



Hydrological consequences of hydroclimate variability and human activity during the last 500 years in Serteya region (Western Russia) – preliminary results

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The Serteya region is situated in Western Russia. Main relief forms were formed during the Valdai (Vistulian) Glaciation. Most characteristic are moraine plains and hills of a glacial origin, glaciofluvial plains and subglacial channels. The main research axis is Serteyka River valley. Serteya kettle hole peatland, which is located in the immediate vicinity of the edge of Serteyka River valley, was created by melted dead-ice blocks during the Last Glacial. Along Serteyka River valley, 60 archeological sites are situated, dated from the Late Palaeolithic to the Middle Ages. For the better understanding of the settlement pattern and palaeoeconomic system, it is necessary to reconstruct palaeoclimatic condition, available food resources and indirectly discover human impact on the environment. For this purpose we used high-resolution multi-proxy analysis of Sphagnum peat core. We applied palaeoecological analyses of pollen and non-pollen palynomorphs, charcoal, plant macrofossils, testate amoebae, Cladocera and Chironomids, as well as abiotic analysis. The palaeoecological are supported by μ XRF core scanning radiocarbon. Chronology of deposits is based on five AMS ^{14}C measurements. The sequence covers last 500 years history of development of the small Sphagnum mire. Based on the first result we observed high sensitivity of the peatland ecosystem to human impact, as reflected in vegetation changes around the mire. This study is a contribution to the grants of „National Science Centre, Poland” No. 2017/25/B/HS3/00274 and 2015/17/B/ST10/03430.