Statistical Analysis of Wind to Assess Climate Change (Central Italy)

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Matteo Gentilucci ✉, Marwan Ghanem & Maurizio Barbieri

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Abstract

Knowledge of weather dynamics is very important, because it controls the climate. These processes are known both globally and in smaller areas. However, there is not always a statistical assessment of the possible changes that may occur in the atmosphere over the years. In order to evaluate from a climatic point of view the atmospheric dynamics that have occurred over the years, one of the most interesting tools used is wind analysis. This study aims to use anemometric data to assess changes in atmospheric dynamics, also investigating possible relations with

precipitation. The prevailing wind directions, wind speed and precipitation were related in order to obtain a schematization of the dynamics occurred in micro areas. This has resulted in interesting reports that have shown a more pronounced change in the last 10 years.

Keywords

Wind **Precipitation** **Atmospheric dynamics**

Climate change

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