



Climate Change Impact on Air Quality in High Resolution Simulation for Central Europe

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Recently the effects of climate change on air-quality and vice-versa are studied quite extensively. In fact, even at regional and local scale especially the impact of climate change on the atmospheric composition and photochemical smog formation conditions can be significant when expecting e.g. more frequent appearance of heat waves etc. For the purpose of qualifying and quantifying the magnitude of such effects and to study the potential of climate forcing due to atmospheric chemistry/aerosols on regional scale, chemistry-transport model was coupled to RegCM on the Department of Meteorology and Environmental Protection, Faculty of Mathematics and Physics, Charles University in Prague, for the simulations in framework of the EC FP6 Project CECILIA. Off-line one way coupling enables the simulation of distribution of pollutants over 1991-2001 in very high resolution of 10 km is compared to the EMEP observations for the area of Central Europe. Simulations driven by climate change boundary conditions for time slices 1991-2000, 2041-2050 and 2091-2100 are presented to show the effect of climate change on the air quality in the region.