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Applied Research for protection and management of Groundwater resources using contemporary technologies

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Abstract

Ground water is a vital natural resource and an invaluable component of sustainable development. The growing degradation of this natural resource during the past years from a quantitative and especially from a qualitative aspect, undoubtedly leads to dangerous situations, jeopardizing both human health and the sustainable development of large areas. The potential to protect, manage and finally preserve the quantity and quality of groundwater through the use of modern technologies including GIS, Remote Sensing and Information systems, is presented herein. Results of applied research in those fields show that, the combination of these technologies with proven methodologies enables to protect and ensure the continuous supply of underground water by protecting it from overexploitation and pollution through optimal management and the use of monitoring/early warning systems. Additional benefits of the implementation of these technologies are the promotion of public awareness and the support to decision making regarding potentially hazardous to ground water quality, land uses.

Keywords:

Remote Sensing, GIS, Groundwater, Drastic, Information systems, hydrogeology



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