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Appendix 1. Species selected for our analysis of habitat selection of amphibian species. For each species, a brief description of its habitat preferences (AmphibiaWeb, 2014) and the number of ponds where the species was found within the study site are given. Among the 7 selected species, several were considered as community interest species. Species listed on annexes of the Bern Convention and/or on the annexes of the European Habitat Directive are noted.

	Species	Habitat preference	Bern Convention	Habitat Directive	Number of ponds (on 774) where the species was present
Anurans	*Alytes obstetricans*	*Terrestrial landscapes :* - generally in open areas such as fields, flat lands, moors, and meadows but can also be found more rarely in wooded areas - slopes, walls, embankments with many small stones, stone slabs or sand, normally with sparse vegetation are preferred - can also be found in parks, gardens, buildings, ruins, cemeteries *Aquatic landscapes :* - permanent waters - variety of aquatic habitats: ponds, canals, lakes	Annex II	Annex IV	151 (19.51%)
	Bufo spinosus	*Terrestrial landscapes :* - forest zones (in conifer, mixed and deciduous forests), where it prefers conifer forests with marshes. - groves, bushlands, parks and gardens, generally in fairly wet sites with dense vegetation - urbanised areas: parks, gardens, buildings, ruins, cemeteries, roads - large open areas are avoided but in forested landscapes the toad readily inhabits bushlands, meadows, fields, glades, gardens, vineyards *Aquatic landscapes :* - lakes, ponds, ditches, large puddles and streams with relatively clear water, quite variable in area and depth less than 600m	Annex III	-	214 (27.65%)
	Hyla meridionalis	*Terrestrial landscapes :* - urbanised areas : parks, gardens - trees, shrubs, orchards, vineyards, and grasses generally near to freshwater habitats *Aquatic landscapes :* - temporal ponds - ponds, springs, irrigation ditches, temporary pools, flooded meadows, lagoons, cattle pools, wells and even swimming pools	Annex II	Annex IV	106 (13.70%)
	Rana temporaria	*Terrestrial landscapes :* - lowland and mountain deciduous, coniferous and mixed forests - diverse habitats: under forest cover, in glades, bushlands, dry and swampy meadows, swamps - anthropogenic landscape: fields, gardens, parks, settlements, cities *Aquatic landscapes :* - lakes, ponds, swamps, ditches, river- and stream pools and puddles with stagnant or semi-flowing water.	Annex III	Annex V	320 (41.34%)

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Appendix 1. *Continued*.

	Species	Habitat preference	Bern Convention	Habitat Directive	Number of ponds (on 774) where the species was present
Urodels	*Lissotriton helveticus*	*Terrestrial landscapes :* - ditches, puddles, water holes or forest meadows, small, slow streams, fountains, reservoirs - marshes, heathlands, moorlands, forests - pastures and agricultural land - abundant in cultivated areas - urbanised areas: gardens *Aquatic landscapes :* - a wide variety of small stagnant waters (including very small and acidic ponds, ditches and ruts), or (rarely) slow-moving waters	Annex III	-	278 (35.92%)
	Salamandra salamandra	*Terrestrial landscapes :* - wet cool deciduous, mixed, or rarely, coniferous forests with well shaded brooks and small rivers - woodlands, glades and forest edges, rocky slopes, dense bush, and herbaceous vegetation - prefers microhabitats covered with dense leaf-litter and moss *Aquatic landscapes :* - streams, ponds and still waters	Annex III	-	211 (27.26%)
	Triturus marmoratus	*Terrestrial landscapes :* - open areas like heathens and agricultural landscapes - under logs and rocks, as well as in man-made structures like stone walls *Aquatic landscapes :* - aquatic habitats include well-vegetated ponds, pools, ditches and streams generally within dry woodlands, heath land, fields and rough grassland - different types of permanent and temporary water sources	Annex III	Annex IV	70 (9.04%)

Appendix 2. Inter-correlation matrix between the manifested variables (i.e. the environmental variables used in the analyses, given in Table 1). Above diagonal: Spearman correlation coefficients and below diagonal: Spearman correlation p-values (significant p-values are in *italics*).

