



## **Regional tendencies of wind characteristics from measured and reanalysis data sets over Hungary**

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One of the most important effects of climate variability and climate change may come from changes in the intensity and frequency of climatic extremes. Therefore, great interest was raised to document and evaluate the extremes of near-surface wind field that could assist in estimating the regional effects of climate change over Hungary. As a respond to the need of new statistical analyses complex wind field research was carried out on clarifying the possible changes of wind characteristics in the country.

The presented study is focused on 36-year-long (1975-2010) observed wind (speed, direction, and gust) data set of 36 Hungarian synoptic meteorological stations. Spatial and temporal distributions of mean and extreme wind climate characteristics were estimated; wind extremes and trends were interpolated and mapped over the country. Furthermore, measured and reanalysis (ERA-40) data were compared over Hungary in order to prove the adaptability of contemporary climate simulation results in estimation of regional climate change effects. The previous and current results of our research suggest that regional wind speed have decreased over Hungary during the last quarter of the 20th century, especially, in the last decade.