

SUPPLEMENTARY MATERIAL

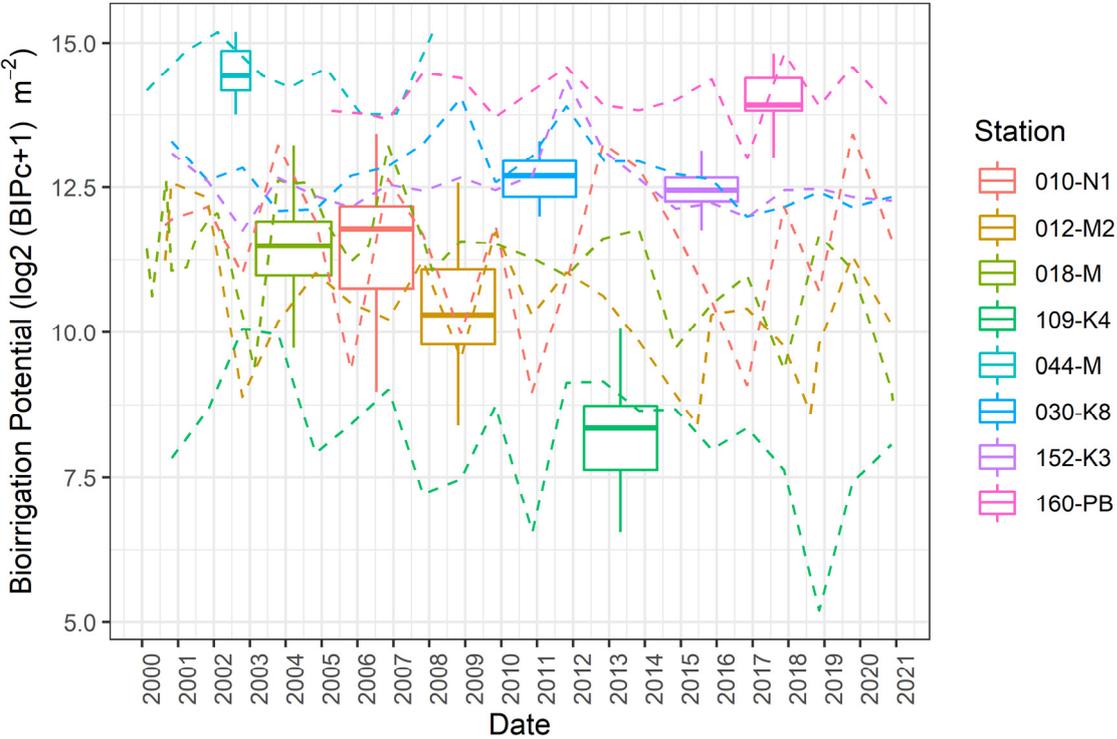
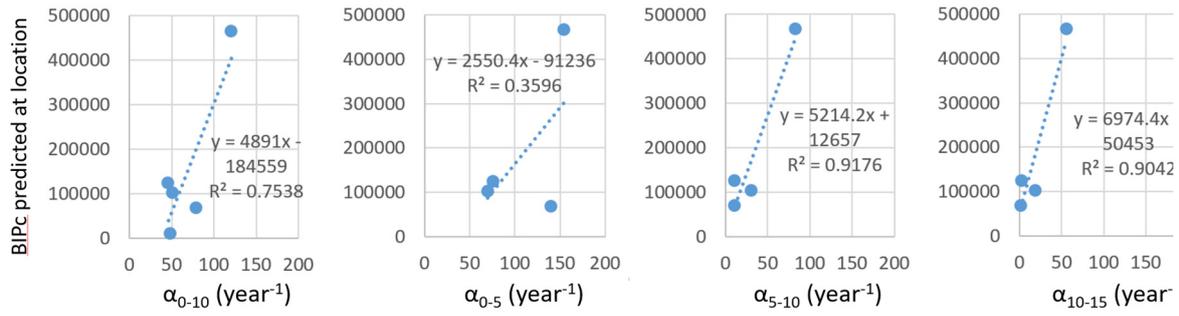


Figure S1. Figure showing time-series of BIPc values at 8 monitoring stations.



Irrigation rate constants integrated for corresponding sediment depth interval (in cm) from Powilleit and Forster (20:

(a)

	Inventory Br mmol/m ²	Irrigation L/(m ² d) entire core depth	Irrigation L/(m ² d) in 2 to 10 cm sediment depth layer	BIPc diff	BIPc diff in 2 to 10 cm sediment depth layer	BIPc (adv scores in fine sands)	BPC	BPC in 2 to 10 cm sediment depth layer	Abundance, ind/m ²	Wet weight biomass, g/m ²	Ash free dry weight biomass, g/m ²
Inventory Br mmol/m ²		0.938	0.859	0.425	0.396	0.365	0.429	0.383	0.278	0.303	0.320
Irrigation L/(m ² d) entire core depth	0.000		0.897	0.350	0.366	0.148	0.301	0.320	0.118	0.301	0.305
Irrigation L/(m ² d) in 2 to 10 cm sediment depth layer	0.000	0.000		0.181	0.200	0.109	0.093	0.109	0.078	0.170	0.170
BIPc diff	0.130	0.220	0.535		0.945	0.474	0.812	0.906	0.112	0.912	0.931
BIPc diff in 2 to 10 cm sediment depth layer	0.162	0.199	0.492	0.000		0.255	0.637	0.909	-0.176	0.971	0.977
BIPc (adv scores in fine sands)	0.199	0.612	0.710	0.087	0.378		0.599	0.283	0.771	0.134	0.171
BPC	0.126	0.296	0.752	0.000	0.014	0.024		0.805	0.532	0.551	0.596
BPC in 2 to 10 cm sediment depth layer	0.177	0.264	0.711	0.000	0.000	0.326	0.001		-0.040	0.843	0.866
Abundance, ind/m ²	0.337	0.688	0.790	0.704	0.548	0.001	0.050	0.893		-0.269	-0.226
Wet weight biomass, g/m ²	0.293	0.296	0.560	0.000	0.000	0.649	0.041	0.000	0.353		0.998
Ash free dry weight biomass, g/m ²	0.265	0.290	0.562	0.000	0.000	0.559	0.025	0.000	0.437	0.000	0.000
Wet weight biomass in 2 to 10 cm sediment depth layer, g/m ²	0.310	0.289	0.514	0.000	0.000	0.822	0.083	0.000	0.215	0.000	0.000

(b)

Figure S2. Correlations of BIPc values with measured bioirrigation rates. **(a)** Correlations of predicted BIPc values with bioirrigation constants resulting from bromide tracer experiments estimated for various depth intervals, as reported in Powilleit and Forster (2018). **(b)** Pearson correlation coefficients (above the diagonal) with significance levels (p -value below the diagonal) calculated between bioirrigation intensity measured with bromide tracer and macrofauna-based parameters. **(a)** Predicted BIPc values at corresponding locations plotted against bioirrigation constants resulting from bromide tracer experiments reported in Powilleit and Forster (2018) for various depth intervals.