Supplementary Materials

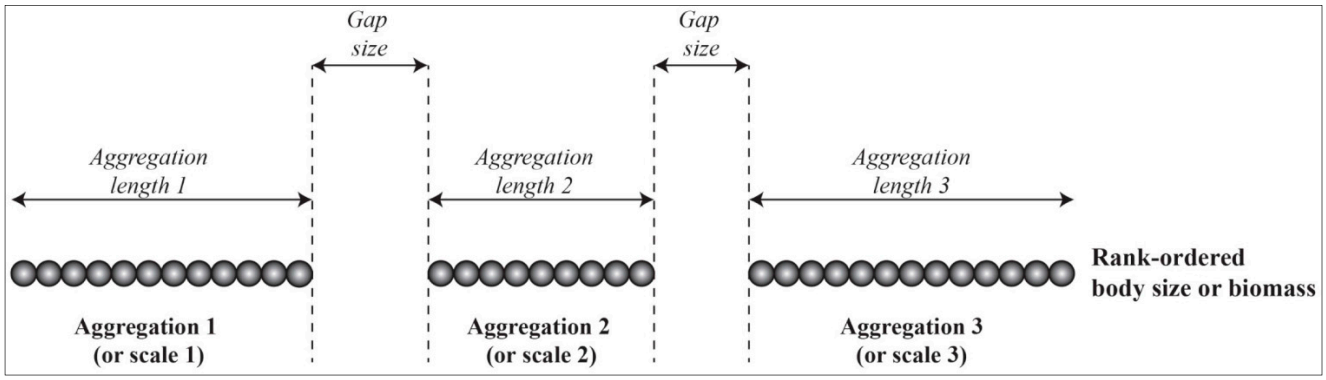

Figure S1. A general conceptualisation of the discontinuity analysis. Individual species in the community (represented by the grey dots) are rank ordered with respect to their body sizes or biomasses (from low to high). Aggregations reflect groups of species with maximum similarity in body sizes or biomasses and which presumably arise from distinct scale-specific processes in the environment. Gaps reflect zones of transitions between scales where no body sizes or biomasses occur.

