



CORDEX projections of the wind flow changes over the Adriatic region

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Results of an ensemble of the 12.5-km CORDEX simulations are examined over the Adriatic region. Focus is given to the wind flow changes under RCP4.5 and RCP8.5 emission scenarios with respect to the historical climate. We document the impacts of the RCM-GCM-RCP combinations on the expected changes in the Bora and Sirocco strength, frequency and duration. Bora (typically northeasterly flow across the Adriatic mountain ranges) and Sirocco (typically southeasterly flow along the Adriatic coastline) are two local flow types that have a prominent impact on the local weather, air-sea coupling and human activities. In contrast to projected temperature and precipitation changes, changes in the near-surface wind speed are more uncertain over the horizon of the 21st century. Nevertheless, in the analysed ensemble, a reduction in number of Bora events and increase in number of Sirocco events is expected during winter over the northern Adriatic. During summer, increase in frequency of NE wind events is found in projections over the Adriatic region.