

books

The Price of Water

Stephen Merret
2005, IWA, full price:
£60.00/US\$108.00; IWA members'
price: £45.00/US\$81.00, ISBN
1843390817, 168pp

Whether it is due to the increasing size and density of human populations, or the exponential growth in economic output and consumption, ever-higher volumes of water and wastewater are requiring water resource planning to become one of the most valuable areas of research in the twenty-first century. This collection of academic papers, previously published in refereed journals, seeks to address this challenge, and is a collaboration not only between economists, but also with those who work in the fields of agriculture, development studies, engineering, environmental science, geography, hydrology and hydrogeology, law, planning, political science and sociology.

The Price of Water argues the credibility of the hydrosocial balance as a planning tool in Integrated Water Resource Management; gives a critical review of the 'virtual water' debate; philosophizes on the importance of water 'demand' and its distinct differences in meaning when applied to separate scientific disciplines; and includes an economic analysis of water abstraction for consumers who abstract for commercial use which offers a basis

for designing abstraction charges. It also considers an agribusiness case study that shows how farm-level drought management can be used to plan for risk. Other chapters include a discussion of economic instruments and environmental regulation for the disposal of industrial effluent; and a paper on the importance of a market for farmers' water rights amid an increasing global demand for water.

Of particular relevance to *Waterlines* readers might be Merrett's attempt to deconstruct households' willingness-to-pay for water in low-income countries, which he does by critically reviewing research defining the current paradigm. Furthermore, he examines studies that directly influenced World Bank policy on domestic water demand of households in low-income countries. Merrett highlights strengths but also significant weaknesses such as the oversight in understanding how the water is being used by the respondents, which is accessed at such great physical and economic costs to themselves.

The Price of Water is a collection of academic papers, richly contributing to the evolutionary development of current paradigms. Economics, which now seems to decide to whom and where water flows, is of great relevance in high-income countries, and is the major thread in this book. With little developing country application, however, the papers fall short of addressing the balance between meeting social goals and economic sustainability.

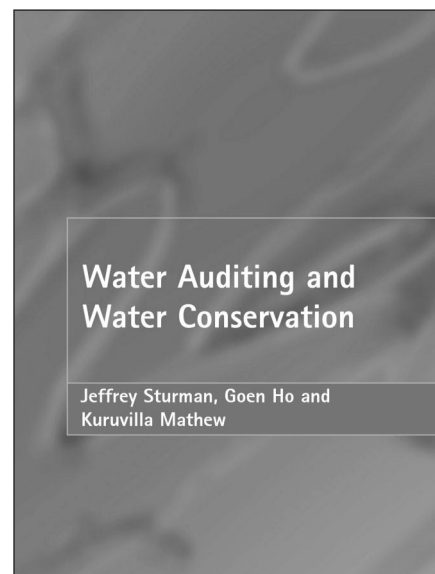
This book will be useful to the professional who wishes to keep abreast of latest research; it would also appeal to students requiring a good example of how to review literature critically in order to strengthen further research.

Andy Narracott, Halcrow Group Ltd

Water Auditing and Water Conservation

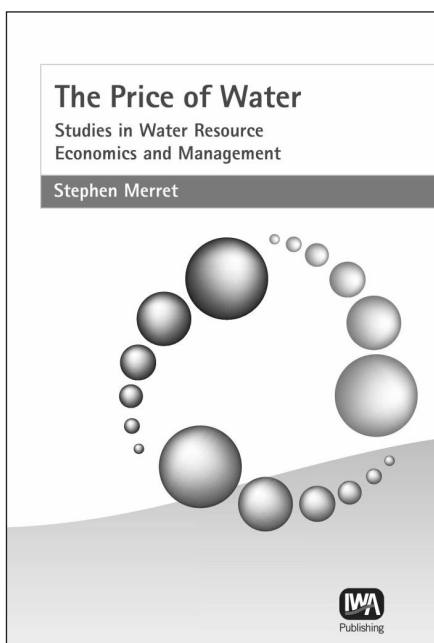
J. Sturman, G. Ho and K. Mathew
2004, IWA members' price:
£60.00/US\$108.00; non-members'
price: £80.00/US\$144.00, ISBN
1900222523; 336pp.

The major focus of this book is on water conservation while looking at the demand side of the water supply chain. Water auditing has been rightly referred to as the quantitative phase of water conservation. The earlier part of the book draws a good relation between water auditing, environmental auditing and environmental management systems. The authors address comprehensively different consumption



cases (arenas) on the demand side while also doing a cost-benefit analysis and calculating cost recovery periods. The book is a useful reference since it includes a checklist and methodology for carrying out a water audit and preparing a comprehensive water audit report. Benchmarks for performance improvement have also been discussed. The book also highlights the energy benefits that accrue from water conservation, and touches on the interplay between water quantity and water quality, thereby bringing in issues of water reuse. It is a good reference for students and freshwater audit practitioners.

The book has a developed country perspective, with a distinctly Australian emphasis. For instance, carrying out a water audit is most challenging for the distribution systems where maximum water losses occur (especially in developing economies). The scope of this book doesn't cover this important phase and hence doesn't provide recommendations on the design of new distribution systems, the upkeep of existing systems and the use of advanced tools for water management, such as GIS and MIS. Comprehensive comparison of instrumen-



The ITDG Online Development Bookshop

Selected titles can be ordered direct from the ITDG Publishing Online Bookshop at:
www.developmentbookshop.com.
Alternatively, for mail order send to ITDG Publishing, The Schumacher Centre for Technology and Development, Bourton Hall, Bourton-on-Dunsmore, Rugby CV23 9QZ, UK; Fax: +44 (0) 1926 634502; email: orders@itpubs.org.uk

tation approaches for quantity measurements with an eye to their costs, accuracy, ease of installation and application would be a better guide to the planning phase of a water audit.

