



MOORuse Paludiculture on fen peatlands in Bavaria - Establishment, climatic impact & environmental effects, utilization options and economic viability

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Over the past decades, draining and intensive agricultural use of organic soils have transformed peatlands from vital ecosystem service providers to GHG emission hot spots. Agricultural use of peatlands currently contributes 5.2 % to the total national GHG emissions in Germany. Various studies show that raising the water level in combination with extensification of land use can lead to a reduction in GHG emissions from organic soil. As this likely entails reduced agricultural activities or even abandonment, landowners are often hesitant to engage in restoration activities. The project MOORuse is designed to test peat-restoring land use alternatives (Paludiculture) in combination with partial or complete rewetting. The integration of conservation and utilisation facilitates the recovery of peatland ecosystem functions, prevents further mineralisation while also allowing for tests of a spectrum of biomass utilization options, developing economically viable solutions, and further assessing their integration with regional value chains. We will give a conceptual insight into the project and its components, and present first results for the establishment of six paludiculture plants, their GHG exchange response to different water levels as well as results on plant biomass utilisation options. Through the comprehensive project approach we seek to develop new sustainable fen peatland management practices which take into consideration biodiversity and ecological functions as well as economic viability and regional value chains.