



Effect of secondary transformation of organic soils on the chemical properties soil's organic matter and changes chemical compounds in ground water

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The function of peatland as biogeochemical barrier was evaluated. Organic soils and ground water from wells located on the transect 3.5 km long of the peatland of Agroecological Landscape Park host D. Chlapowski were investigated. There are these investigated points along to Wyskoc ditch. Two forms of organic carbon (total and dissolved; TOC and DOC) N-total, pH were analyzed in both water and soil samples. Additionally, humic (HA) and fulvic (FA) acids were isolated in soils and E4/6 estimated and in ground water N-NO₃ and N-N-NH₄. In soils the concentrations of TOC ranged from 21.7% to 36.1%, DOC from 0.41% to 0.63%, N-total from 21.7% to 36.1%. The increase of TOC/N-total ratios and were connected with agree of the secondary transformations of soils. The values of E 4/6 of HA indicated good agreement with the degree of secondary transformation of peat. The highest secondary transformed peat characterized the lowest developed structure and the highest content of labile fractions. Contrary was revealed for the lowest secondary transformed peats. In ground water the concentrations of N-total ranged from 8.59 mg/l to 11.39 mg/l, N-NO₃ from 0.32 mg/l to 0.52 mg/l, and N-NH₄ from 2.74 mg/l to 6.23 mg/l. This investigate suggest the function peatland as biogeochemical barrier on the increase of the quality of ground water.