Geophysical Research Abstracts Vol. 21, EGU2019-9533, 2019 EGU General Assembly 2019 © Author(s) 2019. CC Attribution 4.0 license.



Soil solution – soils under the pressure of climate change

András Bidló and Adrienn Horváth

University of Sopron, Institute of Environmental and Earth Sciences, Department of Soil Site Survey, Sopron, Hungary (bidlo.andras@uni-sopron.hu)

Climate change is the most important challenge in nowadays. Especially, it will have a significant impact on the forest cover of Hungary. Changes in temperature and precipitation distribution will have indirect impacts on the change of other site factors, such as hydrological and soil conditions. The transformation of soil condition occur relatively slow, but a significant change may happen during a single growing season in vegetation. During our research, we tried to estimate the impact of climate change on soils which have an important role in regulation and production. Significant changes in soil-forming processes may emerge as a result of climate change. Along with the change in soil-forming processes, we also evaluated possible changes in the nutrient cycle of forest stands. The appearance of changing site factors and the emergence of a new climate category – steppe – will determine new site type variants in Hungary. These new site condition circumstances needs complex assessments to decision supports. In summary, we described what kind of site type variants can be expected in the future and what kind of criteria are needed for a tree species proposal in future.

This article was made in frame of the "EFOP-3.6.1-16-2016-00018 – Improving the role of research+development+innovation in the higher education through institutional developments assisting intelligent specialization in Sopron and Szombathely".

Keywords: climate change, site change, tree species selection, soil