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Assessment of local avalanche risk by high-resolution atmospheric simulations of a set of extreme weather events in E-Iceland

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Twelve cases of extreme winds and precipitation in E-Iceland are chosen from a period of 40 years. The cases are simulated with an atmospheric model (MM5) at ultra-high resolutions (up to 300 meters) to reproduce the distribution of winds and precipitation in the mountains. A subjective evaluation of the combination of these two simulated factors leads to an estimation of local risk of large avalanches in an area where an overhead power line is planned. This method gives quite a different estimation of avalanche risk than a more conventional method of compiling the avalanche history of nearby villages which are located closer to the coast and below relatively low mountains.