



Daily updates of the high-resolution gridded dataset E-OBS

Else van den Besselaar, Gerard van der Schrier, and Richard Cornes

Royal Netherlands Meteorological Institute (KNMI), De Bilt, Netherlands (besselaar@knmi.nl)

The E-OBS dataset is a land-only, high-resolution gridded dataset for daily minimum, mean and maximum temperature, daily precipitation amount and daily sea level pressure covering Europe and the Mediterranean. The underlying daily station time series are sourced from the European Climate Assessment & Dataset (ECA&D). At present, ECA&D contains daily time series for >10000 stations throughout Europe and the Mediterranean. About 75% of these time series are available for download, while all series are used to create the gridded dataset.

Full E-OBS versions from 1950 onward are created twice a year. As ECA&D is updated with a monthly frequency, provisional monthly E-OBS updates are created as well. For assessments of emerging extreme events such as heat waves or floodings, these monthly E-OBS updates are usually not available during or right after these events. This would require more timely updates of the gridded dataset. Here daily updates (with one day delay) of the E-OBS dataset are presented. These daily updates are already used in a few outreach activities, such as the description of the warm December 2015 month (in the form of a Climate Indicator Bulletin (CIB)). As higher quality time series will be available on a monthly time scale for several parts of Europe (with the standard ECA&D update cycle), these daily updates will be replaced by the higher-quality monthly E-OBS updates when available. The monthly updates are subsequently superseded by full E-OBS versions.