

Supplementary material for the article “Habitat connectivity supports local abundance of fire salamanders (*Salamandra salamandra*) but also the spread of *Batrachochytrium salamandrivorans*” by Leonard Bolte, Forough Goudarzi, Reinhard Klenke, Sebastian Steinfartz, Annegret-Grimm Seyfarth and Klaus Henle published in *Landscape Ecology*

Supplementary information 2(S2): Spearman correlation and Variance Inflation of HSM candidate variables

Table SI2a: Spearman correlation coefficients for the full set of candidate predictor for the breeding habitat suitability model

	Water flow accumulation	Elevation	Sandy bedrock	Solid bedrock	TPI
Water flow accumulation	-	-0.20	0.50	-0.49	-0.33
Elevation	-0.20	-	-0.36	0.35	-0.09
Sandy bedrock	0.50	-0.36	-	-0.99	0.04
Solid bedrock	-0.49	0.35	-0.99	-	-0.05
TPI	-0.33	-0.09	0.04	-0.05	-

Table SI2b: Spearman correlation coefficients for the reduced set of candidate predictor for the breeding life cycle habitat suitability model

	Water flow accumulation	Elevation	Solid bedrock	TPI
Water flow accumulation	-	-0.20	-0.49	-0.33
Elevation	-0.20	-	0.35	-0.09
Solid bedrock	-0.49	0.35	-	-0.05
TPI	-0.33	-0.09	-0.05	-

Table SI2c: Variance inflation factors (VIF) for the full set of candidate predictor for the breeding habitat suitability model

	VIF
Water flow accumulation	1.10
Elevation	1.18
Sandy bedrock	4.01
Solid bedrock	3.99
TPI	1.01

Table SI2d: Variance inflation factors (VIF) for the reduced set of candidate predictor for the breeding habitat suitability model

Variables	VIF
Water flow accumulation	1.11
Elevation	1.15
Solid bedrock	1.21
TPI	1.01

Table SI2e: Spearman correlation coefficients for the full set of candidate predictor for the whole life cycle habitat suitability model.

	Coniferous forest	Cropland	Deciduous/mixed forest	Grassland	Settlement	Breeding habitat suitability	Waterbodies
Coniferous forest	-	-0.24	0.92	-0.53	-0.16	0.42	0.12
Cropland	-0.24	-	-0.30	0.09	0.09	-0.14	-0.05
Deciduous/mixed forest	0.92	-0.30	-	-0.60	-0.20	0.42	0.09
Grassland	-0.53	0.09	-0.60	-	0.23	-0.22	-0.13
Settlement	-0.16	0.09	-0.20	0.23	-	-0.15	-0.01
Breeding habitat suitability	0.42	-0.14	0.42	-0.22	-0.15	-	0.00
Waterbodies	0.12	-0.05	0.09	-0.13	-0.01	0.00	-

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Table SI2f: Spearman correlation coefficients for the reduced set of candidate predictor for the whole life cycle habitat suitability model

	Deciduous/mixed forest	Grassland	Settlement	Breeding habitat suitability	Waterbodies
Deciduous/mixed forest	-	-0.60	-0.20	0.42	0.09
Grassland	-0.60	-	0.23	-0.22	-0.13
Settlement	-0.20	0.23	-	-0.15	-0.01
Breeding habitat suitability	0.42	-0.22	-0.15	-	0.00
Waterbodies	0.09	-0.13	-0.01	0.00	-

Table SI2g: Variance inflation factors (VIF) for the full set of candidate predictor for the whole life cycle habitat suitability model

	VIF
Coniferous forest	6.86
Cropland	1.39
Deciduous/mixed forest	8.78
Grassland	1.91
Settlement	1.03
Breeding habitat suitability	1.21
Waterbodies	1.04

Table SI2h: Variance inflation factors (VIF) for the reduced set of candidate predictor for the whole life cycle habitat suitability model

	VIF
Deciduous/mixed forest	1.72
Grassland	1.54
Settlement	1.02
Breeding habitat suitability	1.19
Waterbodies	1.02

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