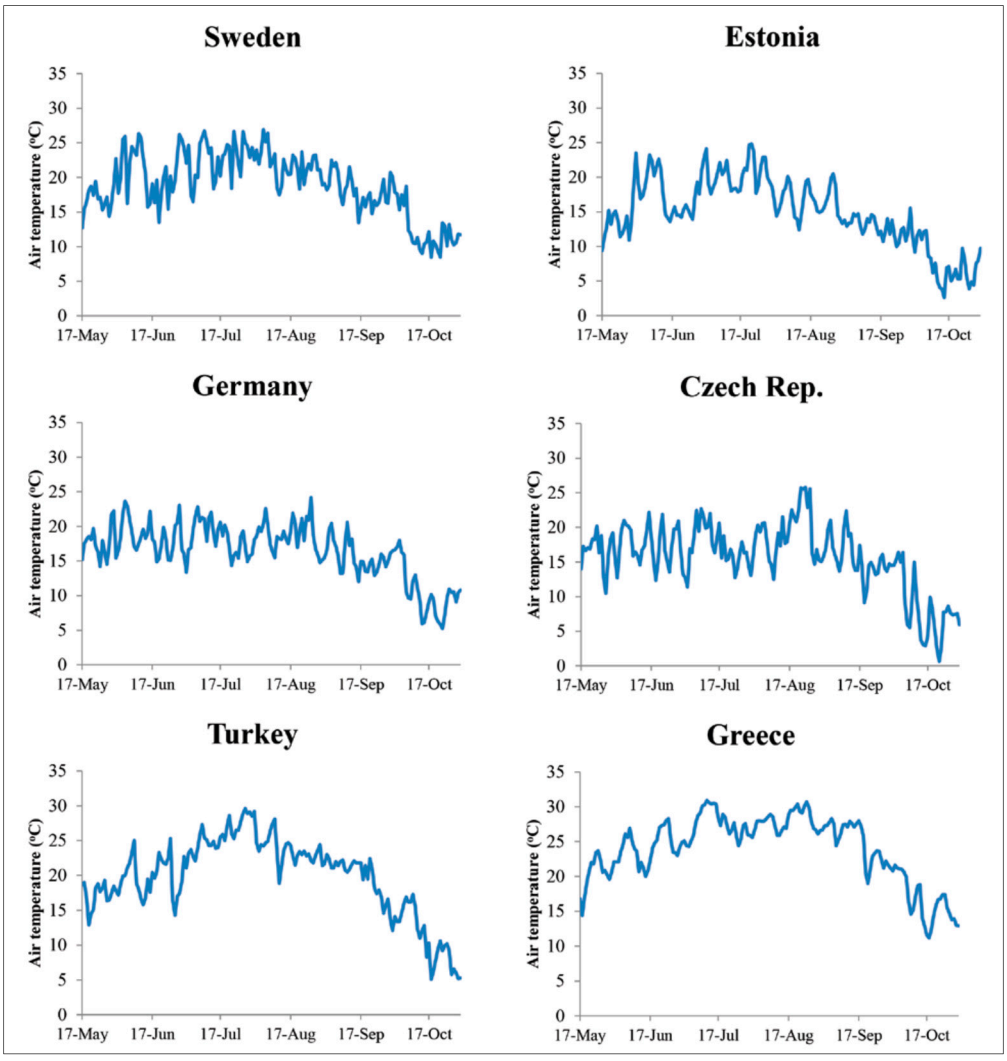

Figure S2. The daily average air temperature (°C) recorded during the experiment in the relevant countries.

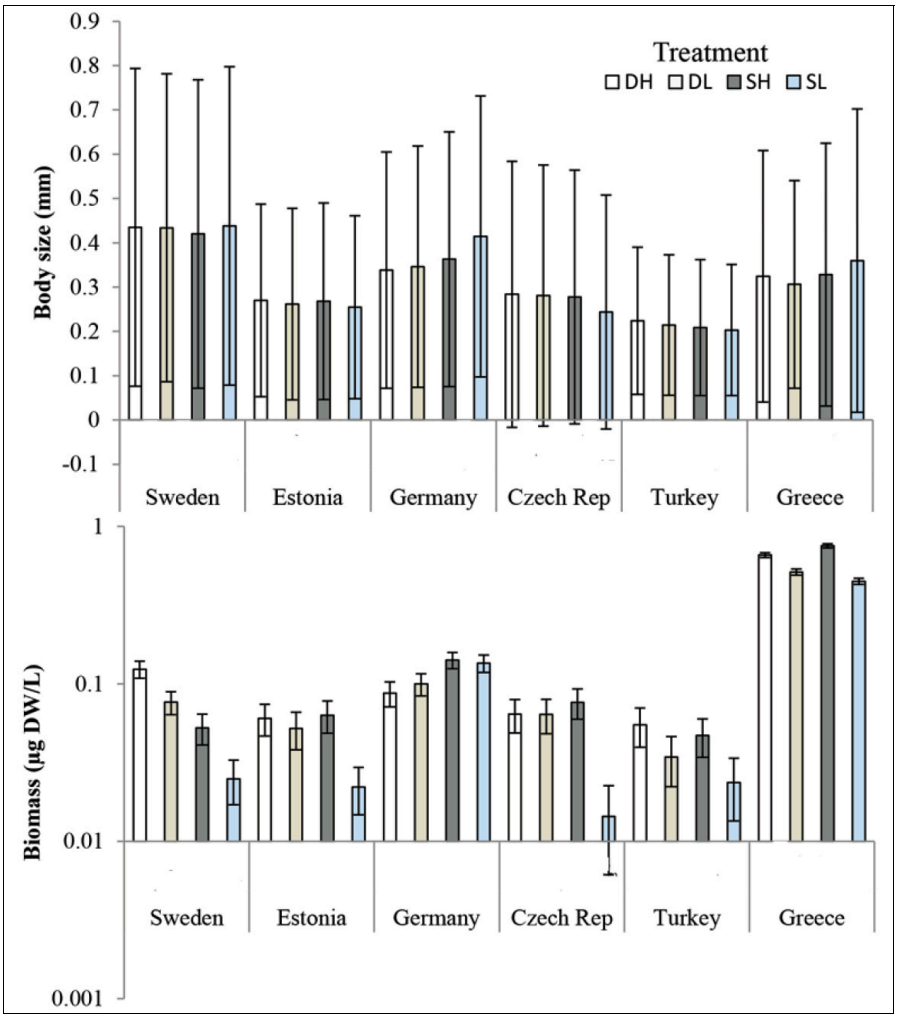

Figure S3. The distribution of zooplankton body size (mm) and biomass (µg DW/L). The bar charts indicate average values and standard deviation are represented by error bars. Log scale was used for the biomass chart only. DH: deep tanks and high nutrients, DL: deep tanks and low nutrient, SH: shallow tanks and high nutrients and SL: shallow tanks and low nutrients.

