

Applications of Remote Sensing and GIS Technologies in Groundwater Hydrology: Past, Present and Future

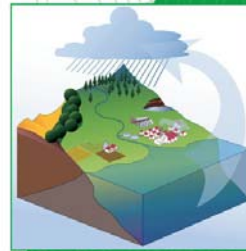
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with contributions by Jörn Hoffmann, Guido Wimmer and
Anna Burchart

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Groundwater Hydrology:
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and Environmental Research

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Groundwater is one of the most valuable natural resources, which supports human health, economic development and ecological diversity. Unfortunately, overexploitation and unabated pollution of this vital resource is threatening our ecosystems and even the life of future generations. Unlike surface water hydrology, the applications of remote sensing (RS) and GIS technologies in groundwater hydrology have received only cursory treatment, mostly focusing on a specific aspect only, and are less documented. Consequently, a general and widely available reference in this field is lacking. This book bridges this gap. It provides comprehensive and thoroughly up-to-date information about the applications of RS and GIS technologies in groundwater hydrology, highlights the constraints and challenges, and discusses their future prospects along with the future research and development needs in this area. It also describes the fundamentals and importance of these emerging technologies as well as the significance, problems and sustainable management of freshwater in general and groundwater in particular. This book will be useful to the students and researchers of civil, agricultural, environmental, and water resources engineering fields as well as to the water resources planners and managers, especially of developing nations.

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