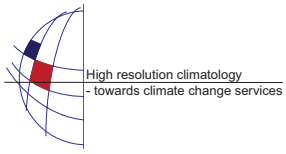
EMS Annual Meeting Abstracts
Vol. 7, EMS2010-229, 2010
10th EMS / 8th ECAC



Using synoptical messages for near-real-time updating of climate time series

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Climate change research and services are often hampered by the fact that the validation and processing of observations takes considerable time. Unvalidated synoptical messages are than regularly used to extend validated climate time series to the present day, despite the differences in measuring periods. The effect of this on climate indices of extremes is not well known. Here we focus on several stations that have both synoptical messages and validated data from data providers in the European Climate Assessment & Dataset over the period 01 April 1982 to 31 December 2004 to study this effect. The two overlapping time series are compared for each station. The difference series show that there is some skewness present for the daily values. Minimum temperature shows larger or equal values for the synoptical messages, while maximum temperature shows smaller or equal values for the synoptical messages. The precipitation results are largely dependent on the measuring periods of both time series. Another result is that the differences are smaller during Spring and Summer than during Winter and Autumn. We conclude that the validated daily time series extended with synoptical messages are sensitive to the synoptical part by calculating indices of extremes using a daily threshold. Aggregated to a seasonal level, the extended time series can be used as long as the synoptical part is less than about 50% of the length of the total time series.