



## **Flood trends in Germany in the period 1951-2002**

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Flood time series are derived and analyzed for trends for 145 discharge gauges in Germany. A common time period of 52 years (1951-2002) is used. In order to obtain a country-wide picture, the gauges are homogeneously distributed across Germany. Seven flood indicators, based on annual maximum series and peak over threshold series, are studied. Our analysis finds significant flood trends (at the 10% significance level) for a considerable fraction of basins. In most cases, these trends are upward; decreasing flood trends are rarely found and are not field-significant. Marked differences emerge when looking at the spatial and seasonal patterns. Basins with significant trends are spatially clustered. Changes in flood behavior in northeast Germany are small. Most changes are detected for sites in the west, south and center of Germany. Further, the seasonal analysis reveals larger changes for winter compared to summer. The spatial and seasonal coherence of the results suggest that the observed changes in flood behavior are climate-driven.