Application of the site classification scheme in the ground observation network of the Norwegian Meteorological Institute

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ABSTRACT

In 2010, the site classification scheme developed by Météo France was included in the recommendations by the Commission for Instruments and Methods of Observations (CIMO). The Norwegian Meteorological Institute started to implement the scheme and is planning to successively classify the observation stations within its network.

The whole process will take a couple of years to be finished and a complete evaluation of the impact will not be possible before then. Valuable experiences, however, were already collected during the assessment phase and the beginning of the implementation. Challenges could be identified and some short term benefits are already paying off. Those impacts and experiences, which are probably typical for the implementation of the scheme in an observation network, are the topic of the poster presentation.

During the assessment process, the Norwegian Meteorological Institute was evaluating which tools and methods should be used for field measurements and the classification process. It will be highlighted which tools and methods were chosen and for what reason.
The description of the scheme itself, transferred to Norwegian and distributed, both in a simplified and a complete version, allowed immediately for a clearer communication about site exposure with all involved parties.

Norway has a very complex topography. This combined with the high latitude of the country bears probably the biggest challenge in applying the necessarily simple classification scheme. Due to the high variations of sun elevation and azimuth throughout a year, for example, the same station might experience long periods of shadow for some months and no shadow at all during other months. Classifying temperature and radiation with the lowest possible class, as the scheme requires, does not consider that the station has an excellent exposure for at least some time during the year. Possible adaptions of the scheme will be discussed.