



Detection of Urban Heat Island in the regional reanalysis COSMO-REA6

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Differences in temperature of urban territories and the rural surroundings have a high impact on population in cities due to more heat stress in summer for example. So a better predictability and understanding of urban climatology is required. The regional reanalysis COSMO-REA6 with a spatial resolution of 6km and available data for 1995-2014 is used for the detection of urban heat islands(UHI) in european cities like London, Paris, Berlin, Hamburg and the Ruhr area. It is shown, how far the currently implemented urban parametrization is able to simulate urban phenomena and micro climate. The main parametrization for urban climate are roughness length and plant characteristics. The diurnal and annual variations between urban gridpoints and surrounded rural ones are analyzed. First results show, that an urban heat island can be detected. Results of its structure for the mentioned regions will be presented.