

Supplementary Materials

A spatial approach for modeling amphibian road-kills: comparison of regression techniques

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ISPRS International Journal of Geo-Information

Table S1. Coefficient estimates and significance of environmental variables in each one of the 10 models calculated with GLM. Asterisks denote for significance. D_urb: distance to urban areas; D_broad: distance to broadleaved forests; D_conif: distance to coniferous forests; D_water: distance to water bodies.

Model	Intercept	D_urb	D_broad	D_conif	D_water	Slope
1	5.830***	-0.000***	-0.000***	-0.000***	-0.000***	-0.041***
2	5.771***	-0.000***	-0.000***	-0.000***	-0.000***	-0.042***
3	5.844***	-0.000***	-0.000***	-0.000***	-0.000***	-0.045***
4	5.198***	-0.000***	-0.000***	-0.000***	-0.000***	-0.029**
5	6.128***	-0.000***	-0.000***	-0.000***	-0.000***	-0.047***
6	5.752***	-0.000***	-0.000***	-0.000***	-0.000***	-0.039***
7	5.372***	-0.000***	-0.000***	-0.000***	-0.000***	-0.043***
8	6.003***	-0.000***	-0.000***	-0.000***	-0.000***	-0.048***
9	6.113***	-0.000***	-0.000***	-0.000***	-0.000***	-0.044***
10	5.601***	-0.000***	-0.000***	-0.000***	-0.000***	-0.042***

***p< 0.001; **p<0.01; *p<0.05

Table S2. p-values and significance of environmental variables in each one of the 10 models calculated with GAM. Asterisks denote for significance. D_urb: distance to urban areas; D_broad: distance to broadleaved forests; D_conif: distance to coniferous forests; D_water: distance to water bodies.

Model	Intercept	D_urb	D_broad	D_conif	D_water	Slope
1	0.736	<0.001 ***	0.009 **	<0.001 ***	0.378	<0.001 ***
2	0.801	<0.001 ***	0.005 **	<0.001 ***	0.182	<0.001 ***
3	0.798	<0.001 ***	0.014 *	<0.001 ***	0.332	<0.001 ***
4	0.280	<0.001 ***	0.003 **	<0.001 ***	0.174	<0.001 ***
5	0.637	<0.001 ***	0.005 **	<0.001 ***	0.093	<0.001 ***
6	0.480	<0.001 ***	0.007 **	<0.001 ***	0.071	<0.001 ***
7	0.653	<0.001 ***	0.034 *	<0.001 ***	0.668	<0.001 ***
8	0.226	<0.001 ***	<0.001 ***	<0.001 ***	0.009 **	<0.001 ***
9	0.946	<0.001 ***	0.004 **	<0.001 ***	0.026 *	<0.001 ***
10	0.831	<0.001 ***	0.016 *	<0.001 ***	0.337	<0.001 ***

