Reviews and resources

The Atlas of Water: Mapping the World's Most Critical Resource
Maggie Black and Jannet King
2009, Earthscan, 2nd edn,
128pp, £12.99, ISBN: 978
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Water certainly is a precious resource and there is a great lack of understanding among the general public about what are the significant issues relating to its availability and use. For many in the more developed world, until recent flooding intruded into domestic properties, water was a given and all that was talked about was the cost of potable water and how much was leaking away from old and deteriorating piped systems. For people in the less developed world, water is not a given, and environmental, economic and political pressures in many regions do not support a ready solution to growing water needs.

Despite being a full-time practitioner in water management, I missed the first edition of this book published five years ago, so I am not able to make a comparison, but I really like this second edition of the *Atlas of Water* which is published by Earthscan. I hope – if only in a small way – that I can encourage people to read and learn from this book. It is accessible to a wide range of readers from school children upwards and presents information and analysis in a clear and attractive 'atlas' format.

The work is set out in six logical steps with a seventh section containing data for those data junkies among us who like to compare and contrast. The first two sections cover facts related to the finite quantity of fresh water and the environmental pressures such as climate change and river management projects that have an impact on the spatial distribution and availability of fresh water. The next two chapters focus on the needs of the human population for drinking water, health support and food production to help people understand the water cost of food; and the economic uses of water, how these interact and how and where value is added.

The fifth chapter focuses on the reduction of water available for immediate use due to poor water management such as pollution and the failure to care for water and its ecology. In Chapter 6, the authors consider what possible solutions there may be to the tangle of problems related to the imbalance between the availability of water and the demands that we are placing upon these resources. The

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authors consider both technology and polity in the consideration of possible ways forward; including more explicit pricing, the use of water footprinting to help explain water use, international river basin management and water-sharing treaties.

The contents of the book are thus all one could hope for. The authors have accessed and listed at the back a large number of UN, FAO and academic sources as well as some less formal sources such as those from news media. Of course in a 120 page atlas, there cannot be the depth of analysis in all areas to satisfy all parties, and there are bound to be bits where sectoral experts will disagree with the conclusions drawn. But the colourful graphics, text box case studies and punchy introductory text on each double page spread make for an easy read and a great introduction to a vitally important subject. At a mere £12.99, I highly recommend the book which is clearly of great value for researchers, practitioners such as myself, water policy makers and their advisers.

Mike Woolgar
Atkins

Peak Water: civilisation and the world's water crisis
Alexander Bell
2009, Luath Press Ltd, Edinburgh
ISBN: 190681 719 0; £16.99

Written in an engaging style – without once using the term 'integrated water resource management (IWRM)' – this book brings alive the politics and history of water management. It should be acknowledged as an important piece of work that presents these complex issues in a way that people can readily understand. All water professionals should read it – if only to learn how to communicate with 'normal' people.

The premise of the book is that water, unlike oil, is irreplaceable. Most economic theories, however, assume that inputs to production – other than labour and capital – can be substituted. So when we run out of something, we just use something else instead. But, how do we apply such theories to something that is finite and cannot just be replaced?

The question this book poses is whether our current global 'civilization' will manage to adapt to this unique problem. Tinkering at the edges will simply not do – it requires a fundamental rethink of our values and how we live our lives.

Alexander Bell takes us on a fascinating journey on water, meandering through space and time. Starting in modern-day Dubai, he takes us back 6,000 years to Mesopotamia, and through the ancient civilizations of the Sumerians, Mohenjo-Daro (Pakistan), ancient Egypt, Rome, Athens and the Incas, on to pre-industrial revolution Europe and the USA, until we end up back where we began

– in Dubai trying to make the desert bloom.

The book charts how water – and its management – has helped shape both the development and the decline of many civilizations. It explores the human desire to control water, the centrality of managing it for survival and development, and its deep cultural and religious symbolism. It explores how the desire to control water dictates how governance structures develop – or is it the other way round? And questions such as: 'Is modern-day democracy a wet-country concept?' keeps this well-researched book alive. There are gems of information buried throughout the book (engineers will be heartened by the knowledge that the Pope is the 'bridge-builder in chief').

