**README NBE**

**Rcode:**

*Main.R* – creates all plots displayed in the MS

*00\_NBE\_MergeRawData:* merges raw data, i.e. count data for each sampling with biovolume measurements

*01\_NBE\_temperature\_planktotrons.R*: creates temperature curves for each treatment

*02\_NBE\_BiomassFigure\_supplement.R*: Total and species-specific biomass for mono- and multi-species cultures

*03\_NBES\_calculation.R*: Analysis of net biodiversity effect on stability (NBES) using the Overall Ecological Vulnerability metric (OEV, Urrutia-Cordero et al. 2021), resistance and temporal stability, measured as Coefficient of Variation (CV)

*04\_NBE\_HectorLoreau\_NetBiodivEffect.R*: calculation of the net biodiversity effect on ecosystem functioning after Hector and Loreau (2001).

*05\_NBE\_Statistics\_Contrasts.R*: Statistics introduced to analyse the influence of temperature and species composition on the NBES as well as the net biodiversity effect on functioning.

**Files:**

**AllRawData\_InclBV.csv:** Created file containing merged raw data including calculated cell Volume from Biovolume of species.

no: unique ID of N x temp combination

speciesID: species-specific information

combination: species combinations, see MS for abbreviations.

temp: temperature treatment, i.e. fluctuation, increase, increase and fluctuation

rep: replicate no

sampling: sampling number - 1,3,6,9,12,15. We sampled every 4th day.

**NBES.csv:** Data on Net Biodiversity effect on stability

combination: species combinations, see MS for abbreviations.

rep: replicate no

NBE: Net biodiversity effect

AUC.RR\_exp: expected Stability

AUC.RR\_obs: observed Stability

N: Species richness level (ranging from 2-5)

temp: temperature treatment, i.e. fluctuation, increase, increase and fluctuation

**NBEonFunctioning.csv:** Data on Net Biodiversity effect on functioning

combination: species combinations, see MS for abbreviations.

rep: replicate no

NetEffect: Net biodiversity effect on functioning

N: Species richness level (ranging from 2-5)

temp: temperature treatment, i.e. control, fluctuation, increase, increase and fluctuation