



## IAH Burdon Network for International Development

6 December 2017

Dear IAH Member,

The IAH Burdon Groundwater network for International Development (IAH-BGID) is pleased to announce the launch of its free book scheme for 2017. The aim of this scheme is to increase access to hydrogeological books for IAH members in countries where it is difficult to obtain reference books, or reliably access the web. We had similar schemes in previous years which proved highly successful.

The offer is open to IAH members in Sub Saharan Africa. To claim your book please follow the simple steps below.

1. Please choose ONE of the books listed below
2. Email your choice of book **by December 30, 2017** to [iah.bgid@gmail.com](mailto:iah.bgid@gmail.com) with the email subject title "groundwater books". Include your name and IAH membership number in the email. We can only process requests with a valid IAH number.
3. We will then arrange for IAH to purchase this book and send it to the address to which the Hydrogeology Journal is sent.

Best wishes,  
Robert M. DiFilippo, P.G. & Megan Breen

On behalf of **IAH-BGID** Steering committee  
Alan MacDonald., Tamiru Abye, Vivana Re and Morgan Burke  
<https://burdon.iah.org/>

*Providing hydrogeological support  
to those involved in helping to meet  
the MDGs for water.*



---

## **1. Hydrogeology: Principles and Practice 2e**

Kevin M. Hiscock, Victor F. Bense

*Hydrogeology: Principles and Practice* provides a comprehensive introduction to the study of hydrogeology to enable the reader to appreciate the significance of groundwater in meeting current and future water resource challenges.

The book presents a systematic approach to understanding groundwater. Earlier chapters explain the fundamental physical and chemical principles of hydrogeology, and later chapters feature groundwater investigation techniques in the context of catchment processes, as well as chapters on groundwater quality and contaminant hydrogeology. Unique features of the book are chapters on the applications of environmental isotopes and noble gases in the interpretation of aquifer evolution, and on regional characteristics such as topography, compaction and variable fluid density in the explanation of geological processes affecting past, present and future groundwater flow regimes. The last chapter discusses groundwater resources and environmental management, and examines the role of groundwater in integrated river basin management, including an assessment of possible adaptation responses to the impacts of climate change.

---

## **2. Modern Hydrology and Sustainable Water Development**

S. K. Gupta

The material of this book will derive its scientific under-pinning from basics of mathematics, physics, chemistry, geology, meteorology, engineering, soil science, and related disciplines and will provide sufficient breadth and depth of understanding in each sub-section of hydrology.

Chapters on ‘global change’ and ‘water and ethics’ aim respectively to emphasize the central role of hydrological cycle and its quantitative understanding and monitoring for human well being and to familiarize the readers with complex issues of equity and justice in large scale water resource development process.

*Modern Hydrology for Sustainable Development* is intended not only as a textbook for students in earth and environmental science and civil engineering degree courses, but also as a reference for professionals in fields as diverse as environmental planning, civil engineering, municipal and industrial water supply, irrigation and catchment management.

---

## **3. Stream Hydrology: An Introduction for Ecologists, 2nd Edition**

Nancy D. Gordon, Thomas A. McMahon, Brian L. Finlayson, Christopher J. Gippel, Rory J. Nathan

Since the publication of the first edition (1994) there have been rapid developments in the application of hydrology, geomorphology and ecology to stream management. In particular, growth has occurred in the areas of stream rehabilitation and the evaluation of environmental flow needs. The concept of stream health has been adopted as a way of assessing stream resources and setting management goals.

*Stream Hydrology: An Introduction for Ecologists Second Edition* documents recent research and practice in these areas. Chapters provide information on sampling, field techniques, stream analysis, the hydrodynamics of moving water, channel form, sediment transport and commonly used statistical methods such as flow duration and flood frequency analysis. Methods are presented from engineering hydrology, fluvial geomorphology and hydraulics with examples of their biological implications. This book demonstrates how these fields are linked and utilised in modern, scientific river management.