This is a complex issue to communicate, and some of the book's underlying assumptions could be challenged. There is a difference between the kinds of physical shortage experienced in richer countries, and those experienced in some poorer countries. The latter are often a result of the lack of water management infrastructure and institutions; there may be enough water to go around, but we are just not in a position to make use of it.

And on dams, Alexander Bell articulates the significant costs, but does not adequately recognize the positive developments dams have made. It is true that the Colorado River sometimes fails to run to the sea, but would many countries in the world not settle for the positive development benefits that this has enabled? Has the presumption against dams – mainly advocated by those who are enjoying the benefits of these, to those who have not even started doing so – been a lost development opportunity for Africa? The book's discussion on 'virtual water' – the water embedded in goods and services we purchase from others – follows a path uncomfortably close to the oversimplified 'food miles' debate that invariably penalizes poor farmers in the South.

This book does a wonderful job of helping people understand and engage with what is undoubtedly one of the great issues of our time. And at least there is one thing on which we can all agree: golf should not be played outside Scotland. Bin the clubs and read the book!

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The World's Water 2008–2009: The biennial report on freshwater resources

Peter H. Gleick, Heather Cooley, Michael J. Cohen, Mari Morikawa, Jason Morrison and Meena Palaniappan
2008, Island Press, 432 pages, ISBN: 9781597265058, paperback: $35.00, hardcover $70.00

This 400-page publication from Island Press is the sixth volume

in this popular series that started in 1998. The book is split into three distinct sections: an initial six chapters that tackle selected global issues affecting water resource management; followed by a set of three briefs describing specific situations in the United States (Tampa Bay desalination plant in Florida and the future of the Salton Sea in California) and the Three Gorges Dam in China; and an additional brief that provides a chronology of water conflicts. The final section of the book consists of a set of data tables, which are very helpful especially taking into account the descriptions about the limitations of the data which inform the reader about the caveats that must be applied to the evidence. Some of the data tables and selected content of the chapters can also be downloaded from http://www.worldwater.org/data.html.

The two chapters of greatest relevance for *Waterlines* readers are those dealing with climate change and water, and progress on the Millennium Development Goals (MDGs). Both these chapters provide a useful overview presenting the latest evidence from the published reports (IPCC Fourth Assessment Report and Technical Paper on Water; and the 2008 Joint Monitoring Program (JMP) report). However, there are some glaring errors in the evidence presented. For instance, the authors criticize the high recorded level of water coverage in Bangladesh in the JMP saying the figures fail to acknowledge widespread arsenic contamination. However, since 2002 the JMP figures have been adjusted downwards to take into account arsenic contamination.

Although the other chapters are of less relevance to *Waterlines* readers, the discussion on business reporting by commercial entities on water management issues is insightful and of particular interest. But the chapter on China relies too heavily on news articles and statements by officials and political leaders, and gives insufficient recognition to the major advances made in China that have improved the management of water resources. The chapter dealing with the concept of peak water makes some good points about the limited utility of the general use of the term, drawing out the difference from the concept of peak oil. However, it also identifies some situations where groundwater is being mined, where drawing on this concept helps analysis of water usage.

The water conflict chronology is very useful, but the categorization of these conflicts appears to be erroneous as most are not in fact 'water wars' but conflicts during which water resources has become a transboundary issue that has fuelled political tensions. Although in places the reference to conflicts from biblical times makes the chronology somewhat bizarre, it does provide a useful reference point for many of today's conflicts.

The book tackles some important issues for a general, non-specialist readership and the data tables are particularly useful for water sector professionals. However, on the whole, the book does not provide the in-depth analysis that one would expect. In addition, although the book is quite accessible and the writing style makes it easy reading, the book is let down by the figures which are often difficult to understand. The use of colour figures – particularly when multiple trend lines are presented – would have greatly improved clarity.

So, is the book of interest and worth buying? Although perhaps excessively long, the answer is, yes. However before purchasing the book, it is important to recognize that it has been written primarily for an American audience and provides limited new insight for water sector professionals who may find it more worthwhile to use the original reports and data sources on which the book is based, some of which are freely available on the internet. However, provided the reader accepts that this is how the document is written and targeted it is a useful and worthwhile read.

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