



## **Comparison of precipitation measurement instrumentation on the Padež river basin, SW Slovenia**

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Hydrological monitoring on the Padež river basin supports the design project, where the construction of water accumulation for water supply is planned. The Padež river basin belongs to the area where the submediterranean and moderate continental climates inter-cross. Precipitation measurements are performed on 6 locations using On-set RG2-M tipping bucket rain gauges. The Kozjane measuring site also contains an automatic weather station Vaisala MAWS201, which includes a tipping bucket rain gauge, and a laser precipitation monitor (disdrometer, Thies Clima LPM300). With the installation of the disdrometer we wanted to examine its operation and to compare the measurement results with those of other rain gauges. The first measurement comparison shows that the disdrometer overestimates the intensities during light rainfall, which is mainly composed of tiny raindrops, while during high intensity rainfall the measured drop size distribution fairly deviates from the Gunn-Kinzer distribution curve. After the installation of another slightly differently constructed disdrometer (OTT Parsivel) in Ljubljana, we could compare the drop size distribution spectra from both disdrometers during similar high intensity rainfall. We found significant differences and we assume that the reason is that raindrops, which are rebounded from the receiver head holders of the LPM 300 disdrometer, pass through the disdrometer light beam.