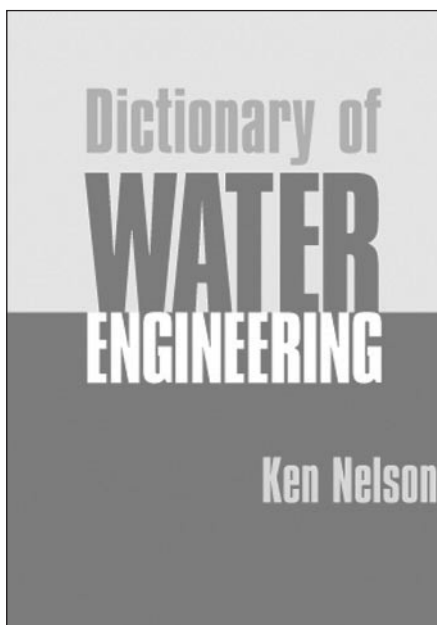
The book should at some stage also discuss issues such as why water auditing is not being undertaken comprehensively and how legislation (like a cess or tax on water discharged) and market-based instruments could popularize auditing and conservation measures. The layout of tables and figures in some parts of the book could also be improved to make them easier to read.

Dr Amit Kapur is a Research Fellow at the Center for Sustainable Systems, University of Michigan, USA, and Harpreet Singh Kandra is an Associate Fellow, The Energy and Resources Institute (TERI), New Delhi, India.

Dictionary of Water Engineering

Ken Nelson with contributions from Charles Kerr and Robert Legg 2005, ITDG Publishing, UK, £35.00 ISBN 1853394904

According to my dictionary, the definition of a dictionary is 'a reference book containing an alphabetical list of words with information about them', and that is exactly what this new publication from ITDG Publishing is. It will also come as no surprise that the thematic focus of the words and phrases are all related to water engineering



and the book provides a comprehensive documentation of over 4000 technical terms related specifically to the disciplines of hydraulics and hydrology.

If you didn't know what 'colloidal water treatment' does or what 'moisture adjustment' means, but were too afraid to ask, then this is for you. It therefore offers you a sense of security during moments of professional insecurity when you realize that, even though you have an impressive list of letters after your name and more than 15 years as a practising engineer, you still don't know what 'guttation' is.

The first edition was released in 1973 and written by the main author of this second edition with another writer called A. Nelson, who presumably is a relation of his. It's taken 32 years to release this second edition, so I can imagine that there are a considerable number of additional terms in this edition. I was, however, a little surprised that the authors had not made a greater attempt to include a few more terms focusing on the social dimension of water engineering. Gender or hygiene promotion specialists be warned: this book is not for you. There is no reference to 'water user community', and in fact the nearest reference to 'community' that I could find was 'communication pipe'.

As in most reviews, it's generally good to say whether the publication is worth buying or not. In this case, it is hard to say one way or the other as you either really need it or you don't. Personally, I think I could live without it. But I can clearly see that for those who are involved in detailed engineering design work for hydraulic structures, water supply systems, drainage, irrigation and water resource management, then this is a useful purchase.

The definitions are clear and concise and the numerous illustrations, which help to clarify more complex terms, engineering equipment and hydraulic structures, are a real asset. The price is £35, which isn't too high for a hardback book these days and I would say that it is worth it. If you have the first edition already and found it useful, then it is certainly worth considering investing in this new publication. And for those who are intrigued to know what 'guttation' is, the best advice I can offer you is, get your credit card out and go to ITDG Publishing's website at www.developmentbookshop.com.

*Jonathan Parkinson, hydrophil,
Vienna, Austria*

Water Services Management

David Stephenson 2005
IWA Publishing Non-members' price £85.00 432pp.
ISBN 1843390809

Water services include water supply, sewerage and stormwater drainage. The facilities needed for these services are pipelines, reservoirs and treatment works; but the service goes beyond the infrastructure. Water services include economics, billing, and business management. Although these services exist in every city, being advanced by the growing use of automation and information technology, costs are also increasing without many consumers seeing increased benefits. Customer service is therefore becoming important to the industry.

Water Services Management is intended to educate engineers to manage and improve water services, rather than simply designing and constructing treatment works and distribution systems. The text covers water supply and drainage from the hydraulic and economic points of view, and while design and construction practices are reviewed, the focus of the book is on improving existing systems to turn the emerging industry into an attractive business. Topics covered include:

- Potable water supply, sewerage and stormwater drainage.
- Hydraulic management: storage, peak flow attenuation and pumping.
- Water quality: standards, pollution control and treatment.
- Infrastructure management: rehabilitation, reconstruction, upgrading and maintenance.
- Economic efficiency: asset management, privatization, and risk analysis.
- Improving economic viability via efficient use of energy and construction project management.

Characteristics encountered in developing countries are also considered, including:

- Low-cost sanitation, water-supply standards and off-grid energy sources.
- Capacity building and appropriate technologies.
- Financing, operation and benchmarking.