Real-Time Karst Groundwater Monitoring- A Case Study in Southern Latium Region, Central Italy
Abstract n°2179

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KEYWORDS: karst groundwater, monitoring, real-time

Pertuso Data Viewer version 1.0 is a software for the visualization, interpretation, download and web access to real time groundwater monitoring data coming from the Environmental Monitoring Plan of Pertuso Spring, in the Upper Valley of Aniene River (Central Italy). This software has been developed in the programming language Matlaby by Sapienza University of Rome for the analysis of time-series data measured by a multiparametric probe developed for the monitoring of water-bearing stratums. This groundwater multiparametric probe simultaneously measures up to 6 parameters (pH, groundwater level, temperature, electric conductivity, redox and dissolved oxygen) and collects hourly time series data. This probe directly interfaces with a datalogger for real-time visualization of instantaneous data in graphical and numerical modes and storages data in a FTP server. Pertuso Data Viewer is supported for Windows XPy, Vistay, Windows 7y, 8 e 10 and the corresponding version of Microsoft Officey (64 bit operating systems) and allows a real-time access of groundwater monitoring data and the automatic generation of data report and data chart at user specified time intervals for each parameter for a rapid interpretation of long time series data sets. Pertuso Data Viewer version 1.0 allows the visualization of concentration plots of each parameter measured which can be expanded in separate windows and saved to a variety of different formats including "jpeg", "tiff", "pdf", "metafile". Moreover, this software exports data, starting from the raw file in ASCII format, in Excel-compatible format. Pertuso Data Viewer allows to change the datalogger configuration (type of sensors, acquisition time, memorization time) and to set up thresholds on measures in manual mode or automatic. Real-time groundwater monitoring improves data availability and reduces the need for regular access to difficult mountain sites to download groundwater data.