



Consistency analysis of the puvliometric information in Galicia (NW Spain)

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An important issue on puvliometric data analysis from rain gauges is the verification of their consistency. In general, this attribute is measured using double-mass curves. This technique verifies the consistency of a register from a rain gauge by comparing cumulative monthly rainfall from it with those averaged from meteorological stations located nearby. The aim of this study is to analyze the consistency of monthly rainfall data registered at 100 gauges within Galicia (NW Spain). The analysed data set corresponded to five years (2002-2006). Initially, 159 meteorological stations were evaluated; however, 59 gauges were withdrawn because 10% of their data were missed. Moreover, boundary provinces data was taken into account. Double-mass analysis was performed following two procedures: a) data from each gauge were compared to those obtained in the nearby main station and b) data from each site were compared to the average from five nearby gauges, including data from boundary regions. Rainfall data did not show any outlier for the study period as described by the double-mass curves. Regression coefficient was higher than 0.9 in all the occasions. Graphical analysis of these curves showed some deviations from the trend lines in certain stations. Causes for these deviations are discussed.