



User-friendly visualisation of climate time series for the public

Andreas Hoy (1), Stefan Müller (2), and Florian Verdet (2)

(1) Hessian Agency for Nature Conservation, Environment and Geology, Hessian Centre on Climate Change, Wiesbaden, Germany (andreas.hoy@hlnug.hessen.de), (2) Meteotest AG, Fabrikstr. 14, 3012 Bern, Switzerland

The recently adopted Open Data policy of the German Weather Service (DWD) encourages new ways to visualise and explain digitally available climate data to a wide range of potential users. Since 2017, the German county of Hesse initiated a range of applications to allow a user friendly, guided evaluation of all climate and precipitation stations currently observing, having at least 30 years of observation history. Additionally, gridded area averages of temperature and precipitation since 1881 and sunshine duration since 1951 are exploited.

All applications aim to integrate actual climate data into a historical timeframe to allow a fast and easy evaluation of their extremity and long-term changes in averages and extremes. All figures are accompanied by explanatory texts consisting of dynamic text elements, which automatically adopt to new data. Climate information are refreshed daily or periodically, according to the respective diagram. Users profit from an up-to-date and continuously growing data basis.

A local webserver of the hosting institution is periodically retrieving climate data from the Climate Data Centre of the DWD, importing them into an own database and deviate relevant climatic indicators. Here, each page access dynamically generates the according diagrams and texts via JavaScript libraries and HTML5 within the browser of the user. Therewith, in opposite of classical picture files, a large range of interactive functions is possible. Users can browse between different years, seasons or months and get detailed information about the data via mouse over. All time series included within the figures can be switched on or off by a click in the legend. Certain customised periods may be chosen by mouse zoom in all graphics – e.g., in a series starting 1901 only the period 1961–1990. Moreover, a high user friendliness is ensured by additional functions: all graphics work in full screen (with all previously described interactive functions), they can be printed and saved in various formats, and the underlying database may be downloaded.