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**THE USE OF LONG-TERM AND INTERDISCIPLINARY DATA TO PLAN THE SUSTAINABLE USE OF PEATLANDS**

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The sharing and utilization of long-term monitoring data and scientific information in land use planning is still at its early phase. Plenty of challenges constrain the use: long-term databases are distributed in different organizations, their use is regulated or restricted by different policies, they are built using different platforms, and the data have usually been measured using different methods, spatial and temporal scales, and using different response variables. Consequently, planning is based on the most easily accessible data, the quality of which is variable. Furthermore, ecological, economic and socio-cultural information are generally produced separately, and the integration of complicated interdisciplinary data is done outside the expert group, e.g. by politicians and land managers. The ecological and socioeconomic sustainability of peatland use planning can be improved by a wider and simultaneous use and integration of data. At the present, the approach needs deep expert knowledge, but in the long run the data and models can be used to produce operations models and tools to be used also by non-experts. I present our research, in which we use long-term ecological monitoring data 1) to estimate and predict the impact of peatland uses (including ecological restoration) on ecosystem services, 2) to numerically optimize cost efficient land uses so that benefits from ecosystem services are safeguarded, 3) to provide socio-ecological values for habitats in order to locate and prevent conflicts from competing land uses, and 4) to provide tools that support decision making.

**Keywords:** -