



## **Mapping the wind climate in complex terrain using results of real-time high-resolution numerical simulations**

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Since early 2004, the flow over Iceland is simulated in real-time for research and forecasting purposes. The simulations are at 9 km and 3 km horizontal resolutions. The results of the simulations are presented graphically and they reveal substantial horizontal variability in the mean wind speed. The variability in the winds can be explained by orographic processes that are fairly well known, but theoretical knowledge of these processes are not useful for producing quantitative maps of the wind climate as we do here. The wind maps indicate high frequency of strong winds over the downstream slopes of the largest glaciers and at their foothills. No observations are available to confirm this so far, but if the simulations are correct, these winds may be of value for energy production.