Geophysical Research Abstracts Vol. 19, EGU2017-16486-3, 2017 EGU General Assembly 2017 © Author(s) 2017. CC Attribution 3.0 License.



Water balance of different forests types in Kiskunság Sandridge

Bence Bolla (1,2) and Péter Kalicz (1)

 (1) University of West Hungary, Institute of Geomatics and Civil Engineering, Hydrology, Sopron, Hungary (kalicz.peter@nyme.hu), (2) Kiskunsági National Park Directorate, Department of Forestry, Kecskemét, Hungary (bollab@knp.hu)

Kiskunság Sandridge in central Hungary shows the signs of significant drying caused by anthropogenic (e.g. river regulation and water consumption) and climatic reasons. These factors generated dramatically decreasing of groundwater levels which was an important water supply for forest ecosystems. These worsening in site conditions bring up several questions in forest management and natural protection as well because significant part of forests are in protected areas in Kiskunság.

This study aims to give a picture of the characteristic features of Sandridge forests concerning their water balance. Hydrology of forest sites were evaluated throughout measurement of hydrological elements and water balance modelling with the Coup 1D water-balance model. Three forest stands and five control stations in the grasslands were settled and monitored to compare the water consumption of different forests with native grasslands. This case study helps the work of forest managers with the quantification of water consumption of forests in Kiskunság.

This research has been partly supported by the Agroclimate.2 VKSZ_12-1-2013-0034 project, and the second author's work was also supported by the János Bolyai Scholarship of the Hungarian Academy of Sciences.