

Kolloquium des Institutes für Landschaftsökologie WiSe 23/24

16. Januar 2024

18 Uhr c.t.

Hörsaal Geo1, Heisenbergstr. 1, Universität Münster

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Do peatlands comply to ecological biodiversity theory?

Peatlands appear trivial as carbon (C) sinks on an annual basis, taking up ~ 0.14 Gt C yr⁻¹ which corresponds to only $\sim 1\%$ of fossil fuel emissions. However, peatlands punch above their weight in the long-term global C dynamics storing an approximate 500-1000 gigatons of C that has accumulated throughout the present interglacial on just 3% of the global land area. In my research I try to understand how environmental and biological drivers affect peatland carbon dynamics. I will demonstrate the role of a range of plant functional types on the composition of microbial communities, and the consequences for carbon cycling. Inspired by examples from grassland and agricultural studies I will discuss the role of diversity in maintaining the carbon sink function of peatlands in a changing climate. I will further introduce a novel research line that aims to understand the role of plant-microbial associations for the stability of peatland carbon uptake in a changing climate.