



Spatial and temporal variability of wind speed and energy over Greece

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To appraise the wind potential over Greece we analyse the main statistical properties of wind speed through time. To this end, we use 66 time series from 1932 to 2013 on daily and monthly time scale and examine the spatial variability of wind speed over Greece. To depict the main statistical behavior and potential of the wind over Greece, maps have been created illustrating the basic statistical characteristics of wind speed on monthly to annual time scale. We also examine time series of energy production from the currently developed system of key wind parks and we compare the theoretical potential with the actually produced energy. Finally, we explore a methodology to simulate wind energy production in a stochastic framework. In that context we generate hourly wind speed synthetic data using a modified Bartlett-Lewis model implemented in Hyetos. The results of our analysis offer an improved overall picture of wind speed variability over Greece and help us clarify to which extent Hyetos is applicable in the stochastic generation of wind speed time series.