***p< 0.001; **p<0.01; *p<0.05

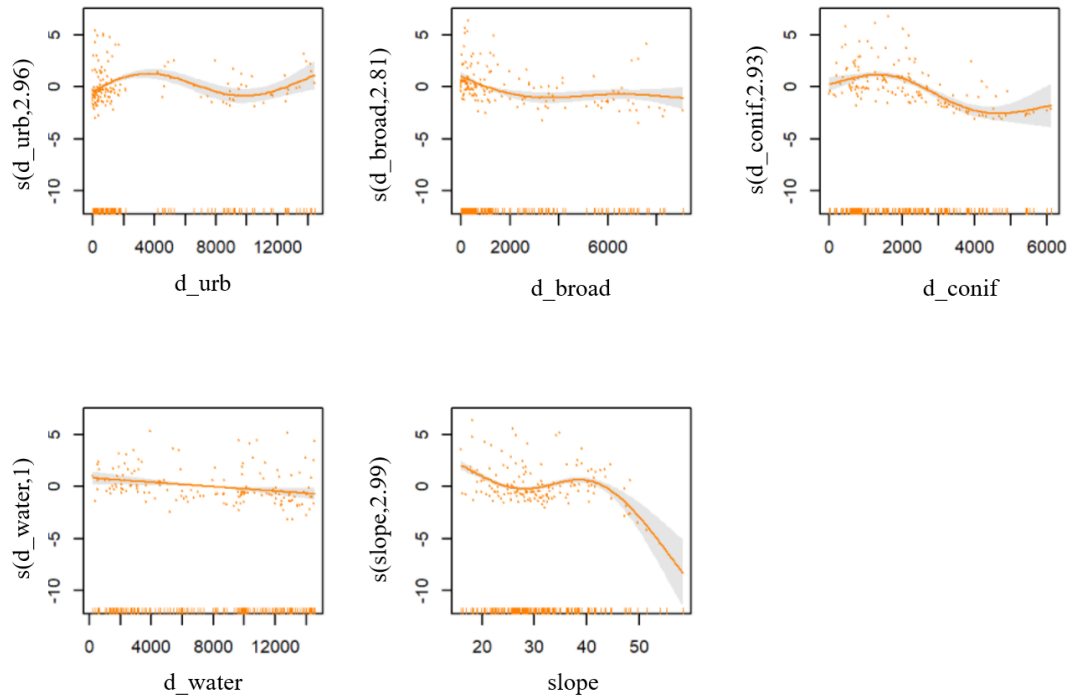


Figure S1. Response curves of the five explanatory variables of the GAM model with the best performance. d_urb: distance to urban areas; d_broad: distance to broadleaved forests; d_conif: distance to coniferous forests; d_water: distance to water bodies.

Table S3. Importance of environmental variables in each one of the 10 models calculated with RF. In bold, the most important variable in each model. D_urb: distance to urban areas; D_broad: distance to broadleaved forests; D_conif: distance to coniferous forests; D_water: distance to water bodies.

Model	D_urb	D_broad	D_conif	D_water	Slope
1	375.3	453.3	453.7	490.9	549.0
2	412.4	470.2	420.3	492.0	535.5
3	367.7	412.5	413.7	427.9	576.9
4	309.7	359.2	374.2	395.3	446.3
5	365.3	453.1	429.6	492.0	612.6
6	348.9	480.5	453.9	449.9	546.2
7	349.1	466.7	407.3	375.4	508.0
8	366.0	445.9	446.0	468.7	663.1
9	270.7	307.1	308.3	353.2	332.5
10	352.1	433.2	432.2	468.8	577.5

Table S4. Relative influence (%) of environmental variables in each one of the 10 models calculated with BRT. In bold, the most important variable in each model. D_urb: distance to urban areas; D_broad: distance to broadleaved forests; D_conif: distance to coniferous forests; D_water: distance to water bodies.

Model	D_urb	D_broad	D_conif	D_water	Slope
1	24.5	14.4	18.6	11.9	30.6
2	24.1	15.2	19.0	11.8	30.0
3	23.4	16.2	17.7	10.8	31.9
4	22.9	13.6	26.0	10.9	26.7
5	21.5	16.0	19.9	11.4	31.1
6	23.6	16.2	21.5	11.1	27.7
7	22.3	16.4	20.5	9.6	31.2
8	22.8	13.5	21.2	10.7	31.8
9	22.3	13.4	26.0	15.6	22.7
10	24.2	15.2	18.7	10.6	31.4

Table S5. Mean estimated coefficients and significance of environmental variables in each one of the 10 models calculated with GWR. Asterisks denote for significance. D_urb: distance to urban areas; D_broad: distance to broadleaved forests; D_conif: distance to coniferous forests; D_water: distance to water bodies.

Model	Intercept	D_urb	D_broad	D_conif	D_water	Slope
1	8.702**	0.001	-0.001 *	-0.001**	-0.000	-0.064*
2	8.769**	0.001	-0.001	-0.001**	-0.000	-0.061
3	9.095**	0.001	-0.001	-0.001**	-0.000	-0.070*
4	8.804**	0.001	-0.001	-0.001**	-0.000	-0.053
5	8.272**	0.001	-0.001	-0.001**	-0.000	-0.070*
6	10.342***	0.001	-0.002*	-0.001**	-0.000*	-0.065
7	8.500**	0.001	-0.001	-0.001**	-0.000	-0.061
8	9.385**	0.001	-0.001	-0.001**	-0.000*	-0.069
9	8.900**	0.001	-0.001	-0.001**	-0.000	-0.062
10	8.389**	0.001	-0.001	-0.001*	-0.000	-0.073*

***p< 0.001; **p<0.01; *p<0.05