



Application of an automatic homogenisation R function to temperature and precipitation series, and impact on their trend evaluations

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Homogenisation of climatic datasets is a task both unavoidable and very time consuming. Moreover, as new terms are added to the series, the whole homogenisation procedure should be repeated every two or three years. A new automatic function has been added to the R contributed package 'Climatol', that allows an easy update of homogenised datasets. It works iteratively, removing the gross inhomogeneities in the first place, and further refining the process until no outlier or shift over a desired threshold is left. The whole operation is controlled through several parameters that prescribe the type of data standardisation, relative weights of the surrounding stations, number of iterations, etc.

The procedure is based on interpolation of standardised values, avoiding the use of interstation correlations that prevent the use of information from nearby stations when no common period of observations is available. It is therefore devised for dense observation networks, though may be used otherwise, as far as stations with different climatic regimes are treated separately.

Examples of application to temperature and precipitation series are presented, comparing their trends before and after the homogenisation process.