

GSWP3 climate reanalysis product in Stordalen Mire (Stordalen_GSWP3)

The Global Soil Wetness Project Phase 3 (GSWP3) is an ongoing modeling activity that provides global gridded meteorological forcing with $0.5^\circ \times 0.5^\circ$ spatial resolution and 3-hourly temporal resolution. The GSWP3 product is based on the 20th Century Reanalysis (Compo et al., 2011), using a spectral nudging dynamical downscaling technique described in Yoshimura and Kanamitsu (2008). A more detailed description of the GSWP can be found in Dirmeyer (2011) and van den Hurk et al. (2016).

The 3-hourly products of air temperature, precipitation, solar radiation, wind speed, and specific humidity prescribed by GSWP3 were extracted at the Stordalen Mire from 1901 to 2010. The cubic spline interpolation was used to interpolate the 3-hourly products into hourly intervals to serve as the meteorological inputs used in the *ecosys* model. Detailed descriptions of data processing and model scenario can be found in Chang et al. (2019).

The data columns in each file are day of year, hour, solar radiation (Wm^{-2}), precipitation (mm h^{-1}), air temperature ($^\circ\text{C}$), specific humidity (kg kg^{-1}), and wind speed (m s^{-1}), respectively.

Reference

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