



Evaluation of radar precipitation data in Norway

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Radar precipitation data are not put to use in prognosis or simulations in Norway, except for viewing animated maps for the last three hours on the internet. In hydrological models radar precipitation is still not used as a data source for rain, but with higher resolution in both time and space than traditional rain-gauge data, radar should be able to give far more information about rain distribution in catchment modeling, particularly for distributed models and in catchments with none or very few rain gauges. For the time being the radar data series are too short to be used in calibration of hydrological models, and in order to be able to use the data they need to be consistent with the rain gauge precipitation which the models are calibrated for.

Data from four precipitation radars covering most of mid and southern Norway are evaluated against independent rain gauge stations for the period with data, i.e. between 1 and 3 years. The radar-based precipitation is already adjusted to monthly values of rain at the precipitation gauges, and the evaluation is done with data that did not take part in this adjustment.

It varies how well the radars and the gauges coincide in rainfall. Two of the radars have no noticeable beam blockage and give quite reasonable correlations with the rain gauges depending on the distance from the radar. One of the radars are clearly poorer correlated to the independent stations than the dependent ones, and the fourth radar has a considerable beam blockage which leaves a large part of the radar coverage area without radar signals. For all four radars both the correlation and the resemblance in rain quantity are dependent of the distance from the radar.