

Motivation, International Framework and Task of the Global Precipitation Climatology Centre (GPCC)

B. Rudolf, C. Beck, J. Grieser and U. Schneider

Deutscher Wetterdienst, Global Precipitation Climatology Center, Offenbach a.M., Germany
(bruno.rudolf@dwd.de)

As a key component of the global energy and water cycle precipitation has immediate influence on environmental and social systems. Thus the knowledge of spatial and as well temporal precipitation variations is of crucial importance. Against the background of global climate change and realizing the needs for its assessment international organizations initialized a variety of research and monitoring programmes. In this framework, the Global Precipitation Climatology Centre (GPCC) has been established in 1989 on request of the World Meteorological Organization (WMO). Operated by Deutscher Wetterdienst (DWD, National Meteorological Service of Germany) as a German contribution to the World Climate Research Programme (WCRP) the centre is a component of the WCRP Global Precipitation Climatology Project (GPCP). The major task of the GPCC is to provide the climate research community with gridded datasets of monthly precipitation totals for the global land areas based on observational data. The GPCC aims to serve different user requirements regarding on the one side the accuracy of the gridded precipitation results depending on the number of stations used, and on the other side the timeliness of the product availability. The use of gridded observational data for verification studies for instance requests high spatial resolution and accuracy for the recent decade, while the priority of long-term variability studies is focused on long homogeneous time-series. Suitable products are realized by cut-off dates for data extraction and analysis corresponding to the specific application type. The gridded data sets are available in varying spatial resolutions of 0.5° by 0.5° to 2.5° by 2.5° geographical latitude by longitude. Corresponding to international agreement, GPCC's gridded products are freely available via Internet.