



Topic 1

Hydrogeological studies: how to explain links between resources and uses and design sustainable management rules?

Major scientific and technologic progress has been made in hydrogeological sciences on new methods of groundwater monitoring and in modelling qualitative and quantitative aspects. However, the complexity of aquifers and the need to account for uses call for long-term investigations to grasp the dynamics of groundwater resources. So a number of uncertainties are still involved in forecasting probable changes in groundwater level and quality depending on the different uses.

The development and the application of management rules to prevent overexploitation of groundwater and to reduce pollution also require long-term negotiations to take into account the socio-economical interests of the stakeholders concerned.

Although scientific knowledge is obviously necessary to shed light on the decisions and prevent risks, in practice, we also need to know how to combine knowledge acquired over time and the implementation of management rules. How can we combine the uncertainties inherent to the scientific process and the precision required for decision making? And in particular, how can we account for the diversity of uses and their dynamics and their interaction with the resource?