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After HOME: Progress in the practical application of statistical homogenisation methods

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Temporal variability in observed climatic series is often affected by undesired changes in the conditions of the observation. Statistical homogenisation intends to exploit a kind of surplus information of dense observational networks, namely the temporal changes in nearby sites are spatially well correlated and they can be used to correct local, temporal biases. The success of homogenisation depends both on the chosen statistical method and the characteristics of the target time series. In the last two decades seven WMO-sponsored international homogenisation seminars and recently a European COST project (HOME) were devoted to find the most recommendable tools for statistical homogenisation.

The progress in the practical climatological application exhibits contradicting trends over the last decade. While on the one hand, well elaborated methods are applied more frequently than in the past, old routines are still employed in several other cases. Notwithstanding, the classification of studies to "good" and "bad" practices is not straightforward, since there still exist several doubts about the recommendable ways of time series homogenisation. In this presentation we will reiterate which theses of homogenisation can be considered as of proven, very likely or just hypothetical efficiency, and recite examples from recent studies.