

books

The Basis of Civilisation – Water science?

John C. Rodda and Lucio Ubertini (editors)

2004, International Association of Hydrological Sciences, ISBN 1 901502 57 0, £58.50, 342pp

A well-edited and tidy volume, this work arises from an international symposium of the same title. Inevitably, some papers are more accessible to the general reader than others. Those directly in line with the title are highly accessible, covering such topics as the origins of hydrology, water supply to Hong Kong, the rise of water management in Italy (there are several useful contributions here), and historical meadow irrigation in Europe (although no reference is made to meadow irrigation in Britain). The sections cover several approaches: the rise of understanding in water science, lessons learned from the International Year of Freshwater (2003), the impact of water resources development and management on society, reductions in risks to water resources over time and an historical take on issues of governance.

A scope as wide as water science and civilization has to include themes that are geographic, subject specific and issue led. The result is eclectic without being comprehensive. Review articles cover technological impacts, lessons learned from the International Year of Freshwater, resource develop-

ment and conflicts, the role of conflicts and the part played by water development in developing civilization. The historical and geographical scope is impressive and includes accounts of water and environmental management from 'classical periods' in India, China and Italy. So strong is the Italian theme, one wonders if a re-working and expansion of the material might produce a carefully crafted volume on history of water management in that country alone. Italy has a range of agro-ecological regions and a long civilization, and ancient work on the Pontine Marshes and the contribution of Vitruvius are of as much interest as contemporary issues explored in the volume including drought and flooding. Other themes covered include isotopic studies in hydrology, network analysis, and drought. Other countries and areas covered include Norway, Hong Kong, Vojvodina (northern Serbia) Somalia and Central Asia.

While such a book is more appropriate to be dipped into than read through, it is refreshing that there is an historical perspective in most instances. A few chapters sit uneasily with this general approach, but that is often the way with edited conference proceedings. This tome is useful because the historical perspective, aside from its intrinsic interest, has much to inform the current debates around 'sustainability' and changing climatic (hence hydrological) conditions.

The book is to be recommended as a reference work for readers of *Waterlines*, primarily because it provides some fascinating background information in history, hydrology and water policy issues.

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Springs of Life: India's water resources

Ganesh Pangare, Vasudha Pangare and Binayak Das

2006, Academic Foundation, in association with World Water Institute and Bharathi Integrated Rural Development Foundation, ISBN No: 81 7188 489 X, 392 pp, \$99.95, www.academicfoundation.org

Springs of Life is compiled using perhaps what is the best strategy – a mix of personal experience through direct interaction with communities, researchers and water experts across the length and breadth of the country and secondary research. While executing this approach must have been a daunting task, it has given the book a certain 'groundedness.'

The book has succeeded in capturing to a large extent the use, misuse, practices, traditions, coping mechanisms and culture associated with water and people. Perhaps for the first time, how people deal with their water needs in remote and hostile environments in the Himalayan region across Sikkim, Himachal Pradesh, Kashmir, Nagaland and Arunachal Pradesh has been documented. These sections make for fascinating reading. The frugality of the residents here in the use of water and their innovativeness is a lesson for us more fortunate ones, who live in the plains of India and complain when our taps run dry.

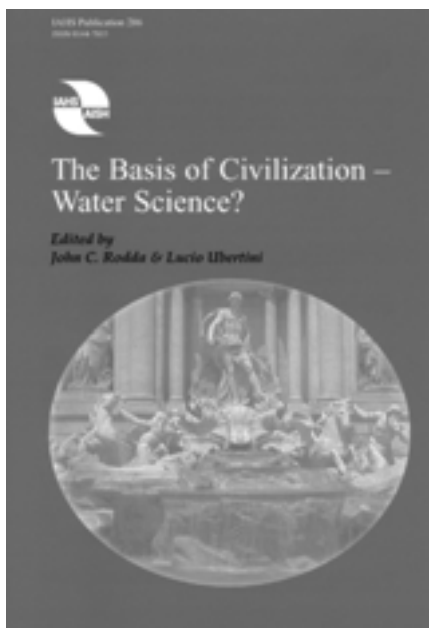
Springs of Life covers water resources, and water shortage in drinking water supply and sanitation, agriculture and for sustaining nature. It informs us about how water itself is at risk and is a source of conflict, about burgeoning water markets, forays into privatization and much more. It describes the tribulations of women in securing water for their families, large government projects and small community ones. It stresses the need for regulating water abstraction and use and the role of community participation in this. It deals with glaciers, rivers, ponds, wells, coastal waters and lakes. It also dedicates several pages to a rapidly emerging issue, that of poor water quality due to natural and anthropogenic interventions.

It is not often that one comes across a book that combines the 'macro' with the mundane. For example while it documents the serious pollution levels in our rivers and groundwater it also points out that taps often continue to waste water just because no user has been bothered to repair them. While it describes the serious efforts by civil society organizations in helping communities to meet their water needs, it also suggests that they should not exaggerate their efforts and achievements.

