

The **Forschungszentrum Jülich (FZJ) experimental water resources bulletin (eWRB)** gives a **regular seasonal update** on the **current state and the upcoming potential evolution of terrestrial near-surface water resources**. The eWRB is an open access research data product for an expert environmental sciences and stakeholder audience as well as the interested public.

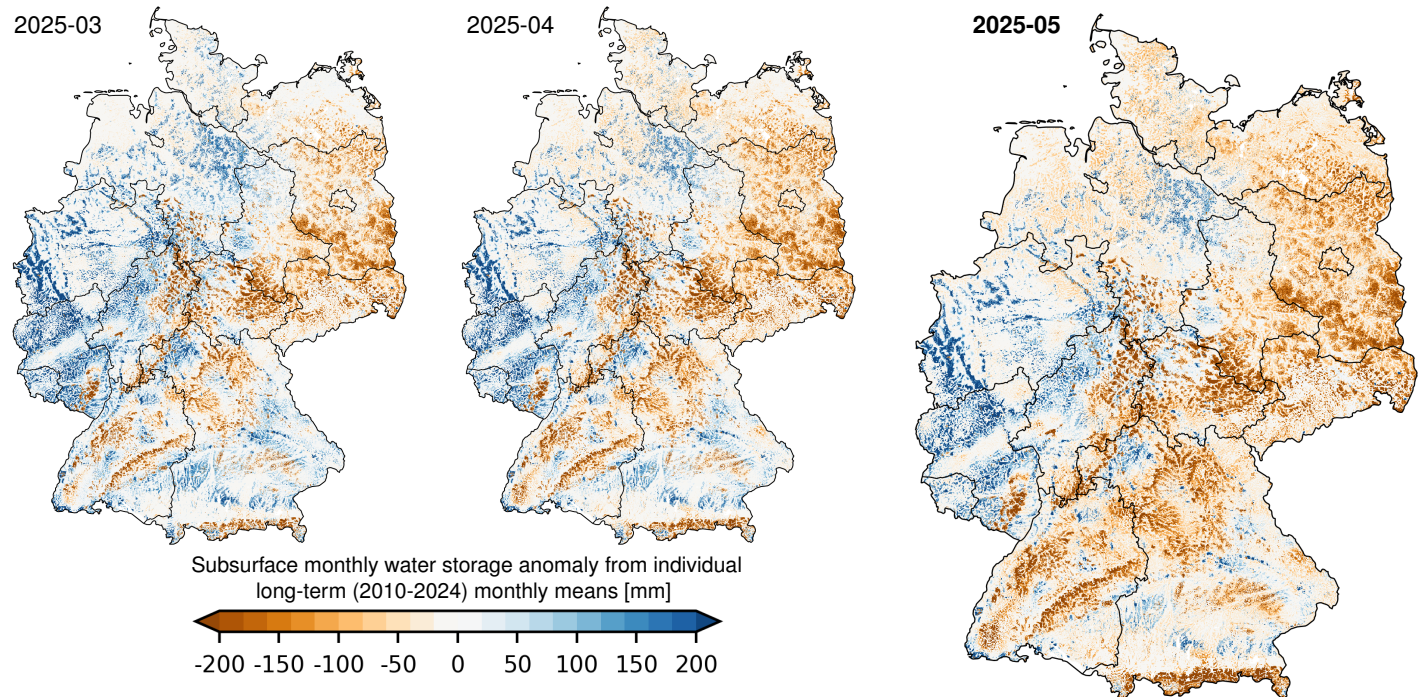


Fig. 1: Monthly anomalies of total subsurface water storage, i.e. shallow groundwater, for the past season with respect to long-term monthly means from 2010-2024 in mm water column. With the eWRB, the total subsurface water storage includes the shallow soil zone and groundwater to a depth of 60m. Data: Hindcasts from ParFlow/CLM simulations with ECMWF HRES atmospheric forcing.

State and possible developments: During Spring, subsurface water storage continued to decline, stronger than forecasted in the April 2025 eWRB. Increasing summer deficits are expected in the south, middle, and east of Germany. Nation-wide means seem comparable with simulation results for drought years 2018 and 2020. Basis: 50-member ensemble forecast from 2025-06-01.

