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## **Stochastic Modelling and Trend Assessment of River Run-Off Data in Southern Germany**

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The assessment of statistical characteristics of time series is an important tool to deliver indicators for the current debate on the impact of global warming on the hydrological cycle. We systematically analyse river run-off data in Southern Germany of several catchments near the river Danube regarding its trend characteristics and persistence behaviour. To account for possible human impacts as well as for natural variability, a local polynomial trend component is estimated using wavelets. The deterministic trend is combined with a stochastic model part being realised using FARIMA models which, in particular, consider long term correlations in time series. The fitted long-term parameter may serve as hint for the persistence behaviour of the series. The results are evaluated on a regional scale and compared with land use patterns and an elevation model.