



Regional tendencies of wind field in Hungary

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Hungary had not been the subject of extensive wind field studies in the last century although, several studies were carried out analysing the surface and upper-air wind records spanning several decades. Hungary is not one among countries with windy climate. However, in response to the need for a new statistical analysis of wind field a research started on clarifying the wind climate tendencies of the country. The primary purpose of the research presented was to provide essential information on seasonal and spatial distribution of basic wind characteristics, extremes and tendencies of wind speed that could assist in estimating the expected future effects of global warming.

The study was based on 32-year-long (1975-2006) wind data sets of 36 Hungarian climate stations. Using wind speed, wind direction and wind gust data time series analysis and complex wind climate research was carried out, basic and supplementary wind characteristics were calculated. In order to analyse the most important characteristics of wind field horizontal and vertical extrapolation of measured wind data was carried out. Furthermore, extreme wind speed values were analysed, interannual variability and tendencies of wind speed have been estimated.