	27.527
Livestock density	polynomial	0.048	27.247
Tall-forb communities			
Mean annual temperature	linear	0.008	10.215
Mean annual temperature	polynomial	0.01	10.206
Sum of annual precipitation	linear	0.04	10.051
Sum of annual precipitation	polynomial	0.049	10.002
Aridity Index	linear	0.012	10.195
Aridity Index	polynomial	0.014	10.185
Livestock density	linear	0.0002	10.255
Livestock density	polynomial	0.011	10.202
Pseudosteppes			
Mean annual temperature	linear	0.152	19.268
Mean annual temperature	polynomial	0.153	19.256
Sum of annual precipitation	linear	0.074	20.134
Sum of annual precipitation	polynomial	0.104	19.806
Aridity Index	linear	0.161	19.166
Aridity Index	polynomial	0.164	19.136
Livestock density	linear	0.172	19.047
Livestock density	polynomial	0.236	18.293
Salt marshes			

Mean annual temperature	linear	0.307	23.555
Mean annual temperature	polynomial	0.316	23.393
Sum of annual precipitation	linear	0.044	27.66
Sum of annual precipitation	polynomial	0.074	27.22
Aridity Index	linear	0.082	27.111
Aridity Index	polynomial	0.104	26.782
Livestock density	linear	0.028	27.896
Livestock density	polynomial	0.081	27.128

Steppes

Mean annual temperature	linear	0.001	22.752
Mean annual temperature	polynomial	0.141	21.094
Sum of annual precipitation	linear	0.098	21.62
Sum of annual precipitation	polynomial	0.112	21.448
Aridity Index	linear	0.119	21.366
Aridity Index	polynomial	0.138	21.127
Livestock density	linear	0.001	22.747
Livestock density	polynomial	0.088	21.734