All in all, the book is a credible and laudable effort at 'capturing water' as it were, across the diverse agro-ecological zones of India. The backdrop is India, yet

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the book is useful for any 'water worker' in just about any part of the world. And it appears that the authors have enjoyed themselves in the process. One can only wait for the next publication, since this one has left us thirsting for more.

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Water and Wastewater Management in the Tropics

Jens Lonholdt (editor)

2005, International Water Association, £52.50 / US\$105.00 / €78.75 (IWA Members)

£70.00 / US\$140.00 / €105.00 (Non Members), ISBN: 1843390132, 392pp.

This new IWA publication has been written by a group of lecturers and practitioners involved in the training of students at the Technical University of Denmark. Based upon notes developed specifically for a course in environmental management in developing countries, the authors have produced a book that aims to 'soften' engineers and to strengthen the understanding and dialogue between professionals from different disciplines who are commonly involved on overseas development projects.

The authors base the book on the recognition that the success rate of infrastructure improvement projects – particularly those in the water and sanitation sector – have generally been poor. The authors believe that this situation could be improved with greater appreciation of the socio-economic, cultural, financial and institutional factors that ultimately determine the sustainability of a project. Although much of this is learned from experience, there are relatively few textbooks that aim to address this imbalance and therefore the book is a very welcome publication.

The first part of the book aims to give a basic understanding of how international projects are conceptualized and provides details of different stages of the project cycle. The second chapter focuses on the preparatory stages of project identification and formulation (45 pages), and another chapter provides details of various tools and methodologies that can be employed to assist in decision-making as part of the project selection process (24 pages). It is interesting to see the importance the book places on project costing and financing (70 pages), which is a welcome addition as engineers often have insufficient training in

these areas. The first part of the book concludes with a short chapter on project implementation (11 pages), which provides an introduction to some of the management issues for water and wastewater management projects in developing countries.

The second half of the book consists of three chapters focusing on rural water and sanitation (40 pages), urban water and wastewater management (100 pages), and industrial water and wastewater management (54 pages). The 'rural' chapter presents a good overview of small-scale water supply systems and appropriate household treatment and sanitation technologies, as well some sections on issues on the community aspects of rural water and sanitation. The 'urban' sector material is longer. There is some cross-over between the urban and rural chapters on issues relating to health, water sources and project management, but much greater emphasis on technologies for water and wastewater treatment that are applicable within towns and cities. Some of the sections discussing the institutional and financial issues relating to project implementation could be placed in the earlier chapters, but it is good to see the socio-economic factors placed next to the presentation of the technologies.

The final chapter provides the reader with a good introduction into the most important components of industrial water and wastewater management projects, including sections on cleaner production and environmental auditing as well as a description of the range of technologies that may be employed for treating industrial wastewaters.

The authors evidently have a wealth of practical experience working in developing countries and this is reflected in the case studies, which describe a range of water supply and wastewater management projects, predominantly from south-east Asia (Thailand, Malaysia and Vietnam) but there is also one from Uganda. These experiences are synthesized and presented successfully, which makes the book both interesting and informative.

I recommend the book as a core text for students studying for post-graduate degrees and diplomas, but it will also be of great interest to more seasoned practitioners as well. Although the level of technical detail is sufficient to give the book credibility from an engineering perspective, these aspects are not overwhelming and the book has a lot to offer other disciplines as well.

At £70 it's not cheap, but members of the International Water Association (IWA) are eligible for a considerable discount and pay only £52.50 which provides a strong incentive for joining IWA, especially for

Harvesting the heavens – Guidelines for Rainwater Harvesting in Pacific Island Countries, and A manual for participatory training in rainwater harvesting

South Pacific Applied Geoscience Commission

Can be downloaded for free from <http://www.sopac.org/tiki/tiki-index.php?page=CLP+Rainwater+Harvesting>

Rooftop rainwater harvesting is a particularly relevant technology in the low-lying Pacific islands, where surface water and groundwater are often unavailable or too saline for drinking, and where rainwater is generally plentiful.

The *Guidelines*, a DVD and the *Manual* were all developed following a United Nations Environment Programme (UNEP) pilot project carried out in Vava'u, Tonga. All three are targeted for use by NGOs, CBOs or others involved in rainwater harvesting.

The *Guidelines* contain both technical design, operation and maintenance information for rainwater harvesting as well as discussing approaches to project implementation and sustainability.

The *Manual* was developed for a 'Training of Trainers' workshop for rainwater harvesting in the Pacific islands in 2004. It contains a number of participatory techniques, tools and activities to assist communities in learning about the operation and maintenance of rainwater harvesting systems. They finish with a series of fact sheets distilling information about the operation of these systems.

those working in developing countries who only pay £11 per annum for an individual subscription. Whether you pay the full price or not, I would say that this book is well worth it.

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