	Slope	Altitude	Water bodies	Water system	Wetlands	Deciduous forest	Mixed forest	Coniferous forest	Open areas	Shrub vegetation	Arable lands	Permanent crops	Grassland	Artificialised areas	Railway	Primary roads	Secondary roads
Slope	-	0.45	0.18	-0.15	-0.03	0.02	0.18	-0.13	-0.38	-0.27	0.39	0.38	0.28	0.22	0.03	0.29	0.29
Altitude	*0.00*	-	0.47	-0.12	-0.28	0.47	0.31	-0.04	-0.89	-0.54	0.89	0.81	0.76	0.47	-0.07	0.58	0.67
Water bodies	*0.00*	*0.00*	-	-0.01	-0.20	0.40	0.29	0.20	-0.58	-0.19	0.54	0.50	0.52	0.25	-0.23	0.19	0.35
Water system	*0.00*	*0.00*	0.74	-	-0.02	-0.10	-0.11	0.04	0.08	0.10	-0.04	-0.10	-0.10	-0.09	-0.17	-0.18	-0.08
Wetlands	0.36	*0.00*	*0.00*	0.62	-	-0.32	-0.06	-0.25	0.27	0.23	-0.37	-0.28	-0.32	-0.13	0.28	-0.11	-0.26
Deciduous forest	0.60	*0.00*	*0.00*	*0.00*	*0.00*	-	0.35	0.19	-0.48	-0.26	0.44	0.41	0.46	0.38	-0.04	0.32	0.39
Mixed forest	*0.00*	*0.00*	*0.00*	*0.00*	0.10	*0.00*	-	0.37	-0.32	-0.18	0.25	0.37	0.29	0.27	0.10	0.25	0.32
Coniferous forest	*0.00*	0.24	*0.00*	0.27	*0.00*	*0.00*	*0.00*	-	-0.07	0.02	-0.04	-0.04	0.06	-0.03	-0.22	-0.22	0.02
Open areas	*0.00*	*0.00*	*0.00*	*0.02*	*0.00*	*0.00*	*0.00*	*0.04*	-	0.44	-0.86	-0.75	-0.73	-0.44	0.15	-0.48	-0.60
Shrub vegetation	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	0.49	*0.00*	-	-0.46	-0.46	-0.47	-0.13	0.16	-0.29	-0.30
Arable lands	*0.00*	*0.00*	*0.00*	0.24	*0.00*	*0.00*	*0.00*	0.32	*0.00*	*0.00*	-	0.74	0.74	0.47	-0.22	0.51	0.56
Permanent crops	*0.00*	*0.00*	*0.00*	*0.01*	*0.00*	*0.00*	*0.00*	0.32	*0.00*	*0.00*	*0.00*	-	0.68	0.52	0.01	0.60	0.65
Grassland	*0.00*	*0.00*	*0.00*	*0.01*	*0.00*	*0.00*	*0.00*	0.12	*0.00*	*0.00*	*0.00*	*0.00*	-	0.42	-0.11	0.51	0.60
Artificialised areas	*0.00*	*0.00*	*0.00*	*0.01*	*0.00*	*0.00*	*0.00*	0.48	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	-	0.27	0.65	0.42
Railway	0.40	*0.04*	*0.00*	*0.00*	*0.00*	0.22	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	0.68	*0.00*	*0.00*	-	0.56	0.06
Primary roads	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	-	0.48
Secondary roads	*0.00*	*0.00*	*0.00*	*0.02*	*0.00*	*0.00*	*0.00*	0.49	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	*0.00*	0.13	*0.00*	-

Appendix 3. Monte-Carlo tests results (from 1000 randomisations) of the ENFA analyses. ***: $p<0.001$; **: $0.001<p<0.01$; *: $0.01< p <0.05$.

	Species	Observation	Standard observation	*p*-value	Variance
Anurans	*A. obstetricans*	8.000	27.800	<0.001 ***	0.045
	B. spinosus	2.230	3.146	0.009 **	0.018
	H. meridionalis	13.899	37.726	<0.001 ***	0.091
	R. temporaria	4.058	23.935	<0.001 ***	0.011
Urodela	*L. helveticus*	3.703	18.300	<0.001 ***	0.012
	S. salamandra	3.547	11.652	<0.001 ***	0.022
	T. marmoratus	24.485	36.279	<0.001 ***	0.339

Appendix 4. Path diagrams used to assess the direct effects of distances from different habitat types on amphibian presence at the department scale. (a) *Alytes obstetricans*; (b) *Bufo spinosus*; (c) *Hyla meridionalis*; (d) *Rana temporaria*; (e) *Lissotriton helveticus*; (f) *Salamandra salamandra* and (g) *Triturus marmoratus*. Values are path coefficients estimated by PLS-PM analysis. Asterisks indicate significant values of path coefficient from the inner model. A negative red value of path coefficient means that the species avoid the environmental parameter concerned. A positive black value represents an environmental parameter preferred by the species concerned. None indirect effects were identified. Abbreviations: goodness-of-fit (GoF); A. obs.: *Alytes obstetricans*; B. spi.: *Bufo spinosus*; H. mer.: *Hyla meridionalis*; R. tem.: *Rana temporaria*; L. hel.: *Lissotriton helveticus*; S. sal.: *Salamandra salamandra*; T. mar.: *Triturus marmoratus*.