



## **Present and future snow loads in Norway**

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In snow rich climates, as parts of Norway, knowledge of the weight from snow on houses is very important for design of buildings. Snow load has been focused by the national standards and the building regulations since 1949, and later revised several times. The traditionally way to generate snow load has been by manual analysis of measurements from observation sites. As part of their regular service the Norwegian Meteorological Institute daily produce an interpolated data set of 1\*1 km resolution for precipitation and temperature. Based on these data sets the Norwegian Water Resources and Energy Directorate (NVE) generate “Snow water equivalent” (SWE) by using a hydrological model. As part of the daily service SWE is available at the Norwegian Meteorological Institute. SWE based on selected climate projections is also available. In this study grids, historic and future, is used to calculate the snow load in municipality centers, and compared to the present standard. The potential risk and effects of climate change on the built environment is assessed and quantified in a regional level. The study include snow load (50 year return period) based on the normal periods 1961-1990 and 1981-2010 and three climate projections for the period 2071-2100.