



Ecology of drained mires in the Sumava National Park (Czech Republic) and possibilities for restoration.

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The Sumava National Park belongs to the most important peatland areas in the Central Europe. In spite of high natural values, many peatlands have been disturbed here by drainage for forestry and agriculture purposes in the past. Monitoring of peatlands including both ombrotrophic bogs and surrounding waterlogged spruce forest has been implemented since 2004. Both drained and intact peatlands were studied with the aim: i/ to characterise degradation changes induced by disturbed hydrology, and ii/ to evaluate the success of restoration.

Water table fluctuation, hydrochemistry of groundwater, peat soil chemistry, amount of precipitation, vegetation on permanent plots (57) and runoff from studied small catchments were monitored. Three year pre-restoration results showed clear differences between drained and intact sites. On drained bog sites, water table was maintained in lower position and exhibited higher fluctuation much sensitive to amount of precipitation as compared with control bog sites. pH of groundwater ranged within lower values here. Expansion of *Molinia caerulea* and trees (mostly *Picea abies*) towards bog expanse were recorded on drained bogs. Dwarf shrub vegetation was prevailing on drained bogs at the expense of both *Trichophorum caespitosum* lawns and hollows with *Sphagnum*-sedge vegetation.

Since 1999, the „Programme of peatland restoration“ primarily focused on restoration of disturbed hydrology has been implemented in the area. The main restoration technique used is blocking of drainage ditches by set of board dams. The aim is to rise and stabilise water table and slow down surface outflow artificially accelerated

due to drainage. At present, about 500ha of peatlands, usually in the scope of small catchments, have been already restored.