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Extremes in a climate prediction for the Iceland region

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Prediction of changes in extreme temperatures, precipitation and winds in are studied in regional downscaling by th e HIRHAM model. The simulations are made for a limited area between Greenland and Eastern Scandinavia and they are forced at the boundaries by global simulations from the Hadley GCM. The simulations indicate that cold spells during winter will be fewer and warmer in the late 21st century than now and that severe cold spells in the spring will disappear. Only a little change is on the other hand predicted for warm spells in the summer. Only small or moderate changes are predicted in the frequency of strong winds and heavy precipitation. The predicted change in cold spells in the winter and spring can be associated with a retreat in the sea ice to the east of N-Greenland. The impact of these predicted changes in temperature may be of substantial impact, since cold spells in the spring are a limiting factor of the growth of many types of vegetation.