



Evaluation of globally available precipitation data products as input for water balance models

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Subject of this study is the evaluation of globally available precipitation data products, which are intended to be used as input variables for water balance models in ungauged basins.

The selected data sources are a) the Global Precipitation Climatology Centre (GPCC), b) the Global Precipitation Climatology Project (GPCP) and c) the Climate Research Unit (CRU), resulting into twelve globally available data products. The data products imply different data bases, different derivation routines and varying resolutions in time and space.

For validation purposes, the ground data from South Africa were screened on homogeneity and consistency by various tests and an outlier detection using multi-linear regression was performed.

External Drift Kriging was subsequently applied on the ground data and the resulting precipitation arrays were compared to the different products with respect to quantity and variance.