

## Spatial Management of borehole data using a GIS Cloud Platform

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### ***Abstract***

- ***Introduction***

Contemporary Geographical Information Technologies (GIS) over the web can provide the platform for both data acquisition and information sharing. Easy to use tools can nowadays help even novice users, to develop customized spatial databases and GIS applications in order to support collective mapping and information sharing in real time.

- ***Methods***

An attempt to demonstrate the potential of using such a Cloud based GIS environment for collective data input and on the fly processing and information sharing is demonstrated. The respective application (app) was developed using GIS Cloud platform (<http://www.giscloud.com/>) and the relevant JavaScript Application Programming Interface (API). Such an application can be implemented in a great variety applications including but not limited to environmental and engineering ones. In our demo case, the application developed provides a simple graphical user interface and it uses front-end calculations and Web Processing Services (WPS), for calculating the spatial extend of groundwater protection and management parameters related to pumping.

- ***Results and significance***

Considering the development procedure of this demo application and the respective functionality delivered, it is evident that a GIS Cloud based platforms can provide a fully expandable and customizable environment for developing applications tailored to user needs.

- ***Conclusion***

The use of such a system, brings “ready to use” solutions to even non-expert, in the domain of geoinformatics users, and helps promote collaborative mapping and information sharing in real time, thus maximizing efficiency.

***Keywords:*** *GIS Cloud, spatial management, radius of influence, water resources management, Cloud Computing*

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