

Estimating future ozone fluxes in different European climate regions

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Ozone is one of the harmful air pollutants in the troposphere. Earlier impact studies revealed that global warming can influence ozone load to the vegetation because of photochemical nature of the ozone formation and deposition in the atmosphere. Not only the changed meteorological conditions, but the changed plant physiology can also influence the deposition of ozone. The leaf area index and other plant physiological parameters might change in the future according to the increased temperature. In this study we present the predicted ozone load in six European EMEP measurement sites corresponding to six different European climate regions for the period 2070-2100, and we show a detailed analysis based on the effect of changed meteorological conditions, leaf area index, and stomatal conductance on future ozone fluxes. The meteorology data and the ozone concentration were obtained from PRUDENCE database and from EMEP measurements.