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## Supplementary material

### **Alpine landscape and canopy cover from 1973 to 2011: are roe and red deer population dynamics linked?**

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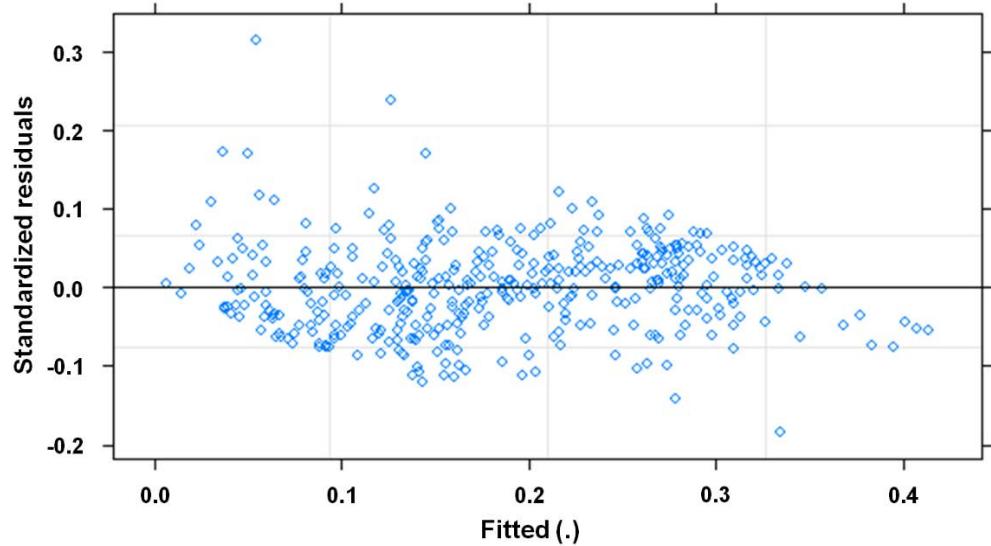
**Table S1.** Data about landscape modification (class level; see Table 1 for metric code names; length is reported in m and areas in m<sup>2</sup>) in 10 sample sites (tot. 90 km<sup>2</sup>) are reported for three years (1973, 1994 and 2011).

Class *	YEAR	CA (x 10 <sup>6</sup> )	NumP	MPS (x 10 <sup>3</sup> )	MedPS (x 10 <sup>3</sup> )	PSCoV	PSSD (x 10 <sup>3</sup> )	TE (x 10 <sup>3</sup> )	MPE	MSI	AWMSI	MPAR	MPFD	AWMPFD
<b>Agricultural zone</b>	1973	3.28	22	149.07	62.33	116.03	172.97	49.07	2230.36	1.80	2.03	0.03	1.34	1.31
	1994	1.93	13	148.09	29.74	116.14	171.99	28.07	2158.94	1.74	2.12	0.04	1.34	1.31
	2011	1.12	11	101.58	52.23	123.16	125.11	19.09	1735.28	1.64	2.02	0.04	1.34	1.32
<b>Open areas (below tree line)</b>	1973	8.02	602	13.32	2.46	297.57	39.64	289.62	481.10	1.47	1.94	0.11	1.41	1.35
	1994	4.55	466	9.76	1.89	260.63	25.43	174.87	375.25	1.36	1.81	0.16	1.41	1.35
	2011	4.16	386	10.78	2.40	269.36	29.05	156.31	404.94	1.34	1.85	0.10	1.39	1.35
<b>Open areas (over tree line) **</b>	1973	27.65	200	138.26	9.83	301.45	416.79	350.64	1753.19	1.71	2.85	0.09	1.40	1.33
	1994	24.79	111	223.35	19.10	232.17	518.55	252.14	2271.52	1.67	2.41	0.05	1.35	1.31
	2011	23.09	106	217.79	19.31	241.99	527.04	234.34	2210.74	1.71	2.46	0.06	1.36	1.31
<b>Scrubland</b>	1973	5.97	150	39.77	11.49	205.91	81.89	148.67	991.13	1.62	2.18	0.07	1.37	1.34
	1994	7.63	99	77.08	18.30	235.96	181.87	133.54	1348.86	1.61	2.12	0.05	1.35	1.32
	2011	8.94	107	83.53	13.71	270.69	226.10	141.68	1324.12	1.60	2.20	0.05	1.35	1.32
<b>Urban area</b>	1973	0.63	27	23.18	17.88	101.48	23.53	24.51	907.74	1.81	1.87	0.06	1.38	1.36
	1994	0.81	35	23.26	7.51	156.47	36.39	25.19	719.67	1.60	1.72	0.08	1.39	1.33
	2011	1.27	37	34.45	17.01	143.33	49.37	35.50	959.44	1.70	1.86	0.07	1.38	1.34
<b>Woodland</b>	1973	43.41	102	425.54	23.98	183.16	779.41	447.20	4384.29	1.99	3.36	0.04	1.35	1.34
	1994	49.27	88	559.86	35.05	169.18	947.15	356.66	4052.91	1.76	2.58	0.04	1.33	1.30
	2011	50.40	86	586.10	45.45	163.46	958.05	341.54	3971.40	1.70	2.40	0.03	1.32	1.29

