

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

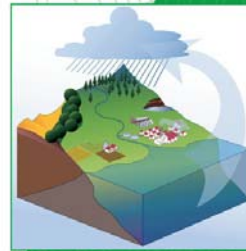
Madan Kumar Jha (Kharagpur, India) and  
Stefan Peiffer (Bayreuth, Germany)

with contributions by Jörn Hoffmann, Guido Wimmer and  
Anna Burchart

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Applications of  
Remote Sensing and  
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Groundwater Hydrology:  
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Madan Kumar Jha  
Stefan Peiffer



Bayreuth Center of Ecology  
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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Dr. Madan Kumar Jha  
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Dr. Madan Kumar Jha  
Associate Professor  
Agricultural and Food Engineering Department  
Indian Institute of Technology  
Kharagpur - 721 302, West Bengal (India)

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