A global land surface hydrology for the last 20-years

Gianpaolo Balsamo, Florian Pappenberger, and Souhail Bousetta
European Centre for Medium-Range Weather Forecasts, Reading, UK

The ECMWF Re-Analysis Interim project (ERA-Interim), covering 1989 to the present is used to force a state-of-the-art land surface model in order to produce a land surface climatology for several land surface variables, including snow mass, soil moisture, and river discharges. In particular, the impact of precipitation is analyzed when a bias-correction method based on independent precipitation datasets is applied to the original fields. Mean states and trends of the land surface water reservoirs and land-atmosphere fluxes are analysed.