Appendix

Step by Step: Using Integrated Step Selection Analysis to Simulate Wild Dog Dispersal and Assess Landscape Connectivity

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Running Title: Simulating Wild Dog Dispersal.

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A.1 Movement Models

Table S1: Results from the forward model selection procedure based on Akaike's Information Criterion (AIC; Burnham and Anderson, 2002) for the movement model. The base model upon which we based our movement model is depicted in the last row. We omitted any other model with an AIC weight of zero.

Covariates	AIC	ΔAIC	Weight	LogLik	Model ID
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_)	89303.73	0.00	0.19	-44631.86	1
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_)	89304.49	0.76	0.13	-44633.24	2
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + T:log(sl_)	89304.75	1.02	0.12	-44633.38	3
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_) + DTW:log(sl_)	89305.30	1.57	0.09	-44631.65	4
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_) + T:cos(ta_)	89305.37	1.64	0.09	-44631.68	5
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_) + HI:log(sl_)	89305.37	1.64	0.09	-44631.69	6
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_)	89305.45	1.72	0.08	-44634.73	7
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_) + S:cos(ta_)	89305.72	1.99	0.07	-44631.86	8
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_) + S:log(sl_)	89305.72	2.00	0.07	-44631.86	9
Base Model + log(sl_):MA + W:log(sl_) + DTW:cos(ta_) + HI:cos(ta_) + T:log(sl_) + W:cos(ta_)	89305.72	2.00	0.07	-44631.86	10
...					
Base Model: cos(ta) + log(sl) + W + T + DTW + HI + S	90091.40	787.67	0.00	-45030.70	NA

Note: W = Water, DTW = Distance To Water, S = Shrubs/Grassland, T = Trees, P = Protected, HI = Human Influence, RC = Road Crossing, DTR = Distance To Roads, MA = Main Activity.

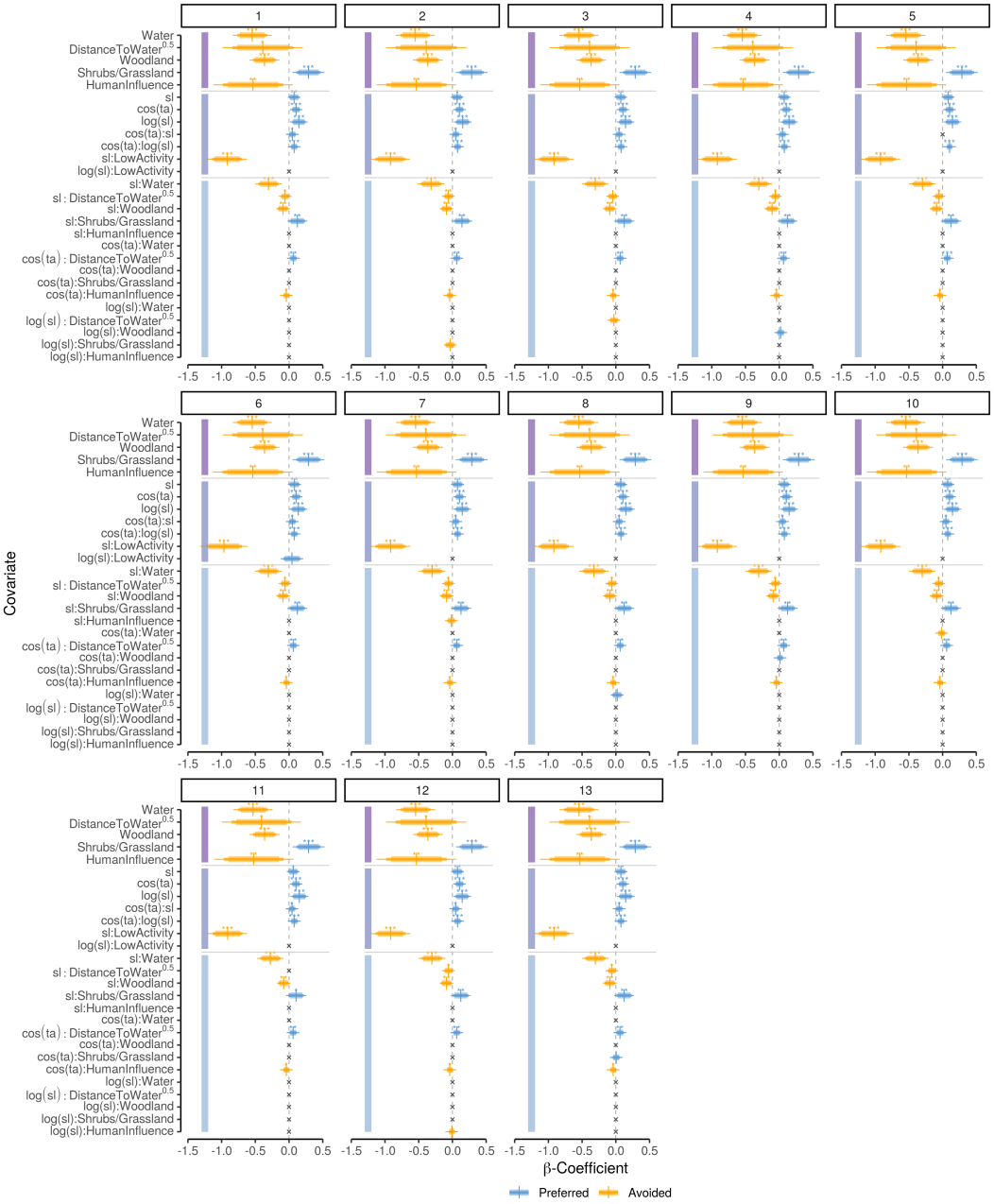

Figure S1: Coefficients of all movement models with an AIC weight above one.

References

Burnham, K. P. and Anderson, D. R. (2002). *Model Selection and Multimodel Inference: A Practical Information-Theoretic Approach*. Springer Science & Business Media, Ney York, NY, USA.