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Plant functional traits as indicators for fen quality

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The aim of our research was to investigate the role between Plant Functional Traits and indicators of good wetland quality in fens. As part of the HiWET-project, one of goals was to derive ecological indicators of wetland degradation. Since Plant Functional Traits act as the practical link between a plant and its environment, they have a high potential for posing as indicators of abiotic conditions and changes and thus as indicators for degradation. Using Plant Functional Traits as indicators has some potential benefits (cheap, easy to measure, less constrained by regional species pool) and they could thus be used as a rapid response indicator for drainage in fens. A specific set of traits, linked fundamentally to the hydrological and nutrient conditions of fens were selected for this research. As indicators of fen quality, we used a set of known parameters linked to the quality of the peat soil and groundwater. Within the framework of the HiWET-project, we also included evapotranspiration as a high potential wetland quality indicator. By using simple statistics, we found some tendencies between Plant Functional Traits and degradation parameters, although that no changes could be found with limited peat degradation as a consequence of minor drainage. Furthermore, it was found that management has a strong effect on these Plant Functional Traits and thus might mask potential small changes. Correlations between Plant Functional Traits and evapotranspiration gave mixed results. In order to use Plant Functional Traits as clear indicators for drainage in fens, management needs to be constant, since this effect is more pronounced compared to drainage.