

**SUPPLEMENTARY MATERIAL**

**Barbel species arrangement in a regional Natura 2000 network (Emilia Romagna, Northern Italy): an altitudinal perspective**

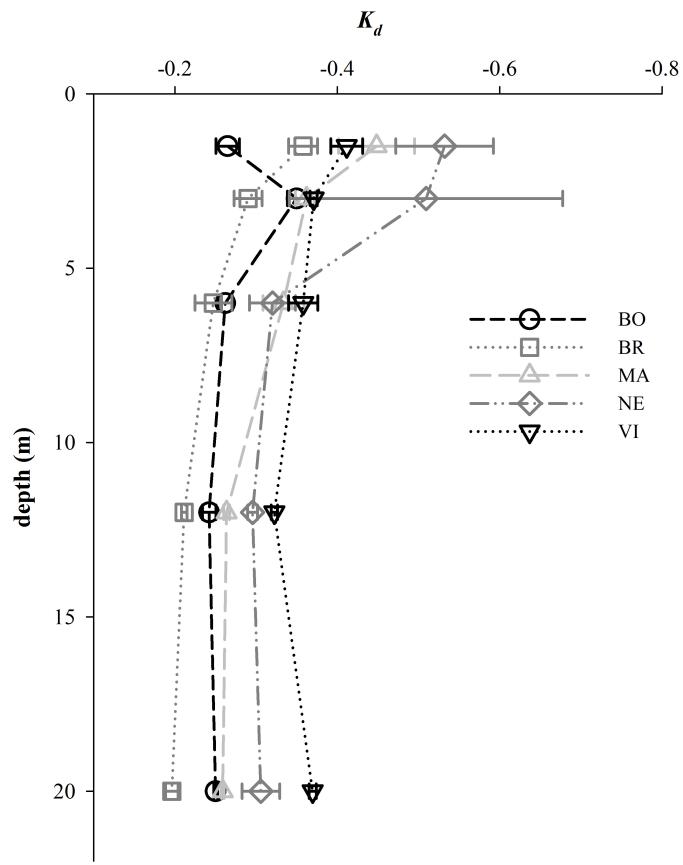
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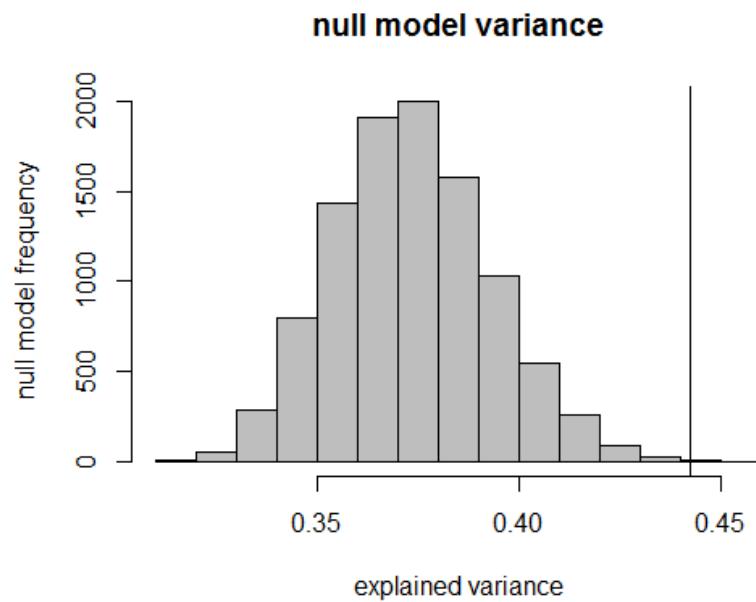
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**Supplementary Tab. 1.** Physical and chemical features of sampled sites. For each sampled site we reported: the indication of the watercourses (code) and the Natura 2000 site it belongs (site); altitude (Alt; m asl); IFF value (IFF); water temperature (Temp, °C); pH; oxygen dissolved percentage (DO%); conductivity at 25°C (Cond,  $\mu\text{S cm}^{-1}$ ); biochemical oxygen demand rate (BOD5, mg L $^{-1}$ ); total suspended solids (TSS, mg L $^{-1}$ ); nitrite ( $\text{NO}_2^-$ , mg L $^{-1}$ ), nitrate ( $\text{NO}_3^-$ , mg L $^{-1}$ ), and ammonia ( $\text{NH}_4^+$ , mg L $^{-1}$ ).

<b>Code</b>	<b>Site</b>	<b>Alt</b>	<b>IFF</b>	<b>Temp</b>	<b>pH</b>	<b>DO%</b>	<b>Cond</b>	<b>BOD5</b>	<b>TSS</b>	<b><math>\text{NO}_2^-</math></b>	<b><math>\text{NO}_3^-</math></b>	<b><math>\text{NH}_4^+</math></b>
10006.TR.1	10006	404	245	21.4	7.92	97.0	253	1.8	1.3	0.01	0.99	0.06
10008.CH.1	10008	202	158	21.0	7.55	98.5	407	2.9	2.5	0.01	0.94	0.06
10011.TR.1	10011	68	215	21.9	8.01	109.0	320	0.0	1.7	0.01	0.29	0.03
10016.TR.3	10016	103	225	25.5	7.86	109.5	337	4.5	1.3	0.01	0.31	0.02
10017.NU.1	10017	166	180	25.1	7.85	112.5	356	6.1	3.3	0.01	0.35	0.04
20003.ST.1	20003	34	103	22.7	7.64	87.5	492	4.6	2.8	0.06	0.73	0.04
20017.LO.1	20017	646	181	14.1	7.62	72.0	495	2.0	6.7	0.02	2.12	0.23
20017.LO.2	20017	36	158	14.2	7.47	44.5	521	0.9	3.4	0.02	1.50	0.45
20020.PR.1	20020	646	210	12.7	7.90	94.5	197	0.8	0.2	0.00	0.32	0.05
20021.TA.1	20021	94	195	19.9	8.08	113.5	355	4.3	0.6	0.01	0.27	0.10
20022.TA.1	20022	40	105	20.3	8.40	198.0	499	8.8	14.2	0.01	0.30	0.61
20025.PR.1	20025	30	102	21.3	7.96	112.0	632	19.1	49.4	0.00	0.14	0.16
30013.EN.1	30013	406	213	12.2	7.98	99.5	288	7.5	3.0	0.01	0.19	0.08
30014.RV.1	30014	202	158	21.0	8.18	99.0	507	9.0	24.8	0.11	2.87	0.21
30014.RC.2	30014	375	165	18.1	8.09	97.0	597	7.0	33.8	0.01	0.61	0.28
30023.EN.5	30023	79	158	18.2	7.95	83.5	477	164.2	6.5	0.01	0.54	0.15
30023.GA.1	30023	45	102	16.1	7.20	51.5	822	1.4	20.0	0.03	5.62	0.14



**Supplementary Fig. 1.** Vertical diffuse attenuation coefficient  $K_d$  values (mean±standard error=SE).



**Supplementary Fig. 2.** Distribution of total inertia explained by the 10000 CCA performed on the 75 randomly extracted plots for the null model analysis. The black vertical line corresponds to the total inertia explained by the 75 plots belonging to lakes without a random pattern.