



Estimating Debrecen's climate characteristics by a Thornthwaite-based approach

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Debrecen's climate characteristics in last decades of 20th century are analyzed in detail using a Thornthwaite-based biogeochemical SVAT (Soil-Vegetation-Atmosphere-Transfer) model. Standard climate data (precipitation, temperature and sunshine duration), soil hydrophysical properties and monthly NDVI-indexes served as input data. The outputs were as follows: Thornthwaite's climate formulae and monthly values of energy-, water- and carbon budget components. Special attention is paid for analyzing relationship between water- and carbon budget components for Debrecen's climate represented by Thornthwaite's formula as $C_1 B_1' d b_3'$. It is showed that there is a closed relationship between the seasonal changes of moisture regime and the net ecosystem exchange (NEE).