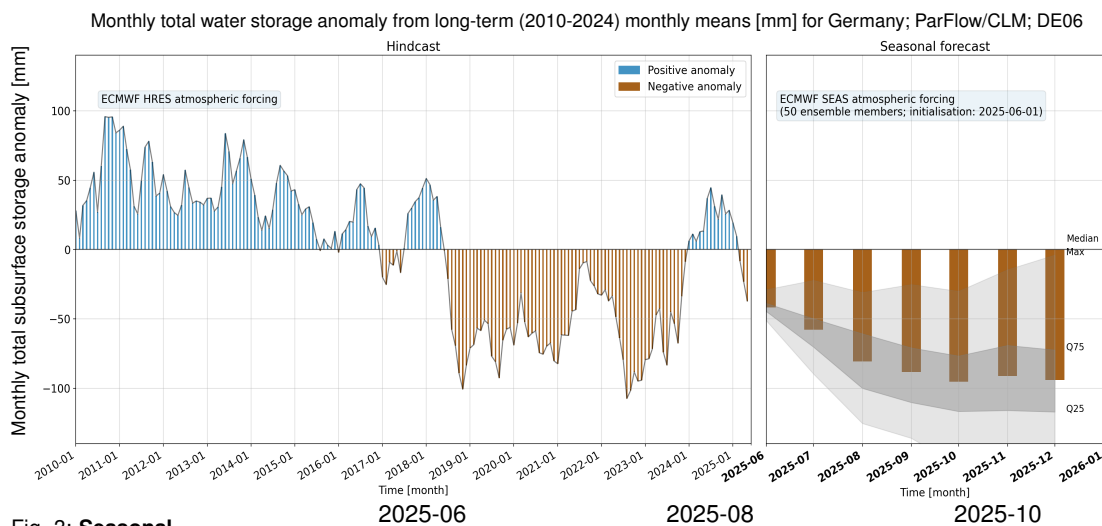
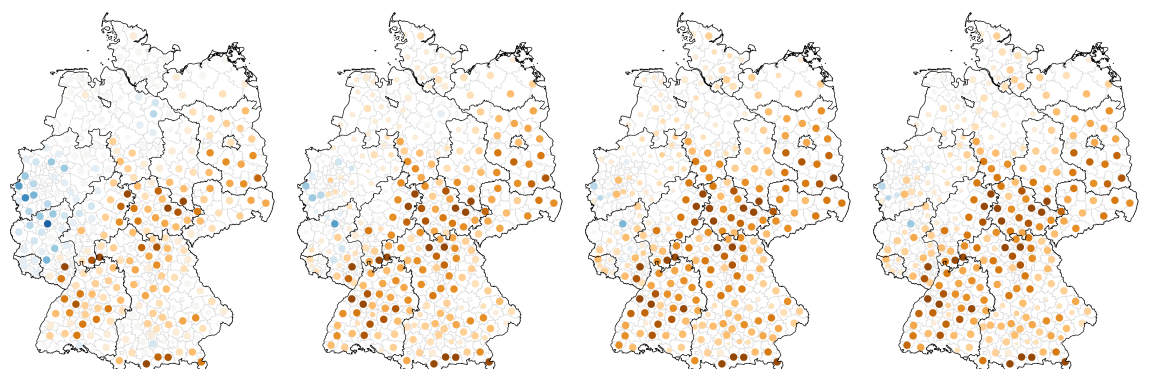


Fig. 2: Past evolution of monthly total subsurface water storage anomalies as spatial means for Germany from 2010-Jan to 2025-May as simulated at 611m resolution with the ParFlow/CLM (www.parflow.org) integrated hydrological model based on daily forecasts driven by ECMWF HRES deterministic atmospheric forcing ("hindcast"), and 7-months forecast from 2025-Jun to 2025-Dec based on ECMWF SEAS 50-member ensemble ("seasonal forecast").

Fig. 3: Seasonal forecasts (2025-Jun to 2025-Dec); mean of total subsurface water storage anomalies from 50-member ParFlow/CLM ensemble (initialized on 2025-06-01), ECMWF SEAS seasonal ensemble prediction driven. Dots: NUTS-3 level administrative regions; dot size: proportional to how many members agree in their sign.



FZJ Experimental Water Resources Bulletin for Germany, usage conditions and disclaimer

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Updates

The FZJ Water Resources Bulletin information products are prototypical scientific products, that are part of a knowledge transfer towards practical real-world applicability. The forecast products are generated in a quasi-operational mode, i.e., they are not part of an official forecasting service. Nevertheless, the FZJ Water Resources Bulletin project team attempts to provide a forecast at the beginning of each meteorological season, within reason.

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Jülich, 2025-06-12