



Effect of modified weather and environmental conditions on the regional ozone load

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Near-surface ozone plays an important role in the formation of the photochemical air pollution and affects both vegetation and human health. Recently, it has also been shown that the indirect radiative forcing of climate change through ozone effecting on the land carbon sink could be an important factor and can induce a positive feedback for global warming. This impact study examines the connections between the possible changes of atmospheric and environmental properties due to the regional climate change and the tropospheric ozone load on different vegetations over Central European region. For this purpose, concentration and flux-based ozone metrics with their spatial and seasonal variability were estimated under different weather and environmental conditions. Simulations were performed with a sophisticated deposition model using different regional climate scenarios with a special emphasis on the possible modifications of the obscured factors of the ozone deposition (water vapour pressure, soil water deficit, etc.). Additionally, different stress-function parameterizations and their effect on the results were also analysed.