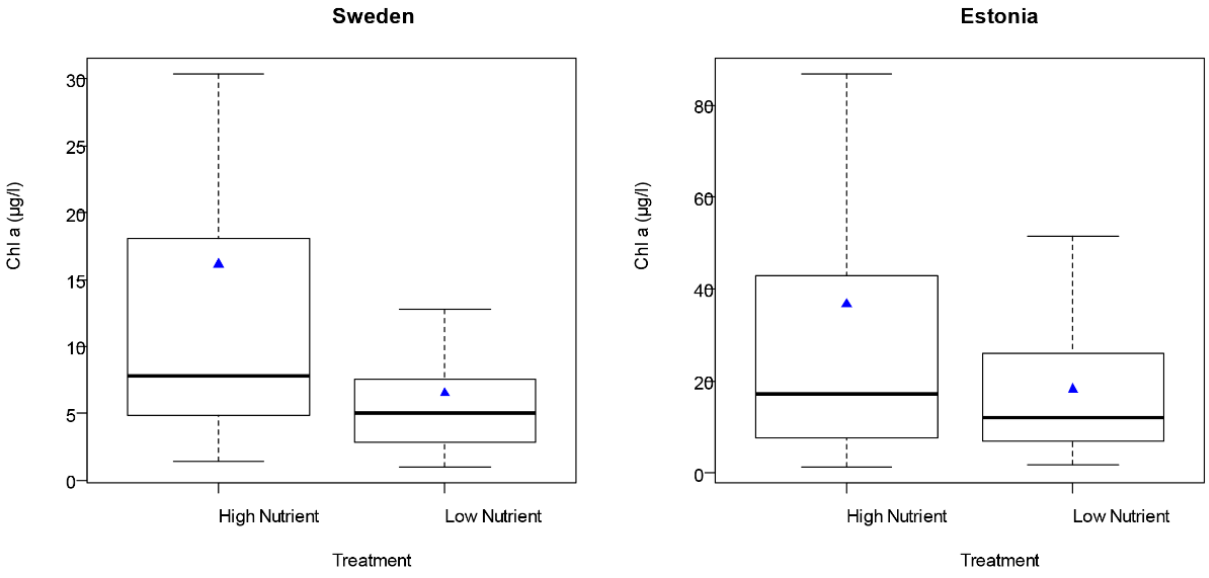

Figure S4. *Cont.*

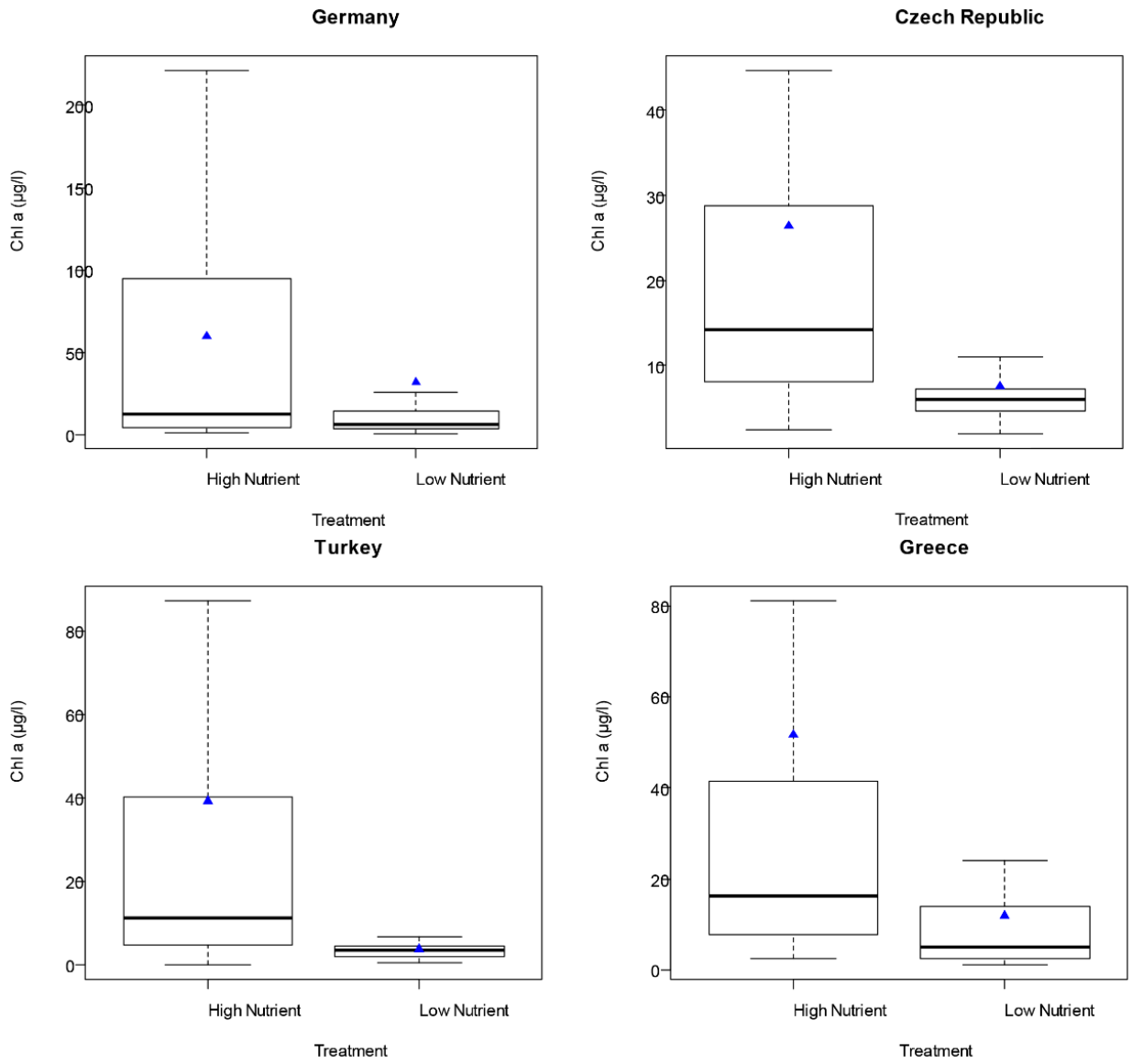

Figure S4. Box plot of Chlorophyll a concentration measured in high and low nutrient treatment across all participating countries. Mean values are also shown (blue triangle).

Table S1. Nutrient dosage performed during the initial phase and thereafter monthly. The ratio between Total phosphorus (TP) and Total nitrogen (TN) addition is 1:20 (by molecular weight).

Mesocosm Type	Initial P (mg mesocosm^{-1})	Monthly P (mg mesocosm^{-1})	Initial N (mg N mesocosm^{-1})	Monthly N (mg N mesocosm^{-1})
Shallow (1m)-low NP	0	5.1	0	102
Shallow (1m)-high NP	179 *	81.6	1575 ***	1632
Deep (2 m)-low NP	0	10.8	0	216
Deep (2 m)-high NP	376 **	172	3225 ****	3440

(*) = 1020 L × 175 µg P L^{-1}, (**) = 2150 L × 175 µg P L^{-1}; (***) = 1020 L × 1.5 mg N L^{-1}, (****) = 2150 L × 1.5 mg N L^{-1}.

Table S2. Results of the mixed model ANOVA contrasting our four resilience metrics derived from (A) zooplankton body size and (B) biomass.

