



The use of Climatology in Forecast Communication

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Weather is relative. To one person 20C is considered hot, whereas to another it is cold. These differences are largely driven by experience of the long-term climatology at the location in which the individual is resident. In the UK, a wide variety of climatological conditions exist, not only for daily temperatures but also for wind speeds and rainfall accumulations. Therefore, categorising and defining the weather in terms of the local, site-specific, long-term observed climatology is ideally suited to communication with non-experts, particularly because their interests tend to prioritise the identification of normal/abnormal weather conditions at specific locations. This user-centric approach to presentation readily lends itself to delivery on a wide variety of platforms, finding application in either human or numerical model output of both deterministic and probabilistic flavours. Within this framework the return-period for forecasts of extreme events become readily accessible to the presenter and such statements are arguably particularly useful as an impact guide for users.

The need to make assumptions about the link between a user's experience and their understanding of weather terms is negated by the use of site-specific long-term climatologically based categories because they easily lend themselves to description using natural speech. It is also relatively straightforward to communicate forecast performance using these ideas, thereby enabling the user to associate an appropriate level of confidence to a forecast at a specific site and forecast range of interest.

These ideas are presented based on long-term observed climatological categorisations at synoptic station sites in the UK, using (for illustration) graphical mock-ups of existing Met Office web pages. This form of presentation is easily applicable to any country that contains geographical areas of contrasting climatological variability.