



Estimation of ozone fluxes over forest

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For the characterization of ozone load, various concentration-based indices can be applied. From among these indices the most frequently utilized index is the AOT_{xx}, which determines the concentration of ozone above a given threshold value. However, investigations conducted in the previous decades pointed out that the actual destructive effects of ozone can more accurately be described by flux-based indices, especially with stomatal flux. The main aim of our study is the estimation of ozone load over Hungarian forests. For the calculations the so-called TREX transport-exchange model has been used. Both concentration and stomatal flux of the ozone were estimated over deciduous, coniferous and mixed forests for July, 1998 over Hungary. Dissimilarities between concentration- and flux-based indices have been analysed in this study. Besides that, in the frame of a detailed sensitivity analyses, the effects of various meteorological data and vegetation parameters on the ozone flux has been investigated.