



Renewed data quality control of Slovenian climate data

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The Environmental Agency of the Republic of Slovenia started in autumn 2008 an extensive project »Climate variability in Slovenia« in order to improve climate data quality, gather more metadata, homogenise climate series and consequently to analyse climate change in Slovenia since 1961.

Data quality process in this project consists of two main steps. The first one represents automatic search for suspicious and erroneous data using specific software. Thorough manual inspection then confirms or rejects and corrects suspicious data. Automatic search methods can be divided into two categories: verifying internal consistency of data and spatial and temporal data comparison. Manual inspection is done using graphic visualization of diverse climate data and by examination of the paper archive. According to our experience it is very useful that a meteorological station possesses auxiliary or duplicate instruments as this improves the rate of error detection and makes it easier to correct the data.

Statistical analysis shows interesting results regarding the controller, type of error, temporal evolution and spatial distribution of identified errors. Despite the subjective influence of controller and many undiscovered errors left, we assume the data quality being significantly improved. The data quality process in such a manner also reveals some systematic errors and gives an insight into the overall data quality. We expect the homogenisation of the series being much easier after detailed quality control of the data and the corresponding metadata inclusion.