---

#### **4. Geochemistry, Groundwater and Pollution, Second Edition**

C.A.J. Appelo, Dieke Postma

Building on the success of its 1993 predecessor, this second edition of *Geochemistry, Groundwater and Pollution* has been thoroughly re-written, updated and extended to provide a complete and authoritative account of modern hydrogeochemistry.

Offering a quantitative approach to the study of groundwater quality and the interaction of water, minerals, gases, pollutants and microbes, this book shows how physical and chemical theory can be applied to explain observed water qualities and variations over space and time. Integral to the presentation, geochemical modelling using PHREEQC code is demonstrated, with step-by-step instructions for calculating and simulating field and laboratory data. Numerous figures and tables illustrate the theory, while worked examples including calculations and theoretical explanations assist the reader in gaining a deeper understanding of the concepts involved.

A crucial read for students of hydrogeology, geochemistry and civil engineering, professionals in the water sciences will also find inspiration in the practical examples and modeling templates.

---

#### **5. Supporting Rural Water Supply**

Harold Lockwood, Stef Smits

Collectively, billions of dollars have been invested in the provision of rural water supply systems in developing countries over the past three decades. Although progress is being made and rates of coverage are increasing, users often find that, once installed, water supply systems are poorly maintained and eventually break down, leaving them with an unreliable and disrupted water supply. *Supporting Rural Water Supply* takes a critical look and asks why we have been unable to provide a sustainable water service to rural people for so long? What are the critical success factors in the areas where there has been good progress? How can we support the adoption of a service delivery approach to rural water supply – one that moves beyond implementing infrastructure projects to delivering a reliable and indefinite service?

This book brings together findings from 13 country studies which were carried out as part of a global learning initiative – Sustainable Services at Scale, or Triple-S. It offers insights into ways countries and individual organisations can move towards a service delivery approach step by step.

---

#### **6. Whose Reality Counts**

Robert Chambers

In this sequel to *Rural Development: Putting the last first* Robert Chambers argues that central issues in development have been overlooked, and that many past errors have flowed from domination by those with power. Through analysing experience - of past mistakes and myths, and of the continuing methodological revolution of PRA (participatory rural appraisal) - the author points towards solutions. In many countries, urban and rural people alike have shown an astonishing ability to express and analyse their local, complex and diverse realities which are often at odds with the top-down realities imposed by professionals. The author argues that personal, professional and institutional change is essential if the realities of the poor are to receive greater recognition.

*Whose Reality Counts?* presents a radical challenge to all concerned with development, whether practitioners, researchers or policy-makers, in all organizations and disciplines, and at all levels from fieldworkers to the heads of agencies. This is a thought-provoking book and it would interest all those concerned with the realities of the poor in the developing world.

- 
- 7. Community Water, Community Management**  
Ton Schouten
- 
- 8. History of Hydrogeology**  
Nicholas Howden, John Mather
- 
- 9. Managing Water Well Deterioration: IAH International Contributions to Hydrogeology 22**  
Robert McLaughlan
- 
- 10. Solving the Groundwater Challenges of the 21st Century**  
Ryan Vogwill
- 
- 11. Calcium and Magnesium in Groundwater: Occurrence and Significance for Human Health**  
Lidia Razowska-Jaworek
- 
- 12. Fractured Rock Hydrogeology**  
John M. Sharp
- 
- 13. Assessing and Managing Groundwater in Different Environments**  
Jude Cobbing, Shafick Adams, Ingrid Dennis, Kornelius Riemann
- 
- 14. Groundwater Quality Sustainability**  
Piotr Maloszewski, Stanisław Witczak, Grzegorz Malina
- 
- 15. Advances in Subsurface Pollution of Porous Media - Indicators, Processes and Modelling: IAH selected papers, volume 14**  
Lucila Candela, Inaki Vadillo, Francisco Javier Elorza
- 
- 16. Applied Groundwater Studies in Africa: IAH Selected Papers on Hydrogeology, volume 13**  
Segun Adelana, Alan MacDonald
- 
- 17. Groundwater Flow Understanding: From Local to Regional Scale**  
J. Joel Carrillo Rivera, M. Adrian Ortega Guerrero