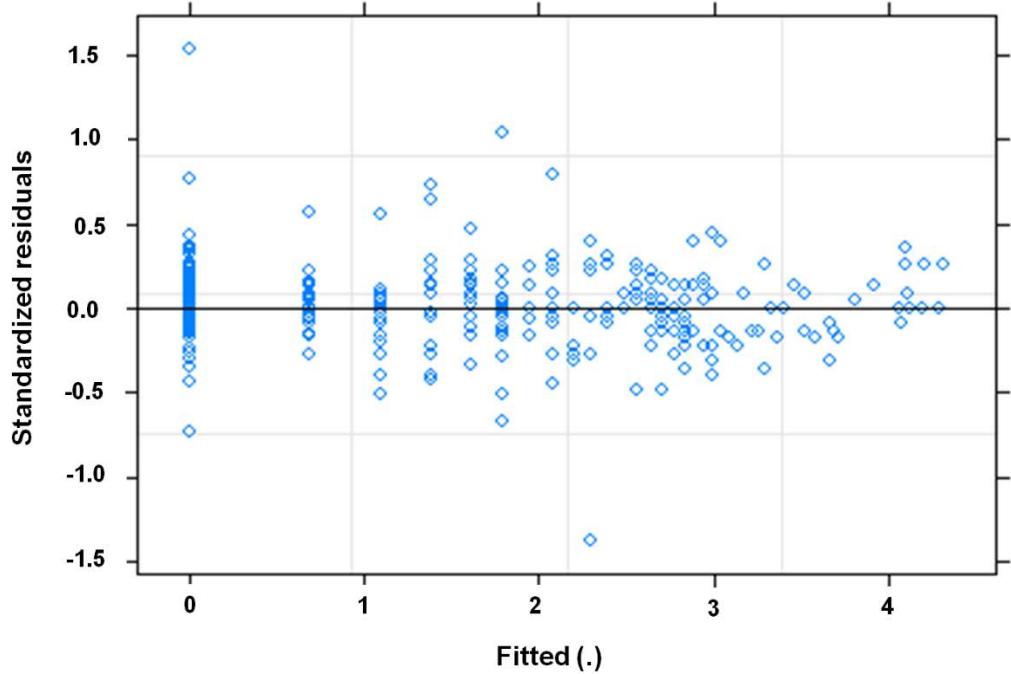
\* = Given the low percentage represented by the class "Inland bodies/courses" and the lack of dimensional change in our study period, we excluded it from this table.

\*\* = This class includes meadows and scree slope.

a)



b)



**Fig. S1.** Standardised residuals plots for linear mixed effect models (LMM) predicting the variability of ROE-In (a) and  $\log(\text{RED-In}+1)$  (b) in the Central-Eastern Alps, Italy (1973–2011).