



## **Variability of Etesian Winds over the Aegean Sea and the link to west summer Indian Monsoon from CMIP5 Models**

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The etesian (annual) winds are northern sector winds blowing over the Aegean Sea during summer and early autumn. They are a persistent wind system and an important component for the atmospheric circulation in the southeast Mediterranean. In this work we investigate the evolution of etesian days and the associated wind speed (WS) over the recent past, 1979 -2005 (May-September), using data from Earth System Models (ESMs) available from the Coupled Model Intercomparison Project Phase 5 (CMIP5). Moreover, we study the connection of the etesians with the atmospheric circulation over southeast Mediterranean and west summer Indian Monsoon. We compare the results of the ESMs analysis to ERA-Interim reanalysis dataset. Our findings show that the ESMs simulations underestimate the wind speed of the etesians but represent accurately the frequency and summer cycle of them. Moreover, the ESMs are able to represent the long term variability of the atmospheric circulation and they can capture the connection between the summer circulation in southeast Mediterranean and west summer Indian Monsoon.