

Description of Additional Supplementary Files

File name: Supplementary Data 1

Description: Sedimentological data of selected sediment samples. Deposited in Github (<https://github.com/wangyi91/spatial-heterogeneity>) as ./06_PCA_RDA/surfsedi_sedimentological_data.txt

File name: Supplementary Data 2

Description: Trait tables of taxa in the eukaryote dataset assigned from Bundestaxaliste der Gewässerorganismen Deutschlands (BTL) and manually. Deposited in Github as ./10_add_trait/euk_trait_manual.xlsx

File name: Supplementary Data 3

Description: Trait table of species in the plant dataset assigned from trait databases (InfoFlora and the TRY Plant Database (2012 release) or manually. Deposited in Github as ./10_add_trait/plant_traits_final.txt

File name: Supplementary Data 4

Description: Copepod 28s rRNA gene sequences generated in this study. Deposited in Github as ./copepod_28s_custom.gb