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Precipitation over Monsoon Asia: a comparison of reanalyses and observations

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Daily precipitation is essential in many impact modelling exercises and several global/regional products exist. Here, we focus on Monsoon Asia and we compare four different reanalyses with a rain-gauge gridded dataset and with a rain-gauge/satellite dataset. Differences in seasonality and distributional differences during the monsoon season are assessed by applying recently proposed approaches. Drought events during the monsoon season are compared as well. Results show remarkable differences in the seasonality of the two observational datasets as well as in the reanalyses. Distributional differences during the monsoon season are also significant almost over the whole region for all reanalyses. Finally, remarkable temporal non-stationarity characterises some of the analysed reanalyses.