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Winds over Iceland in current and future climate

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Flow over Iceland and precipitation is simulated for the periods 1961-1990 and 2021-2050. The simulations are carried out with the WRF model forced by a global simulation by the Arpege model, run by the Bergen group (BCCR) on a T159c3 irregular grid. The scenario chosen is the SRES A1B.

The simulations indicate a small decrease in mean wind speed and a substantial decrease in extreme windstorms in the future. The pattern of mean wind speeds remains close to constant, giving maximum winds on the downslopes of the main glaciers/mountain ranges and minimum mean winds in areas where both orographic wakes and orographic blockings occur frequently.