



Analysis of large errors in dynamic downscaling of winds

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Several years of atmospheric flow over Iceland have been simulated with the WRF model, using boundaries from the ECMWF. In general, the flow is well reproduced, but there are still errors. By comparison with a multitude of observations, the largest errors have been analysed in terms of the physical or numerical processes that appear to go wrong.

Most of the largest errors in wind speed are associated with orography. However, the orography in question is in general well resolved, suggesting that the problem may be associated with the model, a poorly resolved vertical structure of the atmosphere or the non-stationary nature of some of the topographic disturbances.

Not many large errors can be traced to wrong boundary conditions.