(A) Zooplankton Body Size						
Number of scales	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	1.282	1.282	3.687	60.618	0.060
Nutrient	1	0.184	0.184	1.135	59.350	0.291
Climate	2	1.407	0.703	2.755	3.014	0.209
Water level:Nutrient	1	0.031	0.031	0.009	59.350	0.924
Water level:Climate	2	1.591	0.796	3.271	60.537	**0.045**
Nutrient:Climate	2	2.094	1.047	4.119	59.335	**0.021**
Water level:Nutrient:Climate	2	2.066	1.033	3.870	59.335	**0.026**
Number of species per scale	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.023	0.023	1.202	60.618	0.277
Nutrient	1	0.007	0.007	0.366	59.350	0.548
Climate	2	0.097	0.049	3.179	3.014	0.181
Water level:Nutrient	1	0.035	0.035	1.938	59.350	0.169
Water level:Climate	2	0.045	0.022	1.308	60.537	0.278
Nutrient:Climate	2	0.253	0.127	7.762	59.335	**0.001**
Water level:Nutrient:Climate	2	0.104	0.052	3.376	59.335	**0.041**
Aggregation length	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.002	0.002	1.603	60.618	0.210
Nutrient	1	0.000	0.000	0.090	59.350	0.765
Climate	2	0.006	0.003	2.197	3.014	0.257
Water level:Nutrient	1	0.000	0.000	0.075	59.350	0.785
Water level:Climate	2	0.006	0.003	2.281	60.537	0.111
Nutrient:Climate	2	0.007	0.004	2.854	59.335	0.065
Water level:Nutrient:Climate	2	0.014	0.007	5.628	59.335	**0.006**
Gap size	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.197	0.197	2.319	60.618	0.132
Nutrient	1	0.033	0.033	0.776	59.350	0.381
Climate	2	0.154	0.077	1.198	3.014	0.414
Water level:Nutrient	1	0.022	0.022	0.526	59.350	0.471
Water level:Climate	2	0.313	0.156	2.502	60.537	0.088
Nutrient:Climate	2	0.047	0.024	0.317	59.335	0.729
Water level:Nutrient:Climate	2	0.382	0.191	2.888	59.335	0.062
(B) Zooplankton Biomass						
Number of scales	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.011	0.011	0.563	60.922	0.456
Nutrient	1	0.019	0.019	1.006	59.768	0.320
Climate	2	0.098	0.049	2.826	3.008	0.204
Water level:Nutrient	1	0.008	0.008	0.473	59.768	0.494
Water level:Climate	2	0.024	0.012	0.686	60.848	0.507
Nutrient:Climate	2	0.067	0.033	1.855	59.756	0.165
Water level:Nutrient:Climate	2	0.019	0.009	0.537	59.756	0.587

Table S2. *Cont.*

(B) Zooplankton Biomass						
Number of species per scale	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.298	0.298	0.353	60.922	0.555
Nutrient	1	1.117	1.117	2.429	59.768	0.125
Climate	2	3.927	1.963	3.880	3.008	0.149
Water level:Nutrient	1	0.085	0.085	0.225	59.768	0.637
Water level:Climate	2	1.433	0.717	1.422	60.848	0.249
Nutrient:Climate	2	1.534	0.767	1.216	59.756	0.304
Water level:Nutrient:Climate	2	4.919	2.460	4.764	59.756	**0.012**
Aggregation length	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.034	0.034	1.871	60.922	0.175
Nutrient	1	0.034	0.034	1.908	59.768	0.171
Climate	2	0.011	0.005	0.293	3.008	0.765
Water level:Nutrient	1	0.031	0.031	1.765	59.768	0.188
Water level:Climate	2	0.022	0.011	0.631	60.848	0.535
Nutrient:Climate	2	0.026	0.013	0.763	59.756	0.470
Water level:Nutrient:Climate	2	0.013	0.007	0.386	59.756	0.681
Gap Bodysize	Df	Sum Sq	Mean Sq	F value	Denom	Pr (>F)
Water level	1	0.001	0.001	0.028	60.922	0.868
Nutrient	1	0.023	0.023	0.238	59.768	0.627
Climate	2	1.007	0.503	5.562	3.008	0.102
Water level:Nutrient	1	0.001	0.001	0.009	59.768	0.926
Water level:Climate	2	0.106	0.053	0.584	60.848	0.560
Nutrient:Climate	2	0.229	0.114	1.085	59.756	0.343
Water level:Nutrient:Climate	2	0.527	0.263	2.909	59.756	**0.057**

© 2015 by the authors; licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution license (http://creativecommons.org/licenses/by/4.0/).