



## **Hydrogeological data and management of the solid waste landfills: a tool to evaluate the environmental compatibility**

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During the last years, the occurrence of degradation processes of underground water are more and more frequent especially as concerns the quality of this natural resource. Polluting processes produced by landfills consisting of urban and industrial refuses are particularly critical for the type of contamination and for the intrinsic difficulty in applying any remedy.

In the present research, the environmental compatibility of the controlled landfills is estimated by applying an integrated method based on

- i) the hydrogeological behaviour of the area surrounding the landfill according to the map of the intrinsic vulnerability of the aquifer(s);
- ii) the setup, the management and the control of the landfill defined by its risk index.

The application of this approach allowed to evaluate the efficiency of the control system of the existing landfills and the priority list of the intervention to be performed to improve the future management and to protect the surrounding environment.