



Long term monthly gridded snow data for Norway

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Snow is an important factor influencing many sectors of the Norwegian society; hydropower production, floods, avalanche risk, transportation, tourism and recreation. Recently a gridded dataset of monthly snow depth has been developed covering the time period 1900-present

The gridded data are established through two steps. First reference maps of monthly snow depths for the period 1961-1990 are constructed using a residual interpolation approach applying both physiographical parameters as well as gridded temperature and precipitation data as external predictors for the background field. In the second step anomalies from the reference values for each individual month in the period 1900 to present are interpolated in a regular grid of 1x1 km.

The grids are validated and shows good accordance against gridded snow data resulting from the operational daily grids produced by MET Norway and the Norwegian Directorate for Energy and Water Resources where snow depth is estimated by a degree-day snow accumulation and snow melt model.